LEARNING TO PLAN:
AN INVESTIGATION OF MALAYSIAN STUDENT TEACHERS' LESSON PLANNING DURING THEIR PRACTICUM

by

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ABSTRACT

Learning to Plan: An Investigation of Malaysian Student Teachers' Lesson Planning During Their Practicum

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The main purpose of this study was to gain a better understanding of the learning process of trainee secondary school teachers regarding how to plan lessons during their practicum. By examining their lesson planning, I have been able to describe: (1) the process of planning of these student teachers, (2) the changes that occurred in their planning over time; and (3) the factors that influenced their planning and the nature of this influence. A qualitative approach was employed as an attempt to understand the phenomena from the student teachers' perspective. Data were gathered through initial interviews, final interviews, thinking aloud planning, post-lesson interviews, and documents. Qualitative data analysis was conducted in dealing with the large amount of data. Inductive analysis strategy was employed where the patterns, themes, and categories were derived from the data itself. NVivo software was used to manage my data analysis. This study indicated that the process student teachers go through while planning a lesson is relatively structured and follows closely the format provided for them by the university. It appeared as a staged process. The first stage is identifying the planning task, followed by the second stage, that is planning teaching and learning activities for the teacher and the pupils. The process that happened within this stage could be described as recursive in nature. The student teachers elaborated their initial idea repeatedly and the planning elements such as resources, learning outcomes, content, pupils, and time all interplayed during this stage. The third stage of planning is preparing a written plan in their plan book, and the fourth stage is preparing the resources that have been decided on in the second stage. The findings also indicated that changes occurred towards the end of the practicum. Changes occurred both in their planning beliefs and planning practices. University supervisor, cooperating teacher, pupils' characteristics, textbooks and lesson plan format emerged as influences on the student teachers. Those influences did not act separately during planning but were tightly interwoven. Reflections on classroom experiences were found to be a mediating factor for these changes. All student teachers in this study perceived their university supervisor and the cooperating teacher to an extent and at different times as an advisor, an assessor and an expert in planning lessons, yet the degree of these influences varied among them. Implications drawn from this study include recommendations for the review of the methods course taught in the university and for the development of the roles of the university supervisor and cooperating teacher in helping student teachers learning during practicum.

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DEDICATION

To my beloved mother HAJAH AZIZAH AHMAD, who sadly passed away on 17th November 2010, just few days before my viva examination. Your love, your prayers and your spirit inspire me forever.

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ABBREVIATIONS LIST

CiE	Computer in Education
CS	Curriculum Specification
ICT	Information and Communication Technology
KBSM	*Kurikulum Bersepadu Sekolah Menengah* (The Malaysian Secondary School Integrated Curriculum)
MEDC	Malaysian Education Deans' Council
MQA	Malaysian Quality Assurance
NPE	National Philosophy of Education
PGCE	Post-Graduate Certificate of Education
PMR	*Penilaian Menengah Rendah* (Lower Secondary Assessment)
SPM	*Sijil Pelajaran Malaysia* (Malaysian Certificate of Education)
TESL	Teaching English as a Second Language
UUM	Universiti Utara Malaysia

CHAPTER ONE
OVERVIEW OF THE STUDY

1.0 Introduction

This study presents a qualitative inquiry into student teachers' learning while undertaking their practicum for 10 weeks in fulfilment of the requirements for qualified status to be a secondary school teacher in Malaysia. The aim of the study is to enable the researcher and the readers to arrive at a better understanding of the learning process of the student teachers, particularly of how they learn to plan lessons.

This chapter presents an overview of the study. I start by describing my personal experiences that inspired me to investigate this topic. This is followed by an overview of the theoretical and methodological frameworks of the study. This includes the reasons for conducting a study on student teachers' lesson planning, as well as the significance of this study for student teachers and for teacher education. As this study was conducted in Malaysia, a description of the context is provided in this chapter to enable readers from different contexts to have a better understanding of the Malaysian education system.

1.1 The Personal Context

My interest in investigating teacher planning stemmed from my personal experience as teacher educator at the Department of Education in one of the public universities in Malaysia. Based on my experience, I realized that a considerable amount of time was devoted to educating the student teachers about planning a lesson. To me as teacher educator, planning a lesson is essential because it ensures that the teachers think about

the lesson and are prepared before the lesson. I also believe that a good lesson begins with good planning. In teaching student teachers to plan a lesson, we emphasize planning which is driven by goals and objectives. The lesson plan format, which is derived from the rational model, serves as a guide in teaching the student teachers to plan a lesson. The student teachers were required to use the format as a guide while planning lessons in the method courses as well as during their practicum. Producing a detailed lesson plan is necessary for the student teachers as part of their professional development during the practicum.

From my reflections on my own teaching, and on what my colleagues have shared with me, I understand that we shared the notion that learning to plan lessons in the methods courses was mainly for the purpose of preparing and acquiring appropriate knowledge about planning and how to go about planning. Yet, in the real world, a real classroom is complex. Planning a lesson is difficult as the classroom environment is far more complex compared to micro teaching in the method class. As well as being the place to put theory into practice, the classroom also is a place for the student teacher to learn the complexities of the contexts, and thus to gain more knowledge and skills on how to plan lessons.

Besides teaching the student teachers how to plan lessons in methods courses, I also had experiences as a university supervisor working with the student teachers during their practicum. The most important task for me as a university supervisor was helping and guiding student teachers with their planning and teaching, though giving advice pertaining to classroom management, and developing good relationships with pupils and school teachers were also part of my responsibilities. In addition, my role was to

assess and make judgments of the student teachers' performance. To fulfil my role as the university supervisor, I visited each of the student teachers at least four times during their practicum and helped them accordingly regarding planning, teaching and assessing them at the end of the practicum.

Therefore, while working and talking to them, and observing their thinking and teaching, I realized that the student teachers experienced a conflict between what they are required to do in order to pass the practical teaching and what they think they need to do in order to teach well. They try to meet the expectations of both the university supervisor and the cooperating teacher. At the same time they bring their own beliefs and knowledge about planning and teaching. This dilemma influenced the way they planned their lessons. I considered this issue as a very valuable insight in understanding their learning process about planning as part of their professional development as a teacher. My concern was with the time and effort which was put into teaching the student teachers about the process of planning a lesson, and about the importance of planning prior to interactive teaching; therefore I sought to understand how that process works.

1.2 The Theoretical Contexts

1.2.1 Defining Teacher Planning

According to Clark and Peterson (1986), researchers have conceptualized teacher planning in two ways. First, based on the theories in cognitive psychology, planning is defined as a basic psychological process in which a person visualizes the future, inventories means and end, and constructs a framework to guide his/her future action. Second, from the descriptive approach, planning is defined as the things that teachers

do when they say that they are planning. Placek (1984) defines teacher planning as a teacher activity that precedes instruction, is concerned with how instruction will be presented, and is based upon anticipation or expectation of classroom events. From a system approach paradigm, Panasuk and Todd (2005) define lesson planning as a systematic development of instructional requirements, arrangements, conditions, and materials and activities, as well as testing and evaluation of teaching and learning.

Drawing on these definitions, we see that planning involves both a psychological process and a practical activity by the teachers. When teachers plan a lesson, this involves their thought processes which are translated into their practice. Therefore, in this study I defined teacher planning based on Clark and Peterson's view (1986) that planning is both a psychological and practical activity of the teacher in constructing a framework for teaching.

1.2.2 The Need for Planning Lessons

Calderhead (1984: 69) posits that:

> "planning is a vital though often undervalued aspect of classroom teaching. It is in planning that teachers translate syllabus guidelines, institutional expectations and their own beliefs and ideologies of education into guidelines for action in the classroom".

Indeed, there is wide agreement among those who research teacher planning that planning is important and central to the professional role of teachers (Clark & Yinger, 1987; John, 1991a; John, 1991b; John, 1994; Calderhead, 1996; So & Watkins, 2005). To describe the importance of planning, Beyerbach (1988) claims that teacher planning is one of the key processes in teaching, and how one thinks about planning will shape classroom interactions and learning outcomes. Moreover, all teachers engage in

planning lessons and planning is recognised as a seminal component of the cognitive functioning of teaching (John, 1994). Clark & Yinger (1987) view planning as an everyday teaching problem that demands the application of a complex network of knowledge and cognitive strategies. They claim that it is in planning that teachers link curriculum to learning. Each teacher begins a lesson with a set of expectations regarding how the events of the lesson are to proceed (Morine-Dershimer, 1978/79), and thus, planning does affect instruction (Floden & Klinzing, 1990). Panasuk and Todd (2005) claim that the quality of teachers' decisions in planning depends on the creativity of teachers and on their ability to apply learning and instructional theories.

Borko and Shavelson (1990) see planning as a component of teaching in which teachers formulate a course of action for carrying out instruction. To understand teacher planning means to understand how teachers interpret subject knowledge and prepare the presentation of their teaching prior to the presence of pupils (John, 1994; So & Watkins, 2005). Although a lesson plan may not be a particularly accurate guide to what actually happens in the classroom, it does at least demonstrate 'intention to act' and as such potentially provides a link between the teacher's educational beliefs and behaviour (Davies & Rogers, 2000). As teacher planning involves the thinking process that teachers engage in prior to classroom interactions, as well as the thinking process or reflections coming from the previous engagement in the classroom interactions (So, 1997), therefore this activity tends to depend very much on teachers' views of the teaching situation and on their own beliefs and concerns (John, 1991b).

One measure of the importance of planning is illustrated when we consider the amount of time teachers spend on this activity (Arends, 2007). For example, Clark and Yinger

(1979) reported that teachers estimate they spend between 10 and 20 percent of their working time each week on planning. Regarding this issue, John (1994) quoted a report from a teachers' professional association (the Assistant Masters and Misstresses Association) noted that practising teachers spent nearly 6 hours per week on planning and preparing lessons compared to 17 hours in the classroom. This has shown that teachers spend a considerable amount of their professional time planning. Therefore, planning lessons constitutes a large part of what Clark and Yinger (1987) have called 'the hidden world of teaching' and within this private world a large part of the school curriculum is understood, developed and acted upon (John, 1991a). Despite the importance of planning, Calderhead (1996) points out that planning is typically undervalued, as the time allowed for planning and the support offered to teachers to undertake this work is often inadequate.

1.2.3 The Process of Planning

Literature has documented the prescriptive model as a very widespread model of planning offered to student teachers to tell them how to plan lessons (Yinger, 1980; Shavelson & Stern, 1981; Placek, 1984; May, 1986; Floden & Klinzing,1990; Searcy and Maroney,1996; John, 1991a, John, 1991b; Kagan & Tippins, 1992; John, 2006). The prescriptive model, otherwise known as the rational model, first introduced by Tyler (1949), describes planning as a process of selecting educational objectives, diagnosing learner characteristics, and choosing from alternative instructional strategies in order to achieve certain learner outcomes (Peterson, Marx & Clark, 1978). This approach to planning, according to John (2006) has in fact been a pervasive feature of curriculum and lesson planning since the early 1950s, although it gained greater prominence during the curriculum and pedagogical reforms of the 1960s and 1970s

across the world. The model, because of its rational and scientific appeal, has been prescribed for all types of educational planning (Yinger, 1980). Implicit in the planning model taught to student teachers is the belief that somehow good planning will lead to better teaching and, in the end, more student learning (Placek, 1984). In addition, as suggested by John (2006), student teachers in the UK were taught to plan lessons based on the rational model because the National Curriculum and various standards documents required them to do so.

Despite the popularity of the rational model in teaching student teachers how to plan lessons, criticisms of this model have arisen since the 1970s. Many (Yinger, 1980; Shavelson & Stern, 1981; Placek, 1984; May, 1986; Floden & Klinzing, 1990; Searcy and Maroney, 1996; John, 1991a, John, 1991b; Kagan & Tippins, 1992, Calderhead, 1996; John, 2006) have suggested that the model used to instruct teachers in planning techniques frequently has been found to be of limited value. Most of the criticisms of the rational model were based on the findings about how experienced teachers plan their lessons. An extensive review of teacher planning by Clark and Peterson (1986) showed that the rational planning model does not describe the planning behaviour of experienced teachers. For example, Taylor (1970) describes teachers' planning process as to consider materials and resources first, then pupils' interest, aim and purpose of teaching, followed by evaluation. In another instance, McCutcheon (1980) found that the richest form of teachers' planning was the complex mental dialogue, the reflective thinking that many engaged in before writing these plans or teaching a lesson.

1.2.4 Influence on Planning

Research on student teachers, novice teachers and experienced teachers has revealed that teachers' planning is influenced or affected by a variety of factors. Teachers' beliefs have been found to influence their planning (Bullough, 1987; John, 1991a; John, 1991b; John, 1994; Sardo-Brown, 1996; Koeppen, 1998; Davies & Rogers, 2000). Bullough (1987) noted that the teaching-related belief of the teacher was the factor that determined what was and was not important to teach, about what pupils and other teachers were like, about what was and was not ethical behaviour, and about what a good or bad class was. John (1991a, 1994) claimed that belief about the subject matter and the types of knowledge it represents had a strong influence on planning. Teacher belief about the role of the teacher in students' learning also influences teacher planning. In Koeppen's work (1998), the metaphors of teaching as both performance and a monologue emerged as powerful influences in teacher planning.

While the findings indicated that internal factors, such as beliefs, influenced planning, external factors were also found to be influential on teachers' planning. Sardo-Brown (1990, 1996), describes how teachers are influenced in planning decisions by the organizational context in which they work, that is by such things as textbook materials, standardized tests, curriculum guides, physical facilities and pupils' characteristics. Organizational factors including the goals of the school administration, the principal's planning requirements, administrative policies regarding materials, class size, and team membership were also documented as factors contributing to teachers' planning decisions. John (1991a) also found that contextual factors such as the classroom, the

pupils, the curriculum, syllabus and programmes and the management of classes had influenced the planning process.

Specifically, researches on student teacher planning reported that the college tutor and the mentor teacher were also influential factors in student teacher planning and teaching (Calderhead and Shorrock,1997; Koeppen, 1998; John, 1991a; Borko & Mayfield, 1995). However, according to John (1991a), the influences varied in degree between the student teachers.

1.2.5 Why Study Student Teachers Learning to Plan Lessons

Learning has been described as a complex process (Maynard and Furlong, 1993; Borko & Putnam, 1996; Calderhead & Shorrock, 1997; Calderhead, 1989). Borko and Putnam (1996) assert that teachers' learning involves multiple sets of knowledge, skills, and understandings if they are to be well prepared to enter the teaching profession. This learning involves teachers being able to reason out their own actions, being able to justify particular strategies, understanding the subject matter, pupils and their learning styles (Calderhead & Shorrock, 1997). For student teachers, learning should also include applying knowledge gained from teacher education courses to practical situations and guidance on how to best develop as a teacher from these practical applications (Koeppen, 1998). The student teachers learn to decide what curriculum content is important for pupils to learn and how it can be enacted in classroom settings through the execution of learning activities and events (Arends, 2007). Thus, the process of learning, according to Borko and Putnam (1996), is a constructive and

iterative process in which the person interprets events on the basis of existing knowledge, beliefs, and dispositions.

In every teacher education programme, a considerable time is spent teaching student teachers how to plan lessons (John, 2006; Koeppen, 1998; Kagan & Tippins, 1992). This is in line with attempts to reform the teaching profession across the world which meant an increasing emphasis on the importance of competence on the part of student teachers in the skills of curriculum design and lesson planning (John, 2006). In a similar view, Mutton, Burn and Hagger (2008) posits planning is seen by a range of international regulatory bodies as being of fundamental importance in the formation of beginning teachers. John (2006) provides an example regarding The Professional Standards for Qualified Teacher Status in England and Wales which require student teachers to demonstrate that they can set challenging teaching and learning objectives and use these to plan lessons and sequences of lessons, showing how they will assess pupils' learning, select and prepare resources and plan for their safe and effective organization. In Malaysia, the Teacher Education Division of the Ministry of Education published the most recent document of standards for teachers, known as Malaysian Standards for Teachers (MSfT), and planning lessons is clearly included in this document as:

> *All teachers should possess the competency in planning the lesson based on the syllabus provided and the school schedule with consideration to the range of pupils' ability, the pupils' existing knowledge and the pupils' achievement (MSfT, Standard 3, 2009).*

Despite the understanding of the importance of planning lessons prior to interactive teaching, it has been argued that planning and preparing for teaching is an area where student teachers frequently experience difficulty (Calderhead, 1996). John (2006)

hypothesized that the difficulties may lie in the rational model that demands a linearity of thinking that does not necessarily exist in practice. According to John (2006) and Kagan and Tippins (1992) none of the formats recommended for use in teaching student teachers is derived empirically, that is inferred from novices' experiences in classrooms. These notions are congruent to the assertion by May (1986) that because of the linearity of the rational model, the sequence of writing planning may be followed and presented rigidly to student teachers. She argues that when student teachers have difficulty with this planning sequence, for example, writing a rationale, goals, and objectives before they consider learning activities or resources, we question students' apparent inability to meet the expectations. John (1994) claims that the difficulties are mainly due to the student teachers' low level of classroom knowledge, their relatively unsophisticated interactive skills and lack of well established classroom routines.

Preservice teacher education programs traditionally offer student courses in theory and methods and then require student teachers to implement these during student teaching (Jones & Vesilind, 1996). Because teaching is fundamentally a practical activity, student teachers are not able to begin to develop their own body of practical professional knowledge until they enter the classroom (Furlong & Maynard, 1995).

Research in teacher education, according to Calderhead and Shorrock (1997), shows there is a general trend for student teachers to appear to be dissatisfied with the bridge between theory and practice; the student teachers' perceptions of what happens in their university-based part of the course seems difficult to reconcile with their practical experiences in the classroom. From his review, Koeppen (1998) shows that there are

apparent discrepancies between what we teach the student teachers in their university courses and what is modelled for them in classrooms.

The tension student teachers experienced between the university and school settings illustrates what Feiman-Nemser and Buchman (1985) called the 'two-worlds' pitfall, where the student teachers find themselves torn between the university requirement that assigns their grade and the school that structures their first teaching experiences. Through my analysis of my initial study conducted with PGCE students in the UK and with the student teachers in Malaysia, I found that the student teachers reported that the university supervisor and the cooperating teacher, to some extent, had influenced their decision during planning. To fulfil the expectations of both the university supervisor and the cooperating teacher, the student teachers reported that they were in a dilemma. Regarding this issue, Koeppen (1998) pointed out that during their acculturation into the profession; student teachers have to deal with disparity between their university courses and the context of their cooperating teacher's classroom. He added that the discrepancy between the kind of planning instruction they receive and the way planning is modelled for them creates a dilemma for student teachers as they try to meet the expectations of both the university supervisor and the cooperating teacher, and define their roles as teachers.

Research also indicates that beginning teachers rarely receive the kind or amount of assistance they need to plan effectively at each stage of their professional development (Bullough, 1987). In learning how to prepare lessons or ask questions, student teachers in the university do not have to struggle with the complexities of working in the unpredictable context of a real classroom (Furlong and Maynard, 1995), yet in the real

classroom there are many uncertainties relating to time-pressures, organizational issues, attitudes, moods and emotions (John, 2006). Therefore student teachers should be given guidance and practice in seeing the learning task, indeed, the entire school situation from the pupils' perspectives (Westerman, 1991).

The student teachers in my initial study were found to have their own beliefs about planning lessons. The literature also reveals that the student teachers enter teacher education with personal beliefs about teaching (Kagan, 1992b, Borko & Putnam, 1996), and they have different ideas about teaching and about their own professional development (Calderhead & Robson, 1991). Since the literature suggests that there is inconsistency in research findings regarding the relationship between belief and practice (Thompson, 1992; Speer, 2005), and because beliefs cannot be inferred directly from teacher behaviour as teachers can follow similar practices for very different reasons (Kagan, 1992a), therefore more work needs to be done to investigate the relationship between belief and practice. Another issue still unsolved, as noted by John (1991a), is the relationship between university supervisor, cooperating teacher and student teacher in student teachers' learning. Thus, to understand these issues, further research is required especially in different cultural contexts. To date and to my knowledge, no research specifically on student teachers' planning has been done in Malaysia, therefore this study is conducted to understand the process, and thus contribute to the literature on how student teachers learn to plan lessons.

1.3 Context of the Study

This description of the context of the study considers the Malaysian educational system in general, routes to the teaching profession in Malaysia, the teacher education programme at UUM and the practicum for student teachers at UUM.

1.3.1 The Educational System in Malaysia

Since independence, the National Education System of Malaysia has developed tremendously. According to Ministry of Education (2001: 5), "from a diverse and fragmented system of education based upon communal needs, it has evolved into a cohesive national education system, responding to national aspirations, economic progress and technological developments by transforming its philosophy and focus over the years." In accordance with the government's efforts to adapt education to national development needs, curriculum planning and development is done at federal level and the national education system is centrally administered (Ahmad, 1998).

The formal school system in Malaysia provides education in four categories, that is, pre-school (age five to six), primary education (age seven to 12), secondary education (age 13 to 17) and special education (Ministry of Education Malaysia, 2001). However, since this study involves student teachers who teach in the secondary phase, I will only focus on secondary education in describing the education system in Malaysia.

Secondary education is implemented at two levels, that is, lower secondary and upper secondary (Ministry of Education, 2001). The lower secondary covers a period of three years (Form One to Form Three) and upper secondary covers a period of two years (Form Four to Form Five). At lower secondary level, the curriculum comprises Malay Language, English Language, Mathematics, Science, History, Muslim Education (for

Muslim pupils) and Moral Education (for non-Muslim pupils), geography, living skills, art education, music education, health education and physical education. At the end of lower secondary (Form 3), all pupils are required to sit for a centralised examination called *Penilaian Menengah Rendah (PMR)* or the Lower Secondary Assessment.

Following the PMR examination, pupils move into more specialised fields at the upper secondary level. At the upper secondary level, the curriculum offers seven core subjects which are Malay Language, English Language, Mathematics, Science, History, Islamic Education (Muslim pupils) and Moral Education (non-Muslim pupils). These core subjects are compulsory for all pupils at upper secondary level. In addition, nine groups of elective courses are offered at upper secondary level. The nine groups are as follows: pure science, additional science, information technology, technology, applied arts, humanities, language, Islamic studies, and vocational electives. At the end of the upper secondary level, the pupils sit for the *Sijil Pelajaran Malaysia (SPM)* or Malaysian Certificate of Education Open Certification examination. *SPM* is a centralised examination and serves as a requirement for further education or entry into the job market in Malaysia (Ministry of Education, 2001).

1.3.2 Route to Teaching Profession in Malaysia

Routes to the teaching profession in Malaysia are organised under two agencies, that is, Teacher Training Institutes and local universities.

Teacher Training Institutes

The Teacher Education Division, Ministry of Education Malaysia is widely recognised as the foremost agency in the country responsible for training teachers (Ministry of

Education Malaysia, 2001). Teacher education colleges which operate under the Teacher Education Division offer initial teacher training, in-service teacher training, short courses and workshops for specialised groups. The main pre-service teacher education programmes are the three year Malaysian Diploma in Education programme and The Post Graduate Teacher Education Course (PGTE). However, as an effort to enhance teachers' professionalism, since 2009 all 27 teacher education colleges across Malaysia have been upgraded to Teacher Training Institutes (Ministry of Education Malaysia, 2006). With this reform, all 27 teacher education colleges no longer offer the three years Malaysian Diploma in Education programme. The main pre-service programme offered by these institutes is now the four year Bachelor of Education in various specializations.

Teacher Training Programme at Local Universities

The Sultan Idris Training College, which had a prestigious history of training Malay teaching professionals since 1922 was given university status in 1997 (Ministry of Education, 2001). Sultan Idris Education University or *Universiti Pendidikan Sultan Idris (UPSI)* was established as part of the country's efforts to train more graduate teachers and set standards for the teaching profession.

Besides UPSI, the Faculties or Departments of Education in local public universities offer the Postgraduate Diploma in Teaching, undergraduate degrees and postgraduate programmes in education which enable the candidates to obtain teaching positions in public schools in Malaysia. However, as this study focuses on student teachers on the undergraduate route, the discussion is structured around the curriculum for the Bachelor of Education programme. The curriculum offered to the student teachers at all universities and Teacher Education Institutions are standardized as they are required to

follow the guidelines set by the Malaysian Quality Assurance (MQA) Ministry of Higher Education and Ministry of Education Malaysia (2003). The curriculum and structure of the programme is as follows (MQA, 2003):

- Fundamentals of Education
- Subject matter and methodology (generic skills are integrated with the subject matter)
- Practicum
- Contemporary issues in education and society
- Talent and personal development of the student teacher

Although MQA provides guidelines for the courses offered, all universities that offer a degree in education are autonomous, therefore the Malaysian Education Deans' Council (MEDC) was formed as a platform to bring all the institutions together to address teacher education issues. MEDC function as a forum for coordination, cooperation, standardization, and exchange of ideas and expertise in areas related to teacher education (MEDC, 2010). It also function as clearing house that settles complex issues pertaining to academic matters such as academic rules and requirements for graduation.

MEDC work closely with the Teacher Education Division on wide ranging issues, including policy decisions and implementation of the programmes aiming to professionalize teaching.

1.3.3 Teacher Education Programme at Universiti Utara Malaysia

The Department of Educational Studies at Universiti Utara Malaysia (UUM), where the main study for this thesis took place, offers Bachelor of Education with Honours [B.Ed.(Hons)] degree programs in various specializations, that is, Business

Administration, Accounting, and Information Technology. Besides specialization in one of these areas, the students are also required to select a minor from TESL, Interactive Multimedia, Mathematics, Moral Education and Malay Language. The degree program is a four year long course, and is designed to prepare graduate teachers for secondary schools in Malaysia. The four year programme (8 semesters) consists of a university courses component, a content knowledge component (major and minor subjects), an educational and pedagogical knowledge component and a practical component. The components are as follows:

Components	**Credit Hours**
University courses	22
Major subjects (subject matter knowledge)	42
Minor subjects (subject matter knowledge)	21
Professional subject (education) – including school orientation and practicum	41
University electives	3

These components are congruent with the requirement imposed by the Malaysian Quality Assurance, Ministry of Higher Education and Teacher Education Division, Ministry of Education, Malaysia (MQA, 2003). MQA stress the importance of being competent in all components mentioned above before the student teacher can be qualified as a graduate teacher. The curriculum offered by the faculty is similar in structure and scope to the curriculum offered at other universities.

Before the student teachers practise their teaching skills in a real classroom, they are required to undergo a school orientation programme (school experience) at any primary school funded by the government for two weeks. The school orientation must be done after the student teachers have completed their fourth semester. During school orientation, the students are exposed to the real school setting and they are expected to

learn about teaching and learning, school culture, co-curriculum activities, and school socialization. They are not required to practise teaching, but they are encouraged to observe the school teachers teaching, which includes planning and preparing materials.

The Practicum/ Teaching Practice Programme

The Teacher Education Division, Ministry of Education Malaysia (cited in Student Teaching Handbook, 2006) defines practical teaching or teaching practice as a practical experience that is systematic and school based with the aim to assist the teacher in training to become committed and professional teachers.

The Bachelor of Education programme in this study is a four year programme where the student teachers are required to complete their education courses and subject courses concurrently. Upon completing their year two courses at the university, the student teachers attend any national school chosen by themselves to undergo their two weeks School Experience, and after completing their sixth semester at the university they are required to do their practicum for ten weeks at one of the secondary school selected by the university.

Arrangements with the Participating Schools

The practicum committee, Department of Education UUM, follows certain procedures in terms of the arrangements with the teaching practice schools. The first stage is asking permission from the Ministry of Education to place student teachers for practicum in the public secondary schools. This is done through the State Education Department. Once permission is given, a letter is sent to the head teacher of each school inviting participation. Next the chairperson of the committee contacts the head

teachers in person in order to build rapport between the university and the school. The head teacher advises the Department how many student teachers the school can accommodate for the practicum. Thus, the number of student teachers attached to each school depends on the head teacher's agreement. A set of information which includes information for supervision, assessment forms and handbook is sent to the head teacher. The head teachers will then pass this information to the cooperating teachers.

Supervision of the Student Teachers

As stated in the Student Teaching Handbook (2006), each student teacher is assigned a cooperating teacher and a university supervisor who are expected by the university to play an important role in helping the student teachers to learn. There is no formal meeting arranged for the cooperating teachers and the university supervisors to sit together to discuss issues regarding supervision and teaching practice. All cooperating teachers and university supervisors are provided with a student teaching handbook that outlines student teacher requirements. This document serves as the baseline information for all of the teachers and supervisors involved in supervising.

The cooperating teacher is a person who is a qualified school teacher who can give advice and guidance to the student teacher in all aspects of teaching, classroom management and school culture within the practicum period. The cooperating teacher is appointed by the school's head teacher. He/she is selected according to the subject taught; if the student teacher's major subject is Mathematics, then the head teacher selects a class teacher who teaches Mathematics to become a cooperating teacher. The student teacher will then take over the cooperating teacher's classes and start planning

and teaching 'solo' for the entire period of 10 weeks. When the student teachers are attached to a public school, because they are replacing the class teacher for the particular classes, they are required to follow the national curriculum in planning and teaching their lessons. The national curriculum for secondary school provides the syllabus and the curriculum specification for all subjects. The student teachers are required to use the syllabus and the curriculum specification as guidelines in planning lessons. Besides, they are required to plan according to the lesson plan format given by the university (Student Teaching Handbook, 2006).

The university supervisor is an academic staff member of the Department of Education in the university. The university supervisor is appointed by the Head of Department to supervise a maximum of eight student teachers for each practicum. He/she is required to visit the student teachers for supervision three to four times during the practicum. The Student Teaching Handbook (2006) states that the task of the university supervisor is to give sufficient guidance to the student teachers, as well as to assess their performance in the practicum.

Assessment Procedure

Apart from providing guidance and advice to the student teachers, the Student Teaching Handbook (2006) states that during this period the university supervisor and the cooperating teacher are also required to assess the student teacher's performance in planning and teaching. The university supervisor's view contributes 80 percent and the cooperating teacher's view in assessment contributes 20 percent of the total marks. The assessment of practice is made using a standardized form, used by both the university

supervisor and the cooperating teacher. The assessment form covers the areas of planning and preparation, teaching and organization, classroom interaction, development and evaluation, classroom management, closure, and personal qualities of the teacher. The assessment forms completed by the cooperating teacher are then posted to the Department of Education, UUM. The university supervisor combines the marks given by the cooperating teachers with their marks to get the final grade for each student teacher. The Department of Education dictates that the assessment made by the university supervisor is not made known to the cooperating teacher or the participating school.

1.4 Purpose of the Study

The main purpose of this research was to gain a better understanding of the learning process of student teachers in Malaysia regarding how to plan lessons during their practicum. By examining their learning process, I will be able to describe: (1) the process of planning of these student teachers during their practicum, (2) the changes that occurred in their planning overtime; and (3) the factors that influence planning and the nature of this influence.

1.5 Significance of the Study

Research conducted on teacher planning seems to focus on experienced teachers (Zahorik, 1975; Peterson, Marx & Clark, 1978; Yinger, 1979; Yinger, 1980; Morine-Dershimer, 1978/79; Sardo-Brown, 1988; Sardo-Brown,1990; McCutcheon, 1980; McCutcheon, 2002; Yildirim, 2003; Morrow, 2001; Milner, 2003). However, little research has been done to investigate how student teachers learn to plan lessons. In addition, research in teacher planning has mainly been conducted in Western countries,

thus, there is a need to extend our understanding of teachers' planning in other cultural contexts.

In light of my intention to focus this study on student teacher' planning in Malaysia, I contend that this research has benefit to those concerned about student teachers' learning as well as the student teachers themselves to help them understand the complexities of planning in a real classroom. Certainly, in dealing with these complexities, the student teachers wrestle with their own beliefs as well as other factors in planning a lesson. Thus, these issues need to be investigated further to discover the realities of the relationship from the student teachers' perspectives. It could help to inform student teachers about key things to consider as they begin to plan their lessons and perhaps most significantly to inform the university supervisors and cooperating teachers about how best to support student teachers to plan most effectively early in their practicum.

As described in the previous section, the rational model is offered to the student teachers in most teacher education across the world to tell them how to plan a lesson, but when researchers look into what teachers actually do, they find that the rational model is not a good fit with practice. Therefore, exploring a sample of ten student teachers' planning during their practicum will enable me and the readers to gain a better understanding of how these student teachers learn, told from their own perspectives. This is important because different students may learn different things in different ways, or the same experience may have a different significance for different students (Calderhead & Shorrock, 1997). Thus, approaching this issue through the student teachers' own voices will provide insight into the real phenomenon. The case and

cross-case presentation in this study provides an in-depth description of the student teachers' learning processes, and thus readers will gain more knowledge about the process that actually occurred in their planning and the factors that influenced them in making decisions during planning. Thus, this research has the potential to be significant to the student teachers, the cooperating teachers, the university supervisors and to the policy maker in the university, as well as to teacher education in general.

1.6 Methodological Framework

In this study, I aim to discover and to understand how student teachers learn to plan lessons while in their practicum from their own perspective. In other words, I was interested to understand the meaning that the student teachers hold about the problem, not the meaning that the researcher brings to the research (Cresswell, 2007; Marshall & Rossman, 1999). Because learning is a process of qualitative changes (Broeckmans, 1986) in which the person interprets events on the basis of existing knowledge, beliefs, and dispositions (Borko and Putnam,1996), looking at the learning process from the student teachers' perspectives seems the best method to gain in-depth information about how complex the learning was. Thus, a qualitative approach was employed in this study. Specifically, because I wanted to describe the process of the student teachers' planning and changes that occurred, case study seemed the most suitable approach.

Since the purpose of my study was to understand the learning process of the student teachers in planning lessons during their teaching practice, I took practical concerns into account in selecting the research site and the participants. As I was working at UUM as a teacher educator in the Department of Education, I was familiar with the context, including the structure and courses offered to the student teachers, thus for this reason

the student teachers from UUM were chosen as the participants. The selection of the participants in this study was determined by a purposive sampling method. 10 student teachers who fulfilled certain criteria (explained in Chapter Four) were selected as participants. I wanted to have as many participants as I could manage in order to seek understanding of their learning, but considering the time frame that I had was only ten weeks for data collection, I was limited in the number of students I could work with. I also learned from my initial study that dealing with and analysing qualitative data would require a considerable amount of time.

I used multiple methods of data gathering. The main method was the one-to-one interview. Each participant was interviewed three times. First, an initial interview was done with each participant at the beginning of their practicum. This was done to gather insights on their beliefs and knowledge, and to find out how they plan a lesson and what factors influenced their planning decisions. Second, I observed one of their lessons, and immediately after the lesson a post-lesson interview was held that focused on their thinking about events in the lesson such as the approach they took to teaching the subject and their reflection on the strengths and weaknesses of the lesson. Third, a final interview was done at the end of their practicum. I was aiming to see any differences in their beliefs, knowledge and the way they plan a lesson compared to the initial interview. To see what actually happened during their real planning process, all participants were asked to think aloud while planning. They were given a digital recorder to record their 'thinking aloud' session. Besides interviews and the thinking aloud protocol, data were also gathered through documents related to their planning. I collected the entire plan book in which student teachers wrote their lesson plans, the textbook which they used when planning and materials they prepared as teaching aids.

I also conducted interviews with the university supervisors and the cooperating teachers to gain additional data from different perspectives in order to corroborate the data and to help me to better understand the data from the student participants.

Qualitative data analysis was conducted in dealing with the huge amount of data collected by these different methods. The process of qualitative analysis was cyclical (Marshall & Rossman, 1999; Creswell, 2007) as it moved through several stages repeatedly before arriving at the interpretation stage. The process began by organizing the data and undertaking an initial familiarisation with the data, followed by generating categories, themes and identifying patterns in the data. As the volume of data was huge, I used NVivo Software as a tool for coding and I found it very helpful because I could easily retrieve all the data assigned to each code. To make meaning of the data, I pulled together all data assigned to each code to see the similarities and the differences within the categories and between the categories. During this process, data reduction was used to sharpen, sort, focus, discard, and organize data in such a way that 'final' conclusions could be drawn and verified (Miles & Huberman, 1994).

1.7 The Structure of the Thesis

This section describes the structure of the thesis. The first chapter outlines the purpose and background to the study, and briefly describes the theoretical context of the study, the practical context of the study and some methodological aspects of the study. Chapter Two draws on the relevant literature on teacher planning to inform the model which describes teacher planning, the function of teacher planning and the influences that affect teacher planning. Chapter Three considers teacher beliefs and teacher

knowledge as part of teachers' thought processes that have effects on student teachers' learning. This chapter develops a conceptual framework on student teachers' learning to plan a lesson which is based on beliefs and knowledge about planning as the internal factors which are intertwined with the external factors, described in Chapter Two. Chapter Four reports the decisions I made for the research design and methodology of the study. Chapters Five, Six, and Seven report on the findings of the study. Chapter Five first presents how student teachers plan their lessons. Chapter Six presents portraits of the student teachers to describe changes in their planning. Chapter Seven describes influences on student teachers' planning. Chapter Eight provides a discussion of the results and implications of the study. This includes discussion of the findings of this research in relation to the literature, the implications of the study, the limitations of the study and suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In Chapter One, I discussed the purpose of the study, the significance of the study and provided an overview of the study. Chapter Two discusses the literature on teacher planning and the discussion is structured around three main areas that are pertinent to this study. Since my study focuses on how student teachers learn to plan lessons during their practicum, I will consider literature on models of planning in the first section of this chapter. Through extensive review of the literature, I discover that the rational model has dominated descriptions of how teachers plan lessons. The rational model is also found to be widely prescribed to student teachers as a model of how to plan lessons. I have chosen to present models of planning in chronological order to provide a history of views on the rational model since it was first proposed by Tyler (1949). This history includes criticism of the model that leads to the development of an alternative model that builds upon the rational model of planning. At the end of this section I also discuss studies of student teachers' and novice teachers' lesson planning and studies of experienced teachers' lesson planning to see the nature of planning of these teachers and the contrasts between the groups.

The second section of Chapter Two discusses types and functions of planning. Although my focus is on how to plan lessons, the literature on types and functions of planning is related to my study as it may be useful in helping me during my analysis of student teachers' learning to plan, particularly their beliefs about the purpose of

planning lessons for the teachers. This section leads to the third section of the literature review; that is influences on planning. Research on student teachers', novice teachers' and experienced teachers' planning has revealed that teachers' planning is influenced or shaped by a variety of factors. Thus, discussion on the factors that influence teachers in their planning practice will enable me to understand how these factors have a significant impact on student teachers' planning.

2.1 Models of Planning

The literature that describes models of teacher planning or how teachers plan their lessons has been dominated by theory and prescriptive advice (Yinger, 1980, Clark & Yinger, 1979; Clark & Peterson, 1986). The dominant prescriptive model, and certainly the most well known, is the model proposed by Tyler (1949), also known as the separate end-means planning model (Zahorik, 1975), and the rational model (Yinger, 1980) This widely prescribed model consists of a sequence of four steps; which according to Tyler (1949) is fundamental for planning any education program. Tyler (1949) put forth a rationale for the four steps which must be followed in developing a plan for instruction;

1. Determine the purposes and objective of the planning. These educational objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed and tests and examinations are prepared. Tyler argued that the most useful form for stating objectives is to express them in terms which identify both the kind of behaviour to be developed in the student and the content or area of life in which this behaviour is to operate.

2. Select educational experiences that are likely to attain these objectives. Learning takes place through the experiences which the learner has; therefore, in planning we face the question of deciding on the particular educational experiences to be provided, since it is through these experiences that learning will take place and educational objectives will be attained. Learning takes place through the active behaviour of the student; it is what he/she does that he/she learns, not what the teacher does. Tyler outlined five general principles that apply to the selection of learning experiences; first, a student must have experiences that give him an opportunity to practise the kind of behaviour implied by the objective. Second, the learning experiences must be such that the student obtains satisfaction from carrying out the kind of behaviour implied by the objectives. Third, the reactions desired in the experience are within the range of possibility for the students involved. That is to say, the experiences should be appropriate to the student's present attainments, his/her predispositions, and the like. Fourth, there are many particular experiences that can be used to attain the same educational objectives. This means that the teacher has a wide range of creative possibility in planning particular work. Fifth, the same learning experience will usually bring about several outcomes.
3. In order for educational experiences to produce a cumulative effect, they must be so organized as to reinforce each other. Organization is thus seen as an important problem in curriculum development because it greatly influences the efficiency of instruction and the degree to which major educational changes are brought about in the learners. There are three major criteria to be met in building an effectively organized group of learning experiences. These are: continuity, sequence, and integration.

4. Evaluation procedures must be specified in order to find out how far the learning experiences are producing the desired results of the plan. The process of evaluation is essentially the process of determining to what extent the educational objectives are actually being realized by the program of curriculum and instruction. However, since educational objectives are essentially changes in human beings, that is, the objectives aimed at are to produce certain desirable changes in the behaviour patterns of the student, then evaluation is the process for determining the degree to which these changes in behaviour are actually taking place (Tyler, 1949).

Literature has documented that this prescriptive model, where defining instructional objectives must be done at the first stage of planning, has been a very widespread model of planning since proposed by Tyler (1949), and later elaborated by Taba (1962).

Taba (1962) emphasized that a curriculum usually contains a statement of aims and of specific objectives; it indicates some selection and organization of content; it either implies or manifests certain patterns of learning and teaching, whether because the objectives demand them or because the content organization requires them. Finally, it includes a program of evaluation of the outcomes. For Taba, if one conceives of curriculum development as a task requiring orderly thinking, one needs to examine both the order in which decisions are made and the way in which they are made to make sure that all the relevant considerations are brought to bear on these decisions. She then suggests that there is such an order and that pursuing it will result in a more thoughtfully planned and a more dynamically conceived curriculum. This order is: diagnosis of needs, formulation of objectives, selection of content, organization of

content, selection of learning experiences, organization of learning experiences, and determination of what to evaluate and of the ways and means of doing it. Taba emphasized that curricula are designed so that students may learn. Because the backgrounds of students vary, it is important to diagnose the gaps, deficiencies, and variations in these backgrounds. Diagnosis, then, is an important first step in determining what the curriculum should be for a given population. Formulation of clear and comprehensive objectives provides an essential platform for the curriculum. Taba emphasizes that the objectives determine what content is important and how it should be organized.

Wise (1976) refers to this method of instructional planning as "Planning by Objective", and "the dominant model" (John, 2006). This approach to planning, according to John (2006), has in fact been a pervasive feature of curriculum and lesson planning since the early 1950s, although it gained greater prominence during the curriculum and pedagogical reforms of the 1960s and 1970s. In fact, there is consensus among researchers that the rational model was introduced to student teachers to tell them how to plan lessons (John, 2006; Yinger, 1980; Shavelson & Stern, 1981; Placek, 1984; May, 1986; Floden & Klinzing,1990; Searcy and Maroney,1996; John, 1991a, John, 1991b; Kagan & Tippins, 1992, Clark and Yinger, 1987, McCutcheon, 1980), and thousands of educators have been trained in its use (Clark & Peterson, 1986).

The rational model, according to John (2006:487, speaking about the UK) maintained its popularity to introduce planning to student teachers for four reasons:

1. The student teachers need to know how to plan in a rational way before they can develop more complex lesson structures and become adept at juggling curricular elements.
2. The student teachers need to follow the model because the National Curriculum and various standards documents require them to do so. This suggests that students are being prepared for teaching as it appears to policy-makers.
3. The model and its associated formats can help to overcome the 'loose-coupling' that often exists between schools and higher education institutions.
4. The use of the rational planning model reinforces a sense of control. It is easier to manage, assess, and direct the process of teaching if all student teachers are required to plan according to the same procedure and format.

John's argument is consistent with Maroney and Searcy's (1996) that in order for beginning teachers to be effective in delivering instruction, they must first be aware of the components of effective classroom instruction, be presented with strategies and a format for planning effective instruction, and be offered many opportunities to practise this planning procedure.

Despite the popularity of the rational model in introducing student teachers to how to plan lessons, a growing body of empirical and theoretical literature has accumulated documenting the critique of this model. Criticisms of the rational model generally stem from the statement that the selection of objectives is a prerequisite for planning (McNeil, 1990). Decades ago, Wise (1976) examined the use of objectives in curriculum planning as the approach that may or may not do for someone planning instruction. Because the rational model represents planning as having two distinct

phases; first, one specifies objectives; second, one selects means for achieving the objectives. Hence, the apparent logic of the conception is intuitively appealing; means surely cannot be chosen before ends have been identified. Through observation of practice, Wise (1976) questioned the rational model, arguing that it is not easy to write specific objectives, and the attempt to do so constitutes a substantial burden on planners. Taken by itself, the task of specifying objectives diverts effort and impedes planning rather than facilitating it. Therefore, Wise indicated that the weakness of the rationale for specifying objectives, and the substantial cost of doing so in practice, suggest that the claim for Planning by Objectives is not as reasonable as it may seen.

Furthermore, Wise (1976) asked the question whether the instructional activity can be deduced from the objective. He argued that unfortunately it cannot, for there is no analytical relationship between an end and means to achieving it. As Planning by Objectives treats ends and means separately, therefore their connection is regarded as a strictly empirical matter. Wise argued that although an objective may seem to imply appropriate instructional activities, only a tryout can determine which activities are adequate and, of the adequate, which is best. So it is the task of evaluation, a later step in the model, to test whether there really is any connection between one's objective and one's chosen activity.

Many have reviewed the findings on teacher planning and noted that the prescriptive planning model is consistently not used in teachers' planning in school (Shavelson and Stern,1981; Clark & Lampert, 1986; Floden & Klinzing, 1990; Boydell, 1986; May, 1986; Calderhead, 1996; McCutcheon, 2002; John, 2006). These theoretical literatures show that researchers have often concluded that teachers' failure to follow the planning

model they were taught stems from a mismatch between that model and the complexities of classroom. This mismatch arises because teachers must maintain the flow of activity during a lesson or face behavioural management problems. Hence, teachers are faced first and foremost with deciding what activities will engage pupils during the lesson. In other words, the teacher must decide how to entertain the pupils while attending to the curriculum (Shavelson and Stern,1981).

As the literature informs us that teachers do not follow the prescriptive model in planning, May (1986) and Floden and Klinzing (1990) argue that past efforts to teach planning routines have been in some way unrealistic. According to May (1986) this is for several reasons:

1. Students lack the sophisticated knowledge base in subject matter, pedagogy and understanding of particular pupils essential to using the Tyler approach to planning effectively. Successful use of the dominant model implies that the planner is quite knowledgeable, experienced, and able to make such difficult curriculum decisions.
2. Life in classrooms is complex and exists within certain contexts and constraints. The ways in which people plan reflect not only a recognition of this complexity but a reduction of it in order to cope adequately. Although the steps of such a planning model seem logical, systematic, or rational, planning may be approached by neophytes or experienced teachers in ways that appear less systematic than that of the dominant model.
3. Personality factors or teaching-learning style preferences may lead teachers to approach planning differently, and this has little to do with the amount of classroom experience teachers have.

Therefore, Floden and Klinzing (1990) suggest that it is important to work on developing new ways of teaching planning routines, ways that will be better suited to practice and to teachers' working conditions. They concluded that perhaps the best teacher educators can do now is to help teachers revise the rational planning model so that it can be suited to practice without completely losing its desirable emphasis on the relationship between teaching aims and instructional choices.

McCutcheon (2002) commented that research has consistently revealed that experienced teachers do not develop or use written lesson plans when making decisions about what to teach and that their planning is not linear. He argued that apparently teachers, even those with only a few years of classroom experience, find that writing detailed lesson plans does not help them conceive lessons except when they are planning a lesson for the first time. McCutcheon (2002) argued that at most, a teacher may jot down an outline or list topics to be covered during the lesson. Thus, for the most part, teachers' mental planning seems more significant to them than the act of committing ideas to paper. Such a mental rehearsal of the lesson seems to be an integral part of their planning. McCutcheon (2002) concluded that teachers have in mind a general approach and sequence for the lesson. Therefore, they envision it in action and rehearse what they will say, what questions to ask, when to distribute which materials, what to assign for practice or evaluation purposes, what difficulties are likely to occur, and how long the lesson is likely to take.

Recently, John (2006) argued that the rational model does not take into account the contingencies of teaching. According to John (2006) plans constructed according to the

rational model may look fine on paper, but classrooms tend to be more uncertain places: time-pressures, organizational issues, attitudes, moods, emotions, and serendipity all impinge on the closed structures implied in the model. John's argument is that as means and ends are isolated as successive steps rather than being seen as part of the same situation, this can result in ends being seen as unchanging once their definition is complete, and only open to minor revisions once the teaching and learning process begins. Moreover, John noted that although the systems approach to planning and teaching is a powerful generic idea, it tells us very little about the substance of the particular activity we apply it to as it does not say enough about the uniqueness of teaching and learning. John argued that when the prescriptive model is used badly, such planning patterns can lead to a progressive disaggregation: teaching and learning are broken down into segments or key elements, which are then sub-divided into tasks, which are further broken down into behaviours and assessed by performance criteria. As a consequence, John concluded, opportunities for self-conscious reflectiveness are in danger of being lost as items of knowledge are parcelled together by well-written objectives.

Based upon the synthesis on research findings on how teachers plan lessons, several alternatives were proposed as a model of how to plan lessons. May (1986) developed a practical model of how experienced teachers plan. May argued that even though content may be a starting point for many teachers, activities and the flow of instruction are central to the model, and there is a simultaneous interplay of all the curriculum elements. Even in the preactive stage of planning, the interplay of elements is noticeable. May (1986:8) gave an example as; 'I want to do a unit on pollution, well, pupils are expected to know about this, and I have some new neat resources I can use.

I'm going to pick some activities that I think my kids will like and can handle'. According to May (1986), these seemingly simple thoughts are complex considerations related to content, standardized curriculum expectations, available resources and materials, and an awareness of particular pupils' interests and abilities.

May (1986) claims that the practical planning model is not linear or step-by-step. It is descriptive of what we know, rather than prescriptive as to how we should proceed in the matter of teaching planning. Several elements are considered simultaneously by teachers in preactive, interactive, and postactive phases of planning. In this model, May argued, even though content may be a starting point for many teachers, activities and the flow of instruction are central to the model, and there is a simultaneous interplay of all the curriculum elements.

When summarizing the research on teacher planning, Calderhead (1996) highlighted six features of the process of teacher planning. These features are; planning occurs at different levels, planning is mostly informal, planning is creative, planning is knowledge based, planning must allow flexibility, and planning occurs within a practical and ideological context. Calderhead argues that rational planning models tend to emphasize the logical deductive processes involved in translating aims and objectives into classroom activities. He added that studies of the thinking processes of teachers while planning indicate that planning has a problem-finding as well as problem-solving phase. Therefore, planning involves teachers considering alternative ways of looking at situations, identifying problems to analyse and follow-up.

In their extensive review of teacher planning research, Clark and Peterson (1986) noted that although there is a reasonable agreement that the rational planning model does not describe the planning behaviour of experienced teachers, yet it is not clear whether the several styles and models of planning described in the research findings are functionally superior to the rational model. Clark and Peterson argue that it may be that training novice teachers in the use of a version of the rational model provides them with an appropriate foundation for developing a planning style compatible with their own personal characteristics and with the task environments in which they must teach.

Recently, John (2006) proposed a dialogical model of lesson planning where problem-level processes are emphasized. He claims that this model offers a more balanced approach in that it stresses the importance of representing the planning problem (the process) as a vital pre-cursor to the construction of the product (the plan). John argues that this model does not privilege a fixed order, and the process of planning it engenders would automatically involve a number of sub-processes. In this model, the main core is fixed by aims, objectives, and goals of the plan. John explains that a number of satellite components rotate around this central element. These satellites represent the foundational aspects of planning, and attached to each are a series of nodes that further sub-divide the key aspects. In addition, these nodes and satellites are illustrative and can be changed or developed according to context.

In terms of use, John explains that the model may change as a student teacher moves through the various stages of a programme of initial training. Whatever the starting point, there is a constant iterative pattern of shuttling back and forth between each component as the student teacher explores, frames, checks, and re-frames where

appropriate. Gradually, as more and more information becomes available – the size of the class, the ability-range, the time of the day, the availability of resources – a more concrete plan emerges. John emphasizes that this process encourages a constant interaction with the context and its entities, and underlines the point that teaching, learning, resources, tasks, tools, context, and objectives are inter-connected rather than separated.

John (2006) also suggests that his proposed model can be applied at different levels of complexity across the various phases associated with student teachers' learning. During the early phase of their professional learning, student teachers need to know what a lesson plan actually is, as well as understanding the crucial nexus that exists between planning and teaching. Here, the dialogical model can serve as a powerful descriptive tool to acculturate student teachers into the complexities of the planning process. He describes how in the early part of their training, student teachers need concrete, even prosaic models of planning to guide their thinking. Here, the model can help them understand the crucial connection between classroom management, subject content, and the curriculum.

When the practical phase begins, the school-based mentor becomes more prominent as the novices move through a form of 'legitimate peripheral participation'. John (2006) emphasizes that the student teachers should be scaffolded through a dialogue with real teaching situations. It is precisely at this point that joint planning can help the novice gain access to the expert knowledge of the experienced teacher. The model could then act as a heuristic, guiding the student teacher to follow the thinking of the experienced teacher as the lesson structure emerges.

In summary, the literature presented in this section acknowledges that the prescriptive (rational) model proposed by Tyler (1949) is widely employed for teaching student teachers how to plan lessons. The rational model consists of a sequence of four steps; which begins with specifying objectives, selecting learning activities, organizing learning activities and specifying evaluation procedures. Despite its popularity, criticism of the rational model has arisen in the literature, generally stemming from the statement that selection of learning objectives is a prerequisite for planning, and teacher failure to follow the planning model because of a mismatch between the model and the complexities of classroom. I have also reviewed alternatives models of how to plan lessons. These models were proposed as a synthesis from the research findings on how experienced teachers plan lessons. With regards to this study, although I am not intending to test any prescriptive model, yet, the prescriptive models presented above contribute to the theoretical input to my study on teacher planning. Next, I will discuss the studies that have been conducted on student teachers' and novices teachers' planning processes.

2.2 Studies of Student Teachers' and Novice Teachers' Planning Process

To my knowledge, there have been very few studies conducted to examine the process of planning among student teachers. However, these few studies have contributed to the literature to reveal how student teachers plan lessons, thus, it is important to draw from them an understanding of how the process work.

Broeckmans (1986) examined short term developments in student teachers' lesson planning and created a model of the process involved in their planning actions. By undertaking a descriptive study, his aims were to describe the psychological structure of student teachers' lesson planning and interactive teaching; and to identify types of development in this structure. Eighteen first-year students of three training colleges for primary-school teachers were followed during the practice lessons that are part of the weekly schedule in this type of teacher education. All lessons studied were in grades three or four. Lesson types were diverse; the most frequent type was reading. Both observations and self-reports were used. Observations of lesson planning consisted of all the notes made by the student teachers during the planning period (written lesson plans, provisional versions thereof, incidental notes, 'cribs' for use while teaching, and the like). The students also collected all the materials chosen and prepared for the lesson, as well as all the documents they consulted (manuals, curricula, textbooks).

Broeckmans (1986) discovered that in planning lessons, the student teachers were involved in a clearly defined set of steps. Inspection, interpretation, and appraisal of the lesson assignment constituted the first step for these student teachers' lesson planning. This involved the process of understanding the task, identifying the subject-matter as well as the possible teaching and learning activities for the lesson. This led to the second step of planning, which is the exploration of the planning. Broeckmans listed five actions that were taken by the students within this step. Here, the student teachers identified and gathered information related to planning the subject, and determined the time and the planning procedure. This was followed by deciding and studying the content of the lesson. After they had mastered the content of the lesson, they started to identify activities for the lesson. Here, they tried to determine, provisionally and in

general, which topics would be covered successively and which teaching and learning activities would be performed. This led to the final action in this step, that is, exploring ways of designing the activities concretely. The student teachers made an attempt to identify details of the content to be covered, grouping the pupils, materials and exercises for the lesson.

According to Broeckmans, the exploration step was then followed by the most comprehensive step in planning, that is, planning the activities in more detail. The student teachers determined very thoroughly the topic, the activities, the sequence of the activities and the detail of the materials for the lesson, such as thinking about the exact words that would be used in the lesson and things to be written on the board.

Broeckmans's study also indicates that the student teachers worked on filling out the planning form only after they had come up with a provisional plan. The action of filling out the planning form was followed by a check-up of the result of the planning in a narrower sense, as represented by the written lesson plan. The student teachers usually preferred to ask the cooperating teacher to check their written lesson plans. Checking the written lesson plans provided a controlling function as well as providing guidance about revision of the lesson plan.

The final step in student teachers' planning, according to Broeckmans (1986) was the direct preparation of interactive teaching. This step had an orientation function and included a number of actions that are needed to enable the student teachers to teach. It included memorizing the activities or practising the teaching behaviour, preparing a guide, or 'crib' to use while teaching, preparing the planned materials for teaching,

further specifying the lesson plan, for example, by determining precisely what to say and what to do during classroom interaction. Broeckmans found that all sorts of 'resolutions' regarding the lesson were made at this stage. He gives examples such as 'to be more friendly' as one of the resolutions for these student teachers. Broeckmans concluded that the steps in planning lessons were built on each other; each of them orients towards the following one and has a controlling function towards the preceding one.

In a study conducted by John (1991a) on five PGCE student teachers at the University of Oxford, the results show that the planning of these student teachers also followed a staged process. Using a qualitative research method, data were gathered through open-ended interviews, thinking aloud planning and document observation in three distinct phases. The first phase refers to the phase where the student teacher had limited experience of teaching either theoretically or practically. The second phase refers to the student teacher's first full school based weeks, the third phase refers to the end of the first period of school based work and the final phase took place at the end of school based placement.

John noted the first stage of planning involved consideration of the topic and possible activities, resources and strategies that could be best employed to teach it successfully. This was followed by a second more formal stage which, according to John, involved the ordering and structuring of the work carried out in the previous stage and usually took place much closer to the actual teaching time of the topic; usually within 24 hours compared with often over a week spent on stage one. At this stage, the student teacher considered appropriate or possible approaches to the lesson while simultaneously

searching for and thinking about the construction of relevant resources. John described how, within this stage, the key concepts and ideas around the topic were developed in relation to the pupils. The pupils' ability, the length of the lesson and the student teacher's understanding of the lesson were the variables that were involved in planning.

Finally, John described the third stage of planning which involves the production of a usable classroom version of the plan, which often served as an aide memoire during inter-active teaching. This often took the form of a check list of the main points, events and activities for the lesson. John concluded that the third stage also represents the formal writing up of the plan which included any final revisions or changes that had to be made.

Beyerbach (1988) used concept mapping to explore and explain the growth of student teachers' knowledge in relation to planning. Her study focuses on both the form and content of preservice teachers' technical vocabulary related to teacher planning. In her study, 52 students at three levels of the Syracuse Univesity preservice teacher education program constructed concept maps for the topic, teacher planning, at the beginning and end of their semester-long courses. Concept mapping, a technique of graphically representing concepts and their hierarchical interrelationships along two dimensions, is one approach to examining changes in content and organization of prospective teachers' thinking. In constructing a concept map, students generate terms they associate with the topic, thereby revealing the terms contained within their technical vocabulary. Beyerbach (1988) described changes in students' thinking about teacher planning. She found that often students' maps shifted in content as classroom teaching came closer.

Also she found that very few students organized their maps around the Tyler model of planning.

Kagan and Tippins (1992) asked 12 student teachers (five elementary, seven secondary teachers of English and history) in an undergraduate teacher education program at the University of Georgia to modify the traditional linear format according to their needs and to document their experimentation in logs during a semester of student teaching. According to Kagan and Tippins (1992), many teacher educators, assuming that novices need to write lesson plans, have advocated simplified linear formats which include objectives, contents, procedure, materials and evaluation, however, none of these models was inferred from novices' own experiences in classrooms. Therefore, they conducted a study to compare lesson plans used by elementary and secondary teachers to find out what lesson plan formats were most useful to novices.

The findings indicate that the evolution of the elementary teachers' lesson plan proceeded in an opposite direction from the development of the secondary teachers' plan. They described how the secondary lesson plans became more detailed as the semester progressed, whereas the elementary plans became briefer and less detailed. Kagan and Tippins (1992) noted that the elementary teachers were distinctly non-content-oriented, and focused on activities and the need to interrelate lessons across subject. Regarding the written plan, the elementary teachers perceived it as useful for initial organization only; once materials and ideas were assembled, the teachers preferred to interact spontaneously with their pupils.

Kagan and Tippins (1992) concluded that the traditional lesson plan format was counterproductive for the student teachers, albeit for different reasons. Among the secondary teachers, the format promoted an overuse of written tests to evaluate pupil learning and precluded improvisation. It also facilitated an information-giving model of teaching because lesson plans served as convenient repositories of lecture notes taken from textbooks, particularly of history lessons. Among the elementary teachers, the traditional format posed a serious obstacle to relating lessons across subjects. Preplanned scripts proved particularly annoying to these novices. The teachers also found the evaluation section of a lesson plan problematic since they assumed that evaluation meant written tests, and they preferred informal means of assessment.

Westerman (1991) conducted a study to compare expert with novice teacher decision making, before, during, and after teaching. The novices were five student teachers, and the experts were their five cooperating teachers in a suburban elementary school. Audiotaped planning interviews, videotapes of lessons, stimulated recall interviews, post-teaching interviews, delayed self-reports, and relevant printed materials were analyzed using the constant comparative method. In terms of the planning process, the findings indicate that the expert teachers performed a cognitive analysis of each learning task and thought about learning from the perspective of the pupils during planning. In contrast, Westerman described how novice teachers did not have enough knowledge about the overall curriculum nor sufficient awareness of pupils' characteristics to allow them to perform an adequate cognitive analysis of the lessons they were planning. Novices rarely mentioned integrating the present lesson with prior knowledge as the experts had during their preactive teaching. Instead, when planning lessons, the novices relied on the one thing they knew about and felt accountable for,

that is, the curriculum objectives for their grade as prescribed by the county public school system.

Westerman found that novice teachers did not have a well-developed theory of instruction nor an overview of student learning in a subject matter content area and therefore planned each lesson as a discrete entity based on prescribed objectives. Westerman concluded that novices sometimes planned to teach sub-skills without an understanding of how these sub-skills fit together. Furthermore, the novices indicated that they did not respond to student cues because their lessons were driven by wanting to accomplish the objectives.

Westerman (1991) proposed a model of decision making by novices, which according to her, is more linear than dynamic when compared with the planning of experienced teachers. She described how novices attend to a limited number of factors in the teaching domain and know few teaching strategies or alternatives when making decisions. The components of the model are not as information-rich as those of the experts. Furthermore, she described how the information components that novices do have are not interconnected to other components. For example, the novices' beliefs are not connected to their theoretical knowledge of teaching. Thus, Westerman suggests that novice teachers should be taught to plan lessons using an overview of the curriculum rather than to simply consider the objectives for specific lesson they are preparing to teach. They should be taught to assess the prior learning of their students and then build lessons that help students integrate new information with old knowledge.

Mutton, Burn and Hagger (2008) conducted a longitudinal study of beginning teachers in England, following them as student teachers on a PGCE course and subsequently through the first and second years of their teaching career to examine the developing expertise of beginning teachers in planning lessons. Thirty six student teachers from two well established school/university courses were involved in the study, 12 from each of three core subjects within the National Curriculum, that is English, mathematics and science. Data were gathered through classroom observation and semi-structured interview.

In relation to the process of planning, they described how some of the teachers in their study did tend to avoid any linear model since the teacher believed that their initial ideas for a lesson were enough to be able to 'make a bridge' between teacher and pupils. However, they indicated that many teachers continued to plan within a relatively structured model but developed the ability to be flexible and anticipate the way in which the plan might need to take into account the unpredictability of the classroom itself. They concluded that two key features emerge strongly in relation to beginning teachers' learning, that is, planning is essentially knowledge-based and must allow for flexibility. In terms of planning being knowledge based, according to Mutton et al. (2008) it is clear that the student teachers in particular lack the very knowledge that experienced teachers have – both the craft knowledge and knowledge of pupils they are teaching and this result is consistent with those of Westerman (1991).

In a one year longitudinal case study, Bullough (1987) studied one novice teacher planning and enacting lessons during the course of the first year of teaching. The teacher taught English, Social Studies and reading to seventh grade core at Rocky

Mountain Junior High School. The English curriculum was based on the text book, while the reading curriculum was partially organized around a small group of novels which the teachers circulated. There was no prescribed curriculum in the social studies area although there was a list of topics that were to be covered at some point during the year.

While planning for the first few weeks of teaching, the teacher thought little about instructional goals. Moreover, in English, objectives were contained in the required textbook. But, even in social studies where she enjoyed a great deal of autonomy, she thought little about the objectives. Apparently, she did not consider the establishment of goals as a central part of teaching unlike selecting activities and organizing materials; for the most part, goals were to be set elsewhere.

Bullough (1987) indicated that models of planning reflect conceptions of teaching. He insists that if teacher educators are genuinely committed to a Tylerian approach to planning, which he says is doubtful, they should begin working to re-create the institutionalized role of the teacher so that such an approach to planning becomes functional and is valued. Bullough concluded that planning is a collaborative, dialogical, non-sequential but clearly logical, form of problem solving rather than something done either by experts or in the isolation of one's own classroom during a planning period. In fact, regardless of what experts do, teachers will reform the curriculum in their own image.

In summary, the literature presented above clearly describes how student teachers and novice teachers plan lessons. As this literature review reveals, the student teachers'

planning process appeared as a staged process. Student teachers and novice teachers were found to have limited classroom knowledge. Next I will discuss studies of how experienced teachers plan their lessons.

2.3 Studies of the Experienced Teachers' Planning Process

Numerous studies have been conducted that describe how experienced teachers plan lessons. Although my study was to understand student teachers' planning, yet it is important to draw from the literature on experienced teachers' planning processes as an attempt to understand the nature of their planning as compared to the studies on student teachers' planning. In addition, models that describe how teachers plan lesson that are derived empirically are drawn from research on experienced teachers' planning.

Empirical studies on experienced teachers' planning have been conducted only since 1970 when researchers began to examine how teachers plan lessons and compare this to the model prescribed to them (Clark & Peterson, 1986). The study conducted by Taylor (1970) to investigate how British secondary school teachers plan their courses discovered that the most common concern for teachers in planning was the pupil, followed by the subject matter, goals and teaching materials. Data were gathered through multiple methods of data collection such as group discussions with teachers, a questionnaire distributed to 261 teachers and analysis of the course. Taylor indicates that in course planning, the teacher begins with the context of teaching, followed by considering the learning situations and pupils, and then deciding the purpose of the course.

Zahorik (1975) was another researcher who pioneered research on teacher planning by asking 194 teachers to list in writing the decisions that they made prior to teaching. The purpose of his study was to determine what kinds of plans teachers make prior to the time they enter the classroom and begin to teach a group of students. He classified the teachers' decisions into eight categories:

1. Objectives: decisions about goals, aims, outcomes, or purposes.
2. Content: decisions about the nature of the subject matter to be taught, such as identification of facts, events, or other aspects.
3. Activities: decisions about the type of learning activity or experience to be used.
4. Materials: decisions about resources to be used such as books, films, field trip sites, and guest speakers.
5. Diagnosis: decisions about students' readiness for the particular lesson or session. This would include students' previous learning as well as their ability and interests.
6. Evaluation: decisions about how to determine the effectiveness of the lesson or session.
7. Instruction: decisions about teacher verbal and nonverbal behaviours and teaching strategies to be used.
8. Organization: decisions about how to arrange the teaching-learning environment such as grouping of students, use of space, and use of time.

Zahorik suggests several conclusions that can be stated for this particular group of teachers concerning planning decisions:

1. objectives are not a particularly important planning decision in terms of quantity of use.

2. activities are an important planning decision in terms of quantity of use, but they are almost never the first decision made. The activities that are used are almost always specific activities. A specific activity refers to one designed to achieve a predetermined objective.
3. content is one of the most important planning decisions in terms of quantity of use.
4. organization and instruction are particularly unimportant decisions in terms of quantity of use.

Zahorik concluded that teachers' decisions on planning do not always follow linearly from a specification of objectives; in fact, objectives are not particularly important. His study indicates that neither the separate-ends-means model, nor the integrated ends-means model is being used by the teachers during planning. He suggests that the separate-end-means model may be more of a theoretical formulation than a functioning reality.

Following Zahorik's work, more researchers have accumulated evidence about teachers' decisions in their preactive teaching. Peterson, Marx and Clark (1978) investigated individual differences in teacher planning and the relationship of teacher planning to teacher behaviour and student achievement. Twelve experienced elementary school teachers and 288 junior high students were recruited and paid to participate in this study. The teachers taught a social studies lesson, and the students were randomly formed into three groups. Teachers were provided with unfamiliar materials and were given 90 minutes to think aloud and plan a lesson. In terms of planning process,

Peterson, Marx and Clark (1978) found that teachers devoted little planning time to objectives and used more time on content to be taught followed by instructional process.

Yinger (1980) through his five-month field study created a theoretical model of the process of teacher planning. This model drew on his observations, interview data and thinking aloud planning of one teacher who taught a combined first-and second-grade classr in a Michigan school district. This process model has two major purposes. The first purpose is to describe and speculate about the components of teacher planning and their interrelationships. The second purpose is to lay a basis for further theory and research on teacher planning. Yinger described the focus of the process model as the individual, preactive, deliberate information-processing involved in planning, from an initial idea to its execution in the classroom. He claimed that this model deviates from traditional models of planning chiefly in its emphasis on process of discovery and design rather than process of choice.

Yinger viewed teacher planning as taking place in three stages; problem-finding, problem formulation and implementation, evaluation, and routinization. He described problem-finding as the process by which one becomes aware of a problem that needs to be solved. In teacher planning, problem-finding is the discovery of a potential instructional idea that requires further planning and elaboration. He added that during this early stage, the teacher does not know whether or how this idea can be used in the classroom. Because the teacher in Yinger's study focused on activities in her instruction, the problems that surfaced in teacher problem-finding were usually ideas for activities. Yinger portrayed the basic problem-finding process as an interaction among four components: the planning dilemma confronting the teacher, the teacher's

knowledge and experience, the teaching goals, and the teaching materials. The planning dilemma is a direct outgrowth of the general teaching dilemma. He noted that knowledge and experience as portrayed in this model have to do with the ways in which the teacher has learned to perceive problem situations, and the knowledge and the methods the teacher can draw from his or her memory. During problem-finding, knowledge and experience provide the teacher with a repertoire of ideas that may serve as a basis for the initial conception of the problem. Teaching goal conceptions are the teacher's anticipatory notions of effective teaching for a specific group of students. These general goal conceptions include conscious, explicit statements of cognitive and affective outcomes as well as vague intuitions, dispositions, or attitudes toward teaching that a teacher might have. The fourth major component of problem-finding is materials. This component includes not only teaching materials provided by the school or the district, but also any source of information that might be used in the classroom.

Yinger (1980) emphasized that most planning time and energy are invested in stage 2, which he called the design stage. Formulation of the problem is an essential element in problem-solving. Before a problem can be solved, it must be discovered. Then it must be worked into a manageable form. The primary mechanism for formulating and solving problems is called the design cycle. The dominant feature of the design cycle is its structure. The planning problem is developed and solved as it passes through three phases: elaboration, investigation, and adaptation. As a problem progresses through the three phases, two major aspects of the thought process are involved: knowledge and experience and total problem conception.

Yinger claimed the design cycle has two other important general features. First, the process is serial in nature: only one problem is handled at a time; elaboration, investigation, and adaptation continue until the problem is 'solved' or until it is rejected as unsolvable. Second, the process occurs over a period of time and the length of the cycle may vary. Yinger described the elaboration phase as the construction phase of the design cycle and its function is to supply detail to the total problem conception or to sub-problems. The next part of the process is the investigation phase, which provides information on the workability of the solution developed during elaboration. During investigation, the teacher relies chiefly on two components of thought: the knowledge and the methods accumulated through experience and the total problem conception. The result of the investigation phase, whether through trying out or through some other method, provides information about the effectiveness of the previous elaboration and new knowledge about the total planning problem. Next comes the adaptation phase; a phase of integration and transformation. The main purpose of adaptation is to develop the total problem conception, which in turn, directs further elaboration.

According to Yinger, the last stage of the model involves implementation, evaluation, and routinization of the plan. Yinger emphasized that although this stage is not preactive planning, it provides the final link in the instructional planning process and for this reason merits discussion. He claimed that this stage is important because it reflects the tentative nature of the products of the design process, for at this stage the solution is tried out and evaluated, and second, the results of this stage add to the repertoire of knowledge and experience, which, in turn, become an important part of subsequent planning. According to Yinger, the planning cycle is continuous, and there are no sharp

boundaries between planning, teaching and reflection. Jackson (1968) refers to this process as the preactive, interactive and evaluative phases of the teaching process.

Yinger (1980) concluded that in planning lessons activities were the teacher's most important and most frequent concern. Content and materials were features that helped define an activity; thus activities were not separate from subject matter. He found that behavioural objectives were not a central part of teacher planning. Objectives set by the school district for each subject matter area were the objectives most often encountered by the teacher, and the teacher used them as a guide or framework for making decisions about activities. In the planning by the teacher reported in this study, there was little evidence to support the rational-choice model of planning. In his study, planning was a purposeful activity, guided by teaching goal conceptions; no provision was made for planning based on behavioural objectives or previously stated instructional goals. Attention to pupils' background characteristics was evident in his study – not in the plans themselves, but in the planning process. Pupils' characteristics were an important source of information at all levels of planning.

Clark and Peterson (1986) noted that Yinger's cyclical model of planning was a significant contribution to conceptualizing the planning process of the teacher. This assertion confirmed the study by Placek (1984) on four physical education teachers planning lessons. The teachers were observed over an intensive two week period for data collection which consisted of observations, interviews, and excerpts from documents and records. Placek found that the teachers did not use the rational planning model, but rather employed informal planning habits that typically focused on activities.

He added that the teachers focused on what pupils would do rather than on objectives or what the pupils could learn.

Placek's finding was then confirmed by Sardo-Brown (1988) in her case study descriptions of 12 middle-school teachers' planning decisions. Using multiple methods of data collection, such as questionnaires, interviews, think aloud planning and analysis of written plans, Sardo-Brown indicated that Yinger's three stage process model provides a better description of planning than the rational model because teachers in her study were found focusing on activities rather than on objectives. She claimed that the steps in the rational model offer an inaccurate description of the way in which these middle school teachers planned for instruction. The teachers' first considerations in planning were what instructional activities to use and how these would fit with curriculum guides, textbook content, competency requirements, and pupils' ability and interest. However, according to Sardo-Brown (1988), elements of the rational planning model were present, since teachers thought about objectives that were stated in curriculum guides, texts, and competency lists.

In her later investigation, Sardo-Brown (1990) asked 33 experienced teachers who taught in the same large urban school district located in a Midwestern city of the USA about their planning practices. She noted that teachers in this school district were required to plan according to the Madeline Hunter planning model, which is an elaboration of Tyler's rational model and consists of a seven step planning procedure. The seven steps are (a) establish focus to arose student interest, (b) set objectives, (c) give input or information, (d) model the information, (e) monitor and adjust instruction, (f) provide guided practice, and (g) assign independent practice. These teachers were

asked to complete an open-ended questionnaire in which they described their own instructional decision-making process. This was followed by a follow-up interview, conducted to ask for clarification of responses given in questionnaires. Sardo-Brown indicated that the teachers reported using this planning model but in a more flexible manner than prescribed, which allowed for wide ranges in pupils' ability and interruptions in the school schedule. Perhaps, according to Sardo-Brown, so many teachers planned with the objectives in mind because of the district requirement to plan according to the model imposed on them. Although these teachers seemed driven by objectives in planning instruction, they did not report that they originally penned these objectives; instead the objectives were derived principally from district curriculum guides.

McCutcheon (1980) provided a different perspective on the planning process of the teacher. In his study of teacher planning by 12 elementary school teachers in Virginia, he found that the richest form of teachers' planning was the complex mental dialogue, the reflective thinking that many engaged in before writing plans or teaching a lesson. Sometimes the result of mental planning was sketchily outlined in planbooks, but much of it never appeared on paper. He described how part of the mental dialogue resembled a rehearsal of the lesson, an envisioning of what would happen, and also a reflection on what had happened previously during the year or what had happened in other years when a similar lesson was taught. Many teachers reported that they engaged in a mental dialogue almost continuously at odd moments during the day. McCutcheon gave the examples that while driving home from school, or standing in the shower in the morning, or walking down the aisles in the grocery store, the teacher might reflect on the past and plan for the future. Teachers say that they take school home with them and

envy the taxi drivers and the plumbers of the world. When the teachers 'take school home,' they are reflecting on what happened that day and what to do the next day or next year.

According to McCutcheon (1980), mental planning is probably the part of teaching that has the potential for being the most professional activity of teaching, for it gives teachers the opportunity to relate theoretical knowledge to particular cases. During mental planning, a teacher can relate what he or she knows about issues (such as how children learn) to the unique problems that particular children face as well as to the regulations of a particular school and customary ways of doing things there. Teachers may consider mental planning to be subconscious because educational theorists have not recognized reflective thinking as a form of planning. Mental planning is a practical activity of many teachers, even though they have not heard it discussed in education courses. Because mental planning is not recognized by theoreticians and teacher educators as an important and legitimate part of planning, teachers and administrators may not recognize mental planning as an important, legitimate professional activity.

McCutcheon (1980) concluded that teachers do not follow the objectives first model in their planning process. It appeared that teachers' planning involved a complex, simultaneous juggling of much information about children, subject matter, school practices, and policies. The scope and the sequence of lessons are usually derived from textbooks. Some teachers base the sequence on experiences in a classroom as they build on the past and intertwine it with present activities.

A later investigation of the process of planning by McCutcheon and Milner (2002) related to one secondary school English teacher, who has 25 years experience in teaching and taught a senior level elective, semester-long course in British literature at Channington High School, Ohio. This study provided a different description of planning compared to the prior research 20 years before. The teacher in this research was interested in technology, used the school's reel-to-reel videotape machine, and gained the reputation of being a 'techie'. Fifteen years ago, the journalism teacher asked him if he was interested in broadcast journalism. He built a television studio at the school, and they team-taught a broadcast journalism course.

McCutchen and Milner (2002) found that during the first time the teacher in this study thought about the course he taught, he looked at the way the previous teacher of the course had organized it, but he rejected that organization because in his view it centred too much on the textbook. Hence, he began planning by selecting literature meeting several criteria. First, it had to be literature he himself liked, or literature he knew; second it had a theme that students could link to other pieces of literature, and third; whether it was available on the Web so he would be able to transfer it to his course materials easily. Other than planning for pacing and sequencing purposes, the teacher does not do short-term lesson planning because of his extensive long-range planning; he does not think lesson planning would be helpful. Concerning pacing, for instance, the teacher recalls a few years ago when he had students make brief animation videotapes about selected readings. Although some students prospered greatly, particularly in terms of self-esteem, by the end of the project's second week he realized the assignment was too lengthy. While they did complete it, he did not incorporate it in his subsequent plans because it consumed too much time, given the total amount of time he had for the

course. This is a clear case where his post-active reflections about this assisted him with subsequent pre-active planning. The teacher in this study thinks that too much planning restricts the flow of discussion and exploration. He further desires to integrate technology into the curriculum so students can learn about technology in his course rather than through separate coursework.

McCutcheon and Milner (2002) confirmed the previous work (McCutcheon, 1980) that the teacher in this study does not plan by objectives, rather it was a highly intellectual endeavour focusing on the curriculum of the entire course. McCutcheon and Milner (2002) refer to Shulman's (1986) work about pedagogical content knowledge, saying that this teacher understands the content at a very deep level and how to impart the content effectively using technology in the presence of technology in today's classroom.

Maroney and Searcy (1996) confirmed the findings of the previous studies in teacher planning when they found that the majority of their sample of experienced special needs teachers did not use any lesson planning format designed for experienced teachers, nor one suggested in preservice teacher training while planning lessons. They also found results consistent with those of McCutcheon (1980). Maroney and Searcy conducted a survey of 207 teachers who were selected from a computer-generated, randomized list of special education teachers in Iowa. They found that mental planning was identified as the most important and largest portion of all planning done by the teachers.

So (1997) continued this line of inquiry into teacher planning in Hong Kong by interviewing ten female primary science teachers with 2-3 years experience of teaching. Teachers were asked to plan their primary science lessons as they normally did before

the study. During the interview, teachers were asked questions concerning how they planned a lesson. The study found that pupils, content to be taught, learning activities, setting in which the teaching is to take place, teaching approaches, evaluation, and belief in teaching were the main concerns of the teachers when they planned a lesson. She concluded that teacher planning is the process that teachers engage in prior to classroom interactions, as well as reflections coming from the previous engagement in the classroom interactions which may guide their future planning.

Sanchez and Valcarcel (1999) carried out a study on teacher planning among 27 secondary school science teachers in Spain. They attempted to study the views and practices of a group of science teachers in planning teaching units or individual lessons. They analyzed what the teachers do as they plan their classes, what references they use, what elements and aspects they bear in mind, and how they take decisions as to what is most important. In addition they analysed what the teachers think about their planning, how they evaluate it, and how they assess its success in class.

Data were gathered using structured interviews. This study found that most teachers begin by thinking of the content to be taught and then choose activities such as problems, exercises, etc. For this, the students' textbook is the principal reference, although most also consult other books either because they do not totally agree with the textbook or because they want more information. According to Sanchez and Valcarcel (1999), the content was the most important point the teacher considered when planning. All teachers claimed to take the students into account at some time during the preparation process even though they only considered general aspects such as level, age, and general knowledge of the subject in question. Sanchez and Valcarcel concluded

that the process the teachers engaged in was not a linear process in which decisions are made in a certain order. Rather the teachers' thought processes were interrelated.

Milner (2003) conducted a case study of an African American teacher's decision making as she planned and enacted lessons. This study concentrated on one teacher who had been teaching for 25 years and was described as energetic and passionate. Over a five-month period, data was gathered through observation of the teacher's classes, and structured interviews. Using an analytic inductive approach in analysing the data, Milner developed thematic categories: long-range planning, short-range planning, culturally and racially reflective planning, and planning for racial and cultural awareness.

Milner found that the teacher engaged in both long-and short-range planning, but the most meaningful planning seemed to occur as a result of the teacher's reflections during short-range planning, as the teacher considered matters of interest to the students. The teacher deeply understood the rationales and philosophies related to why she taught what she did, and her teaching was greatly affected by this. It appears that when teachers are committed to certain issues and when they had planned the lessons, the enactment of the lessons that follow may be more effective. His findings offer a different perspective on teacher planning, teacher knowledge and teacher thinking. Milner highlights a teacher's cultural comprehensive knowledge and self-reflective planning. His study builds on the more general knowledge base on teacher planning by focusing on the pervasive issues of culture, gender, and race. This research attempts to expand and build on the notion of practical knowledge to more specifically focus on a teacher's cultural comprehensive knowledge as evidenced in the planning process.

In summary, the literature in this section shows that experienced teachers do not plan as prescribed by the rational model, as they focus more on the pupils, content, materials and activities, rather than the learning objectives. Because much of the literature focuses on experienced teacher planning, this study builds on this body of literature to understand the nature of experienced teachers' planning processes. This may lead to an understanding of the nature of the process that student teachers are being expected to engage in to plan successfully.

2.4 Types and Functions of Planning

Many researchers have indicated that teachers engage in five different types of planning; yearly, term, unit, weekly, and daily (Clark & Yinger, 1987). Among the five different types of planning, unit planning was most often identified as the most important type of planning, followed by weekly and daily planning (Clark & Yinger, 1987). Sardo-Brown (1988) confirmed that teachers are involved in yearly, unit, weekly and daily planning. Venn and McCollum (2002) also reported that teachers engage in yearly, unit, weekly and daily planning, but term planning was the least frequently reported.

Classroom interaction, or what the teacher does vis-à-vis students according to Jackson (1968) is interactive teaching, and what the teacher does at other times – in an empty classroom, could be called preactive teaching. Preactive teaching takes place before and after school, during recess, and at other times when the teacher is alone in the classroom (Yinger, 1979). Of the many things teacher do in the 'empty classroom' planning is one of the most important (Yinger, 1980). The most obvious function of

teacher planning is to transform and modify the curriculum to fit the unique circumstances of each teaching situation (Clark & Yinger, 1987). Teachers reported that they plan in order to meet immediate personal needs (e.g. to reduce uncertainty and anxiety, to find a sense of direction, confidence, and security), as a means to the end of instruction (e.g. to learn the material, to collect and organize materials, to organize time and activity flow), and make direct uses of plans during instruction (e.g. to organize students, to get an activity started, to aid memory, to provide a framework for instruction and evaluation) (Clark & Yinger, 1987). McCutcheon (1980) emphasized that lesson planning is a necessary external memory aid, and a shorthand for mental planning.

In my study I am not investigating types or functions of planning directly, because I anticipate that during the practice teaching period, the student teachers will mainly be involved in daily planning or individual planning rather than in other types of planning. Koeppen (1998) noted that student teachers traditionally plan on a day-to-day basis during teaching practice. However an awareness of the types of planning identified in the literature and required on a practical basis may help me in my analysis of student teachers' learning. It is part of the framework available to me for data analysis.

2.5 Factors/Influences Affecting Teachers' Planning

Research on student teachers', novice teachers' and experienced teachers' planning revealed that teachers' planning was influenced or affected by a variety of factors. In looking across the research on teacher planning, and also supported by the data from my initial study, I found that the factors that influenced planning can be divided into two

main categories: external factors and internal factors. This section discusses the external factors whereas the internal factors are presented in Chapter Three.

2.5.1 The External Factors

Findings from research on teacher planning frequently refer to the external factors that have affected teachers in their planning process. External factors, such as pupils' characteristics, curriculum materials, textbook and teacher manuals, organizational factors, which include the goals of the school administration, the principal's planning requirements, administrative policies regarding materials, class size, and team membership were documented as having influence on teachers' planning (Sardo-Brown, 1990; Sardo-Brown, 1996). Another review by Warren (2000) produced findings in line with the Sardo-Brown's, identifying factors such as school schedule, the availability of instructional materials and the interest and abilities of pupils as influencing teacher planning.

Textbook

McCutcheon (1980) identifies the textbook as having influence on teachers' planning. In Virginia, according to McCutcheon, reliance on the textbook may be greater than in other US states, for Virginia is a 'narrow-adoption' state. This means that a state-wide committee authorizes textbooks and places them on a list of textbooks approved for purchase with state money. In each school division, one textbook is selected for each subject area. Therefore teachers in Virginia have little choice of instructional materials. McCutcheon noted that many teachers relied heavily on textbooks and guides and they thought the textbooks provided a thread of continuity in their lessons for the pupils. She

concluded that teachers relied on the textbooks to determine the scope and the sequence of the lessons. This notion was also evident in work by Calderhead and Shorrock (1997), where the student teachers' decision-making about topics, sequencing, long-term aims and teaching techniques were influenced by the textbook, the school's schemes of work, and existing teaching practices within the school.

Similarly, Sanchez and Valcarcel (1999) in their study of Spanish teachers also pointed out that the textbook was the main source for the teachers in determining the activities for the lesson. However, the teachers in their study were found to consult other books in their planning as an addition to gain more information about the topics, or because they did not totally agree with the textbook. This notion was echoed by McCutcheon (1980) who argued that the textbooks themselves may not be structured to provide for continuity. Furthermore the textbooks may differ from one another and from teachers' beliefs on some basic issues in teaching.

In the Sardo-Brown (1996) study of teacher planning to understand novice teacher change from the first to second years of teaching with regard to the factors affecting planning practices, several factors that affect planning were indicated. In terms of textbook and materials, Sardo-Brown (1996) described how changes occurred in the degree of reliance on the textbook and supplementary materials. In other words, the teachers in her study were found using a greater variety of planning sources in the second year compared to their first year. For example in planning lessons for Mathematics, besides the textbook, the teacher began to consult multiple math textbooks and brain teaser books in order to generate additional practice problems.

Furthermore, the teachers were also found utilizing more additional visual aids, such as videotapes, transparencies and diagrams.

In a survey, Yildrim (2003) asked 1194 primary school teachers from 210 schools in Turkey to answer a questionnaire that included both open-ended and closed questions on types of instructional plan, influences on these plans, problems faced during planning and the teacher's background. His study was conducted as an attempt to bring a different perspective into teacher planning within a highly centralized system of education. Yildrim indicated that teachers relied on course textbooks more than the national curriculum in preparing daily plans, whereas the national curriculum had a larger influence than the textbooks in preparing unit plans. These results, according to Yildrim, indicated that teachers may depend on textbooks for short-term or immediate planning whereas long-term planning may depend more on the national curriculum. He concluded that his findings suggest that teachers saw the textbooks as the national curriculum since they were supposed to be in line with the national curriculum.

Pupils

Pupils were identified in several research studies as a factor that affected teacher planning. In a study of four teachers' planning for Physical Education lessons, Placek (1984) categorized three different aspects of pupils' behaviour that influenced teachers' planning decisions. The first category is related to pupils' enjoyment of the class. This category was exemplified by such behaviour as pupils' laughter, or pupils asking to do the activity again. The second category is levels of pupils' participation, and the third category is pupils' misbehaviour. Based on these three categories, the teachers were

asked what factors influenced their planning. Placek reported that two teachers identified all three categories, whereas the other two teachers cited two of the three categories that affected them.

Placek found that teachers informally monitored these three behaviours and decided either to continue their planned activity or to modify their plans during the activity or for the next class. Although pupils' behaviour was their main consideration, the teachers indicated that this factor were not considered separately from the practical concerns, such as what equipment is available and how to organize the class, but were tightly interwoven. Their concern about pupils' behaviour directly influenced decisions they made about activities and organization. All the teachers either chose activities based on pupils' preference or gave examples of how they had done in the past.

The number of pupils in the class was also found to affect planning. McCutcheon (1980) noted that teachers believed that the number of children in the class influenced planning. She gave an example related to teaching science which arose from her study. She noted that in one science class a teacher felt that she had too many children to use the "hands-on" science program. Therefore, the teacher decided to demonstrate the experiments and asked for group responses as a way of quickly checking on what children learned.

The pupils' background, needs and interest (Yildrim, 2003), and ability (Sardo-Brown, 1988) were found to affect teacher planning. Yildrim reported that teachers' primary objective in daily plans was to design the lesson according to pupils' needs and interests, taking into consideration the teaching and learning materials available to

them. Conversely, in Sardo-Brown (1988), variability in ability-grouping practices in school affected teacher planning. In John's (1991a) study to investigate the growth and development of student teachers' planning perspectives, he noted that pupils (including their ability and behaviour) were high on the list of concerns in student teachers' planning. However, with regard to the pupils' influence, Shavelson and Stern (1981) indicated that teachers' concern about the pupils in their planning were greatest early in the year when teachers were "getting to know them". Once teachers had reached a judgement about their pupils, less attention was given to pupils in planning.

University Supervisor and Cooperating Teacher

Specifically, research studies on student teacher planning report that the college or university tutor and the mentor teacher are also influential factors in student teacher planning and teaching (Calderhead and Shorrock,1997; Koeppen, 1998; John, 1991a; Borko & Mayfield, 1995). John (1991a) in his study on PGCE student teachers in Oxford reported that all student teachers felt the curriculum tutor (subject tutor based at the university) had an effect on their learning to plan lessons, although the influences varied in degree between the student teachers. John described these influences by providing evidence from his study. For example, one student teacher planned to explain the classroom code of conduct and developed two punishment systems, firstly to remove the disaffected pupil from the classroom, and secondly, to create a classroom "sin-bin" for minor miscreants so as to minimise potential problems in his lesson. This student teacher explained that this early idea on planning came directly from advice given by the curriculum tutor.

In another instance, according to John, the student teacher began to realise that lessons can be affected by factors outside the control of the teacher. However, this information was first passed on by the curriculum tutor and was confirmed by observation. The student teacher was then able to take account of these factors in her planning. Conversely, there were also instances in John's study where the curriculum tutor was viewed negatively and the advice given was regarded as useless. John reported that the student teacher's perception of the curriculum tutor was negative as a result of a contradiction between what the curriculum tutor espoused theoretically as good practice and what he suggested the student teachers should do when faced with problematic situations. With regards to the role of the curriculum tutor, John concluded that for some student teachers, the curriculum tutor was a valuable source of ideas and information, whereas for others, the curriculum tutor appeared to be no more than a peripheral planning adviser.

Similarly, John (1991a) noted that the school mentor outwardly appeared to have little influence on student teachers' planning. He reported that for the student teachers who taught geography, the school mentor was seen as irrelevant or even at times a hindrance. On the other hand, for the student teachers who taught Mathematics, the school mentor was seen as helpful in developing ideas and in providing useful contextual information.

Koeppen's (1998) study was intended to obtain information on student teachers' perception of instructional planning in social studies. Six student teachers from Midwestern University were selected for the study. For one semester, the participants revealed their perspectives on instructional planning and teaching through self-reporting techniques such as interviews, questionnaires, journal reflections, and think aloud

protocols. These data were combined with copies of their written lesson plans, and researcher's observation notes. Koeppen found that the cooperating teacher appeared as the influential factor in student teacher planning. Koeppen described how the student teacher planned lessons to make sure that the conditions set out by the cooperating teacher were fulfilled, rather than concerning themselves with whether and what students were learning. In one example, Koeppen reported that the cooperating teacher strongly suggested a lesson plan format that, in turn, structured the student teacher planning processes. The student teacher explained that he changed the structure of his plan because the cooperating teacher was uncomfortable with instruction that differed from his own. Thus he asked the student teacher to emulate the process by which he taught his pupils. According to Koeppen this student teacher's planning was dictated by his cooperating teacher. Koeppen concluded that the cooperating teachers' influences had contributed to conflict in the environment for the student teachers. Conflicts arose as the student teacher worked to satisfy his cooperating teacher, and this factor was interwoven with the student teacher's own beliefs and the university supervisor's influence.

The influences of cooperating teachers and university supervisors were also found in Borko and Mayfield's (1995) study of four student teachers involved in the Learning to Teach Mathematics (LTTM) project in the USA. All four student teachers indicated that their cooperating teachers influenced their learning in several respects. For example, Borko and Mayfield reported that one student teacher did much of her planning together with her cooperating teacher and used many of the same materials. They conferenced regularly during lunch and after school, and their conversation frequently focused on Mathematics content and on ways of presenting mathematical

ideas to the pupils. Given the extent of these interactions, Borko and Mayfield concluded that it was not surprising when they observed the student teacher's lesson, that she incorporated her cooperating teacher's suggestions into lessons. In describing the university supervisors' influence, Borko and Mayfield indicated that the supervisors' impact was present in factors such as making the lesson objectives and purposes explicit to the pupils.

Other External Factors

Besides the factors described above, other external factors were also found to affect teacher planning. These include school policies and administrative, time considerations, and personal life (Sardo-Brown,1988; Sardo-Brown, 1996), scheduling, materials, promotion and retention (McCutcheoen, 1980). In Sardo-Brown's (1996) study, personal life was reported as having impact on teachers' planning. During the summer after the first year of teaching, both teachers in this study had been married. Thus, they mentioned that they were seeking out ways in which they could have more leisure time to spend with their spouses. Hence, these teachers reported that they plan activities which would cut down on the amount of time they had to spend grading pupils' work at home.

2.6 Conclusion

The literature presented in this chapter reveals teacher planning from the prescriptive and descriptive paradigms. To date and to my knowledge, none of these research studies on teacher planning were conducted in Malaysia, and most of them were

conducted in Western countries. Thus, this study builds on this body of literature as an attempt to understand the nature of teacher planning in the Malaysian context.

The literature presented above regarding the process of planning shows that the prescriptive planning model, although important in terms of its theoretical input, bears very little relation to the thinking and actions of student teachers in the context of the classroom (John, 1991a), and experienced teachers do not plan as prescribed in the rational model. However, as a teacher educator, a prescriptive model of planning lies behind my research questions. Although I am not intending to test any prescriptive model in this study, as I mentioned earlier, the student teachers in my study were required to plan based on the format given which derived from the rational model. Therefore, for me, it is important to clarify what student teachers do when planning a lesson, how they do it, and how these different actions are connected and build on each other. This may increase insights in the ways in which student teachers construct a lesson plan and prepare themselves to teach the lesson.

The research reviewed in the final section of this chapter provides evidence that teachers' planning was influenced by several external factors. The literature also revealed that the internal factors, such as teachers' experience, teachers' belief and knowledge have a significant impact on teachers' planning. In looking across the studies that were reviewed, there is a relationship between the external factors and the internal factors in teachers' planning practices. All these factors intertwined and I am interested in looking at this relationship. I will discuss this in Chapter Three.

CHAPTER THREE

A CONCEPTUAL FRAMEWORK FOR STUDENT TEACHERS' LEARNING

3.0 Introduction

In Chapter Two, I have discussed the external factors that influence teacher planning. The literature also reveals that internal factors, that is teachers' beliefs and knowledge have a significant impact on teachers' planning, thus this construct will be addressed further in this chapter. It begins with discussion of the definition of belief and knowledge as derived from the literature. Following this is my argument for seeing beliefs and knowledge as interrelated constructs, and this is followed by a description of the categories of knowledge and beliefs that are pertinent to the teaching profession. Next, a discussion of the relationship between beliefs and practice is provided as the literature shows matches and mismatches between teacher beliefs and their classroom practice. Here, in looking at these two constructs, my focus was not on interpreting the relationship as consistent or inconsistent, rather I was trying to understand the reasons that may influence teachers in their planning practices. Finally, I discuss the term 'reflection' as the means for the learning process. By reflection, changes may occur in the student teachers' beliefs or practise, and changes in either of these constructs may indicate that learning has happened. I conclude this chapter by presenting a framework that illustrates factors that have influence on student teachers' learning to plan lessons.

3.1 Beliefs and Knowledge

It is essential to start by describing what beliefs and knowledge refer to as these two constructs have been much debated among researchers (Kagan, 1990). Richardson (1996, 2003) posits the most complex issue in research on teaching and teacher education is the confusion between the terms belief and knowledge. This notion was also highlighted by Borko and Putnam (1996), Woods (1996), Calderhead (1996), and Thompson (1992). Calderhead (1996) claims the terms knowledge and beliefs have been widely used in reference to teachers' cognitions. Speer (2005) argued that from studies of teacher cognition, researchers found that the wide variety of factors teachers referenced when making instructional decisions, many of which could not be classified as knowledge. Thus, according to Speer, this had led to a proliferation of terms and various uses of "belief" to describe elements of teacher's cognition.

Pajares (1992) described beliefs as a "messy construct" with different interpretations and meanings. Pajares (1992:309) lists more than twenty of such terms that refer to beliefs; 'attitudes, values, judgements, axioms, opinions, ideology, perceptions, conceptions, conceptual systems, preconceptions, dispositions, implicit theories, explicit theories, personal theories, internal mental processes, action strategies, rules of practice, practice principles, perspectives …' This notion was also highlighted by Kagan (1992a:66), who found that the term 'beliefs' has not been used consistently in the literature, with some researchers using the terms teachers' "principles of practice", "personal epistemologies", "perspectives", "practical knowledge" or "orientations". Hence, Pajares (1992) claims that defining beliefs is at best a game of player's choice.

Speer (2005) argues that much of the "messiness" of this construct stems from researchers' desires to distinguish between beliefs and knowledge. Richardson (2003) has made such a distinction based on traditional philosophical literature. Drawing on Green (1971), she stresses that in the traditional philosophical literature, knowledge is thought to depend on a 'truth condition' or warrant that compels its acceptance as true by a community. She argues that propositional knowledge would require epistemic standing; that is, some evidence to back up the claim. Beliefs, however, do not require a truth condition. Richardson (2003) asks the question "if propositions that are not warranted are held by an individual, how can they be called 'knowledge,' particularly if there is evidence that the proposition is false?" She argued further by asking "Is an incorrect knowledge proposition to be called incorrect knowledge"? Thus, according to Richardson, knowledge is a set of warranted propositions held by a community of experts.

In a comprehensive review of the literature on teachers' belief and conceptions, Thompson (1992) put forth that a common stance among philosophers in defining these two constructs is that disputability is associated with beliefs whereas truth or certainty is associated with knowledge. A similar stance was also evident in Calderhead's (1996) work, where he noted that beliefs generally refer to suppositions, commitments, and ideologies, whereas knowledge is taken to refer to factual propositions and the understandings that inform skilful action. Hence, Speer (2005) postulates that researchers often claim that a unique feature of beliefs is their evaluative and affective nature. Similarly Pajares (1992) contended that belief is based on evaluation and judgement whereas knowledge is based on objective fact.

The definition discussed above has tried to distinguish between beliefs and knowledge, however, Borko and Putnam (1996) claim that there is no agreed-upon distinction between beliefs and knowledge. Moreover, the conclusion of such debates is far from satisfactory. In an attempt to distinguish belief and knowledge, Abelson (1979:360) highlighted seven characteristics of beliefs as:

1. The element of a belief system is not consensual,
2. Belief systems are in part concerned with the existence or nonexistence of certain conceptual entities,
3. Belief systems often include representations of "alternative worlds", typically the world as it is and the world as it should be,
4. Belief systems rely heavily on evaluative and affective components,
5. Beliefs systems are likely to include a substantial amount of episodic material,
6. The content set to be included in a belief system is usually highly "open", and
7. Beliefs can be held with varying degrees of certitude.

However, Abelson concluded that none of the above features is individually guaranteed to distinguish belief from knowledge; in combination they are very likely to do so.

Although, as reported in the earlier discussion, Richardson (1996) has made a distinction between knowledge and beliefs based on traditional philosophical literature, yet, she acknowledges that there is a considerable similarity between these terms in the concepts of teachers' personal practical knowledge. She describes practical knowledge as tacit and contextual, and as gained through experience. In addition, Richardson noted that such a differentiation between beliefs and knowledge is not evident in much of the teaching and teacher education literature, and the task of distinguishing these

constructs is daunting (Pajares, 1992). In addition, Richardson (1996) noted that the terms beliefs and knowledge have been used synonymously, giving as an example Alexander, Schallert and Hare's (cited in Richardson,1996:104) conception of the terms belief and knowledge as "knowledge encompasses all that a person knows or believes to be true, whether or not it is verified as true in some sort of objective or external way". Pajares (1992) emphasized that the difference between belief and knowledge, even if they are in degree and not kind, will depend on how researchers choose to operationalize them.

Kagan (1992a) defined beliefs as pre- or inservice teachers' implicit assumptions about pupils, learning, classrooms and the subject matter to be taught. Based on the research findings presented in her literature review, Kagan (1992a) concluded that most of a teacher's professional knowledge can be regarded more accurately as belief. Kagan emphasizes that a teacher's knowledge of his or her profession is situated in three important ways: in context (it is related to specific groups of students), in content (it is related to particular academic material to be taught), and in person (it is embedded within the teacher's unique belief system).

Woods (1996) posits that the distinction between knowledge and beliefs is not tenable. He explained in the context of his study, it cannot be clearly determined whether the interpretations of the events are based on what the teacher knows, what the teacher believes, or what the teacher believes s/he knows. Woods (1996:194) gives the example of "a teacher who knows/believes that students don't like to work in groups may interpret a particular case of the students' groans at the suggestion of taking up the homework in groups as being caused by students' attitudes about group work rather

than their particular mood that day, or the effects of the class party the previous evening. This event is remembered by the teacher not simply as groans, but in terms of her assumptions about what caused the groans, and is stored as a further abstracted or generalised item of knowledge/belief." Woods argues that it is hard to distinguish between background knowledge structures and belief system as the distinction between these two constructs is blurred. Therefore, Woods concludes the teacher's use of knowledge in their decision-making process did not seem to be qualitatively different from their use of beliefs. Thus, as an attempt to reduce the distinction between beliefs and knowledge, Woods (1996) proposed the term beliefs, assumptions and knowledge (BAK) to describe the relationship between beliefs and knowledge and their interrelated structure.

In this study, following the literature presented in this section, beliefs and knowledge are seen as interrelated as these constructs are not easily distinguishable (Calderhead, 1996). As suggested by Malara and Zan (2002), no matter which framework one chooses to analyse teachers' knowledge, it is always necessary to consider teacher knowledge as a large, integrated, functioning system in which each part is difficult to isolate, thus, it is impossible to separate teachers' knowledge and beliefs. Leetham (2006:92) illustrates this notion as follows: "of all the things we believe, there are some things that we just believe and other things we more than believe – we know. Those things we more than believe we refer to as knowledge and those things we just believe we refer to as beliefs. Thus beliefs and knowledge can profitably be viewed as complementary subsets of the things we believe." In conclusion, knowledge and beliefs are inextricably intertwined (Veal, 2004), but the potent affective, evaluative, and episodic nature of beliefs makes them a filter through which new phenomena are

interpreted (Pajares, 1992). Pintrich (1990) posits that regardless of conceptualizations, research has shown that both knowledge and beliefs influence a wide variety of cognitive processes of teachers; memory, comprehension, deduction and induction, problem representation, and problem solution.

3.2 Beliefs and Knowledge Categories

Borko and Putnam (1996) categorise knowledge and beliefs in teaching into three main domains: general pedagogical knowledge and beliefs, subject matter knowledge and beliefs, and pedagogical content knowledge and beliefs. However, they assert that any categorization of teacher knowledge and beliefs is somewhat arbitrary because there is no single system for characterizing the organization of teachers' knowledge. Further, they claim that all knowledge is highly interrelated, and thus, the categories of teacher knowledge within a particular system are not discrete entities, and boundaries between them are necessarily blurred.

3.2.1 General Pedagogical Knowledge and Beliefs

According to Borko and Putnam (1996), this domain includes knowledge and beliefs about classroom management, instructional strategies and learners that transcend particular subject matter domains. Knowledge of classroom management has been described as an important element in this domain, for example, teachers should possess knowledge on how to keep a number of pupils working together and oriented toward classroom tasks. A conception of classroom management that is in line with a cognitive psychology offered by Doyle (1986) suggests that the major tasks of classroom teaching are promoting order and learning. The task of promoting order is mainly for the

purpose of establishing and maintaining an environment in which learning can occur. Thus, Borko and Putnam (1996) explain that to accomplish this task, teachers must have repertoires of strategies for establishing rules and procedures, organizing groups, monitoring and pacing classroom events, and reacting to misbehaviour.

Apart from knowledge of classroom management, Borko and Putnam (1996) explain that teachers need knowledge of how to structure classroom activities, as well as repertoires of strategies and routines for interacting with pupils, for ensuring pupils' participation and engagement, and for keeping lessons running smoothly. Moreover, they noted that teachers' knowledge and beliefs about how to manage classrooms and create learning environments are supported by, and intertwined with, knowledge and beliefs about how children think and learn, and about how teachers can foster that learning. Although this kind of knowledge, as noted by Richardson (1996), is most often initially encountered in preservice teacher education courses taken prior to student teaching, yet, much of general pedagogical knowledge would appear to be procedural, and learnt from practice as it is constructed from innumerable 'cases' of teaching, and has a substantive base (Turner-Bisset, 2001).

The kind of knowledge that teachers acquire within their own classroom practice which facilitates them to utilize the strategies, tactics, and routines of classroom teaching has been referred as craft knowledge (Calderhead, 1996). This kind of knowledge has also been referred to as wisdom of practice (Shulman, 1987), practical knowledge (Richardson, 1996; Carter, 1990), and situated knowledge (Leinhardt, 1988). Practical knowledge is gained through experience, is often tacit (Richardson, 1996), and is situated within the contexts of teaching (Leinhardt, 1988). Carter (1990) explains that

practical knowledge is shaped by a teacher's personal history, which includes intentions and purposes, as well as the cumulative effects of life experience. Zanting & Vermunt (2001) conclude that practical knowledge is a mixture of all teachers' cognition, such as declarative and procedural knowledge, beliefs and values, and thoughts that influence their preactive, interactive, and postactive teaching activities.

Given that much of the general pedagogical knowledge and belief of teachers is gained from practice and situated within the contexts of teaching, thus as shown by Borko and Putnam (1996), most teachers who have spent several years in classrooms have acquired considerable general pedagogical knowledge. They explain that experienced teachers' attempts to learn to teach in new ways also are highly influenced by what they already know and believe about teaching, learning, and learners. Likewise, Borko and Putnam (1996) noted that student teachers' knowledge and beliefs about teaching, learning, and learners are shaped by years of their own school experience, yet, as suggested by Calderhead and Robson (1991), student teachers seemed to lack the knowledge about the children, the curriculum, and alternative teaching strategies, and thus, have difficulty taking context and children into account in their teaching practice. Mutton et al. (2008) found that the student teachers lack both craft knowledge and detailed knowledge of the pupils they are teaching. They argue that it is the lack of this knowledge that may explain why the lesson plan as 'script' is dominant in the early stages of the development of many teachers.

Furlong and Maynard (1995) report similar results when investigating the professional development of student teachers in their school experience. The student teachers were reported as having very simplistic views about pupil learning, thus, they did not take

account of pupils' prior knowledge or understandings in planning and teaching. However, towards the end of their school experience, changes occurred where they started to think in general terms about what the children already knew. Thus, to acquire useful knowledge of pupils, direct experience appears to be important to the student teachers learning to teach (Kagan,1992b).

3.2.2 Subject Matter Knowledge and Beliefs

Borko and Putnam (1996) assert that having a flexible, thoughtful, conceptual understanding of subject matter is essential to effective teaching for understanding. Because subject matter knowledge means different things to different people, it is important to determine exactly what is meant by subject knowledge (Turner-Bisset, 2001). According to Borko and Putnam (1996), several important distinctions within knowledge of subject matter have been made by researchers studying teachers' knowledge and learning. Shulman (1986) has been acknowledged in the literature for the original division of content knowledge into three categories; subject matter content knowledge (the knowledge of a subject or discipline per se), pedagogical content knowledge (subject matter knowledge for teaching), and curricular knowledge. In this section, the discussion is focused on subject matter knowledge and pedagogical content knowledge follows in the next section.

Shulman (1986) noted that subject matter content knowledge refers to the amount and organization of knowledge per se in the mind of the teacher. He, however, emphasized Schwab's (1964) distinction between substantive and syntactic structures of knowledge in his explanation of subject matter content knowledge. Shulman explains that the

substantive structures are the variety of ways in which the basic concepts and principles of the discipline are organized to incorporate its facts. Following Shulman (1986), other authors (Furlong & Maynard, 1995; Borko & Putnam, 1996; Fang, 1996) used the term "substantive knowledge" referring to the understanding of ways in which the ideas, concepts, and facts of a discipline are organized.

Shulman (1986) describes the syntactic structures of knowledge as a set of ways in which truth or falsehood, validity or invalidity is established. He explains that when there are competing claims regarding one phenomenon, the syntax of a discipline provides the rules for determining which claim has greater warrant. Shulman concludes that the syntactic structure is like a grammar, hence, it serves as a set of rules for determining what is legitimate to say in a disciplinary domain and what 'breaks' the rules. Furlong and Maynard (1995) defined syntactic knowledge as knowledge about the subject; it involves an understanding of the way a particular body of knowledge is generated and validated.

Turner-Bisset (2001) clarifies syntactic structures of knowledge as the procedures, the means and processes by which accepted 'truths' have become accepted. In other words they are the ways and means by which new knowledge becomes accepted by a scholarly community, through procedures of experimentation and verification. She provides an example in science, where the scientific method such as observing and inferring, reasoning, weighing evidence, predicting and testing hypotheses are used in establishing the validity of new knowledge. She adds that understanding of syntactic structures of knowledge is important for teaching, for example, if one attempts to teach science and history as a parade of facts and concepts then pupils will not come to understand the

true nature of each subject. Turner-Bisset (2001) concludes that when the teachers have some understanding of the syntactic structures of the subjects they teach in the classroom, they will teach the subjects differently than if they treat all knowledge as accepted fact.

Because teachers need to know more than just the facts, terms, and concepts of a discipline, as noted by Borko and Putnam (1996), knowledge of organizing ideas, connections among ideas, ways of thinking and arguing, and knowledge growth within the discipline is an important factor in teachers' preparedness to teach the subject. They claim that teachers with greater subject matter knowledge tend to emphasize the conceptual, problem-solving, and inquiry aspects of their subjects whereas less knowledgeable teachers tend to emphasize facts, rules, and procedures and to stick closely to detailed lesson plans or text. In addition, Borko and Putnam emphasize that less knowledgeable teachers sometimes miss the opportunities to focus on important ideas or connections among ideas in teaching. Moreover, Ball & McDiarmid (1990) claim that when teachers possess inaccurate information or conceive of knowledge in a narrow way, they may pass on these ideas to their students.

A review of literature related to student teachers' subject matter knowledge and beliefs has been documented by Borko and Putnam (1996). They suggest that student teachers enter teacher preparation programs with widely different subject matter backgrounds and leave the programme with different degrees of content knowledge, substantive knowledge, and syntactic knowledge of their disciplines. Borko and Putnam noted these differences affected what and how they teach, and how they use textbooks and other materials in teaching. Turner-Bisset (2001) posits a similar notion that student

teachers' understanding of the nature of the subject influences the kind of lessons they present to the students.

John (1994) noted that research is beginning to show that one of the strongest influences on teachers' curriculum and lesson planning is their perception of the subject matter and the types of knowledge it represents. This notion was evident in a study conducted by Borko et al. (1988) where they found that there is a strong relationship between subject matter knowledge and planning. They suggest that when student teachers had strong content area knowledge, the way they planned lessons seemed less detailed and they were more responsive to pupils in their teaching. John (1991a) also found that the student teachers' perceptions of their subject had a strong influence on their planning. In his study, the student teachers (of mathematics) saw the subject as predominantly hierarchical, involving a logical, staged progression of understanding. Thus, for these student teachers, planning should help facilitate that understanding by building carefully on each previous stage of the work covered. Several other studies (Koeppen, 1998; Livingston & Borko, 1990; Mapolelo, 1999; Goulding, 2002) also suggest that knowledge and belief about subject matter affected teachers' planning and teaching.

3.2.3 Pedagogical Content Knowledge and Beliefs

Borko and Putnam (1996) postulate the pedagogical content knowledge (PCK) construct has served as an important catalyst for considering the ways in which teachers need to think about the subjects they teach. Shulman (1986, 1987) conceptualised pedagogical content knowledge as an amalgam of subject matter knowledge and general pedagogical knowledge. He emphasized that pedagogical content knowledge goes

beyond knowledge of subject matter per se to the dimension of subject matter knowledge for teaching. Shulman (1986:9) explained that pedagogical content knowledge includes, "the most useful forms of representation, the most powerful analogies, illustrations, examples, explanations, and demonstrations – in a word, the ways of representing and formulating the subject to make it comprehensible to others ... It also includes an understanding of what makes the learning of a specific topic easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons."

Shulman (1987) explained that pedagogical content knowledge identifies the distinctive bodies of knowledge for teaching. For Shulman, teaching must begin with a teacher's understanding of what is to be learned and how it is to be taught. He goes on to explain that teachers must have an understanding of how particular topics, problems, or issues need to be organised, represented, and adapted to different interests and abilities of learners. In other words, Carter (1990) uses the term pedagogical content knowledge to mean what teachers know about their subject matter and how they translate that knowledge into classroom curricular events. Therefore, this explanation shows that pedagogical content knowledge represents a class of knowledge that is central to teachers' work and differentiates expert teachers in a subject area from subject area experts (Cochran et al., 1993; Marks, 1990), and appears to be important for teaching (Rovegno, 1992).

In their extensive review on teachers' knowledge and beliefs, Borko and Putnam (1996) organized pedagogical content knowledge into four categories: overarching conception

of teaching a subject, instructional strategies and representations, students' understanding, thinking, and learning in a subject, and curriculum and curricular materials. Borko and Putnam argued that teachers' overarching conceptions of teaching a subject can limit their efforts to learn to teach in new ways and can be resistant to changes. They also claim that student teachers have limited knowledge of subject-specific instructional strategies and representations, and of the understanding and thinking of their students about particular subject matter content. This notion was also found in studies conducted by Bullough (1992), Rovegno (1992), Borko et al. (1988), and Veal (2004) where student teachers were found to have a relative lack of pedagogical content knowledge. Because student teachers have little sense of how children learn specific content, what children find difficult or exciting and common misconceptions children hold, they have difficulty in representing content in ways appropriate for helping pupils learn (Rovegna, 1992). Therefore, student teachers need assistance in developing PCK because limited PCK affects their planning and teaching (Borko et al.,1988).

3.2.4 Conclusion

The literature presented above supports the idea that teachers must possess a wide variety of knowledge and beliefs for planning and teaching; knowledge of how to manage their pupils in the classroom, knowledge of content to be delivered, and knowledge of how to deliver the content to the pupils. However, Feiman-Nemser and Remillard (1995) assert that in planning lessons, teachers do not draw on knowledge one domain at a time, instead they weave together different kinds of knowledge as they

reason about what to do and take action in particular situations. They provide an example to illustrates how teachers weave knowledge in planning a lesson:

> "In planning an instructional activity, a teacher may consider what concepts she wants students to learn (content), how those topics fit with previous and future topics (curriculum), how appropriate the activity is for her particular group of students (learners), what might be difficult for them (learning), how she will find out what students do and do not understand."(Feiman-Nemser and Remillard (1995:15)

Because planning lessons involves different kinds of beliefs and knowledge that is highly varied, this study builds on this body of literature to understand how student teachers draw on their knowledge and beliefs and transform it in their planning practice.

3.3 Beliefs and Practices

A substantial body of literature shows matches and mismatches between teacher beliefs and their classroom practice (Speer, 2005; Aguirre & Speer, 2000; Calderhead 1996; Fang, 1996; Thompson, 1992). In reviewing research on teachers' beliefs, Thompson (1992) claims that teachers' conceptions of mathematics have been found to be generally consistent, however the relationship between conceptions of mathematics and instructional practice was reported variously as being consistent and inconsistent. Those findings, according to Thompson, resulted from the major underlying assumptions in beliefs research, that is, belief systems are static entities to be uncovered, and the relationship between beliefs and practice is a simple linear-causal one. Thompson explains that thoughtful analysis of the nature of the relationship between beliefs and practice shows that beliefs are dynamic, permeable mental structures and susceptible to change in light of experience. Thompson explains further

that the relationship between these two constructs is dialectic, not a simple cause and effect relationship.

Richardson (1996) also claims that teachers' beliefs are interactive with their practices. She postulates that beliefs are thought to drive actions; however, experiences and reflection on action may lead to changes in and/or additions to beliefs. Thompson (1992) suggests a complex relationship, with many sources of influence at work, such as the social context in which mathematics teaching takes place. Fang (1996) noted that the complexities of classroom life can constrain teachers' abilities to attend to their beliefs and provide instruction which aligns with their beliefs. Therefore, Fang asserts that the contextual factors have powerful influences on teachers' beliefs and, in effect, affect their classroom practice. For example, in Fung's (2002) study about student teachers' beliefs and practice, the student teachers conceive themselves as having a more child-centred approach to teaching, yet in reality their practices constituted a more teacher-centred approach. Thus, Fung explained that the discrepancy between student teachers' pedagogical images and actual classroom practices can be expected; this incongruence of expectations and reality could be triggered by a variety of factors, including supervising teachers and classroom characteristics.

Other researchers (Speer, 2005; Skott, 2001a; Skott, 2001b; Skott, 2009, Leatham, 2006) highlight methodological issues in reviewing the literature on the relationship between belief and practices. Speer (2005) argues that no matter how data are collected and analysed, all beliefs are attributed to teachers by researchers. She explains that to claim such beliefs are professed and are in some sense "pure" representations of teachers' cognition ignores the roles that methods play in research, and the role that

researchers play in reporting data. Therefore, Speer suggests that it is important for researchers to place an emphasis on developing and using methods that enable the most accurate attribution of beliefs possible instead of focusing extensively on the relationship between beliefs and practice.

According to Skott (2001a, 2001b, 2009), for more than 20 years, beliefs research has been based on the premise that teachers' beliefs may serve as an explanatory principle for classroom practice. Skott (2001a) claims that belief research found in the literature seems to make no attempt to look beyond teacher beliefs when interpreting what happen in the classroom. Skott (2009) argued that if there is apparent compatibility between a teacher's espoused beliefs and the observed practices, there is little more to explain, whereas, if no such compatibility is found, one may explain that there is a conflict between espoused and enacted beliefs. It is inappropriate to conclude that teachers are inconsistent because inconsistency is the researcher's perspective that does justice neither to the complexity of teaching, nor to teachers' attempt to relate sensibly to this complexity (Leatham, 2006).

Leatham (2006) argues that research often assumes teachers can easily articulate their beliefs and that there is a one-to-one correspondence between what teachers state and what researchers think those statements mean. Leatham explains that research conducted under this paradigm often reports inconsistencies between teachers' beliefs and their action. Leatham's article views teachers as complex, sensible people who have reasons for the many decisions they make, thus, he provides an alternative framework for conceptualizing teachers' beliefs that views teachers as inherently sensible rather than inconsistent beings. Leatham explains that the sensible system

framework assumes that what one believes influences what one does, however, this assumption does not imply that an individual holding a belief must be able to articulate that belief. On the contrary, teachers' abilities to articulate their beliefs are seen as problematic. Skott (2009) asserts that beliefs are elusive and not easily accessed. This is in line with Pajares' (1992) view that beliefs must be inferred, and this inference must take into account the congruence among individuals' belief statements, the intentionality to behave in a predisposed manner, and the behaviour related to the belief in question.

Kagan (1995:232) has the similar notion that beliefs cannot be accessed directly by simply asking a teacher to explain why such a decision was taken in planning and classroom teaching. Kagan provided several reasons for this:

1. Teachers are often unaware of their thoughts and beliefs because they are held and applied unconsciously.
2. Teachers do not normally verbalize their thought aloud and thus may not possess language with which to describe them,
3. Teachers may also be reluctant to admit beliefs that are unpopular or that have negative connotations,
4. Beliefs cannot be inferred directly from teacher behaviour, because teachers can follow similar practices for very different reasons.

A point of interest highlighted by these researchers is that the relationship between beliefs and practice is not straightforward. It has been well recognized that teachers can espouse particular knowledge and beliefs which conflict with those implicit in their practices (Calderhead, 1991; Speer, 2005; Veal, 2004). Having considered the

methodological and theoretical issues underpinning the findings of beliefs research, therefore, my attempt to investigate the relationship between these two constructs was not on the basis of interpreting the relationship as consistent or inconsistent, rather I was trying to understand the reasons that may influence practices.

This study was conducted to understand student teachers learning to plan lessons. As the literature suggests, student teachers enter programs of teacher education with personal beliefs about teaching, images of good teachers, images of self as a teacher, and memories of themselves as pupils in classrooms (Kagan, 1992b; Calderhead & Robson, 1991, Furlong and Maynard, 1995; Calderhead & Shorrock, 1997), thus, the decisions that the student teachers make about what to teach and how to teach it may be largely influenced by their beliefs and knowledge. Pajares (1992) claims that beliefs are strong predictors of practice, thus, it is important to note that beliefs and knowledge held by student teachers may provide some insight into the way they practice. Their existing knowledge and beliefs serve as filters through which they view and interpret their experiences (Borko & Putnam, 1996). Supported from the data from my initial study (see Chapter Four), this provides some direction for me to investigate further into this relationship. Although my theoretical framework makes a clear distinction between beliefs and practices, in practice the links between them are so intricate that it is difficult to collect data about either of them without acknowledging the influence of the other.

3.4 Reflection in Student Teachers' Learning

Calderhead (1989) noted that much of the literature on reflection derives from the concepts offered by a few key theorists, each emphasising different aspects of the

process. Reflection as an aspect of teachers' professional thinking owes much to John Dewey (Furlong & Maynard, 1995). Dewey (1933: 9) defines reflection as "active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends". Clark & Yinger (1987) noted that Dewey uses the word 'reflection' almost synonymously with the word 'thinking'. Dewey (1933:12) explains that reflection is a process which "involves a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and an act of searching, hunting, inquiring to find material that will resolve the doubt, settle and dispose of the perplexity."

Furlong and Maynard (1995) assert that central to Dewey's view of reflection was the differentiation of routine action (action guided by tradition) from reflective action. As reflective actions are based on the need to solve a problem, teachers use their beliefs and experience to contextualize a problem or doubtful situation, and, through careful and structured thought, formulate plausible solutions to solve the problematic situation (Tauer & Tate, 1998). Clark & Yinger (1987) claim that Dewey perceived reflection as the means for meeting and responding to problems or problem-solving.

Schon (1983) built upon and expanded Dewey's concept of reflection by examining the thought processes of different professionals dealing with uncertainty or difficulty in their profession. He proposes that the most effective way for developing expertise in a profession is for the novice practitioner to engage in professional work activities in which she\he would gain new knowledge while being coached by an expert professional who helps the novice make sense of the new knowledge acquired (Tauer & Tate, 1998).

In describing the nature of professional action, Schon (1983) put forth two forms of action, which are, 'reflection-in-action' and 'reflection-on-action'. According to Furlong and Maynard (1995:48), reflection-in-action occurs when a practitioner faces an unknown situation. They explained that in these situations, 'the experienced practitioner is able to bring certain aspects of their work to the level of consciousness and to reflect on it and reshape it without interrupting the flow.' Furlong and Maynard added that reflection-in-action involves 'situated' knowledge where one can go through the process without necessarily being able to say what one is doing. Rather than applying theory or past experience in a direct way, professionals draw on their repertoire of examples to reframe the situation and find new solutions (Griffiths, 2000).

Calderhead & Shorrock (1997) suggest that reflection-in-action also refers to the process of monitoring and adapting one's behaviour in context. They explain that because teaching is complex and unpredictable, teachers cannot rely entirely on routine ways of coping with situations. Thus, Calderhead & Shorrock assert that teaching involves a process of acting, reflecting on the effects of one's actions and constantly adapting one's behaviour to the situation and purposes at hand. By thinking about our actions and reactions as we are teaching, we can improve our teaching (Freese, 1999).

Reflection-on-action refers to the thinking about the lesson after the lesson. After a lesson or after a day is over, teachers may reflect back on the particular events of the lesson, analysing where difficulties arose, to consider how they might improve and deciding on the future directions their teaching might take (Calderhead and Shorrock, 1997). Furlong and Maynard (1995) describe reflection-on-action as a key process in learning a professional activity like teaching. By reflecting on teaching and trying to

capture it in language, student teachers begin to transform the behaviours they have copied into concepts and theories that help them own the practice for themselves (Furlong, 2000). Action based on reflection was viewed as intelligent action, in which its justifications and consequences had been considered (Calderhead, 1989).

This view provides an understanding of the necessity for a professional to be reflective, both during and after actions, to improve practice. However, Moran and Dallat (1995) assert that reflective practice is a complex and intellectually challenging activity. Thus, they noted that success is dependent on the skills of the reflective practitioner and on the quality of support afforded by fellow professionals. Furlong and Maynard (1995) claim that student teachers can and do reflect on their own teaching themselves, but the reflective process is strengthened if it is systematically supported by an experienced practitioner. Schon (1987) characterized this structured and supported reflection-on-action activity as 'coaching'. This indicates that the mentor or the supervisor as the experienced practitioners have to act as coach in order to help the student teachers to reflect on their practical teaching experience.

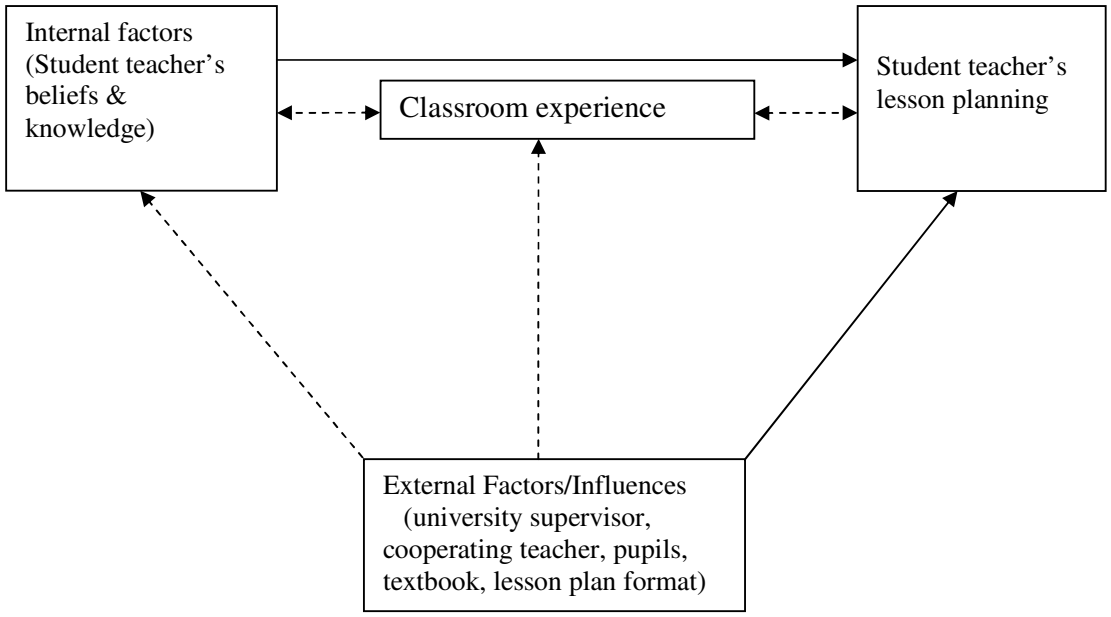
Despite the importance of 'coaching', Moran and Dallat (1995) claim the literature also suggested that the process of mentoring itself does not automatically enable students to become more reflective teachers. They explain that classroom experience without thoughtful, structured, complementary learning experiences is inadequate. They suggest that student teachers need to reflect for themselves on the process of teaching and the results achieved because if student teachers themselves cannot engage in reflection, little learning is likely to occur.

This study was conducted to understand student teachers learning to plan lessons. Planning lessons involves both a thought process and a practical activity by the teachers; therefore I envisage it as a complex task, hence, the student teachers cannot rely entirely on routine ways of planning their lesson. I was interested in reflection as I considered it as an important means of connecting internal and external influences and practices in the learning process of the student teachers. Rosemary (1996) claims that the process of reflection had a positive influence on how much the student teachers learnt from the practicum. In this study, reflection is defined as the process of reviewing, reconstructing, re-enacting, and critically analyzing one's own teaching abilities and then grouping these reflected explanations into evidence of changes that need to be made to become a better teacher (Ornstein, 1995).

3.5 Conclusion

The conceptual framework in this study was drawn from my initial study (see Chapter Four) in the UK and in Malaysia. As stated in the previous chapter, I started my research with no theoretical perspective in mind; rather I depended mainly on my professional interest and my experience as a teacher educator. Thus, my initial study data gave some insight into how the student teachers plan their lessons during their practicum. The framework was also built on the body of literature presented in the previous section. Diagram 3.1 illustrates the conceptual framework that guides this study.

Diagram 3.1: A Framework of Student Teachers' Learning



As shown in Diagram 3.1, learning to plan lessons involves a process of reflection (as indicated by a dashed arrow). In planning a lesson, the student teachers may depend on their own beliefs and knowledge or they may plan a lesson based on the external factors/influences (as indicated by an arrow). As they move on from planning and implement their lesson planning in the classroom, reflection on classroom experiences may affect either their beliefs or their practice. It is also through reflection that the student teachers construct new understanding by connecting their beliefs and knowledge with the influences from the external sources mediated by their own classroom experiences. Those influences are not considered separately during planning but are tightly interwoven. Thus, learning occurs as they engage in reflection. For example, a university supervisor comments on the activity planned by the student teacher as

inappropriate to the pupils' learning, and she/he suggests to the student teacher the activity that she/he believes will help pupils' learning. The supervisor's suggestion may influence the student teacher's beliefs and knowledge, or it may influence the student teacher's planning practice. Both relationships may lead to the student teacher's learning because teachers' beliefs are interactive with their practices. As noted by Richardson (1996), beliefs are thought to drive actions; however, experiences and reflection on action may lead to changes in and/or additions to beliefs.

CHAPTER FOUR
RESEARCH METHODOLOGY

4.0 Introduction

This chapter reports the decisions made related to the design and methodology of the study. First, I discuss the nature of my study and the rationale for choosing qualitative inquiry as the approach to investigate the study. This is followed by a description of the initial study which was my first step in this research. The initial study was conducted in two different contexts as a means to get some information about the student teachers' perspectives on learning to plan lessons. This leads to descriptions of the design for my main study, the context of the study, the participants in the study, the data collection procedure and the methods that I employed in analysing and interpreting qualitative data.

This chapter also discusses the procedures used to ensure the study is believable, accurate and right from the view of qualitative research. Finally, as this study involves interaction with human beings, I discuss how ethical issues were given consideration. As I was involved throughout the whole process of this study, I discuss my role and influence in this study at the end of the chapter.

4.1 In Search of a Research Methodology

Corbin and Strauss (2008) defined methodology as a way of thinking about and studying social phenomena. Once the methodology is chosen, it defines how one will go

about studying any phenomenon (Silverman, 2004). In search of a research methodology, Gray (2004) reminds us that the methodology chosen is influenced by the theoretical stance adopted by the researcher. In this study, as described in Chapter One, I was interested to understand the experience of the student teachers in learning to plan lessons, thus, my intention was to 'keep a focus on learning the meaning that the participants hold about the problem, not the meaning that the researchers bring to the research' (Creswell, 2007; Marshall & Rossman, 1999). Merriam (2002) regards learning how individuals experience and interact with their social world, and the meaning it has for them, as taking an interpretive qualitative approach.

Working within a qualitative approach enabled me to understand and make sense of phenomena from the participants' perspective (Merriam, 2002; Corbin & Strauss, 2008). This would yield descriptive data to understand the student teachers' learning which is grounded in their experiences. According to Gray (2004), descriptive data can provide rich descriptions and explanations that demonstrate the chronological flow of events as well as often leading to serendipitous findings. Cresswell (2007) noted that the qualitative approach is chosen when the researcher needs a complex, detailed understanding of the issue by listening to the participants' voices within the context or setting in which they construct and interpret their own realities. Silverman (2005) postulated that a qualitative approach can provide a deeper understanding of social phenomena than would be obtained from purely quantitative data. Moreover, qualitative research involves the study, use and collection of a variety of empirical materials (Denzin & Lincoln, 1994).

In Chapter One, I have discussed the rationale for studying teacher planning from the student teachers' perspectives. Thus, a qualitative approach was particularly appropriate to the nature of my study, as I was not intending to test any hypotheses or any model of teacher planning. As I attempted to understand student teachers' learning, the process was inductive; that is, data were gathered to build concepts, hypotheses, or theories rather than deductively deriving postulates or hypotheses to be tested (Merriam, 2002). The perspectives of the participants were essential and this required asking important questions that lent themselves to qualitative inquiry.

The following section describes the initial studies conducted in two different contexts as a means to get some information from the student teachers' perspectives. This is followed by a description of the design for my main study, contexts of the study, the participants, data collection procedure, methods for analysing data, ethical issues, trustworthiness of the study and my role in this research.

4.2 Initial Study

I started my research on teacher planning with no particular theoretical perspective in mind. My choice depended mainly on my own professional interest in this area, and some experience teaching student teachers on teaching methodology and my experience as a university supervisor. Therefore, for a few months after arriving in the UK, I began my work by reading literature in this area. Thus, through reading several research studies in this area, I found several terms used by various scholars across the discipline; teacher planning, instructional planning and instructional design. Drawing distinction between these terms, the literature revealed that the term instructional design is widely

used in talking about designing distance education and web-based learning, although some researchers refer it to classroom instruction. Its use in these settings usually implies an adherence to a prescriptive and linear model of design, whereas the term 'teacher planning' carries no assumptions about how the activity is undertaken. I have chosen, therefore to use the term 'teacher planning' to refer to the process I am interested in studying.

In order to get some information from student teachers regarding teacher planning, I follow useful advice from Corbin and Strauss (2008) that 'a good way to begin is to do some initial interviews and observation'. I decided to begin my inquiry by conducting two interviews to get some views from the student teachers' perspective about their experience in learning to plan lessons during their practicum. Two interviews were conducted, first, with some PGCE student teachers in Norwich, and second, some student teachers in Kedah, Malaysia. For both groups, data were gathered through a focus group interview.

A focus group interview is a structure originally used in marketing research for probing perceptions of individuals (Steward & Shamsadani, 1990). Unlike individual interviews, the group setting of the focus group interview enables participants to exchange ideas and elaborate on them through discussion. A focus group has been described as a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment (Krueger, 2000), and is useful for revealing through interaction the beliefs, attitudes, experiences and feelings of participants (Litoselliti, 2003).

I was aware that a particular problem in group interviews is when one or two people dominate the discussion, therefore I took the role as the moderator in the interviews to keep balance between the active and the passive participants (Robson, 2002). Krueger (2000) stated that a focus group is useful when we are looking for the range of ideas that people have about something, and when we are trying to understand differences in perspectives between groups of people. Hence, I believed that a focus group was a very helpful method for me to start with as it facilitates social interaction among the participants, thus it enabled me to understand their similarities and differences in opinion, beliefs, and experiences on the topic of teacher planning. Following this section is a discussion of the initial study undertaken with two different groups of student teachers.

4.2.1 Focus Group One

Focus Group One involved eight secondary PGCE students in Norwich, UK. They had a variety of subject specialism and were self-selecting from the whole cohort who were invited to take part. As stated by Krueger (2000), the ideal size of a focus group is six to eight participants. The discussion was held in February 2005, and lasted for one and half hours at UEA. This group of students had completed their first school placement, thus I thought it was a good time for me to gain some insight into their experiences of dealing with planning lessons. I introduced myself, my research and the reason I invited them to participate in the discussion. To establish a starting point for a discussion, several questions were prepared to initiate the discussion. Although the questions were predetermined, there were certain answers from the students that shaped

a discussion which related to their experiences in planning. All discussion was recorded using a digital recording device and transcribed verbatim.

The data from the PGCE students in the UK gave me some insights into how student teachers learned to plan lessons. The fieldwork in the UK, in the sense of method and data as well, gave a direction for my future research, yet because of a different context to my main study, I decided to do some fieldwork in Malaysia. The contexts of my main study were discussed in Chapter One.

4.2.2 Focus Group Two

Focus Group Two involved eight student teachers at UUM, Malaysia. These student teachers were undertaking a four year undergraduate course for secondary school teaching and had a variety of subject specialism. During the discussion, the student teachers were on their final week of the practicum, and they had almost ten weeks at school experiencing planning and teaching in a real classroom. These student teachers were attached to three different schools near the university. I invited them to the discussion which was held in June 2005 at one of those schools after school hours. I followed the same procedure by asking their consent and informing them of the purpose of the discussion. Because my purpose was to hear from the student teachers regarding their experiences in planning during practicum, the same questions as for focus group one were used to initiate the discussions. The discussion lasted for one and half hours. All discussion was recorded using a digital recording device and transcribed verbatim. The original version of the data was in the Malay Language.

4.2.3 Analyzing Focus Group Data

As mentioned earlier, the focus group discussions were transcribed verbatim. This step was taken to provide a complete record of the discussion and facilitated analysis of the data. Then, I read through the text several times in order to find the themes in the data. As suggested by Taylor-Powell and Renner (2003), reading and re-reading the text helps ensure that the data are correctly categorized. This approach allows the categories to emerge inductively from the data. Through the inductive approach, the data are analyzed to see if any patterns emerge that suggest relationships between variables (Gray, 2004). Then I began to see patterns and connections, and similarities and differences in the way the participants responded during the discussion. Three major themes were identified from the data from both groups: the student teachers' beliefs about planning, factors influencing their planning and the changes that occurred in their planning over time. The important excerpts that derived from focus group two were translated into English Language. Because my aim in conducting focus group interviews was to get some insights into how student teachers learn to plan lessons during their practicum, I presented the findings in terms of what I learned from those studies which guided me in designing my main study. This I discuss in the following section.

4.2.4 What Was Learnt From The Initial Study?

I have discussed that I entered the field with a general idea about my research interest and the methodology as well. Thus, having conducted these initial studies enabled me to understand the realities of the student teachers' learning from their own perspectives.

Yin (2003) claimed that a pilot study will help to refine the data collection plans with respect to both the content of the data and the procedures to be followed.

Drawing from both focus group interviews, the data provided a direction for me in terms of the methodology and the data as well. Both groups were student teachers but they were trained to become a teacher under different models. The UK students followed a one-year post-graduate course for secondary teachers. In this model, 66 percent of the time is school-based, leaving only 12 weeks out of 36 weeks to the university preparation. By contrast the student teachers in the focus group in Malaysia followed a four-year Bachelor of Education program. Within this program, they practised teaching in a school-based practicum for only 10 weeks. This informed me that the student teachers in the UK put the theory into practice throughout the year, whereas the student teachers in Malaysia put theory into practice for the duration of 10 weeks. The two different contexts suggest that the two groups of student teachers learned in a different way during their practicum.

In terms of the method for data collection, I found that focus group interview was useful as a method for gathering the range of ideas that the student teachers have about planning lessons. Focus group interviews were also useful because the discussion enabled me to understand differences in perspectives between the student teachers in the group. I found similarities and differences in their opinion regarding issues in planning lessons, and this informed me that qualitative inquiry was the appropriate methodology to use in order to understand the issue from the participants' perspectives.

However, the focus group has its own limitation. From both interviews, I learned that the discussion was dominated by several student teachers, and because I wanted to hear more from every participant, therefore for my main study, I decided to use one-to-one in depth interviews for data collection. Besides interviews, I needed other methods of data collection to gain a deeper understanding of the issue. Using multiple-method of data collection enabled me to obtain a 'thick description of the phenomenon under study' (Merriam, 1988:11) to describe learning for the student teachers.

Although the data from the two focus group interviews were gathered from two different contexts, the findings for both groups indicate that:

- The student teachers have their own beliefs about planning,
- External factors such as university supervisor and cooperating teacher influenced student teachers' planning practice,
- Student teachers' planning practice changed towards the end of their practicum.

The initial studies were important in terms of the data as it helped me to formulate the research questions for this study. The data which arose from these studies indicate that in learning to plan lessons, there is a relationship between internal factors, such as beliefs and knowledge and external factors, such as university tutor and school-mentor, and these factors are inextricably linked. I pulled together these factors and generated research question for my main study.

4.3 Research Questions

The research questions for this study were generated from the data obtained from my initial study and from my review of the literature.

My main question is "how do student teachers learn to plan lessons during their practicum?"

To answer this question, I tried thinking whether a set of subsidiary questions or contributory questions might help me. Subsidiary questions are those which derive from a main question and should be answered after the answering of the main question; and on the other hand, contributory questions are those that work toward the answering of the main question, and therefore should be answered before the answering of the main question (Andrews, 2003). Knowing the distinction between subsidiary question and contributory question, I decided to think of a set of contributory questions which might help me to answer the main question.

The contributory questions are:

1. How do the student teachers plan lessons during their practicum?
2. Does student teachers' planning change over time?
3. What are the major factors that influenced the student teachers' planning beliefs and planning decisions and how do they influence them?

4.4 Design for My Main Study

4.4.1 Research Strategy

Because I wanted to describe the process of student teachers' planning and changes that occurred, case study seemed the most suitable approach. Creswell (2007: 73) defines case study as 'a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information, and reports a case description and case-based themes'.

Stake (2005) distinguishes case study by the size of the case and the intent of the case analysis. He refers to a case study as *intrinsic* if the study focuses on the case itself, and one focusing on an issue or concern is classified as an *instrumental* case study, whereas *collective* case study (or multiple case study) refers to the selection of multiple cases to explore an issue. In this study, the primary focus of interest was the planning process of the student teachers, and this inquiry seeks the experiences from 10 student teachers. Taking Stake's classification, therefore, my research strategy was a collective case study.

4.5 The Participants and Duration of Data Collection

Before discussing how I chose the participants in this study, I will provide a brief description of the rationale for selecting this cohort of student teachers from Universiti Utara Malaysia (UUM). As described in Chapter One, The Department of Education at UUM offers Bachelor of Education with Honours [B.Ed.(Hons)] degree programs in various specialization, that is, Business Administration, Accounting, and Information

Technology. The program is designed to prepare teachers for teaching in the secondary school. In terms of its structure and the duration of study, the education program offered at UUM is similar to the education program offered at other universities in Malaysia. Despite the similarities, there are some differences, particularly related to the timing and duration of the practicum. Student teachers at UUM have their practicum for 10 weeks from May until July soon after they have completed their sixth semester. After completing the 10 weeks of practicum, the student teachers are required to complete their remaining courses at the university. As a comparison, some other universities require the student teachers to do their practicum for one semester after all of their university-based courses.

Bearing in mind that the purpose of my study was to understand the learning process of the student teachers in planning lessons during their practicum, I took practical concerns into account in selecting the research site and the participants. As I was working at UUM as a teacher educator in the Department of Education, I was aware of the program structure and courses offered to the student teachers. The student teachers went for their practicum after they had completed the teaching methods courses. All student teachers were required to take two teaching methods courses; one for their major subject and one for their minor subject. In these courses, the students learned to plan lessons theoretically and practised teaching in a micro-teaching session twice.

Apart from the above reason for selecting the research site, I also needed to select student teachers who were doing their practicum during my data collection period, hence, I chose the student teachers in the cohort that undertook their practicum in May

to July 2006. The student teachers at UUM were required to do their practicum in public secondary schools located in Northern areas in Peninsula Malaysia.

The selection of the participants in this study was determined by a purposive sampling method. The purposive method was pertinent to understand the meaning of a phenomenon from the perspectives of the participants (Merriam, 2002) and would enable me to obtain the most appropriate information and 'rich data' (Patton, 1990) for the study. I wanted to have as many participants as I could manage in order to seek understanding of their learning, but I had to take account of the time frame of only 10 weeks for data collection. I also learned from my initial study how long it would take to analyse large amounts of qualitative data. Therefore, initially I invited 10 student teachers to participate in my study. I would be collecting multiple data sets from each participant and this number of participants seemed feasible for me in terms of having time to collect and analyse the data, yet to have enough data in order to understand the process and development of their planning. During the data analysis phase, I reduced the number of participants to eight when I found that the last two of them did not give me additional codes or themes. These two participants happened to be the number nine and the number ten of the transcripts (participants) during my data coding process. It is likely that if the transcripts had been analysed in a different order, different participants would have been omitted, once they were found to contribute no new codes or themes.

The participants who fulfilled certain criteria were invited to participate in the study. The criteria were:

1. Willingness: I looked for student teachers who were willing and interested to share their experience, and who were willing to spend their time in this study. Because I employed three interviews for each participant, considerable time commitment was needed from the participants. Therefore, their willingness to participate was important since without this it was unlikely that they would remain engaged throughout the study in order to provide me with appropriate information from their experience.
2. Accessible: The time frame for the student teachers' practicum was from 1 May – 10 July, and during this time frame, I needed to be able to visit the student teachers from several schools at least three times each. I was not able to select the student teachers doing their practicum at just one school as there were no more than three student teachers per school. Thus, taking account of this factor, I chose the student teachers at five schools located near to the university. I lived near the university, thus choosing the schools that were near the university would make it easier for me to commute from one school to another, and from the school to the university and to my house, respectively. This would enable me to collect data from 10 student teachers as I was planning.

My attempts to recruit the participants began before the practicum started. I contacted the education department at my university asking for the student teachers list and the school where they were assigned for their practicum. From the lists, I chose the student teachers who fulfilled the criteria above concerning accessibility. Then, in order to meet the first criteria, that is willingness, I contacted them introducing myself and my intention of selecting them as the participants in my study. All participants that I invited to this study agreed to participate. Once the student teachers agreed, I visited them to

build rapport and to give the consent forms as a written explanation about my study. Taylor and Bogdan (1998) noted that establishing rapport with the participants is the goal of every field researcher.

As I was interested to understand the student teachers' experience in general, I did not take into account what their major subject was in selecting the participants. Once the participants had been selected and agreed to take part I found that their major subjects were as follows: three majored in Information Technology (IT), three majored in Accounting, and four majored in Business. The data was collected over the 10 weeks of the student teachers practicum period.

4.6 Data Collection Method

There were four different sources of data employed in this study: first, in-depth interviews with the student teachers, the university supervisor and the cooperating teacher. The second source of data was the student teachers' thinking aloud planning. The third source was the participants' written documents, such as lesson plan books, curriculum materials, and the textbooks. The fourth source was observation of the student teachers' teaching in the classroom. These sources of data were used to ensure that the phenomenon under investigation could be illuminated from different perspectives for triangulation.

4.6.1 Interviews

Qualitative interviewing was used in this study to understand participants' views on planning lessons. Interviews are a powerful tool for eliciting rich data on people's

views, attitudes and the meanings that underpin their lives and behaviour (Gray, 2004). Thus, by conducting interviews I would be able to enter into participants' perspectives to find out from them those things that cannot directly be observed: their thoughts, behaviour, feelings or the meanings they attach to what goes on in the world around them (Merriam, 1998; Patton, 1990; Byrne, 2004, Rapley, 2004). A semi-structured interview was used as this technique allowed me to 'probe' for more detailed responses by asking the participant to clarify what they have said (Gray, 2004). Moreover, the semi-structured interview seems to be the most popular way of conducting a research interview because of its flexibility balanced by structure, and the quality of the data so obtained (Gilham, 2005). In my attempt to seek understanding of the student teachers' planning, I conducted two in-depth interviews with each participant: an initial interview and a final interview. As my aim was to give full concentration in listening to the voice of the participants during the interview, and to ensure that the entire conservations were recorded, I used the digital audio recorder throughout all the interviews undertaken in this study. Appendix A provides the schedule for the interviews conducted with the student teachers.

Initial Interview

During the second week of practicum, I conducted an initial interview with each of the 10 student teachers who participated in this study. The length of interviews ranged from 40 minutes to an hour depending on the participant's responses and the questions I needed to clarify. This semi-structured interview was based on a set of predetermined questions (see Appendix B). The data from the Initial Interview gave me an opportunity to learn about the student teachers' educational backgrounds, their planning

practices, influences on planning decisions and beliefs about teacher planning. I arranged the questions from broad to narrowing focus; the questions started with educational background and the decision to enter the teaching profession, going on to the subject they taught during practicum, to their planning practices, to the factors that influenced them in planning lesson and their beliefs about planning. This ordering of questions was done following the advice given by Breakwell (2000) that a good interview schedule has a rhythm to it which takes the participants through what appears to be a set of issues which are sensibly related. The ordering was also done in order to avoid prejudice of their responses. Immediately after asking them the subject they taught during practicum, I asked them about how they go about planning lesson. The questions on influences on planning and beliefs were asked later so that these questions would not influence the participants as they told me how they go about planning lessons. I did not want them to feel that they had to make their description of their practice fit what they had already told me about their beliefs.

Final Interview

The final interview was conducted at the end of their practicum and lasted from 40 minutes to an hour. With the exception of the educational background questions, the questions for this Final Interview were based on the question asked in the initial interview (see Appendix C). I used this Final Interview to see the similarities and the differences in their responses about their planning practice, their beliefs about planning and influences on their planning. I also used this Final Interview to ask them questions about changes in their planning practice as they had engaged in planning for about 10 weeks during their practicum. This Final Interview was important to my study as it

enabled me to see the stability and changes in their beliefs about planning, in the way they make decisions in planning and the influences on their planning process.

The data gathered in this interview were about stability and changes, therefore I took precautions in dealing with the participants' responses to the questions asked in this interview. I was aware when I asked someone a question, and then eight weeks later asked them the same question, and this time I got a different answer, that the reason for getting a different answer compared to the answer given during the initial interview might be any of three reasons. First, it might be that the participants have changed their views; second, it might be that their views change all the time and it happened that they have a different view the second time; and third, it might be that something about the way I ask the question is different and influenced what they say. Therefore, in my attempt to ensure that the answer given to me in the final interview was a genuine answer, I used exactly the same questions as in the initial interview, in the same order, so that their interpretations of the questions would as far as possible be the same. If the student teacher gave different answers to the same questions, I interpreted it as a genuine change, meaning that it was the real answer rather than a random answer. Triangulation from other sources of data also helped me to make an interpretation of the responses given in this interview.

4.6.2 Thinking Aloud Planning

To see the student teachers' planning process and their decisions whilst planning lessons, data were gathered through 'thinking aloud planning'. As Patton (2002) has pointed out, protocol analysis or a think-aloud protocol approach aims to elicit the inner

thoughts or cognitive processes that illuminate what is going on in a person's head during the performance of a task. The thinking aloud method consists of having a student teacher verbalize all of his/her thoughts while engaged in a task (Clark & Peterson, 1986).

The student teachers in this study were provided with a pocket-size digital recorder and asked to talk into the recorder at the actual time and place of their planning, for example at home, or when they planned a lesson at school. I did not prepare any set of questions to guide them, rather, student teachers were asked to record their planning process for the lesson they were actually going to teach in a free-flowing manner. This approach, according to Pendry (1997) was to distort their normal thinking as little as possible, and to pay due attention to the effects that the preparation for the task might have on the thinking they articulated. The student teachers were asked to record their name, the date, the class and the lesson at the beginning of the taping and then to verbalise what they were thinking about as they planned. To make them feel comfortable with the task, they were given flexibility in choosing the subject, the date, and the duration of the planning time. Each of the participants verbalised their planning and made the recording once and these lasted for between 30 and 60 minutes. All the thinking aloud protocols were transcribed to create the typewritten protocols. The first stage of analysis of these typewritten protocols was to write a commentary on each of them. In commentary writing, I explained what was done by the student teachers in their planning process in order to enable me to understand what came first, second and so on during planning. The commentary aimed to be a description rather than an interpretation of the data because my purpose was to produce the data that could then be coded (see Appendix D).

4.6.3 Classroom Observation and Post-Lesson Interview

In my attempt to maximise the validity of the study through the process for collecting data, multiple sources of data were used. Validity considerations are presented in a later section of this chapter. Robson (2002) has pointed out that observation can be used as a supportive or supplementary method to collect data that may complement or set in perspective data obtained by other means. An informal observation method (Robson, 2002) was adopted as this approach was less structured and allowed considerable freedom in what information was gathered and how it was recorded. I sat at the back corner in the classroom for one lesson that lasted for 40 minutes to observe student teachers implement a lesson which they had planned prior to interactive teaching. This gave me the opportunity to see a teaching episode. I kept detailed field notes regarding classroom arrangement, teaching approaches, activities for the pupils and their behaviours. Immediately after the lesson, I compared my notes to the lesson plan in the student teacher's plan book. I did not refer to the lesson plan during the observation period as the student teachers needed it for their teaching. It was also because I wanted to avoid prejudicing whether they implemented the lesson as in the lesson plan book. My intention was to see how the lesson was implemented without knowing the written plan in advance.

I sat down with the student teacher after the lesson and conducted a post-lesson interview ranging in length from twenty minutes to half an hour depending on the responses from the student teacher. The interview focused on their thinking about events in the lesson such as the approach taken to teach the subject and their reflection

on the strengths and weaknesses of the lesson. The core questions that I asked the student teachers were:

1. Did you implement the lesson as you had planned beforehand?
2. How did you decide the activities for the lesson?
3. What were the strengths / weaknesses of the lesson?

Data gathered from this interview were used to interpret and corroborate the data obtained in the initial and final interview. For example, to understand the participants' beliefs and practices in planning lessons, data were gathered through interviews. However, for accurate portrayal of teacher belief, investigations of teachers' beliefs should examine teachers' verbal data along with observational data of their instructional practice (Thompson (1992). Thus, conducting a classroom observation and post-lesson interviews provided data that helped me to understand the relationship between student teacher beliefs and their practice.

4.6.4 Documents

Documents are some of the most frequently used unobtrusive measures (Gray, 2004), and include written documents, whether these be books, newspapers or whatever (Robson, 2002). According to Robson (2002), using documents meant we are dealing with something produced for some other purpose; it is an unobtrusive measure which is non-reactive, in that the document is not affected by the fact that you are using it. Yin (2003) provides useful advice regarding using documents as a source of evidence: in addition to being useful to provide other specific details to corroborate information from other sources, the researcher can make inferences from the documents. However, Yin

(2003) noted that the researcher should treat inferences only as clues worthy of further investigation rather than as definitive findings because the inferences could later turn out to be false leads.

I collected the student teachers' lesson plan books, and their additional notes, or materials that were used during planning. I also collected the textbooks, the syllabus and curriculum specification for each subject that were used by the student teachers in planning lessons. These documents were collected at the end of the practicum as I wanted to have the entire collection of the materials. As suggested by Marshall & Rossman (1999), the decision to gather and analyse documents should be linked to the research questions developed for the study, thus, investigating documents for this study would enable me to see the patterns of the student teachers' lesson plans and determine if any changes occurred in this learning period.

Marshall and Rossman (1999) noted that the use of documents often entails a specialized analytic approach called content analysis; a method for describing and interpreting the artefacts of a society or social group. I adopted content analysis as a procedure for dealing with these documents: this was done in two phases. First, I scanned through each of the plan books to describe the characteristics of the lesson plans (the subject, number of lessons planned, changes in planning such as the length of the lesson plan, and whether the details in each column increased or decreased). The second phase was scanning what was written in the plan and the way the student teachers plan the lesson. The later phase was to identify interesting issues from the plan book. At this stage codes were given to each of the interesting issue derived from the data.

4.6.5 Interview with the University Supervisor/Cooperating Teacher

The university supervisor and the cooperating teacher were not the participants in this study. This study was conducted to understand the student teachers' experience in learning to plan lessons. However, as I was aware that during practicum the student teachers were assigned a cooperating teacher and university supervisor to guide them, it seemed likely that both of these parties would contribute valuable information regarding student teachers' learning.

As described in Section 4.5, the setting of the study was five secondary schools that are located near to the university. Two or three student teachers were assigned for their practicum in each school. I had no theoretical reasons for choosing the cooperating teachers for this interview, rather I chose them because they were the teachers working in the school, and they were assigned as the cooperating teacher to the student teacher. For each school, I invited two cooperating teachers to a semi-structured interview. I explained the reason for interviewing them, and followed this by a written letter introducing myself and the study I was undertaking. All of the cooperating teachers approached agreed to be interviewed. I asked the cooperating teachers to decide the time, the place and the date for the interview as I wanted to have a conversation where they would feel comfortable, and most important, I did not want to interrupt their work schedule. The interviews were conducted during school hours in the staff-room as determined by the cooperating teacher. Each interview lasted for between 15 and 20 minutes.

Besides this, I also invited the university supervisors to be interviewed. The university supervisor is a member of staff within the Department of Education, Universiti Utara Malaysia, who is designated to give appropriate guidance to the student teacher during the practicum. In addition, the university supervisor is required to assess the student teacher's performance in their practicum (as described in Chapter One). Upon obtaining the permission of the Head of the Department, I contacted eight university supervisors inviting them to give their views and all agreed to contribute their views. During the interview, I asked the cooperating teacher and the university supervisor to give general information without referring to any specific student teachers. My intention was to seek information regarding; their experience as a university supervisor / cooperating teacher, their role in guiding the student teacher's planning, their beliefs about planning lessons and what a lesson plan should look like, and their perception about student teachers' planning during practicum (see Appendix E).

Although my study was to understand student teachers' learning from student teachers' perspectives, the data gathered from the cooperating teacher and university supervisors' perspectives were used to corroborate data. For instance, when the student teachers talked about their university supervisors' influences in their planning, I referred to the data obtained from the university supervisor about their role and beliefs in helping student teachers to plan lessons. Thus, the function of collecting data from the university supervisor was to help me to understand the data from the student teachers.

The cooperating teacher and the university supervisor were not the participants of the study, yet ethical consideration was given priority in my attempt to obtain their views. Gregory (2003) pointed out that research involving human subjects undertaken without

the explicit consent of the researched lacks an adequate moral basis. Ethical considerations are presented in a later section of this chapter.

4.7 Data Analysis

Marshall and Rossman (1999:150) conceptualised data analysis as:

> "the process of bringing order, structure, and interpretation to the mass of collected data. It is a messy, ambiguous, time-consuming, creative, and fascinating process. It does not proceed in a linear fashion; it is not neat."

Their description of qualitative data analysis alerted me to the huge amount of data collected for this study which took the form of initial interviews, final interviews, post-lesson interviews, thinking aloud protocols, and documents; all of these data had to be bought together to give meanings. As the process does not proceed in a linear fashion, the researcher engages in the process of moving in analytic cycles (Creswell, 2007). Therefore, in dealing with this huge amount of data, I followed the useful advice given by Merriam (1998) and Rapley (2004) that data analysis is done in conjunction with data collection. Maxwell (2005) mentioned that the most common problem in qualitative studies is letting your unanalyzed field notes and transcripts pile up, making the task of final analysis much more difficult and discouraging. Taking Merriam's (1998) suggestion that data analysis is done in conjunction with data collection, and Maxwell's (2005) advice about the difficulties that arise when the data pile up, I started my data analysis concurrent with the data collection.

4.7.1 The Process of Analysis

Organizing Data and Initial Familiarisation

At this initial stage, I followed Maxwell's (2005) suggestion that listening to interview tapes prior to transcription is also an opportunity for analysis, as is the actual process of transcribing interviews or of rewriting and reorganizing your rough observation notes. Throughout my first phase of collecting the data, i.e. conducting one-to-one interviews, I also made my first attempt to make sense of the data. I listened to the interview recording again and again to get familiar with what the students had said.

I was aware that my interview tapes began to pile up. Therefore, I started the transcription of my interviews before I completed the entire phase of data collection. I did the transcription on my own because I believed that by doing this I would orient myself easily to the data. As the interviews were conducted using the Malay Language, the transcriptions too, were made verbatim in the Malay Language.

I continued the process of interviewing, listening to the recording and transcribing, writing notes and collecting documents for the whole phase of my field work. At the end of my field work, the data which I collected from the student teachers consisted of 10 initial interviews ranging from 40 minutes up to one hour, 10 post-lesson interviews ranging from 20 minutes to 30 minutes, 10 final interviews ranging from 40 minutes to one hour and 15 minutes, and 10 thinking aloud recordings ranging from 30 minutes to 60 minutes. Besides the audio recording, I also collected all participants' plan books, 10 altogether. Along with those data above, I also have my classroom observation notes which were written during my classroom observation. In conjunction with all data

pertaining to student teachers' learning process, I interviewed 8 university tutors and 10 school teachers. The interviews with the university tutors ranged from 45 minutes to one hour, and the interviews with the school teachers ranged from 15 to 20 minutes.

After completing all the data collection procedure, I returned to the UK with the bulk of the data mentioned before. I kept in my mind that the process of analysing qualitative data does not happen in a linear fashion, therefore I continued my analysis by doing all the processes simultaneously. I continued transcribing the audio recording, and organizing the data. Lacey and Luff (2001) suggested that after transcription, it is necessary to organise the data into easily retrievable sections. In organizing the data, I created a different folder for every category of my interviews, notes and documents. All the files were identified by date, time and name of the interviewee. For ethical reasons I gave pseudonyms to each participant, the cooperating teachers and university supervisors. Before the formal analysis began, I kept on listening to the audio, reading and re-reading the transcription and my observation notes. I also went through the participants' plan books in order to get an initial idea of the patterns of their lesson plans. This preliminary exploratory analysis (Cresswell, 2008) helped me to obtain a general sense of the data, memoing ideas, and considering whether more data was needed for the study.

Generating Categories, Themes and Patterns

This stage, as noted by Marshall and Rossman (1999), demands a heightened awareness of the data, a focused attention to those data, and openness to the subtle, tacit undercurrents of social life. Patton (1990) reminded us that embarking on an attempt at uncovering patterns, themes, and categories is a creative process that requires making

carefully considered judgements about what is really significant and meaningful in the data. Prior to the analysis phase, I had identified which forms of data (initial interview, final interview, thinking aloud planning) would contribute to answering the research questions. Therefore, in order to begin the formal analysis, I picked two initial interview transcripts, two final interview transcripts, two post-lesson interview transcripts and two thinking aloud transcripts to read again very closely. I chose these transcripts as each of them represented the data which could answer my research questions. Gilham (2005) noted that a lot of categories are derived from the first transcript, more from the next but progressively fewer from those that follow because the interviewees are making the same kind of points. Working on these few transcripts as my starting point, I followed Maxwell's (2005) suggestion that during this reading or listening, the researcher should take notes and memos on what she sees or hears in the data, and develop tentative ideas about categories and relationships. I adopted inductive analysis (Patton, 1990) where the patterns, themes, and categories of analysis come from the data; they emerge out of the data rather than being imposed on them prior to data collection and analysis.

From the data, I constructed an initial list of categories and these were generated by two means. First, I used what Patton (1990) describes as 'indigenous concepts' where the categories are the actual words expressed by the participants in the interviews. Secondly I used 'sensitizing concepts' (Patton, 1990) where the categories are created by the researcher but grounded in the data. During this process, I read the transcripts with the research questions in mind, so that the research questions guided me through this process. When I found data that I thought were relevant to answer the research

question, I considered whether I should create a category from it. For example, I coded the excerpt below as 'belief and knowledge about planning':

> *To me, lesson plan is vital for a new teacher and for a student teacher because we still inexperience and we could not anticipate what will happen in the classroom. By doing some planning, at least we know the flow in the classroom; we plan the activities, so we know what to do and how to do. (SR/INT)*

In the excerpt above which I found in an initial interview transcript, the participant talked about a lesson plan. She viewed that lesson plan as vital. In her opinion, the lesson plan seemed vital for new teachers and for student teachers. Why does she think the lesson plan is vital? She said that it is vital because student teachers and new teachers are inexperienced teachers, and she believed that by planning, the teacher will know what to do and what activities to carry out during teaching.

I categorised the above excerpt as 'belief and knowledge about planning'. Although the words 'belief and knowledge' do not come directly from the participant's language, after I read it and re-read again, I conceived the excerpt above as 'belief and knowledge' because the participant expressed her belief and knowledge. So this code is a "sensitizing concept" driven by the theoretical framework I developed for the project. In my data analysis, the terms belief and knowledge are not distinguished. Thompson (1992) highlighted the issue of the difficulty of distinguishing between beliefs and knowledge because of the close connection between them. Most of the teacher's professional knowledge can be regarded more accurately as belief (Kagan, 1992a). (See Chapter Three for the discussion about beliefs and knowledge).

Without predetermined themes set before conducting the data analysis, codes emerge directly or indirectly from the data. For instance, when the participant talked about

influences on his/her planning, I created a code 'pupils' as one of the factors influencing student teacher planning. Although the idea initially was suggested by the research question, the code 'pupils' comes from the data itself. I kept all the coding notes or "analytic memos" (Glaser & Strauss, 1967) in my memo pad; I defined each code created during this process. Coding notes were very useful for me as a tool to check the meaning of each code and how I labelled it. As I progressed coding data intensively, more codes emerged from the data. The initial list of the codes is represented in the Appendix F.

Coding the Data Using Computer Software

Coding data is the formal representation of analytic thinking (Marshall &Rosman, 1999). Working with a large amount of data in the form of interview transcripts and documents, I would have found it difficult and time consuming to continue the coding process manually. I decided to use computer software NVivo to code the rest of my data. I believed that this software could assist me in the data management task. Furthermore, using a computer for qualitative analysis allows one to 'play' with the data (Fielding and Lee, 1998). They emphasize that using computer software makes it possible to look at data in different ways, and to try out new analytic approaches.

Using the initial list of codes prepared during my initial coding, I prepared these codes as 'nodes' in NVivo 2.2. I chose to create the nodes using 'tree nodes' because from my early reading of the transcripts and coding, I built a consensus in my mind that those codes were hierarchical in nature. For instance, from one initial interview transcript, I found that the student teacher talked about her background which began with her early life during childhood in school, her life during secondary school and her life during her

tertiary education. She also talked about the reason for choosing teaching as her future career. This information seems to me to be usefully seen as hierarchical, therefore I created a 'tree node'(category) which I named as 'ST Background' (short for Student Teacher Background). From this 'ST Background' node, I started to create the sub-category 'sibling nodes'(codes) which related to the tree node. The sibling nodes are 'education' (information about early, secondary and tertiary education), 'family'(information about family, including their jobs) and 'why teacher'(information about choosing a teaching profession as a career). These three sibling nodes are related to what I called ST Background.

The use of questioning as my analytic tool (Corbin & Strauss, 2008) was predominant as I kept questioning the data before assign it to any code or category. Corbin and Strauss remind us that asking questions and thinking about the range of possible answers helps us to take the role of the other so that we can better understand the problem from the participant's perspective. I also adopted the Constant Comparison (Glaser & Strauss, 1967) technique; each incident in the data is compared with other incidents for similarities and differences.

As I proceeded with the coding using the NVivo software, I keep on constructing and adding tree nodes and sibling nodes when the new categories arose from the transcripts. I read and re-read the transcripts, asking questions and making comparisons of the data while coding and making notes about the reason for creating new tree nodes or sibling nodes. When no new data were found that suggested new codes or category, the categories were considered to be saturated. At the end of this process, I had created 14 tree nodes and 81 sibling nodes. (see Appendix G).

The use of NVivo helped me to organize the data so that I could easily retrieve it. Having coded all of the transcripts using the NVivo software, I carried out an exhaustive review of each code again to check the accuracy and consistency of the coding system. By clicking the node (code) from within the software package, I could retrieve the data assigned to that node (code) without having to go through piles of transcripts manually. However, this software could not help me to perform the analysis. The interpretation of the data remained the human responsibility.

Identify Patterns and Connections Within and Between Categories

As I coded the entire collection of transcripts into categories (tree nodes) and codes (sibling nodes), I began to examine the connections between the codes within the categories and between the categories. I pulled together all the data assigned to each code to see the similarities and the differences within the category. This process helped me to develop my understanding and make sense of the data. For example, I pulled together all the data coded under the category of "process of planning lesson". In this category, initially I created 16 codes (sibling nodes) that talked about process in planning lesson. I read the data again to find the similarities and differences within the codes in this category, then I visualised the codes into a diagram. As suggested by Taylor and Bogdan (1998), I hoped that sketching out potential relationships between different slices of data would enable me to see whether it helped me to come up with new understanding. Diagram 1 depicts the analytical diagram of the planning process.

Based on the diagram, I explored the similarities and connections between the codes.

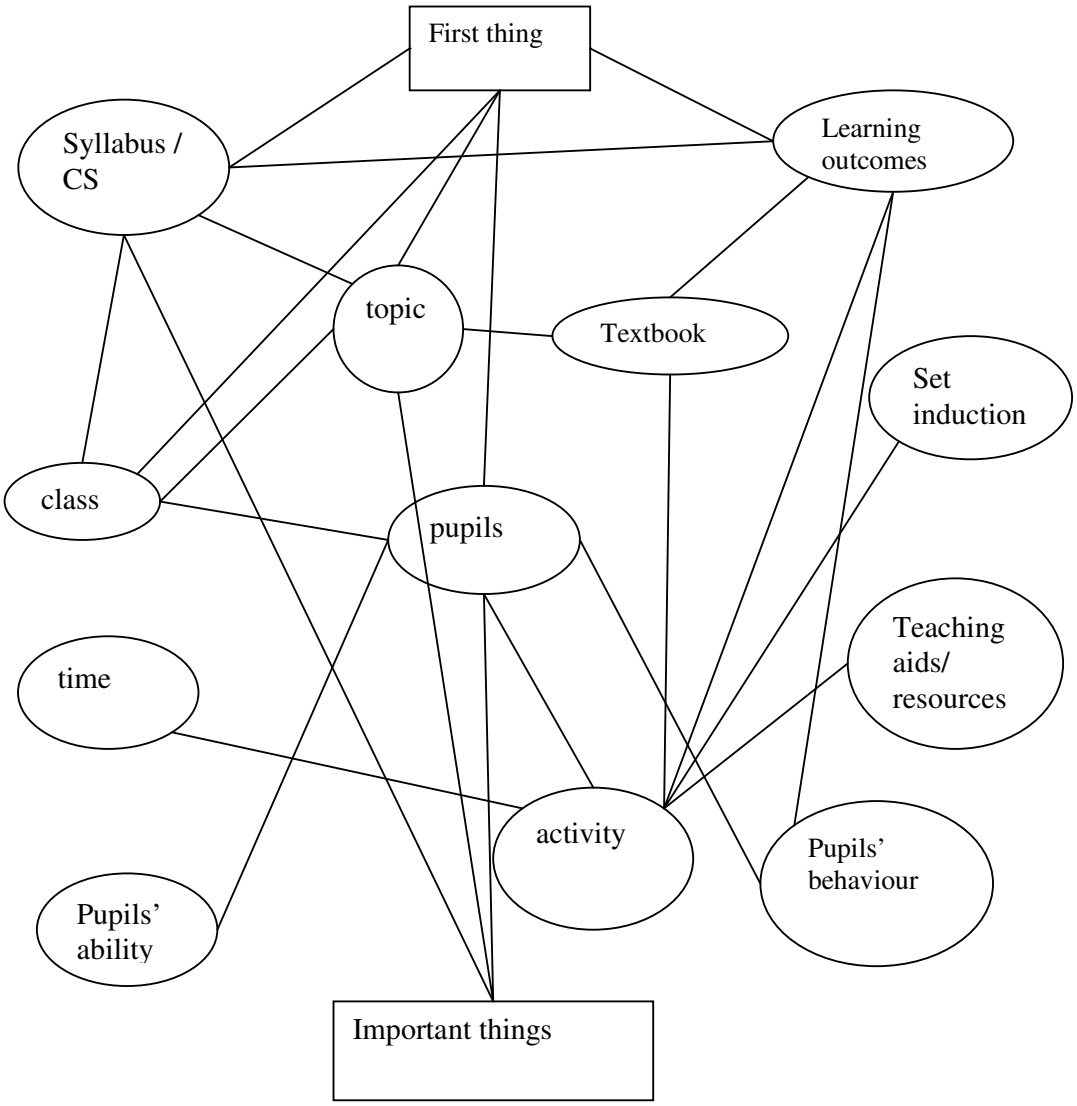
This was done by cross-case analysis, which according to Patton (1990) means grouping together answers from different people to common questions. I decided to write about each code to describe similarities and differences across cases. For example, some participants talked about the learning outcomes as the first thing that came into their mind when planning lessons, other participants said that the textbook came first, some others said the topic, the syllabus, the class, and the pupils. These codes were inter-related (the line in Diagram 1 indicates the connection between the codes). As I proceeded to describe other codes, I discovered there were similarities and differences between participants' responses. Having engaged in this process, I merged codes that had similar meanings in context, for example I merged "class" (referring to a particular classroom) with "pupils" as the data talks about the same data ("pupils" refers to pupils in the particular classroom). Having carried out an exhaustive review of each code within categories, I gradually understood the pattern and the key ideas being expressed in each category.

In examining codes between categories, I realized that several codes appeared in different categories. For example, "activities" appeared in three different categories. (process, changes, difficulty). This indicates that "activity" was quite central in student teachers' planning as they talked about the activity in a number of particular contexts; therefore it appeared in several categories. I decided the repetition was necessary as the code carried different meanings in different categories.

At this stage, I realized that I was engaged in the process of data reduction, which according to Miles & Huberman (1994) is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that 'final' conclusions can be

drawn and verified. They recommend that data can be reduced and transformed in several ways, either through selection, or through being subsumed in a larger pattern. While engaged in re-examining codes and categories to ensure the data were coded consistently before reaching the final version of the categories, several categories were merged into larger categories. For example, I merged "university supervisor/cooperating teacher" into "influences in planning". This was done as the data in this category represents the same sort of information. Towards the end of the data reduction process, I removed a few codes as these codes were not offering meaningful data to answer the research questions for this study. The final categories/codes are given in Appendix H.

Diagram 4.1: The Analytical Diagram of the Planning Process



4.8 Interpretation

The interpretation of the data, according to Patton (1990) involves going beyond the descriptive data, and it implies a researcher's understanding of the events as related by participants (Corbin & Strauss, 2008). In giving meanings to the data, I am reminded of the data analysis spiral by Cresswell (2007) that the researcher engages in the process of moving in analytic circles rather than using a fixed linear approach. Thus, there was no sharp line that distinguished between data analysis and interpretation. Interpretation exists in several forms; it may be based on hunches, insights, and intuition or it might be within a social science construct or idea, or a combination of personal views as contrasted with a social science construct or idea (Cresswell, 2007). With regards to this, mine was of the latter form; a combination of personal views as contrasted with a social science construct.

While engaged in the interpretation process, I took steps to ensure validity in interpretation. According to Mason (2004: 191) "validity of interpretation in any form of qualitative research is contingent upon the 'end product' including a demonstration of how that interpretation was reached". Therefore, in devising methods for interpretation, I structured my approach around the goal of answering the research questions (RQ). As described in Section 4.3, to answer my main research questions, I generated four contributory questions that helped me to answer my main research question.

As I engaged in coding the data using the NVivo software, engaged in the process of data reduction, came out with the final categories and codes, and represented each

category in analytical diagrams, then gradually I began to understand the connections between the data within the category and between the categories. Now as I attempted to progress to the interpretation of the data, the steps taken were, first, I identified the categories that were relevant to the RQs. For example, to answer RQ1, I pulled together the data coded under the category "process of planning". After going through the data reduction process (which I explained in the previous section), this category consisted of 15 codes. I chose one code in this category at a time, for example "the first thing", output the excerpts from this code, and read each of them very closely. As I went through, I began to identify the pattern, the similarities and differences across cases of what they said were the first thing when planning a lesson. I also saw the consistency and inconsistency of the data within the case. For example, early in the practicum, Hani mentioned that the first thing she thought about when planning a lesson was the topic, and this was consistent with the data from her final interview.

After I studied and reflected on what I saw from the data, this was followed by describing them in detail: I described the similarities and the differences across cases, as well as the consistency and inconsistency within the case. I included the excerpts as evidence of the descriptions. Then, I followed the same procedure working with all of the codes (15 codes) under this category. The analytical diagram was also helpful in the sense of helping me to visualise the connections between the codes. I also reviewed the student teachers' plan books. Initially, I had already coded the interesting issues from the plan book in NVivo, but at this stage the plan books were used alongside the coded data to pick examples of lesson plans on particular dates that I had identified to illustrate points in my description.

After I had understood the patterns and described all the similarities, the differences, the consistency and inconsistency in this category, then, I reviewed my descriptions again, and compared them to the original data. This was done for two purposes. The first was, to check for any redundancy. When I found that the description was redundant in two or more codes, I condensed them. For example, for the code "textbook", the description also appeared in the code "topic". Therefore I merged these descriptions together as they referred to the same meaning. The second reason was to see whether there was any new understanding that arose from the data. When there was no new understanding arising, I thought about my description of the data again, and wrote propositions about them.

Before any proposition was made, I reviewed again all forms of data and I revisited the initial proposition several times before arriving at a decision whether the proposition was valid and helpful in talking about the data. For example, one proposition was "the student teachers thought that the most important things in planning were the learning outcomes". This proposition was revisited several times before I decided it would be useful in my interpretation. I needed to ensure that it was the exact meaning of the data and was supported by the evidence from different forms of the data, therefore I retrieved codes that spoke about the learning outcomes again, and studied the data carefully to think of any other possible proposition that would speak about the same data.

While I was engaged in this process, some propositions were adopted from the literature whenever I thought that the data supported similar interpretive concepts to those suggested in the literature, such as " planning is recursive" (John, 2006; Yinger, 1980),

in which the term was used to describe how the process of planning does not happen in a linear fashion. I then followed a similar procedure, re-checking in all forms of data before the proposition was considered useful in my interpretation. Thus, the process that I adopted is congruent with Patton (1990:477) assertions that "a qualitative analyst returns to the data over and over again to see if the constructs, categories, explanations, and interpretations make sense, if they really reflect the nature of the phenomena.

I followed the same procedure in answering RQ2 and RQ3. After having satisfied myself that I had explored the data in every pertinent way, the next step was to present it according to the RQs. Following this chapter are three chapters that reports the findings and interpretation of the data.

4.9 Coding System and Abbreviation

In the data analysis and data presentation, the coding system and its abbreviations are as follows:

Coding system	Examples of coding	Explanation
Initial interview (INT)	AR/INT	Aina from the initial interview data
Final interview (FNL)	AR/FNL	Aina from the final interview data
Thinking aloud (TA)	AR/TA	Aina from thinking aloud data
Post-lesson interview (PL)	AR/PL	Aina from post-lesson interview data
Plan Book (PB)	AR/PB	Aina's plan book data

Summary

The previous section in this chapter described the decisions made related to the design and methodology of the study. This includes an explanation of the reasons for adopting a qualitative research approach for this inquiry, and the procedure followed in selection of the research site and the participants, data collection and data analysis. The next section in this chapter describes the procedures followed to ensure the trustworthiness of this study.

4.10 Trustworthiness

Creswell (1998:193) raised an issue of quality in qualitative research with the question "how do we know that a qualitative study is believable, accurate and right?" His question alerted me to the fact that there are criteria that every qualitative researcher should fulfil in order to claim that the study is believable, accurate and right. However, Corbin and Strauss (2008) argued that quality in qualitative research is something that we recognize when we see it; yet, explaining what it is or how to achieve it is much more difficult. Thus, Corbin and Strauss claim that "let the research findings speak for themselves" (2008: 305) is more appropriate in judging the quality of qualitative research.

Although I agree with Corbin and Strauss's notion to some degree, I also believe that for this study to be accepted as achieving a high standard of quality, I need to be able to demonstrate its trustworthiness to the reader. Lincoln and Guba (1985) outlined four questions pertaining to a claim to trustworthiness. These questions are "truth value, applicability, consistency and neutrality" (Lincoln & Guba, 1985:290). Lincoln and

Guba explain that "within the conventional paradigm, the criteria that have evolved in response to these questions are termed 'internal validity', 'external validity', 'reliability', and 'objectivity" (p.290). In the naturalistic paradigm, Lincoln and Guba use the terms "credibility" as equivalent to "internal validity", "transferability" as equivalent to "external validity", "dependability" as equivalent to "reliability", and "confirmability" as equivalent to "objectivity".

Corbin and Strauss (2008) argue that the term 'truth' carries with it a certain degree of dogmatism, therefore, according to them the term 'credibility' (Lincoln & Guba, 1985; Corbin & Strauss, 2008) is more appropriate when talking about quality in qualitative research as it indicates that findings are trustworthy and believable in that they reflect participants', researchers', and readers' experiences with the phenomenon, but at the same time the explanation is only one of many 'plausible' interpretations possible from data. Several techniques, (Lincoln and Guba, 1985; Creswell, 1998; Robson, 2002) are suggested to enhance credibility, such as prolonged engagement, persistent observation, triangulation, member checking and peer debriefing. The following section discusses the procedures undertaken that would help to increase the credibility of this study.

4.10.1 Prolonged Engagement and Persistent Observation

I went into the research sites for my main study for 10 weeks. Although the research sites in this study were five different locations, as the locations were in a radius of 20 kilometres, I could manage to be at each site once or twice a week. Prior to the interviews, I visited all participants at the research site to introduce myself and to build rapport. Throughout the duration, I interviewed each of the participants three times;

first when the participant started their practicum, second, when I conducted a post-lesson interviews, and finally during the final week in their practicum. Within this time frame, I also talked to the participants when I asked them to do think aloud planning, explaining to each of the participant the meaning of thinking aloud, and the reason for doing thinking aloud planning.

I also conducted a classroom observation once with each participant, and the observation session was held after I had seen them several times. At the end of the practicum, I asked permission from the student teachers to collect documents such as their plan books, and other supporting materials used in planning and teaching lessons. Thus, I would claim that this investment of time at the site was sufficient, as Robson (2002:172) noted "a period of weeks or even months is still usual, much longer than is typical in a fixed research method". By spending sufficient time with the participants, I was able to built trust with the participants, I learned the culture of each setting, and had frequent communication with the participants and the teachers as well. This should help to reduce reactivity as claimed by Robson (2002), who asserts that a researcher who spends a long time in the setting tends to become accepted and any initial reactivity reduces. "Reactivity refers to the way in which the researcher's presence may interfere in some way with the setting which forms the focus of the study, and in particular with the behaviour of the people involved" (Robson, 2002:172).

4.10.2 Triangulation

Another procedure used in order to ensure the credibility of the study is triangulation. Cresswell, (2008: 266) describes "triangulation as a process of corroborating evidence

from different individuals (principal and student), types of data (observational field notes and interviews), methods of data collection (documents and interviews) in description and themes in qualitative research". As reflected in a previous section, there are multiple source of data that have been used to understand student teachers' learning to plan lessons: initial interviews and final interviews with the participants, thinking aloud planning for each participant, observation of one teaching episode followed by post-lesson interview, documents such as the participants' plan book, Curriculum Specification for the particular subject, and textbooks. These different sources of data and methods of data collection were employed as it helped to check the consistency of the data and thus to ensure the study was accurate because the information drew on multiple sources of information and individuals (Yin, 2003), not on researcher's belief. This should help to avoid threats to validity in terms of researcher bias, which according to Robson (2002) refers to what the researcher brings to the situation in terms of assumptions and preconceptions, which may affect the analysis of the data.

For instance, in my attempt to understand the planning process, data from the thinking aloud planning was used to describe what the student teachers think about as they plan and how they make decisions as they plan. However, I believe that to get a holistic picture of the planning process, using multiple types of data was important as these would provide a check on the consistency of the data and would avoid bias in interpretation. Therefore data from the interviews (initial interview and final interview) were used to corroborate the information from the think aloud planning as these data also provided information about what the student teachers do in planning lessons. Thus, this type of triangulation helped to build my understanding about what the student teachers think about and why they think about it in the process of planning. The data

from the plan book was also used to check what was written in the plan book as compared to the data from the thinking aloud and interviews.

4.10.3 Member Checking

Member checking involves taking data, analysis and interpretations that I had made to the participants to validate the accuracy and credibility of the account (Creswell, 1998; Robson, 2002). In this study, member checking was done across the research process. As I was having three interview sessions with each participant, therefore, I started to transcribe the initial interview data while I was doing my fieldwork. Although this step was taken as a means to orient myself to the data, it was also done as my strategy to ensure that I could return the initial interview transcripts to the participants for the purpose of checking and correcting factual errors. The participants were asked to add more information if they were willing, or make amendments if the data were not accurate. This also allowed me to get further explanations for some things that might be unclear to me so that for the second and third interview sessions, my understanding of what they said would become clearer and more accurate.

Although I started to transcribe the interviews while I was doing my fieldwork, I left the research site with a pile of interviews that still needed to be transcribed. Upon completing the transcription of the whole interview set (40 transcripts) of the participants, I sent them to the participants via e-mail for the purpose of validating the accuracy of the data. The participants were asked to add additional information or to make corrections if there were any factual errors. I did the same with the data from the university supervisors and the cooperating teachers. During my analysis stage, I

consulted the participants to provide further explanation for the data that needed clarification. During the process of interpretation of the data, I sent relevant excerpts to two participants for them to validate the interpretation of what they said during the interviews. These two participants were Elly and Reezal and I chose them randomly as my intention was to ensure that I interpret the excerpts authentically.

4.10.4 Peer Review or Debriefing

In one PhD Student Research seminar session, we were invited by the facilitator (academic member at CARE UEA) to bring some data for coding. Although I had started the process earlier, I brought a small amount of data to the seminar to do the process again and to get feedback from my research colleagues; through this process I was given valuable feedback about the codes that emerged from the data, and this I compared to the coding that I had done earlier. This strategy, the revelation of the research process to another neutral party, according to Creswell (1998), provides an external check of the research process, in much the same spirit as interrater reliability in quantitative research.

I conducted the interviews using my native language (Bahasa Melayu) as the participants preferred the conversation to be in this language, therefore in reporting the findings, I have had to translate the relevant excerpts into English. In dealing with the translation, I was reminded by Patton (2002: 392) that "it is tricky enough to be sure what a person means when using a common language, but words can take on a very different meaning in other cultures. Some words and ideas simply can't be translated directly". I translated the relevant excerpts into English myself as I believed that I was

the only person who could really understand the context, the topic and the nature of the discussion. To validate the translation, I employed a back-translation process to ensure that the meanings from the original excerpts were similar to the excerpts translated into English Language and this process was done by my critical friends. My critical friends are PhD research students and they are competent users in both languages as they used to teach English Language in Malaysia. In addition, they have experience in conducting qualitative research and have been involved in translating their own data. Thus, conducting back translation with my peers who are "in every sense the inquirer's peer, someone who knows a great deal about both the substantive area of the inquiry and the methodological issues" (Lincoln & Guba, 1985: 308) were very helpful to check the consistency and validity of the translation. Peer validation was a very important strategy that helped me to verify my translation so that it reflects the actual meaning given in the original source.

During the process of analysis, I also sought help from my critical friends to validate my coding system and we had frequent conversations about this before I arrived at my final categorization of codes and themes of my data. I did the same in the process of interpretation of the data. This was done as a strategy to employ the perspective of someone who was not involved in this study to avoid researcher bias in the process of analysis, thus ensuring dependability and confirmability of the study. The steps taken were in line with Creswell's (1998: 198) suggestion that "both dependability and comfirmability are established through an auditing of the research process."

4.10.5 Transferability

Transferability refers to how the research may be used by the readers in other contexts (Lincoln & Guba, 1985). Therefore, according to Marshall and Rossman (1999), it is the researcher who must demonstrate that the findings will be useful to others in similar situations, with similar research questions or questions of practise. In order to make the research transferable to others, Lincoln and Guba (1985) assert that the researcher can provide a thick description of the research to enable the readers to reach a conclusion about whether transfer can be considered as a possibility. Therefore, by providing a thick description of how the student teachers in this study learn to plan lessons during their practicum, I hope to help other researchers or readers to determine the transferability of this study to other specific contexts.

4.11 Research Ethics

Ethical issues start at the very beginning of a study (Robson, 2002; Silverman, 2006; Gregory, 2003; Creswell, 2008). Ethics refers to general principles of what one ought to do (Robson, 2002). As stated in the CARE Research Handbook (1994:133) "the more qualitative the research the more we, the researchers, find ourselves caught in the moral maze, whether we like it or not. The primary methods of qualitative research are observation and interview, and in both it is difficult to avoid the personal dimension." As this research involves human subjects, in conducting this study I sought documents that could provides guidelines on ethics that are applicable to the entire nation. Considering the contexts of my study and myself as a researcher from Malaysia but writing this study in the UK, I decided to observe closely two documents that provides guidelines on ethics; these were the UEA Research Ethics Pack (2003) and the General

Circular by EPU Malaysia (1999). Having deep understanding of the ethical issues that need to be addressed before I started my study and entered the field, helped me to deal appropriately with the issues related to access to participants, informed consent, confidentiality, the extent of involvement of the participants, the nature of the researcher boundaries at the research site, clearance of the data, the nature of what is reported, and the identity of the researcher (UEA Research Ethics Pack, 2003)

Ryen (2004) noted that 'informed consent' means that the participants have the right to know that they are being researched, the right to be informed about the nature of the research and the right to withdraw any time. As described in 4.5, I followed a careful procedure in selecting and approaching the participants for this study. Although they were selected from a list provided by the Department of Education, UUM, yet their participation was on voluntary basis. Gregory (2003) claims that the ethics of research is insistent that consent given should be voluntary. When I met them individually for the first time, the students were informed about my intention to invite them as research participants, the reason for choosing them, and the reason for conducting this study. I also informed them that they have the right to make a decision whether to participate or not to participate, as this study was looking for participants who volunteered and felt comfortable to participate.

Upon having the participants' agreement to participate in this study, I followed the ethical procedure by giving them assurance that they may withdraw from the study at any time without any condition. I also explained the method of data collection and how frequently I would see them during their practicum. A written consent form was given to each participant to confirm their willingness to participate. I asked them to read the

consent form carefully as it provided details about myself as a researcher and the nature of the research (see Appendix I).

As the nature of this research was to gain understanding from the participants' perspectives, so detailed information was sought from them through multiple methods of data collection. This included their identity, the school they were located at, the cooperating teacher and the university supervisor that were assigned to guide them.

This study was conducted in Malaysia where there is a need for every researcher to obtain permission from the government of the country before any scientific research is undertaken. I complied with the General Circular number 3 (1999) provided by the Economic Planning Unit, Prime Minister's Department of Malaysia. The circular stated that:

> "A foreign researcher or a Malaysian national domiciled overseas who intends to conduct research is required to obtain prior permission from the government. A research pass will be issued to enable the research to be conducted. A researcher is only permitted to start the research after he/she has received approval from the Economic Planning Unit (EPU)".

4.12 My Role and Influence

Before I engaged in this project, I used to be a teacher educator at the University Utara Malaysia where this study was undertaken. As I had experience of teaching methodology courses to the student teachers, as well as working with them during their practicum as university supervisor, thus, this knowledge and experience helped me to understand the complexity of planning lessons. Lincoln and Guba (1985) remind us that having prior understanding of the issue being investigated is both an advantage and

a disadvantage to the researcher. On the positive side, as I was interested to investigate the topic that I had experienced, therefore, I was interested in finding out from the student teachers their experiences in planning lessons in the real situation. Corbin and Strauss (2008) note that the topic is something that the researcher will have to live with for some time, so it has to be something of interest. Thus, this interest helped to maintain my energy and commitment in these intellectual endeavours, beginning from designing the study, and continuing through carrying out the interviews and observations and analysing the data.

On the other hand, having prior experience as a teacher educator and having experience in this topic, could have an effect on my research. I have discussed in a previous section the steps taken in order to ensure the "trustworthiness" of this study, however, I could not control how the participants perceived my presence during their practicum. Initially, during my first meeting with each of the student teachers, I explained to them that I was on study leave to do my PhD, and emphasized that my presence was mainly as a researcher. Although I have taught student teachers from the same university, the participants of this study were not familiar to me. I left for my study leave when this cohort of students was in their first semester at the university. Given this, I believed that the student teachers would be able to see me as a researcher and not someone who would make a judgement about their planning and teaching. My notion was also confirmed by the data provided from the student teachers, which I report in the following chapters.

CHAPTER FIVE

STUDENT TEACHERS' PLANNING PROCESS

5.0 Introduction

This chapter answers the research question 'How do the student teachers plan lessons during their practicum? To describe how student teachers plan lessons, the discussions were based on data from the thinking aloud planning, interviews and lesson plan books. As discussed in Chapter Four, 'thinking aloud planning' was the method used to gather data that provide access to the inner thoughts of the participants. This meant that to understand how the student teachers make their decisions while planning lessons and the sequence of the process, the discussions were based on the data from the thinking aloud planning. Besides gaining data from thinking aloud planning, my analyses of the process of planning were also based on the initial interviews and final interviews with the student teachers as well as the student teachers' plan books. The questions that underpin my effort to understand the planning process are: 'How do you go about planning a lesson?' Probes were used to initiate the interviews, such as 'What are the first things you think about when planning a lesson? 'What are the important things that came into your mind when planning?', 'What do you think are the most important things you do in planning a lesson?' and 'How do you go about deciding activities for your lesson?'

As planning lessons involves both a psychological process and a practical activity by the teachers, I provide a detailed picture of these process that appeared from the data by comparing across cases because my intention was not to characterize the individual

teacher. Rather, the analysis focused on the similarities and differences among the student teachers in the ways they go about planning lessons. First, I discuss the starting point of the student teachers' planning processes. Because planning lessons involves teachers' thinking processes, the discussion will include the things that they said were the first thing that came across their mind in planning as well as the things that they considered as important in lesson planning. This is followed by a discussion of how the student teachers plan activities for their lessons. The discussion will demonstrate how the process appeared to be recursive and to be central to these student teachers. I demonstrate how these student teachers, while engaging in planning, made decisions on the activities, the timing and the resources, and I consider the reasons for deciding on such activities for the lessons.

This chapter will then discuss the written lesson plans prepared by these student teachers. Because their process of planning was staged, presenting their planning in the written form came immediately after planning the activities. The discussion includes how many lessons they planned during the practicum and what their written lesson plans looked like. Finally, the discussion will focus on preparing the resources or the teaching aids as the final stage of the planning process. This includes the reason for using the resources and the type of resources that the student teachers use for the lessons.

5.1 The Starting Point in Planning Lessons

At the beginning of the practicum, when I asked the student teachers about what was the first thing that came into their mind when planning, most commonly reported was the topic or what they were going to teach. I also found in their thinking aloud planning

that the topic appeared as the first thing they said when planning. For example, Aina, who taught Mathematics to Form One (age 13), and Commerce to form Four (age 16) pupils, reported that the first thing was the topic and the sub-topic for the lesson:

> *The topic, and then I see the sub-topic, after that I have to read the textbook to understand the content. (AR/INT)*

In identifying the topic, she reported that she referred to the syllabus and the Curriculum Specification. The Curriculum Specification (CS) is a document that contains detailed explanations of the basic information required within the subject curriculum. It is designed as a teaching guide to help the teacher interpret and implement the syllabus in the classroom (Curriculum Development Centre, Ministry of Education Malaysia, 2006). She said:

> *I refer to the syllabus, I follow the syllabus and plan according to the syllabus, moreover, it has continuity, so when I plan a lesson, I know that today's lesson has continuity from the previous lesson. I also refer to the Curriculum Specification to see the learning outcomes and the activities suggested for that topic. (AR/INT)*

Similarly, Shirley also claimed that she starts her planning by thinking about the topic first. She taught Accounting Principle to Form Four and English Language to Form Two (age 14). She said:

> *The first thing is what I have to teach, I mean the topic which I have to teach. During my first week, the class teacher told me that I have to teach certain topics, for example she told me to teach the topic 'cash book', and from there I have to identify the learning outcomes for that class. I consult the syllabus and Curriculum Specification to see the learning outcomes, so from there I identify the learning outcomes for the lesson. (LPS/INT)*

In another example, Hani, who taught Information Communication Technology (ICT) to Form Four and Computer in Education (CiE) to Form One pupils reported that the first thing that came into her mind when planning was what she has to teach; she said:

> *The first thing is what I'm going to teach, and then I look at the syllabus, after that I think about how to make the lesson interesting so that the pupils will pay attention in my class (HH/INT)*

Toward the end of her practicum, Hani was consistent on the process she went through when planning a lesson. She said that the first thing she thought of was the topic and the learning outcomes. She studied the syllabus and learning outcomes, then she thought about a teaching and learning activity to achieve the learning outcomes. Hani said:

> *As I mentioned earlier, it depends on the topic or what I have to teach, and also the learning outcomes I have to accomplish, I mean the syllabus and CS is already there, and the learning outcomes are already in the CS, so I have to follow the syllabus; what I did was plan the teaching and learning activity to achieve the learning outcomes. (HH/FNL)*

Similarly, Elly who also taught CiE for Form One and ICT to Form Four pupils mentioned that the first thing was what she was going to teach on that day.

> *Firstly, I look at what I am going to teach on that day. Then I decide on the activity based on what I'm going to teach. (RAG/INT)*

Both Hani and Elly used the same words to explain the first thing they did in planning. Instead of mentioning the word 'topic' like the other student teachers did, both Elly and Hani referred as 'what I'm going to teach'. They used the words differently, but it refers to the same category. It was apparent from Hani's thinking aloud as below:

> *For the class 1A, what I want to teach for tomorrow is MS Word; teach them how to compose a poem using MS Word. Learning outcomes, first the pupils will be able to type the document, second, they will be able to edit the document, and third, they will be able to save the file. (HH/TA)*

In her thinking aloud planning, she mentioned that she wanted to teach the students using MS Word software to compose a poem. She mentioned that she is not teaching them how to write a poem, but she teaches them how to use MS Word to write a poem. This was apparent in her learning outcomes where she said, first, the pupils will be able to type the document, second, they can edit the document, and third, they can save the file.

The data also show that some student teachers did not mention the topic as the first thing that came across their mind when planning lessons. There is evidence that shows that they already have a topic in their mind, but when asked about what comes first in their planning, the response was as follow:

Afiq, who taught Mathematics to Form Four, for instance, said that:

> *The first thing that came into my mind was the learning outcomes for the lesson. That was the first thing, I have to determine what do I want them to know. For instance, to plan a lesson for the topic of 'mathematical reasoning'; I want the pupils to be able to understand the concepts of statements, to be able to make a distinction between 'all' and 'some' statements. That was the first thing. I need to know what I want them to know after the lesson. (MFH/INT)*

He said that the learning outcomes were the first thing, but from the excerpt above it shows that initially the topic comes first before he thinks about the learning outcomes. The data shows that the topic was already in his mind before he thought about the learning outcomes.

In another example, Reezal, who taught Commerce for Form Four and Mathematics for Form One, mentioned that the teaching and learning activity comes first when planning a lesson. He said:

> *For me, the first thing is the teaching and learning activities. We're given the syllabus, and also the topic and the learning outcomes were already stated in the curriculum specification, so what I have to think of is the activity to achieve the learning outcomes. (SR/INT)*

Here, even though Reezal mentioned the activities as the first thing, the data shows that the topic and the learning outcomes come first as it appears in his thinking aloud planning. However, as he explains that the topic and the learning outcomes are already stated in the syllabus and Curriculum Specification, this may be the reason that he did not mention that the topic has appeared first in his mind before he could think about teaching and learning activity.

We see that the majority of the student teachers state that the topic or 'what I am going to teach' is the first thing they think about in their planning. Even those who claim that other things are their starting point are taking the topic from the syllabus or CS as given. No student teachers refer to making a decision about the topic as they see this as determined by the co-operating teacher, the syllabus or the CS.

5.2 The Most Important Thing in Planning Lessons

While the findings revealed that most commonly reported was the topic or what they are going to teach as the starting point in planning, most student teachers also reported that the learning outcomes were the most important things in their planning. In this study, the terms learning outcomes and learning objective are used interchangeably as these two terms were found to carry similar meanings for the student teachers. Some student

teachers use the term 'learning outcome' and some of them use the term 'learning objective'. In this study, I have defined learning outcome as a statement of what learners should get out of the lesson.

For example, Hani mentioned that *'the most important thing in my planning is the learning outcome, I mean what the pupils should learn from the lesson (HH/INT).* By the end of the practicum, Hani said the same thing, that the learning outcomes were important in planning lessons and the activities were planned as an attempt to achieve the learning outcomes. Hani explicitly said '*I chose the activity mainly for the purpose of achieving the learning objectives' (HH/FNL)*

Afiq was the student teacher who described the learning outcome as the most important element in planning as well as describing it as the first thing he thought about when he went about planning. And his notion remained consistent during the final interview:

> *As I told you in the first interview, the most important thing to me is the learning outcome, I mean what I want the pupils to be able to do. (MFH/FNL)*

Jason, like Hani and Afiq, mentioned that '*the learning outcome is the most important thing '* and he explained that he planned the activity based on the learning outcomes that he determined earlier in his planning process. Jason described how he goes about choosing the activity in order to achieve the learning outcomes:

> *I wanted to do a group activity to build the pupils' understanding of the concept that I have explained to them, to achieve the objective at the same time. If I do the activity first, perhaps they will not be able to understand and will not perform the group activity well. If they cannot perform well, this might affect the objectives. (JL/PL)*

Another example, Elly did not mention explicitly that the learning outcomes are important, but she described pupils' enjoyment of the lesson as the reason for choosing the activity. Here, she explained that if the pupils cannot follow the activity this will have an impact on achieving the learning outcomes.

> *I need to make sure, every time I do an activity, that the pupils will find it amusing, understandable and will enjoy it. I'm afraid that if they don't understand and they can't follow the activity, it will show that the learning outcomes have not been accomplished. (RAG/FNL)*

Unlike the student teachers mentioned above, Ruby, who taught Accounting Principles to Form Four pupils, said that the activity was the most important thing in planning:

> *... the important thing is an activity which will attract student attention to the lesson. I'm trying to apply what I've learned before, for example, how to plan effective group work, normally I got stuck, I couldn't sort it out especially for Accounting lessons, it is very difficult to plan an interesting activity for these lessons. (RH/INT)*

Here Ruby explained that to plan activities that attract pupils' attention to the lesson is the most important thing in planning. She also explained that she was trying to apply what she had learnt before, however she found it difficult to plan effective activity for Accounting lessons.

In summary, for almost all student teachers, the first stage of their planning process was to identify the planning task, and this was the starting point of the planning process. At this stage, the topic, and the learning outcomes were their main consideration. Some of the student teachers also thought about the possible activities for the lesson at this stage, however the data show that they elaborate the activities in more detail soon after identifying the planning task.

5.3 Planning the Activity

The data shows that after the student teachers had identified the planning task, (the topics, and the learning outcomes), what they did next was to plan the activity for the lesson. In this study, an 'activity' is the term used to refer to a teaching and learning activity. This includes the teaching strategy (any teacher's activity that was planned to do with the pupils, including lecture, explanation, demonstration, question and answers and so on), pupils' activity (individual, pair or group activity) and everything that teachers plan to be done during the lesson from the start until the end of the lesson.

Planning the activity can be described as central in their planning process for the student teachers in this study. The data show that for some student teachers, most of the time spent planning was focused on how to present the content of the topic, and to achieve the learning outcomes. During this phase, the data also show that some student teachers engaged in the planning process in a recursive pattern. While engaging in the planning process, some student teachers elaborated their initial idea repeatedly in trying to come up with the teaching and learning activities for the lesson. The data also show that some student teachers do a lot of mental discussion to gauge the activities for the lesson. These include what they will be doing, and what the pupils will do during the entire period of the lesson.

The best example to demonstrate that the process of planning the activity was not linear is Ruby. From Ruby's thinking aloud planning, soon after she had identified the planning task, she moved on to plan the activity:

> *... the thing to do now is to think about the set induction. Before that I think I need to explain; explain to the pupils what a folio is, after that I need to explain the categories of ledger. Categorizing ledgers*

> *is simple. I will do a group activity. After explaining, both folio and categories of ledger, then I want to do a group activity but in this group activity I want to do solving questions and problems in groups but it will only be related to the topic 'folio'. I think group work is not suitable for the topic 'categories of ledger' because it is just theory for them to understand. There is nothing much that can be done as an activity. But if it is folio it can be made into a group activity. I might give questions. Give a question in groups so that they can discuss it and solve it. Then, maybe 'mahjong paper'[1] is needed to show the answer even if not all groups can do it, at least one or two groups can volunteer to come forward. Show the solution method but try to involve all five groups. (RH/TA)*

Here, her thinking aloud planning shows that initially she thought of planning the set induction for the lesson. The term 'set induction' is introduced to students during the methods course. Using Cohen, Manion and Morrison's (2004) conception, 'set induction' refers to saying or doing specific things prior to a learning situation that will direct the learner's attention to the task in hand.

However, the data show that she did not proceed with planning the set induction. She rather continues thinking about what she wants to do and group activities. She thought of explaining the concepts, explaining what a folio is, and then explaining the categories of ledger. Here she also mentioned that to explain the categories of ledger is simple. This indicates that while thinking about the activities, she also determined whether the topic is easy or complicated. The data also show that immediately after Ruby planned the teacher's activity, she thought of planning group work for the pupils' activity. Here again she determined which topic is suitable for group work. The data also indicate that her understanding of the topics helped Ruby to decide the activities for the lesson. While thinking about the pupils' activity, she also thought about using mahjong[1] paper in the lesson. She also mentioned the learning outcomes again, '*There are 3 learning outcomes*

[1] . Mahjong paper is a thin sheet of white paper sized 2 ½ square ft.).

to cover for this topic, but it is easy, all the learning outcomes are level 1, so it is easy'. (RH/TA)

After deciding the teacher's activity and pupils' activity, and having thought about the learning outcomes again, the pattern of her planning process shows that she comes back to think about the set induction. Here she portrays how she planned a set induction for this lesson:

> *So back to the set induction for the topic folio, to find the idea I think I can use the concept in a clinic. A clinic has a patient's record and the record is put into a file usually. This is the old way (manually), but now using the computer maybe it is not suitable to use from the computer. I use the old way, moreover, most of the pupils here are used to the manual way. So when I ask them how the clinic saves the record, they will see themselves as patients walking into a clinic. So if the record is recorded by name or IC (identity card) number as reference. So then they give the IC to the staff at the counter then the staff will look into the drawers and files to find the patient's card. So the use of name or IC number as reference can be used to explain the concept of folio. I think the pupils are familiar with the system used in the clinic; this idea might be easy for them to relate to the topic. I will explain it to make it easy for them to relate to the topic. Ok, the set induction, I think I want to use this idea. (RH/TA)*

At this stage, we see that Ruby was very explicit while thinking about the set induction where she tried to visualize what happens in the clinic in the first place when the patient arrives. Then she said she will relate that situation to the topic so that the pupils can have a clear picture about the folio. It appears in her thinking that she was trying to justify the situation in the clinic with the pupils' prerequisite knowledge about the system used at the clinic. Once she was satisfied with the set induction, then she thought of the resources again, but mainly resources for the set induction. Initially she said it was not necessary to have any resources because the pupils are familiar with the clinic, but then she thought that without any resources, this activity might not be

interesting enough for the pupils, so she thought of preparing a 'patient card' to show to the pupils during the lesson. However, the data show that at this stage she was undecided about whether to prepare the resources or not for the set induction.

The data also indicate that after Ruby had a brief idea of the activities for the whole lesson, and seemed satisfied with the idea for the set induction, then she moved to structure and elaborate the plan in detail. The excerpt below illustrates how Ruby was trying to elaborate the teacher's activity again. She made it very explicit in what way she will explain the concept to the pupils:

> *Ok, after that the first step is explaining what the folio is used for. Before explaining I need a teaching aid. I want to show one example of a ledger that has a column for folio. A ledger or a journal – it doesn't really matter. I think I want to use a ledger because they are currently studying about ledger. So far the column for folio was left blank because they do not yet know how to fill it; they don't know what the function is. So now I can show the folio. I will already have related it in the set induction, now I will explain what the use of the folio is. Ok, that is easy. Nothing else is needed to do. Just make an introduction then say what the function of it is. Here in the text books, it says that folio is like a row for filling in a reference number when the record from one book to another is done. Ok, if there is no record of column for folio that means they have not yet done the posting. Ok, or in other words we need to identify the first entry or double entry. So, it's confirmed now that I will explain based on ledger but not journal. Ok, that is simple. (RH/TA)*

The analysis of the thinking aloud planning indicates that at this point of planning, Ruby started to divide the content into chunks, and it indicates that in her entire thinking aloud planning session, the content were divided into several chunks which she called steps. It is apparent that the process in Ruby's planning was recursive, moving back and forth. She went through the same process for the second step and the remaining steps in her planning. While planning, she thought of suitable resources to support her teaching, for example:

> *So I think the teaching aids for the first step and the second will be to show how to record data in the folio, so I can use the same thing. Ok, just for the second step, I want to show a journal and a ledger. So I have to prepare many teaching aids for the second step. That means I have to prepare a lot of mahjong paper. Maybe two or three sheets of mahjong paper. The board will also be full of stuff. How big or how many will be decided when I'm preparing the teaching aids. (RH/TA)*

The planning process modelled by Ruby illustrates that she concentrated on planning the teacher's activities first, and once satisfied with the teacher's activities, then she thought about dividing her time for the lesson.

> *Ok, the set induction is five minutes, explaining that is about five minutes as well maybe; the first step. The second step is probably 10 minutes, 10 – 15 minutes. So there are only 10, 20, 25 minutes or something like that. So there is still enough time for the group activities. (RH/TA)*

Here, in dividing her time, she did not give any reason for allocating a certain amount of time for each step, rather she allocated time so that there was enough for the activities. Once she was satisfied with her planning for the teacher's activity and how to present the lesson, what she did next was to plan the pupils' activity again. While planning the pupils' activity, she thought of preparing resources for the pupils to work from:

> *Ok lastly, I wanted to plan a group activity. This has to take more time because I need to look at questions from the book. I have to prepare the question by typing or writing but it will need to be photocopied. But not that much, just about five questions for each group, there are 5 groups. The questions will be about how to record a folio. The questions will be the same for every group but we call them to record the folio one by one. So each group will get the chance to answer in front of the class. I will ask them to send a volunteer. Maybe they will be able to because it is simple. Moreover, they won't have to discuss it for a long time, so it won't take much time. (RH/TA)*

After she decided the group activity for the pupils, then she moved on to thinking about dividing her time again:

> *...for the folio it will be about 25 minutes. Ok, to explain types of ledger, maybe about 10 minutes. So there is about 35 minutes. To explain '* classifying the ledger account' *will probably take 10-15 minutes. If there is still a lot of time, I can give them more examples. Even if I don't have time, they will probably know how to do it already. Ok so that was 25minutes, altogether 35minutes. Then add 25 minutes add 25 minutes, it's 50 minutes. There is still 30 minutes left. Ok, 5 minutes at the last is for closing the lesson. So this group activity is, 50 left with 30 minutes, because the total is 80 minutes minus 5 minutes for the closure. So the group activity s, including solving at the front, is 25 minutes. I think it is possible. (RH/TA)*

Here Ruby was busy dividing her time for each activity and this was done after she had structured and elaborated the activities for the lesson. The data show that while dividing her time, she did not mention any further the reason for allocating such an amount of time for each activity.

The final element that Ruby thought of in her planning process was the values to instill in the lesson:

> *Ok, now think about values...values to inculcate. Firstly there must be teamwork because it is a group activity, they must have teamwork. Then, careful, because if the folio was done incorrectly, then it is harder to check. What other values for this lesson? I think just these two. Teamwork and carefulness. Assiduous. When classifying the account ledger they need to be diligent, because if they are not diligent, they cannot classify the account ledger, in what type of ledger because there are many terms. If they are not diligent, maybe it will be difficult for them. That's it, values to inculcate, done (RH/TA)*

Ruby was trying to relate the values to inculcate in the lesson to the activities planned for the lesson. In doing this, it seems that Ruby justified the reason for planning each value and why it is important in this lesson.

Another example that shows the process of planning was recursive and detailed comes from Shirley's data. She taught Accounting Principles to Form Four pupils. Compared to Ruby, soon after deciding the planning task, Shirley concentrated on dividing her time for the lesson:

> *Is there enough time to do all of these three objectives? Explaining the meaning of 'trial balance', explaining the function of 'trial balance' and also preparing a 'trial balance' in columns. Explaining about the function will take about eight minutes. After that explaining about the limitations of trial balance may take around 10 minutes, set induction around five minutes, preparing for a trial balance in columns will probably take more time than the others, so I reckon it's around 20 to15 minutes maybe. Ok, after that I want to have a discussion in groups. Ok, 43 minutes for the teacher's activity and the other 37 minutes is for pupils' activity. Is it possible to fit in? Explaining about the function of a trial balance, can I finish it in six minutes? Em..I think eight minutes, if eight minutes for explaining the function of a trial balance. Then I can explain about the limitations of trial balances, how long will it take? I think eight minutes will be enough, we can finish it in eight minutes. Preparing a trial balance in columns could be done in 15 minutes. I think they will all fit in today's lesson. I think I have enough time to do all these three objectives which is explaining the function of a trial balance, explaining the meaning of trial balance limitations and preparing a trial balance in columns. (LPS/TA)*

Here, after being clear in her mind that she has divided the time to achieve the learning outcomes, she then started thinking about the teacher's activity. She said, '*how am I going to teach all of these.'* It seems that she was thinking again about how to teach the lesson. Earlier on when she was dividing her time, she had already thought what she would explain, and later she thought again how she would go about the task:

> *I will explain to them in detail and then give them a question to be discussed in a group, or I can give a very hard and long question. I will explain a little then ask the students to come out to the front and finish the question. Ok, there's a lot of student in that class, 32 pupils. So, discuss in groups. Discuss in groups, in groups, in groups or something else? If they discuss in a group, it will be noisy afterwards. Ask students to do it on their own then ask them out to*

> *the front to finish the question. They need to do it on their own, not a word with their friends. Ok, discuss in a group. I think I will take that one, discussion in a group, and when they finish, they need to do a presentation of the idea and the answer they come up with. So the activity will go on for around 30 minutes. It's quite long enough to jot down their ideas and answers. So, the activity is done. (LPS/TA)*

The data show that Shirley was trying to make a judgment between explaining the topic in detail and later on giving one question to the pupils and asking them to discuss in groups, or giving them a very hard long question, explaining a bit and asking the students to come out and finish off the question. In deciding between these two options, she considered the number of pupils in the class and the potential for the class to become noisy if they discuss in groups. Here, she also described her decision about how she would ask the pupils to do the activity and the time allocated for the activity. In her earlier decision when she was dividing her times, she allocated 37 minutes for the pupils' activity, however when she thought about it for second time, she said that the group activity will take around 30 minutes. Because Shirley thought that planning the pupils' activity was done, then she asked herself, 'w*hat do I do now; I think I need to look at how to prepare for my teaching steps'. (LPS/TA).* What she did next was:

> *Ok, first step, explaining the function of a trial balance, how do I prepare a teaching aid for this one? Manila card, mahjong paper, ok, ok. Ok, on mahjong paper I will list the functions of a trial balance. But first I will ask the pupils to give their ideas on what the function is. Why do we need to prepare trial balances in accountancy? I will make them think and then discuss, discuss about it and then I will show them the answers. Ok, first ok. Second step, limitations. I will do the same for this. Ok, for trial balance limitations, I will prepare the teaching aid first, which is the same as the first one, I will write it down on mahjong paper and then ask the pupils to give their ideas about it and then I will show them the answers (LPS/TA).*

The data analysis shows that at this stage Shirley started to elaborate the teacher's activity again. Here, similar to Ruby, Shirley divided the activities into steps or sequences. It seemed that she was trying to achieve one learning outcome in each step. While planning, she also thought of using teaching aids and of getting pupils involved in each step. The data indicates that Shirley was engaged in the same process for the remaining steps in her planning.

After she had elaborated the teacher's activities, the data shows that Shirley moved on to think about the pupils' activity again:

> *Next, ok, group discussion. Step four, group discussion. I will give them a question. Then I will divide them into groups of four. Then I will give them time to discuss it amongst themselves. Ok group. If I don't want any unwanted noise, I will divide them according to my own choice. Ok form groups with four pupils in a group. Ok, now I will make eight groups with four pupils in a group. Ok, I will form the groups myself. I will put noisy students with disciplined ones. I will mix them together. I want to separate them from their own group of friends. Now I want to form groups for this class, 4 pearl. Ok when I have put them in groups then they need to discuss amongst themselves and prepare a presentation. For this presentation, how many student in each group need to come upto the front? If there are eight groups of four pupils. I think two pupils. Ok, two pupils is good. (LPS/TA)*

Here she concentrated on grouping the pupils for the group activity. In grouping the pupils, she took account of the pupils' behaviour. This indicates that she has her own belief and knowledge about the pupils in her class and this knowledge helped Shirley to decide how to group the pupils in the class.

After having done all the steps including the teacher's activities and the pupils' activities, she then started thinking of preparing the set induction for the lesson:

> *What shall I do for a set induction for this one? How can I make it interesting in the eyes of students? If trial balance, balance. What kind of things balance? Balanced diet? Balance…the set induction must have something that connects with trial balance and attract*

> *student attention…set induction…set induction…set induction for trial balance…set induction…what is important in a balanced diet? In accounts, balance trial balance. No, it's not appropriate. What else is there that balances? Balance…do our legs have the same length? If they're not, we won't balance. If we don't balance, we will fall down easily. So in accounts, if ' not balanced, that means you made a mistake before. Can I use this for set induction? Set induction. Ook, up to now I haven't come up with a good set induction yet so I think I will use the set induction that I mention just now which is "legs have the same length". Ok, if they're not the same length, we're not balanced and then we will fall. I will use that set induction for this lesson. Ok, set induction is all done. (LPS/TA)*

It seems that Shirley was trying to work out how to make the set induction interesting. She thought the set induction should be interesting in the eyes of the pupils and it must be related to the topic. She tried to think of some things that balance. The first thing that came into her mind about balance was balanced diet, but then she thought it was inappropriate to the topic. Later, she thought of using the analogy of human legs to start the lesson. However, the data from her thinking aloud shows that Shirley was not totally satisfied with this idea, but she said that she would use it unless she got a better idea for a set induction. When looking in her plan book, I found that the set induction written in her plan book was what appeared in her thinking aloud planning.

Another example is Elly. Unlike Ruby and Shirley, in her planning process, Elly started planning the set induction immediately after she had identified her planning task. She planned the lesson for Form One pupils. The subject was Computers in Education (CiE).

> *Alright, now I need to look at how to do the set induction. The pupils already know how to use Microsoft Word, so I am going to ask them about how to save files and how to close the document. "Okay, now I want to see how to save files and close it in Microsoft Word". I'll be expect the answer from the pupil like this 'First click on the icon file, 'save as' then type in the name of the file and then click save. (RAG/TA)*

Compared to Ruby and Shirley, it appears that Elly did not give much thought to planning the set induction. What she did was to plan to ask the pupils to 'save' the document and close the application. After she had planned the set induction, then she thought of explaining the learning outcomes to the pupils. She mentioned that for this lesson, she planned to achieve three learning outcomes:

> *They need to change letter case to upper case, write the title and then the author. Then they need to create a table and add some graphics and they need to know how to set the image properties. After that, they need to print the document. (RAG/TA)*

What she did next was to plan the teacher's activity and the pupils' activity for the lesson. For the pupils' activity, she planned to ask the pupils to 'type' in the article using MS Word. Her thinking aloud planning indicates that Elly recalled that in her previous lesson she had already asked the pupils to bring their own material for the next lesson. And she also thought about the possibility that the pupils might forget to bring the article, so she had a back-up for them. In planning the pupils' activity, she makes it explicit what the pupils have to do, or the skills they need to practise step-by-step:

> *Ok then. Typing the article. First thing I will ask them to 'type' the article. Ok. Most of the pupils already know this can be done by using Microsoft Word. Then they type up the article. What am I going to ask them to do? I will give them an amount of time for them to 'type' it up. After they have typed it up, I will ask them to resize the title. Ask them to resize the title and place it in the middle of the article, then ask them to make the title bigger. Ok. The author's name at the end of the article. Both of those features I will ask them to place in the middle of the page. Then I will ask them to change the font size of the article title. Is 24 okay? Yes, the font size will be about 24. (RAG/TA)*

Here, similar to Ruby and Shirley, once she has decided the activities, she proceeds to elaborate and structure the activities in more detail. To do this, Elly divided the activities into sequence or steps. As she believed that teaching CiE should focus on

hands-on experience, (I explain her belief in Chapter Six) in planning the activity for this lesson, she planned to use a teaching strategy of demonstration. Elly decided to show the pupils how to do all the tasks required step-by-step, and to ask the pupils to do it on their own to acquire the skills.

> *Ok, now I want them to change the first word in the sentence into capital letters using the sentence case icon. Ok. Teacher's activity…teacher's activity. Teacher shows how to use the sentence case icon. When the teacher has shown how to do it, pupils' activity, the pupils must follow what the teacher did. First, the pupils must select all the text, then they must use the formatting icon, click on the change case icon, then they can choose the sentence case icon. The use of sentence case is to change each new word in sentences to a capital letter. Ok. Then they click on ok. (RAG/TA)*

The data analysis shows that, similar to Ruby and Shirley, Elly was trying to achieve one learning outcome in each step. She also thought of using appropriate resources, such as computer software, and also thought about how to instill good values in the lesson, and getting pupils' involvement in each step. At the end of her thinking aloud planning, Elly thought of asking the students randomly to come to the front and show the class how to 'edit' the document. She thought this approach could motivate other pupils to catch up so that they might be able to do soothe same. Elly also mentioned that giving the task to the pupils to demonstrate the skills was a way to show her appreciation for their understanding, their hard work and the knowledge they gained in the lesson.

In another example Hani, who taught the same subject as Elly, had the most similarities to Elly in planning the lessons. However, unlike Elly, Hani put emphasis on apportioning time while planning. Her thinking aloud data indicates that Hani was

dividing or calculating her time four times for this lesson. First when she identified the planning task, she mentioned that the time for the lesson was one hour, from 5.30 pm to 6.30 pm. Second, during her initial stage of planning activities she mentioned that she needs five minutes for the set induction, and the remaining time is for the activities. Third, when she elaborated her planning in detail, she calculated her time again in each step:

> *I'll ask them to 'type' in the document, here they will get typing skills. But I have to monitor them, I'm afraid they might play games or talk around. Maybe there are some who do not know how to use the keyboard, ok... here I will assist them, show them how to use the keyboard. How much time here for this activity? Let say 15 minutes, so I still have 30 minutes left (HH/TA).*

At the end of her thinking aloud planning, she calculated her times again to satisfy herself with the time allocated for each activity and to make sure that the lesson filled the time allocated:

> *Ok, need to check the time again. Set induction five minutes, then for the second step, introduction to MS Word 10 minutes, altogether already 15 minutes. Then, 'type' in the document also will take 15 minutes, so that's 30 minutes. Then, 'edit' the document I need to do this in 15 minutes. How much time left now? 15 minutes, okay, that's for them to do more activity and closure. Enough for one hour. (HH/TA)*

Here, the data analysis shows that although Hani engaged in thinking about apportioning her time repeatedly in planning one lesson, it seems that she did not say anything further about how the judgement was made. In another example, Jason was similar to Hani as he was also repeatedly engaged in allocating the time for each activity he planned. He however described the reason for allocating the amount of time. His thinking aloud planning shows that Jason planned a lesson for Computer in

Education (CiE), and the learning outcomes set by him were '*the pupils must be able to type in a short article using MS Word, and must be able to 'edit' the document (JL/TA).* In planning the activity, Jason decided to ask the pupils to type a short article given by him. He allocated 45 minutes for the pupils to accomplish the task. Jason thought that the pupils would need quite a long time for this task based on his experience doing the same thing in the previous class. As he reflected on the previous lesson, he said that even though he gave the pupils plenty of time to finish the tasks, there were some pupils who could not make it on time. Thus, he thought 45 minutes was appropriate for the pupils in completing the task.

In summary, I have discussed the process the student teachers went through when they planned the activity for the lesson. It appears that this stage was central for them as most of the time in planning was devoted to planning the activities. However, there were differences in emphasis given by the student teachers to each element during the process. For example, Ruby was seen to be giving more emphasis to planning the activities for the teacher and the pupils, alongside the resources that she wanted to use in each activity, before thinking about the time needed for each activity. In contrast, Shirley concentrated on dividing her time immediately after identifying the planning task. She prioritised dividing the time to decide whether the learning outcomes could be achieved within the time allocated for the lesson. Unlike Shirley and Ruby, Elly did not mention dividing her time in her planning, but rather concentrated on planning the activities and resources for the lesson.

5.4 Written Lesson Plan

The data from the thinking aloud planning show that the student teachers engaged in presenting their planning in the written form immediately after they had completed their planning. This stage can best be described as filling in the plan book as their final record of the process. In the student teachers' thinking aloud planning, it seems that after they were satisfied with the planning, what happened next was thinking about transferring the plan into the written form, for examples, they mentioned '*Ok now, I need to write in the plan book', 'next, write in the plan book', 'ok, the next stage is the plan book'*. Data from my interviews with them show that student teachers wrote sketchy notes while planning, then once they were satisfied with it they transformed it into the plan book.

> *I used to do it on rough papers first before I wrote the final version in the book (RAG/INT).*
>
> *Well…I do a draft in order to avoid mistakes, or if I want to change the plans or anything in it (SR/INT).*
>
> *I used to use a drafting paper to do rough work and then record them on the actual plan (LPS/INT).*

All student teachers explained that during the practicum period, they were required to write their lesson plans in a plan book provided by the university. It was also stated in the Student Teaching Handbook (2006):

> *All student teachers are required to have a plan book during practicum. Student teachers are required to prepare daily lesson plans as suggested by the format provided by the university.*

I also interviewed a university supervisor to determine the university policy regarding student teachers' plan books. She stated that:

> *The lesson plan must comprise all steps; the first step is the set induction, second step, introduction, development, followed by evaluation, reinforcement and conclusion. When all those steps are in the plan, it shows that the student teachers have thought about all the elements carefully. As long as they give consideration to all those elements, then they will be able to implement an effective lesson. All lesson plans must be recorded in the plan book provided (FT)*

My analysis of the written lesson plans was based on eight lesson plan books collected by the end of the practicum. The plan book was A4 size with 200 blank sheets. I skimmed their plan books one- by- one, and it appeared that all were written by hand, and the entry was in sequence starting from the first day in school and finishing on their final day in school. However, the length of each lesson plan for each student teacher varied, depending on the size of their hand-writing and the contents of the plan itself. There were spaces allocated for the student teachers to fill in their personal details, subject taught and classes, their teaching time-table, school calendar, and also yearly planning. I was informed by the student teachers that the yearly planning was provided by the school, and they had to paste the yearly plan in their plan book. The student teachers were required only to undertake the daily planning. The analyses from the plan books depict variability in the number of lessons planned by each student teacher. Table 5.1 illustrates the total number of the lesson plans for each student teacher.

Table 5.1: Number of Lessons Planned During Practicum

Name	**Subject**	**Number of lesson**
Afiq	Maths Information and Communication Technology (ICT)	11 7
Jason	Economy Computer in Education (CiE)	12 10
Reezal	Commerce	14

	Mathematics	12
Elly	Information and Communication Technology (ICT) Computer in Education (CiE)	13 12
Hani	Information and Communication Technology (ICT) Computer in Education (CiE)	10 15
Ruby	Accounting Principle Geography	18 20
Aina	Commerce Mathematics	15 12
Shirley	Accounting Principle English	19 16

Table 5.1 shows that all the student teachers had experience of planning and teaching two different subjects, and the number of lessons planned varied. For example, Afiq planned 18 lessons, compared to Shirley who planned 35 lessons for the entire period of the practicum. This indicates that although they each went for a practicum for a duration of 10 weeks, yet it was for the school to determine the number of classes and lessons conducted by the student teachers.

In terms of the structure of the lesson plans, as they appeared in the plan books, there was similarity in the way the lesson plans were written every time. The entries began with the subject, class, number of pupils, date, time, topic, sub-topic, learning outcomes, prerequisite knowledge, teaching aids and values inculcated. Then the page was divided into four columns, that is, 1. step and time, 2. contents, 3. teacher's activities and pupils' activities, and 4. teaching aids and values inculcated. The resources or teachings aids and values inculcated were recorded in the same column. Besides the columns, the lesson plan was also divided into rows, with the first row for the set induction, followed by the development of the lesson, and closure. The next part in the lesson plan was the reflection. It appears that the student teachers used this section to make comments on their planning and teaching after the lesson, but the contents and the length of the

reflections, again, varied between them. There were student teachers who wrote their reflection in detail, for example:

> *I did not manage to finish all the lessons I wanted to teach today. There were so many things to teach and explain and the students needed more time to understand them. I made a few changes in my teaching today and did the game activity after the set induction because the questions in the box were related to the previous lesson. I worried that the students might get confused if they were asked to solve questions on the lesson learnt yesterday. Plus, they might get confused as there are many things they will learn today. So, I made the changes. It did affect my time management because it took more time than expected to finish the activity. But all the students were excited during the activity and during the set induction (AR/PB/28/6/06)*

However, some of the student teachers' written reflections recorded in their plan book were very brief, for instance *'learning outcomes were accomplished, the pupils could answer all the questions given to them'(MFH/PB/6.05.06), 'pupils behaved well during this lesson'(SR/PB/29.6.06).* The analysis also indicates the length of the lesson plans and the reflections written in the plan book gradually become shorter toward the end of the practicum.

5.5 Resources/Teaching Aids

The terms 'resources' and 'teaching aids' are used interchangeably throughout this study. They encompass a broad range of material that student teachers draw on to support their teaching and pupils' learning. For example they include computer software, printed materials, pictures, videos, mahjong paper, manila cards, newspaper cuttings, handouts, etc. This study shows that the student teachers repeatedly talked about the resources or the teaching aids during their thinking aloud planning and interviews. The resources they planned to use for each lesson were also recorded in their plan books.

As discussed earlier it was apparent from the data that the student teachers, in planning the activities, have thought about the appropriate resources for the lesson. The final stage in their planning process was preparing the resources. For example the excerpts below were taken from the thinking aloud planning:

> *Ok, now I need to make the teaching aids (RAG/TA).*
>
> *Ok, the last thing is the teaching aids. I need to prepare for it. I will prepare questions and notes for the pupils (LPS/TA).*

The analyses indicate that the student teachers planned to use the resources to support their teaching and pupils' learning. The data also indicate that the type of resources used was related to the subject taught. For example, the student teachers used computers and software in teaching Computers in Education and ICT. For other subjects, they used resources such as paper handouts, newspaper cuttings, manila card, mah-jong paper, and pictures. For example, Elly, Hani, Afiq and Jason talked about using computer software such as MS Word and MS PowerPoint and a projector LCD for their lesson because they taught CiE and ICT. Other student teachers normally planned resources such as 'mahjong paper' and handouts, and often used the whiteboard to support their teaching.

5.6 Conclusion

Drawing on the data from the interviews, thinking aloud protocols and the plan books, I have shown that the process student teachers go through during planning a lesson is relatively structured and follows closely to the format provided to them by the

university. It appeared as a staged process. The first stage is identifying the planning task, followed by the second stage, that is planning teaching and learning activities for the teacher and the pupils. The third stage of planning is preparing a written plan in their plan book provided by the university, and the fourth stage is preparing the resources that have been decided on in the second stage. However, the process that happened in the second stage, that is planning the activity could be described as recursive in nature. I have discussed how while planning the activities, the student teachers elaborated their initial idea repeatedly and the planning elements such as resources, learning outcomes, content, pupils, and time all interplay during this stage. So, the process as it was apparent from the various sources of date can be described as both staged and recursive.

CHAPTER SIX

CHANGES IN THE STUDENT TEACHERS' LESSON PLANNING

6.0 Introduction

This chapter answers the research question "does student teachers' planning change over time?" The questions that underpinned my effort to discover changes in their planning process were; what changes had occurred, and what caused these changes? The data were gathered through the interviews, and thinking aloud protocol. Besides gaining the data from the student teachers themselves, my analysis of the changes in student teachers' planning were also based on two other sources of data, which is from documents such as plan books, textbooks and lesson observation, and also from the written comments from their supervisors and the cooperating teachers in the plan books. I incorporated all these sources to describe the changes in learning to plan lessons for these student teachers to get as broad a picture as possible of the ways in which the student teachers' planning changed.

I chose to present this section using a case approach as I noticed that the nature of the changes that occurred in terms of the student teachers' planning can be best illustrated by examining the individual cases. I chose four student teachers from the participants of this study because the description of changes that occurred and how they occurred were informed better by looking at four cases in depth rather than looking at all cases more superficially. These four cases in particular were selected because they demonstrated different ways in which changes occurred, which I will discuss in the

following section. Analysis of the other four participants' data did not contribute any new kinds of changes.

Each of the cases presented below are thoroughly crafted so as to demonstrate how changes occurred for each of them. For each case, I start by describing their beliefs about planning a lesson, followed by their beliefs about planning the subjects they taught during practicum. Then, my description for each case is structured around the elements of planning that have changed, such as the learning outcomes, the teaching strategy or pupils' activity and the influences that may have been involved in the change.

6.1 ELLY

When I met Elly for the initial interview in the second week of her practicum, she explained that she was assigned to teach two subjects. The first subject was Information and Communications Technology (ICT). This subject is an elective subject taken by the pupils in Form Four (age 16) and the number of pupils in this class was 30. The second subject was Computer in Education (CiE). This subject is also an elective subject taken by the pupils in Form One (age 13), and the number of pupils in this class was 35. For both classes, the teaching took place in the computer lab. During her practicum, it appeared in her plan book that Elly had planned 25 lessons altogether. For CiE, she planned 15 lessons and each lesson was for the duration of 80 minutes, and for ICT subject, she planned 10 lessons and each lesson was for the duration of 60 minutes. Elly's conceptions of planning in her early practicum and in the final weeks were as below:

> *For me, planning is to assist the teacher. How to teach and how to control the class. If we do not plan, going to teach without planning would result in a disaster. (RAG/INT)*

> *For me, a lesson plan is like a menu before teaching. By having it before teaching, I can have confidence… my self-confidence. In reality, if we do not plan, we don't feel confident in teaching. I still think that lesson plans help me to teach confidently in the classroom. I mean self-confident. For instance, if I did not plan for the lesson, what should I do in the class? What is the topic, the resources? To think about the activities to be done on the spot is difficult, I'm not sure it can be done. The worst thing would be if I could not achieve the objectives. (RAG/FNL)*

She spoke of the impact of not having a lesson plan before the class as a 'disaster'. For her, the plan served as a 'menu' showing how to teach and how to control the class. Moreover, she also believed that planning a lesson beforehand would enable her to remain confident to face the pupils. Her belief was also related to the role of the teacher as a key player in the classroom. Not knowing what to teach, the resources, the activity in advance would result in a 'disaster' because in her view, she should plan all those to maintain her confidence in the classroom:

> *It helps me, I mean when I already have a plan in hand I feel confident and comfortable facing the pupils. I feel well prepared to teach them. Without planning, I think I would be speechless … uu… aa… uu…aa … and the time would run out without achieving anything. (RAG/INT)*

6.1.1 Beliefs about the Subject

Elly believed the natures of the two subjects she taught were different. She said that although both subjects were related to the computer, yet the nature was totally different. Teaching CiE, she said "*I teach them computer skills, such as how to use MS Word, and MS Power Point, whereas teaching ICT, I teach them concepts, such as computer*

system, and computer software."(RAG/INT) When I asked her more about her teaching strategies for these two subjects, Elly described them as follows:

> *For ICT, I ask them questions about the concept which I want them to learn, and then after getting answers from them, I define everything. For each subtopic I ask them questions, then I explain, and then I will ask them questions again. I choose the pupils randomly to answer my questions so it will make the students alert in class. For CiE, I give them hands-on experience. First, using the teacher's desktop, I demonstrate the skills that I want them to learn, after that they have to do on their own to get hands-on experience. (RAG/INT)*

According to Elly, when she planned lessons for ICT, she chose to explain the concept to the pupils, and when I asked her the reason she used that approach, she said:

> *Because when I ask them, let's say, 'what does 'virus' mean?' no one gives any response, like no one reads their notes or anything. After I ask them and they don't know the answer, I ask another question like 'give me example of some Windows software', they still cannot give any example. (RAG/INT)*

Having early experiences in the classroom, she learnt that the pupils could not answer her questions as she thought they would, therefore Elly thought the best way to deliver the content is by explaining the concept to the pupils. In order for me to understand her approach, I asked her permission to observe her teaching. I observed Elly implement her lesson plan on 22 June 2006, in the middle of her practicum period. She began her teaching by showing a floppy diskette to the class and asked the pupils, *"how much storage is there on a high-density floppy diskette?"* After asking the question, she waited for students to volunteer. I realized that the pupils' responses were not clear to her because they answered all together. Later she called on someone by name to get the question answered. After she got the answer from the pupils, she then moved on to explain the first concept of units of data measurement. She then continued her teaching

activities by explaining the other concept. She continued the same procedure until she completed all the concepts of the lesson. For the whole lesson, it seems to me that Elly's teaching strategy was introducing a concept by asking questions and then explaining those concepts. After the lesson, when I asked her about the strategy, she said:

> *Because this topic is new for them. They have some basic knowledge about ICT but they don't know some specific terms in depth. There are many new terms to be learned. Some students don't have a computer at home, so ICT is quite new to them. So I have to explain it to them. Like today's lesson, the student hadn't learnt the concept of unit of data measurement yet, it was a new topic, they can say kilobyte, gigabyte and megabyte, but they don't know what it means. (RAG/PL)*

6.1.2 Teaching Strategy

In this study, teaching strategy refers to any teacher's activity that was planned to do with the pupils, including lecturing, explanation, demonstration, question and answers and so on.

Having experienced planning and teaching these pupils for a few weeks, Elly thought that the pupils' knowledge about computers was limited, therefore for ICT she believed that the concepts or terms in this subject were new for the pupils. Thus to teach ICT, she thought the teacher had to explain and give all the information to make the pupils understand. She continued explaining to me:

> *When I start a new topic, I can't use student centered approach because they haven't learnt the content yet. So student centered is useful after I finish teaching any topic because I can question the student and see if they understand or not. Like just now, after I explained all the concepts of kilobyte, gigabyte and megabyte, I used student centered approach… the quizzes just now were student centered. From there I know whether they understand or not. (RAG/PL)*

Elly used the term 'student centered' when she described the activity which she planned for the pupils. Quizzes, for example were an activity where the pupils took part and this activity, for Elly, was done as an indicator to find out whether the pupils understood the lesson. Looking at Elly's plan book I could see that throughout the 10 weeks of her practicum, she remained consistent in planning lessons for ICT where she took the role of the key player conveying knowledge which she perceived as new knowledge for the pupils.

At the end of her practicum, when I asked her whether any changes had occurred in her lesson planning, she said:

> *From the teaching perspective, I can now relate the content to the pupils' real life. Previously, I used to just explain about it only, I didn't relate it to their life. So after eight weeks now, I can already relate it to them to make it easier to understand. That is what I think has changed. Before I used to focus on the subject only, now I can be more open. (RAG/FNL)*

Elly talked about changes in the way she conveyed knowledge where she was trying to relate the concepts or terms which she wanted the pupils to learn with their real life. To understand her thinking, I asked her to explain more about this idea. She said that it was easier to explain any new concept in ICT to the pupils if she could relate it to their everyday life and use examples from their existing knowledge. She explained:

> *Now I can relate it to other things. For instance, if we talk about operating systems, right, why can we say an operating system is like a platform? Then the students will reply something like we don't know. Don't understand it. How? Why do you want to ask about platforms, when this is an operating system? Just imagine why Shahab Perdana [bus station] has a platform. Because otherwise the busses will collide. If we have a platform, they will go one by one. That is how the operating system works. When*

the data is entered, it can operate all that stuff. Oooo…so we can relate this to everyday life, right? (RAG/FNL)

Towards the end of her teaching practice, Elly understood that teaching new terms or concepts was much easier if she could relate it to the pupils' existing knowledge and experience. She gave the example of a platform at the bus station as an analogy to explain the platforms in an operating system. She had the idea that the pupils knew about Shahab Perdana [the central bus station in the city near their school]. To make them understand, she explained that the purpose of having a platform at the bus station is to prevent collisions. Elly learned that by using an example which the pupils were familiar with she could help them understand more easily. To understand the way she planned this idea in her lesson plan, I retrieved her plan book and found the lesson plan for this lesson, as documented below:

Lesson plan for 29 June

Content	**Teacher's activity**
System software	• Teacher asks pupils; 'what is system software?' • Teacher explains about system software and a type of system software.
Operating system	• Teacher asks pupils about the operating system. • Teacher praises pupils for the good answer and gives example of operating system.
Platforms	• Teacher asks pupils whether they know about platforms. • Teacher explains about platforms.
Functions	• Teacher asks pupils; 'what is the function of an operating system?' • Teacher praises student for the good answer and explains the most important functions of operating systems.
Interface	• Teacher asks pupils about interface and user interface. • Teacher explains and gives 3 types of user interface.
Activity	• Teacher divides pupils into 3 groups and explains the rules of the game (quiz).
Reinforcement	• Teacher distributes question sheet and asks student to answer it. • Teacher discusses the answer with the pupils.
Conclusion	• Teacher asks pupils what they have learnt today. • Teacher summarizes the lesson and ends the class.

Elly described how the aspect that had changed was related to the teaching perspective, (she used this term to refer to the way she delivered the content), however it appeared in her plan book that she did not write the analogy she used [Shahab Perdana] explicitly in her lesson plan. It seems to me that what was written in her plan book under-represented her actual plan. For the above lesson, she described that how changes had occurred in the way she explained the concept of a 'platform in an operating system', but her lesson plan did not reflect the description which she gave of the changes. It was apparent that Elly's written plan stated the teacher's tasks in delivering the lesson without explaining explicitly the ways she would enact the tasks. For Elly, her lesson plan had changed but this was not recorded in her written plan. This suggests that her written lesson plan did not reflect the changes in her entire plan. Thus, it seems that changes in her pedagogical content knowledge took place, but it was not recorded in her written plans.

Apart from changes in her planning for ICT lessons, Elly claimed that changes occurred in her lesson planning for CiE as well. As stated earlier, Elly believed that teaching CiE should be based on hands-on experiences as it involves teaching computer skills, such as skills in using MS Word and MS Powerpoint. To teach this subject, Elly explained that she demonstrated the skills to the pupils on the teacher's PC, then the pupils had to practise on their own to master the skills. However, later in the final interview, she explained that her lesson plans for this subject changed in that pupils were given the opportunity to demonstrate the skills on the teacher's PC rather than the teacher demonstrating the skills:

> *What I did in these last two weeks was slightly different from the previous weeks. I asked a volunteer to come out to the front and demonstrate how to use the features in the software, the rest pay*

attention and then practice on their PC. I play a minimal role now (RAG/FNL)

Elly claims that the changes happened because she already knew her pupils' prior knowledge about the skills which she wanted them to learn. She explained that "*because I'm very sure that among the pupils, 30 of them, at least one of them will know how to do the task which I want them to learn."(RAG/FNL)* Elly had observed in her previous lessons the pupils' skills in using the MS Word software without her having to teach them and this was an indicator for her so that she made a judgement that the pupils would already know how to use some of the basic features of the Power point software. For instance, Elly said, when she taught them skills in using MS Word, two or three pupils in the class already knew skills such as 'insert column', 'insert picture', 'insert line between columns'. Therefore, she come to the decision that the same thing would happen when she was about to teach them MS Powerpoint; she believed that a few pupils would already know the basic skills of the software.

Looking at her lesson plan of 5 July 2006 (a few days before her practicum ended), we find the following:

Content	**Teacher's and pupils' activity**
Start MS Ppoint program	• Asks one volunteer to come to the front and start the MS Powerpoint program • Pupil comes to the front and shows to the class how to start the program.
Create a Slide	• Asks pupils to create a slide using the format given by the teacher. • Pupils create a first slide using layout 'title slide', and second slide using 'bulleted list'.
Insert Clip Art	• Asks volunteer to demonstrate how to insert 'clip art'. • Pupil demonstrates how to insert 'clip art'
Choose slide Design	• Asks volunteer to demonstrate how to choose 'slide design' • Pupil demonstrates the task by choosing 'design template' to select the design required.
Insert Slide Animation	• Teacher shows how to insert slide animation for the first slide. • Pupils follow teacher's activity by choosing 'custom animation' on 'slide show menu'.

Insert sound clip	• Asks pupil to demonstrate how to insert 'sound clip' • Pupil demonstrates by selecting the 'drum roll' icon on the 'sound menu' in 'custom animation' pane.
Insert transition effect	• Teacher shows how to insert transition effect to each slide. • Pupils follow teacher's activity by choosing 'slide transition' icon on 'slide show' menu.

Elly claimed that towards the end of her practicum, in planning lessons for CiE she asked the pupils to demonstrate the skills to the class instead of the teacher performing the tasks. Her written lesson plan, as quoted above, suggests that this change has happened because the entry she made shows the pupils were given the task of demonstrating the skills to the class. The changes in her written lesson plan for CiE can be easily appreciated by looking at her lesson plan for the first week of her practicum as a comparison. I randomly chose the lesson on 10 May 2006 which is as follows:

Content	**Teacher's and pupils' activity**
Start MS Word program and text entry	• Shows how to start the MS Word program. • Pupils follow teacher's activity. • Give the pupils a short document and show them how to type the document using Word software. • Pupils type the document on their PC
Edit the document	• Demonstrates how to edit the document. • Pupils pay attention • Asks pupils to edit the document. • Pupils edit their document.
Draw a line	• Demonstrates how to draw and change the line style • Pupils pay attention • Asks pupils to draw line in their document • Pupils draw a line in their document.
Insert picture	• Demonstrates how to insert picture. • Pupils pay attention. • Asks pupils to insert picture. • Pupils insert picture in their document.

Her early written plan clearly shows that the teacher was acting as the key person in demonstrating the skills to the pupils, and the pupils practiced it after the teacher had

demonstrated, whereas towards the end of her practicum, the pupils were given the role of demonstrating the skills even though she had not yet taught them the skills.

6.1.3 Pupils' Activity

Early in her student teaching, when talking about her planning process, Elly said that the first thing that came into her mind when planning was the topic or what she was going to teach on that day.

> *Firstly, I look at what I am going to teach on that day. Then I decide on the activity based on what I'm going to teach. I do the activity to see if they can follow the lesson and understand what I've been teaching. (RAG/INT)*

Elly explained that after she knew what she was going to teach, she then planned activities that were appropriate to find out whether the pupils had learned the lesson. For Elly, planning the activity was to plan or organize the tasks for the pupils, such as group discussions, quizzes, presenting ideas in front of the class, or working in pairs. She believed that having an activity would help her to identify whether the pupils understood the lesson.

When I talked again with her during her last days at the school, she remained stable in her view that planning activity was vital as a way to find out whether the pupils had understood the lesson. However, she had discovered that the pupils' knowledge in CiE, for instance MS Word and MS Powerpoint, was more advanced than she had anticipated, therefore she said *'the activity was not only to find out whether they understood the lesson, but the pupils who already had knowledge in using that software were given the opportunity to demonstrate the skill to the class'.(RAG/FNL)* The

reason for doing this was, she said '*because I already know their prior knowledge, their likes and their behaviors'(RAG/FNL)*

It seems that her reflection on the classroom experience contributed to changes in Elly's planning. Early in her practicum, Elly revealed that she entered the classroom for the first time without having any experience in teaching, therefore her learning to plan a lesson and to teach pupils in a real context had started on her first day in school:

> *Because at that time, I didn't have any experience, what was in my mind was that I wanted to teach them, I had no idea about the kind of activities they were interested in, but once I had some classroom experiences, had talked to the pupils, knew their behaviors, from there I learned that pupils are keen to give their opinion, to take part in activities… now I plan varieties of activities; give them a chance to talk, come to the front and explain or demonstrate their skills, or discuss in groups. (RAG/FNL)*

According to Elly, she normally planned for the pupils to work in groups for the activities; she said '*in planning the activities, usually I'll give them questions and ask them to discuss in groups. They do it in groups, because if I get them to do things individually, I plan it in the reinforcement step.'(RAG/FNL)* Later, after having experience of conducting activities, Elly came up with planning a quiz as one of the activities. According to Elly, '*the pupils like to compete against each other, so when I did a quiz as their activity, the class was very active and the pupils seemed to enjoy the lesson (RAG/FNL)*

When reflecting on her plan, especially on the activity done in previous lessons, Elly once again concentrated on the responses from the pupils to the activities. Elly always

tried to do the activity which the pupils would like most and to avoid activities which would be uninteresting for them. She said:

> *What I learned from past lessons was I think I looked at how to control the class. Sometimes I didn't get cooperation from the pupils. The other day, I did an activity but the pupils didn't seem to concentrate and just took things easy. It looked like they were saying to me 'I'm bored' or something like that. So I will try to make the students happy by finding an activity that won't make them bored. (RAG/PL)*

Keeping the pupils' attention on the lesson and fostering the pupils' enjoyment were her main focus when planning activities. For her, when the pupils enjoyed and liked the activity, the lesson was smooth and the learning outcomes were accomplished. Her ideas can be seen in her reflections which she wrote in her plan book as below:

- Teaching and learning activities was smooth. All pupils enjoy and like the activities (quiz). Students can answer the questions given and they really understand the topic. (15/6/06)
- Teaching and learning activities were good, majority of the pupils can answer the question given. Learning outcomes accomplished and pupils really enjoyed the quiz session. (19/6/06)
- Today's class was good, pupils gave their cooperation to participate and enjoy the quiz given. Learning outcomes were accomplished. (22/6/06)
- All pupils participated and enjoyed the quiz activity. Students could understand the topic and learning outcomes were accomplished. (29/6/06)

So, Elly's planning changed because of her classroom experiences which related to the pupils' ability and behaviors. She also explained that she learned from mistakes which, according to her, her supervisor had pointed out to her:

> *Firstly, I learnt from mistakes. Ok, when my university supervisor came to observe me, she said 'don't just focus on the teacher's activity'. I had to do some pupils' activity as well. From that point, I've changed. After that, she said don't just focus on the subject; I should try to relate it to things around me. So I think I've learnt a lot from mistakes. Because when we apply the plan, we just follow how we want to teach. We don't see it. But someone else can notice it and tell me my mistakes and the things that I'm lacking. I think that is how I learnt. I learnt from mistakes that I made ... when someone else talked to me about it I noticed it. (RAG/FNL)*

According to Elly, during the practicum period, she was observed three times by her supervisor. Her supervisor came and sat down at the back of the class for the entire period. Soon after the lesson ended, they sat down together, and her supervisor made comments about her planning and teaching. She took note of what her supervisor said, and she thought she made some mistakes. Elly believed that her supervisor was an expert in planning and teaching, therefore she responded to the comments positively and made changes in her planning as suggested by her supervisor. Along with the verbal comments given to Elly in their meeting, there were written comments from her supervisor in the plan book:

1. Teacher must show an estimated time for each step. You can select a group leader for each group to ensure all pupils participate in the activities. Think of other suitable techniques to gain pupils' interest. (first observation, 10/5/2006)
2. You should focus more on pupils' activity rather than teacher's activity. Instead of you demonstrating the skills to the pupils, why not ask the pupils (who are good) to demonstrate it. This is to avoid boredom with the same technique, moreover pupils would be more involved. You should plan varieties of

technique to make the lesson more interesting. (second observation, CiE, 14/6/2006)

3. The lesson plan was prepared thoroughly, however, the teacher should think more about how she could get the pupils to participate more actively. Therefore, careful consideration should be given to the student activity when planning a lesson. The method used was more of a lecture type, which is suitable for conveying difficult or new concepts such as 'bit' and 'byte'. It was good that the teacher also used other methods such as group work, to vary her methods of teaching a lesson. Pupils seemed to like the quiz activity. (third observation, ICT, 15/6/2006)

It seems that the university supervisor's advice and comments had an influence on Elly's planning. Following the comments by her supervisor, I looked in her plan book to see if there were changes as a result of the comments made. Her written plans in the plan book indicate that Elly made changes in her subsequent lesson plans after she was given comments by her supervisor.

In summary, it seems that Elly gradually changed her planning practices as a result of factors that are interconnected with each other. She gradually learnt how to plan and present knowledge to the pupils. It seems that she has changed in terms of her beliefs and knowledge about the subject and how to deliver it to the pupils and these changes happened as a result of reflection on classroom experience with the pupils. The changes also happened because of the influence of the university supervisor.

6.2 SHIRLEY

Shirley was assigned to teach Accounting Principles to Form Four (age 16) pupils and English Language to Form Two (age 14) pupils. She taught two different classes for Accounting Principles; that is 4P a class of 29 pupils, and 4T a class of 16 pupils. At the time I interviewed her first, she was in the second week of her practicum. Because she had already taught them a few lessons, she said that the pupils in these two classes have different ability. For English Language class, she had 32 pupils in this class. English is a compulsory subject in the curriculum at all primary and secondary schools in line with its status as a second language in Malaysia (CDC, 2000).

When talking about these two subjects, she said she was confident in teaching Accounting Principles rather than English language because Accounting was her major subject at university. Even though her minor subject was English Language (TESL), she thought that she was not very good at English but she accepted that she had to teach it as she believed this is the best time for her to take the challenge.

It appears from her plan book that during her practicum, Shirley planned 36 lessons. This comprised 15 lessons for English Language (30 minutes or 60 minutes), and 21 lessons for Accounting Principles (80 minutes for each lesson). Shirley believed that a lesson plan is "*a preparation before teaching and learning takes place" (LPS/INT*). And in the final interview, she maintained this belief that planning is preparation before the lesson. For Shirley, having a lesson plan meant she was sure what to say and what to do in the classroom. This was related to the idea that planning is important to help the teacher feel confident to face the pupils:

> *It's like a step, a preparation we make before the lesson. We plan what we are going to do in the lesson. Planning is important. In my opinion, if I go into a lesson without a lesson plan, I will find myself confused about what I'm teaching, and the pupils will be too. If I myself don't know what to say, how am I going to teach, so it is essential to have a plan before starting the lesson. (LPS/FNL)*

6.2.1 Beliefs about the Subjects

Shirley believed that these two subjects were different, therefore to teach these subjects, she said the approaches she used were different. Furthermore, the pupils were also at different ages. Shirley said to teach Accounting, the teacher must explain the concept first, because it is difficult for the pupils to understand it without the teacher's help; to understand concepts in Accounting is not easy when they read it on their own. Shirley emphasized that "*whatever it is, the teacher has to explain, explain and explain, until the pupils can understand."(LPS/INT)* She believed that only when the pupils had understood the concept would they know how to apply it. Shirley believed that teaching language was different in nature from teaching Accounting. She said "*English is different, because the subject is language; if the pupils are motivated and interested in learning the language, then they could learn on their own without having the teacher to explain it."(LPS/INT)* She said that the teacher's role in teaching English was more as a facilitator. Shirley also believed that teaching language was more flexible and she gave the example of one of her English lessons where she had to teach literature. For this lesson, she planned activities such as role-play and acting, but she thought that Accounting as a subject is quite rigid, with everything stated in the textbook or workbook. She also had in her mind that teaching or learning Accounting meant dealing with debit and credit, or preparing a financial statement. She thought that there was no scope for doing anything new as there was in teaching language.

6.2.2 Learning Outcomes

In her initial attempts at planning, Shirley described how her emphasis was more on thinking about the set induction than on other aspects of planning. Shirley's great concern about the set induction was related to her early beliefs that "*by having a good set induction, the pupils will be motivated and interested in the lesson."(LPS/INT)* Because she had in her mind that a good set induction helps motivate the pupils for the lesson, she said that in her planning process she gave priority to thinking about planning a good set induction. But after having a few experiences in planning and teaching, she changed her focus, she said:

> *Earlier, I always thought of the set induction as very important, but after having a few experiences in teaching lessons, I found the learning outcomes are important. From there on, I gave priority to the learning outcomes first before I went on to another aspect of planning' (LPS/FNL).*

Her focus changed after having a few experiences of planning and teaching, because she found that although she thought that the set induction which she had planned was good, it didn't guarantee that the learning outcomes would be achieved. She learned that a good set induction did not make the pupils understand the lesson, rather it could draw their attention to the lesson instead.

> *I planned a good set induction, so I was able to attract the pupils' attention to the lesson, but in that lesson, the learning outcomes could not be accomplished, and probably they were not achieved. Sometimes it seems that there is too much to cover in one lesson, and then I realize that they weren't able to understand it. (LPS/FNL)*

When I asked Shirley to elaborate further on this issue, she explained that she now put more emphasis on deciding the learning outcomes for each lesson. The example below illustrates her thinking:

> *For example, when I planned a set induction for the topic Cash Book, it seems to me that the set induction was interesting and likely to attract their attention to the lesson, but does that mean the pupils understood the lesson? Certainly not, because to teach this topic, I need to cover three or four objectives. Because there were three objectives to cover, therefore I taught them very fast. I felt like they didn't understand my teaching, and sometimes I myself got confused with what I had explained to them. I felt like I was trying to rush to complete the lesson. The time allocated was not sufficient to cover that much content. (LPS/FNL)*

Shirley reckoned that her teaching was not successful; she could see the pupils did not understand the lesson, and she herself was confused while she taught them the lesson. It seems that Shirley realized that she was trying to cover too much content in one lesson, therefore she was not satisfied, and she thought that it was because she didn't give careful consideration when deciding the learning outcomes for the lesson.

Shirley also learned that the learning outcomes chosen for each lesson must be appropriate to the time allocated for the lesson. She said she had tried to put all the learning outcomes for one topic into one lesson, and she ended the class without completing the lesson as planned. Having learned from that experience, she said that she considered carefully when deciding the learning outcomes for each lesson. She gave the example below to explain the changes she made in deciding the learning outcomes:

> *In deciding the objectives, let's say in one topic there are five objectives, and the times allocated for the lesson is 30 minutes, then I pick one or two objectives. The next lesson, I chose another one or two objectives. From my experience, it is difficult to cover all five objectives in one lesson. (LPS/FNL)*

To understand the changes described by Shirley, I studied her plan book and the example below was chosen to shows her first attempt at lesson planning. On 2 May 2006 (the first week of her practicum), she taught a lesson where the topic was First Entry, and the sub-topic was Cash Book. The learning outcomes stated in her lesson plan are as below:

- To list four functions of the cash book
- To calculate and to record cash discount
- Record the transaction (cash discount, bounced cheque, contra entry) in the Cash Book

When Shirley was asked about how she decided the learning outcomes when planning a lesson, she said, "*I look at the Curriculum Specification (CS)."(LPS/INT)* Shirley explained that the CS was her main resource to identify the learning outcomes for each topic of the lesson. As I looked through the CS for Accounting Principles, I found that the example above was taken from the CS, and it seems that in her first attempt to plan a lesson, Shirley tried to cover this much content in 80 minutes. In the CS, the three learning outcomes above were arranged in three levels of difficulty as suggested in Blooms Taxonomy (Bloom, Krathwohl & Masia, 1956), and in this example, Shirley was trying to cover all three levels of difficulty in one lesson.

After she found that her lesson was not successful, she thought that she needed to change her focus in planning lessons. She now concentrated more on the learning outcomes as the first thing she thought about when she started planning, rather than thinking about the set induction first.

To see the changes that she talked about, I looked at the data of her thinking aloud protocol to see her planning process. The thinking aloud planning was done on 21 June 2006 (week 8 of her practicum).

> *Now I'm going to start getting the lesson plan ready for the subject Accounting Principles. Ok, firstly, I need to identify the learning outcomes for this lesson. What do I want to teach today? Ok, the learning outcomes. For this class, today I will start with a new topic, which is in chapter six, Trial Balance. So, what are the learning outcomes for today? Look in the CS. Ok, what is Trial Balance? What should I teach them for this 80 minutes worth of time? Ok learning outcomes, explaining the function of a trial balance. Explaining the meaning of trial balance limitations. Preparing a trial balance in column format. Is there enough time to do all of these three objectives? Explaining the meaning of trial balance limitations, explaining the function of a trial balance and also preparing a trial balance in columns. (LPS/TA)*

Her thinking aloud planning shows that what came first in her thinking was the learning outcomes. Besides thinking about the learning outcomes, she also thought about the time allocated for the whole lesson. It seems that she was explicit about the learning outcomes, mentioning all the learning outcomes for the pupils to achieve explicitly. She also tried to make a judgement of the time allocated for this lesson; whether she had enough time to teach the pupils to achieve these three objectives within the time allocated for the lesson.

There is evidence in her thinking aloud planning that she has changed her focus in terms of what comes first when planning as she described. It appeared in her thinking aloud planning that she came to thinking about the set induction towards the end of her planning. After she had planned the activities and the resources, and before the closure, then she thought about the set induction. Thus, this data suggests that Shirley has

changed her focus, with the set induction coming later in her planning as opposed to what she did during her early days in her practicum.

Shirley said that her classroom experience had made a difference to her planning, as she said that she changed her focus after she found that her lesson was not successful. The data also suggests that the supervisor's comments contributed to these changes. For example, she compared her supervisor's comment to what she learned during her methodology class at the university:

> *In her comments on my planning and teaching, she always emphasized the activity. Also, she reminded me about the objectives. I found that she commented on the activity every time she saw my planning. Compared to what I learned in my methodology class, my lecturer put more emphasis on the set induction. He said planning a good set induction was very important because it could motivate and attract the pupils to the lesson. But my supervisor gave more priority to the activity. (LPS/FNL)*

When her supervisor constantly talked about the activity after she observed Shirley's lessons, Shirley thought that her supervisor's priority in planning was the activity, whereas in her early days of practicum, she was heavily influenced by her lecturer whom she said gave more emphasis to the set induction in planning a lesson. Thus, Shirley can now see the differences between her lecturer who taught methodology as a subject, and her supervisor who came and guided her in a real classroom setting. As she was repeatedly being reminded by her supervisor, she followed her supervisor's suggestion to put more emphasis on the learning outcomes and the activity. Therefore, the changes occurred in the way Shirley thought about the set induction as a result of her classroom experiences as well as her supervisor's comments.

It also appeared in her plan book that the way Shirley thought about and planned the set induction changed. The example below shows the set induction for Accounting Principles; the topic is 'entry book' and the lesson was held in week 1 (3 May 2006):

Activity	**Content**	**Teaching and Learning Activity**
Set induction	Introduction to the journal	• Teacher asks several questions: the types of sports that you like? Can we use a basketball ball to substitute for a tennis ball to play tennis? • Teacher relates the example above to the topic: using the analogy of appropriate ball to play appropriate games, so for a transaction, it must be recorded in the appropriate entry book. • Teacher reminds the pupils about the previous lesson. • Teacher explains the function of journal.

The example above illustrates that Shirley was trying to catch the pupils' attention by using an analogy which she thought the pupils could relate to the lesson. She used the analogy of 'the appropriate ball to play appropriate games' to attract their attention to learning about the journal in accounting. However, towards the end of her practicum, the way she thought about the set induction was more in terms of developing the pupils' cognition rather than attracting their attention. For example, in an Accounting Principles lesson taught in week 10 (final week), the topics were 'entry book, ledger, trial balance'. The set induction was as below:

Activity	**Content**	**Teaching and Learning Activity**
Set induction		• Teacher asks 4-6 pupils to state the content/what they have learned from chapter 4 (first entry), chapter 5 (ledger), and chapter 6 (trial balance). • Teacher recaps important aspects of the three chapters.

		• Teacher explains that the pupils will have to work on a past examination paper (2004) to evaluate their understanding of those three chapters.

This lesson was carried out during her final week of practicum. Looking at the topic, this lesson was a revision of a previous topic which she incorporated into one lesson. What she did as the set induction for this lesson was selecting pupils randomly to state the contents of the previous lessons. It seems that towards the end of the practicum, her focus was more on developing their cognition than attracting their attention to the lesson.

6.2.3 Teaching Strategy

Shirley reports that her initial attempts at planning activity were based on the topic and the objectives to be achieved. She gave the example of planning for Accounting where she explained:

> *Well… I study the topic to see the difficulty of the topic and what they should know about the topic. For example, Cash Book, to be able to answer the questions for this topic, the pupil must have a strong basic knowledge about this topic. Therefore, I must teach them from the beginning, step-by-step, the definition, its function in accounting, must explain all types of transaction; they must understand what debit and credit are and how to make an entry. If they don't have this basic knowledge, they won't be able to answer the questions. So, the first 30 minutes was for explanation, and for the activity I gave them 30 minutes as well. For the activity, what I did was give them exercises to discuss with their partner, and then I asked them randomly to give the answer to the class. (LPS/INT)*

According to Shirley, after studying the topic, she got an idea of the difficulty of the topic in order to help her to make a decision about the activities for that lesson. Based on her own knowledge, Shirley made a judgment of the difficulty of the topic. From

her account, it seems she used 30 minutes to explain the contents to the pupils, and another 30 minutes for the activity. The type of activity planned was a discussion between 2 pupils to answer exercises related to her teaching. It seems that Shirley planned the activity to check the pupils' understanding of the topic. She believed that without a strong basic knowledge about the topic, the pupils would not be able to answer the questions. Thus, according to her, she planned questions for the pupils as the activity, and this activity was carried out after she has finished teaching.

I looked in her plan book to see what was documented, and the lesson plan on 3rd May 2006 (week one of her practicum) is as below; the written plan below seems to be consistent with Shirley's beliefs that the activity planned was to check the pupils' understanding of the lesson.

Activity	**Content**	**Teaching and Learning Activity**
Step 1	Match the document to the journal	• Teacher explains 4 types of journal • Teacher asks pupils to name the business documents that should be recorded in the journal. • Teacher shows the business documents that should be recorded (invoice, credit notes) • Teacher asks pupils to refer to the textbook page 90-93 to better understand the topic.
Step 2	Record transactions in the journal	• Teacher shows the journal on the whiteboard. • Teacher shows how to record a credit transaction in the journal. • Teacher gives more examples on transactions in the journal.
Step 3	The function of a cash book	• Teacher displays 6 functions of a cash book on the board. • Teacher asks one pupil to read from the board.

		• Teacher chooses a few pupils to explain the functions of a cash book. • Teacher explains further about the functions of a cash book.
Step 4	Record simple transactions in the cash book	• Teacher explains how to record a cash transaction in the cash book. • Teacher distributes handouts about the transaction. • Teacher asks the pupils to study the handouts given: the transactions from Jan 1 to Jan 27 and record the transactions in the cash book. • Teacher explains how to record the transactions.
Step 5	Match the document to the journal	• Teacher distributes exercise sheets to the pupils. • Working in pairs, the pupils discuss to identify the document that should be recorded in the journal. • Teacher chooses 4 pupils to present the output of their discussions. • Teacher re-iterates the explanation of how to identify the document that should be recorded in the journal. • Pupils discuss the tasks again with their partner. • Pupils present the answers.

However, changes occurred in the way she planned the activity. Although Shirley started the lesson by explaining the concept first, it seems that she made a change by asking the pupils to work in groups rather than working in pairs. The lesson plan below on 21 June 2006 (week 8) illustrates the changes:

Activity	**Content**	**Teaching and Learning Activity**
Step 1	Record a transaction into the ledger (from firstly recorded in the journal: journal and cash book)	• Teacher distributes handout to the pupils. • Teacher show how to post the item from the journal to the ledger (sales journal). • Teacher asks two pupils to demonstrate how to post the items from the journal

		(buying) and sales return journal to the ledger. • Teacher explains how to post the item from the cash book (debit) to the ledger. • Teacher asks 3 pupils to demonstrate how to post the item from the cash book (credit) to the ledger. • Teacher discusses the answers with the pupils.
Step 2	To balance and to close the account	• Teacher put the pupils in groups (four in a group). • Based on the accounts discussed in step 1, teacher asks the pupils to discuss in their groups how to balance and to close the accounts. • Teacher monitors the discussion and assists the groups who have problems solving the tasks given.
Step 3	To balance and to close the account	• Teacher chooses three pupils to present the answers on the board. • Teacher discusses the answers given.

Shirley talked about the changes she made in planning the pupils' activity during my final interview with her at the end of her practicum, where she said:

> *I learned that group discussion is effective for the pupils to learn Accounting in week six of my practicum. When I found it was effective, for every lesson, I planned a group discussion for them, I think by having them work in groups, they learn more from the activity. (LPS/FNL)*

I asked Shirley to elaborate more about the reason she thought that group discussion was more effective than working in a pair, and she explained as below:

> *I asked the pupils to discuss in groups, let's say four pupils in a group. If one of the group members can solve the problem given, the other three pupils can also solve the problem. The reason is they help each other; they discuss how to solve the problem together. They are keener to ask their group member rather than their teacher. Maybe because they feel shy, or afraid to ask the teacher. (LPS/FNL)*

Through her own experience of delivering the lesson, and reflection after the lesson, she discovered that group discussion helped pupils to learn from their friends and help each other, and it seemed easier for the pupils to ask their peers than to ask the teacher. Besides, her university supervisor was a strong influence in this change, as Shirley said *'the second time my supervisor observed my lesson, she asked me to do a group discussion. I tried, and I found it effective'.(LPS/FNL)*

In her plan book, her supervisor's comments were as follow:

> *Teacher should give more attention to the pupils' activity in planning a lesson. Teacher's explanation about the concept was clear and the examples given were useful in helping the pupils on how to record in a ledger. Asking the students to come to the front to record ledger on the white board was good to check their understanding. However, group work would be better for problem solving so that the pupils can learn from their peers, sometimes they will learn better in group. (FT/Accounting/14.06.06)*

She also learned that the disadvantage of group discussion is that pupils like to talk about other thing and make a lot of noise, so she was very careful in planning group work. This can be seen in her thinking aloud planning (as I've discussed in Chapter Five).

Towards the end of her practicum, the lesson plans which appeared in her plan book were focused on revision rather than planning for a new topic. The lesson plan on 4 July 2006 (final week of the practicum) illustrates her decision to plan more group discussion in the revision lesson.

Activity	Content	Teaching and Learning Activity
Step 1 (group discussion)	• First entry • Posting the entry to the ledger • Prepare the trial balance	Teacher distributes the exercise sheet to the pupils, Teacher groups the pupils (4 in a group) Teacher asks the pupils to discuss in groups in order to solve the problem given on the sheet. Teacher assists the groups who have problem.
Step 2 (presentation)	• First entry • Posting the entry to the ledger • Prepare the trial balance	Teacher chooses 4 pupils to show the output of their discussion on the whiteboard – first entry Teacher chooses 3 pupils to show the output of their discussion on the whiteboard – ledger Teacher asks 1 pupil to show the trial balance on the board.

Shirley's approach to planning English lessons was different. She believed that teaching and learning English is different from teaching Accounting because the pupil may learn on their own without having the teacher to explain in detail. She said the way she plans lessons for English is more focused on planning the activity. When she was asked to describe the activity which she planned for English lessons, she said, "*it must be fun and related to their background knowledge."(LPS/PL)* I asked her to elaborate further the reason she thought that the activity for language lesson must be fun, and she replied:

> *One day I taught them simple past tense. I thought that they would get bored learning grammar, so I planned a crossword puzzle as their activity. I thought that activity would make them enjoy the lesson, but I was wrong. I found that they didn't really like the activity, they looked bored, but today, I think they enjoyed the lesson. They liked today's activity more than the crossword puzzle. (LPS/PL)*

I asked her to elaborate on the activity about which she said 'the pupils liked it', and she said it was an activity which involved a role-play. She explained that the lesson was on

the literature component, and the school had selected a novel 'The Phantom of The Opera', by Gaston Leroux as suggested by the Ministry of Education Malaysia. The English Language Syllabus (2000), states that a small literature component should be added to the curriculum to enable learners to engage in wider reading of good works for enjoyment and for self-development. This reading will also develop an understanding of other societies, cultures, values and traditions that will contribute to their emotional and spiritual growth. Commenting on the novel, Shirley said:

> *The Phantom of the Opera is a novel, I read it 3 times before I understood the story. That made me think, how will the pupils be able to understand the story? If they just read the story, they will not understand. Therefore, I thought of a script, if I prepare a script, I think the pupils can see who is talking, what they are talking about, then step by step they can understand the story. (LPS/PL)*

According to Shirley, the activity should make the pupils feel at ease, as well as keeping the pupils' attention on the lesson. For Shirley, keeping the pupils' attention on the lesson by planning an activity which she thought was 'fun' in the eyes of the pupils is the reason that Shirley makes changes in planning the activity.

In summary, Shirley has changed in terms of emphasis given to each element in planning, judging the appropriate learning outcomes for the lesson and the activity that is appropriate to the pupils' characteristics. These changes have occurred as a result of her reflection on the classroom experiences. The university supervisor was also found to contribute to these changes.

6.3 REEZAL

Reezal was assigned to teach in a small secondary school in a rural area near to the university. He was responsible for teaching Commerce to Form Four pupils (age 16) and Mathematics to Form One pupils (age 13). The number of pupils in Form Four was 29, and the number of pupils in Form One was 37. As stated in the Curriculum Specification (CS), Mathematics is a core subject that is compulsory for all pupils, whereas Commerce is an elective subject selected by the school for the pupils. As I went through his plan book, I discovered that during the practicum Reezal had planned 15 lessons for Commerce, and 16 lessons for Mathematics. The duration of the lessons was either 40 minutes or 80 minutes for both subjects. When talking about lesson planning, he said:

> *It tells you what the teacher wants to teach, and the teaching approach to teach the topic. To me the lesson plan is very important. I said it is important because as a teacher, I have to make my students understand, so before teaching, I have to plan so that I know how to impart knowledge to them. I know what to do in the classroom because I've set the goal and the learning outcomes in my plan. (SR/INT)*

6.3.1 Beliefs about Teaching the Subjects

When I interviewed Reezal at school in his second week, he explained that he was given the subjects which he specialises in to teach. However, he said he preferred to teach Mathematics rather than Commerce. Although his major was Business Studies, he thought that teaching Commerce, which is close to his major studies, is quite difficult because it consists of facts and story. To be able to teach well, he said, the teacher needs to read a lot in order for him/her to explain and elaborate the facts of the business concepts to the pupils. Teaching mathematics, he believes, is easy because for Form One pupils, the content is basic knowledge of Mathematics. Furthermore, he added,

Mathematics deals with calculation, and he used Mathematics everyday; addition, subtraction, multiplication, and fraction, therefore, he can show pupils how to get the answers very easily through a variety of techniques. At the time that he expressed his initial thoughts about these two subjects, he had already planned three lessons for Mathematics, and two lessons for Commerce.

Reezal's early ideas about planning were related to his beliefs about teaching. As mentioned earlier, Reezal was assigned to teach Commerce to Form Four pupils, and Mathematics to Form One pupils. He believed that these two subjects were not the same in nature. Reezal explained that "*to teach Commerce, I have to read a lot about the business world because it keeps changing from time to time, I need to explain the concepts to the class no matter what. After explaining the concepts, I'll ask them questions to check their understanding, or ask them to give an example"(SR/INT)* whereas on the other hand, about mathematics he said "*it deals with facts, and it goes on pretty much the same, for instance, how to solve problems on fractions will always be the same."(SR/INT)* He added, "*for Mathematics, I show them how to solve problems, and it's fun because there's a lot of exercises to do."(SR/INT)* Even though he believes that the nature of Commerce and Mathematics are different, his emphasis in teaching was the same in that he as a teacher should know all the concepts and all the answers which are related to the subject, and the teacher is the key player in the teaching and learning process.

6.3.2 Learning Outcomes

Early in his practicum, Reezal explained that he relied on the curriculum specification and the textbook in deciding the learning outcomes for the lessons. He said:

> *The learning outcomes are already stated, either in the textbook or in the CS, so my task is how to teach in order for the pupils to achieve the learning outcomes. (SR/INT)*

Because he believed that the learning outcomes were provided, either in the curriculum specification or in the textbook, therefore in planning a lesson, he followed the curriculum specification or the textbook. He also thought that it was his responsibility to plan a lesson to achieve the learning outcomes. Later, in his final week of the practicum, when talking again about this issue, he said:

> *How to make the pupils understand the lesson is important, and I do not try to do too many of the learning outcomes in the curriculum specification now. (SR/FNL)*

I asked him to explain further on this issue, and he went on as below:

> *For example, to determine the learning outcomes for each lesson in weeks one and two, I might have depended too much on the text books, or Curriculum Specification which are provided by the school. But now, in the last few weeks of the practicum, I found it hard to make the pupils understand the lesson if I followed them 100 per cent, therefore, I didn't follow exactly from those two sources, but I varied them according to the pupils' ability. Now the learning outcomes which I set were more dependent on the pupils, because I want them to learn. There is no point in my setting three or four learning outcomes, and at the end of the lesson, they don't get anything. For instance, the learning outcomes stated in the textbook, they might be two learning outcomes in one sentence, and I found it was difficult for the pupils, so I make them separate, and decide on the learning outcomes depending on the pupils' ability. It's just that I set one or two learning outcomes in my lesson. (SR/FNL)*

Reezal explained that it was difficult for the pupils to understand the lesson when he tried to cover the learning outcomes as provided in the textbook or CS. He was more concerned about pupils' learning rather than trying to impose the contents that had been outlined in the textbook for the purpose of accomplishing the learning outcomes. Reezal he believed that if he still did the same things as he did before, the pupils would

not be able to learn from the lesson, and now he stressed that *'the learning outcomes must be achievable' (SR/FNL)* He also found the learning outcomes in the textbook might comprise of two learning outcomes in one sentence. It seems that he was more critical about the learning outcomes outlined in the textbook or in the CS.

To see the changes as he described them in the final interview, I skimmed his plan book, as well as the textbooks (Commerce Form Four, and Mathematics Form One) and the Curriculum Specification for Mathematics, and the following examples were taken from his plan book to understand his thinking, and any changes that occurred.

One of his first attempts in planning lesson was on 3 May 2006. As it appeared in his plan book, the lesson was Mathematics for the pupils in Form One (age 13). The duration of the lesson was 80 minutes, the topic was Decimals, and the sub-topics were; Addition and subtraction of decimals, and Multiplication and division of decimals. The learning outcomes written in his plan book were as follows:

1. add decimals,
2. solve problems involving addition of decimals,
3. subtract decimals,
4. solve problems involving subtraction of decimals,
5. multiply two or more decimals,
6. solve problems involving multiplication of decimals,
7. divide: a decimal by a whole number, a decimal by a decimal, a decimal by a fraction.
8. solve problems involving division of decimals.

These learning outcomes were all planned for one eighty minute lesson on 3 May 2006. I referred to the Curriculum Specification for Mathematics Form One, and I discovered that Reezal had copied verbatim the learning outcomes stated in the CS under the topic Decimals. Interestingly, it was not stated in the CS how much time the teacher should allocate to cover those learning outcomes.

Upon enacting the lesson, Reezal found that the lesson was not successful. His view about the unsuccessful lesson was written clearly in the plan book as his reflection. He wrote, *'the learning outcomes were not accomplished, the time has running out. Learning outcomes six, seven and eight will be covered in the next lesson on Monday, 8 May 2006, at 9.45 to 10.25 am' (SR/PB/03.05.06)* His reflection shows that the focus was on the learning outcomes and his view that they were not accomplished, and the reason stated was about the time constraint.

Looking in his plan book, the lesson on 8 May 2006 was not planned as he had proposed in his reflection before. The learning outcomes for this lesson were:

1. perform computations involving combined operation of addition, subtraction, multiplication and division of decimals, including the use of brackets,
2. solve problems involving combined operations of addition, subtraction, multiplication and division of decimals, including the use of brackets.

Although Reezal said that he learned from the previous lesson that the learning outcomes were not achievable, the data shows that he made no changes in the next lesson as it appeared in his plan book. He rather continued with the next sub-topic stated in the Curriculum Specification, that is, 'Combined Operations' which comprise

two learning outcomes as mentioned above. As appeared in his plan book, again I found that these learning outcomes were copied verbatim from the CS. The duration for this lesson was 40 minutes. His reflection for this lesson was '*the lesson was unsuccessful; the learning outcomes were not accomplished' (SR/PB/08.05.06)* Again, the reflection written in the plan book shows that Reezal thought that his lesson was not successful. This lesson was also being observed by his university supervisor, and the comment written regarding the learning outcomes was *'the learning outcomes must be achievable, you should be careful when planning this aspect; think about the pupils, whether they are able to achieve them' (first observation).* It seemed that the comment written by his supervisor was the factor that had influenced Reezal in planning for the next lesson, although it gave no more explanation about it.

His lesson on the 10 May 2006 is an example which illustrates changes. His lesson plan was still on the topic 'Decimals', and the sub-topic was 'Multiplication and division of decimals'. The learning outcomes were:

1. to multiply two or more decimals
2. to solve problems involving multiplications of decimals.

The data shows that Reezal planned again the same sub-topic as on 3 May 2006, and it shows that for this 80 minute lesson, he was trying to plan in line with his reflection on his lesson before, where he said he would continue with the learning outcomes six, seven and eight. Having taught for 80 minutes to cover the two learning outcomes above, he wrote in his reflection that '*the lesson was successful as planned, the pupils followed the lesson well and I felt very happy with this progress'. (PB/10.05.06*) Although in the reflection he did not mention what made the lesson successful, he

might be referring to the learning outcomes because in his previous lessons, he mentioned that the lesson was unsuccessful because the learning outcomes were not accomplished. It seemed that Reezal had changed in terms of deciding the learning outcomes for each lesson. Thus, this may explain that during his early days in the practicum, Reezal was following his instinct on how to apply the learning outcomes provided in the CS into his lesson plans, but after having experience with the pupils in the class, he found that his instincts were very inaccurate.

I went through his plan book and I found that in deciding the learning outcomes for each lesson, Reezal seemed gradually to know how to adapt the learning outcomes from the textbook or CS as time went on. He gradually learnt how much content the pupils in his class could learn in one period. At the end of the practicum, he said:

> *I learned that the content to be covered in one lesson shouldn't be too much, or too little, it must be appropriate to the pupils' ability and time allocated for the lesson. For me, this aspect must be given careful consideration when planning lessons. (SR/FNL)*

6.3.3 Teaching Strategy

At school, in his second week, Reezal learned that he was responsible for teaching two different subjects for two different ages of pupils. Reezal's initial attempts at planning activities were based on his initial conception about the pupils and about the subjects taught. He said:

> *The activities have to fit the pupils in the class. See the pupils' capabilities. This is because I teach two different student levels. They are Form Four and Form One. In the Form Four lessons, we discuss and exchange ideas and opinions a lot. In Form One, I give questions and exercises for them to complete. Then for*

> *pupils who get the right answer, I ask them to come up to the front and write their answer on the board. (SR/INT)*

He gave consideration to the pupils when planning the activity, saying the activities have to fit the pupils. Reezal seemed to learn quickly that planning for these two groups of pupils was not the same. For him, pupils in form 4 were different from pupils in form 1. Although he mentioned that there were differences between these two groups, as planning and teaching were new to him, and he was going through a learning process, he used the approach of 'trial and error' in planning the activities.

> *I'm still trying to gauge the pupils' level, therefore when planning, it's more like 'trial and error'… for example, I asked the pupils to come to the front and solve the problem on the whiteboard, and I found they like this activity. From there I know whether they understand the lesson, and also I think they like it because they are always eager to come out and answer the questions. (SR/FNL)*

Whilst he implemented the lesson, he made a judgement whether the activities fit the pupils or whether the pupils liked the activity which he had planned for them. Reezal thought the pupils liked the activity when he found that, as in the excerpt above, the pupils were always eager to come out and answer the questions. As well as thinking that pupils were fond of the activity he did with them, he also thought the activity helped him to find out whether the pupils understood the lesson.

In order for me to understand the types of activity which he planned at this initial stage, I went through his plan book, and I discovered that the activities that Reezal planned for these two groups of pupils were different. For example, for Mathematics, the approach he used was 'drill and practice'. He explained the concepts to the pupils, showed them how to solve the problems, then set a few exercises for the pupils to practice. In the early stage, after giving the pupils time to practice the questions, he discussed the

answers with them while the pupils checked their answers individually. Gradually, he changed his approach and invited volunteers to come to the front to answer the questions. It appears in the plan book that to check the pupils' understanding, he repeatedly invited the pupils to show their answers on the board. In the final interview, when talking again about the activities for mathematics, he said:

> *For Mathematics, I ask the pupils to solve the problems on the board and encourage pupils to ask questions if they do not understand or do not know how to solve the problem. Firstly ask the teacher, but if there are other pupils who are able to understand, I'll ask them to ask their friends first. However if other pupils are not able to do it, I have to explain it. (SR/FNL)*

It seems that Reezal has changed gradually in planning activities. In his first week, he put emphasis on 'drill and practice' per se, then he tried asking the pupils to show their answers on the board and he found that the pupils liked this type of activity. He kept on doing this type of activity, and later he gave more opportunity to the pupils to answer the questions, or to help their classmates to solve the problems, rather than him explaining or solving the problems for them. Reezal could now see the potential in the pupils to help each other in learning, and he as a teacher explained whenever nobody else could solve the problems. However, because of his experience teaching them, he knew the pupils' behaviour. He said '*pupils in Form One, I don't encourage them to do group work because if I do let them, they will talk, chat and fool around'. (SR/FNL)*

On the other hand, Reezal believed that Form Four pupils were more mature and could work on their own or in groups better compared to Form One pupils where group work did not work. His first attempt at planning activity for teaching Commerce to Form Four pupils was more focused on discussion. He said '*after I explain the concept, I ask*

them to give examples, and later put them in groups to discuss more on the topic' (SR/INT). In his plan book, the lesson plan on 3 May was as below:

Content	**Teaching and Learning Activity**
4 types of sale: Cash sale, credit sale, prepaid sale, consignment sale (5 minutes)	• Teacher lists out four types of sale in business on the whiteboard • Teacher then ask the pupils to jot down what's on the board • The pupils do as told by the teacher.
Definition: Cash sale, credit sale, prepaid sale, consignment sale (10 minutes)	• The teacher explains about those four types of sale. • The teacher asks the pupils to give some examples for each type of sale. • Pupils listen to the teaching and jot down some notes along the way • Pupils answer the question about type of sale from their own knowledge and learning.
Advantages and disadvantages of 4 types of sale (3 minutes)	• Teacher divides pupils into groups of five • Teacher gives handout to each group. • Teacher directs pupils to brainstorm their ideas in groups about advantages and disadvantages of the types of sale that have been explained. • Pupils discuss in their groups about their task
Discussion (7 minutes)	• Teacher asks pupils to give details about what they got from their discussion. • Teacher asks other pupils to check their answers. • Teacher will give the right answer if the answer is wrong • Pupils give answers based on the discussion

The example above depicts the activity planned by Reezal for teaching Commerce. It seems that before the discussion, the teacher played the role of explaining the concepts which he wanted the pupils to learn in this lesson. In line with his beliefs that *'the Commerce lesson is for Form Four pupils, and they are quite mature and self reliant; they can work amongst themselves and they are responsible as well'(SR/FNL),* the type of activity which he planned was group discussion. The above plan was for duration of 40 minutes. There are two parts to the discussion; first, the pupils are put into groups, then they have to discuss the tasks given in the group for three minutes, second, there is

a whole class discussion where the teacher asks the pupils to reveal the answer as the output of their group discussion, and this takes seven minutes. It seems that the time allocated for both activities together is 10 minutes.

However, allocation of time for the group activity shows a slight change after few lessons. For example, the lesson plan for 12 June 2006 is as follows:

Content	**Teaching and Learning Activity**
Definition of International Trade (15 minutes)	• Teacher explains the meaning of international trade in detail. • Teacher gives example of international trade. • Teacher states 3 important components in international trade: import, export, entreport. • The pupils listen and take notes. • The pupils answer questions.
Definition: import, export, entreport (15 minutes)	• Teacher explains in detail the meaning of import, export and entreport. • Teacher explains two types of import and export. • Teacher states example which relates to Malaysian import and export. • Teacher asks pupils to give their own example. • The pupils listen and take notes. • The pupils answer the question.
Factors enabling international trade to happen (15 minutes)	• Teacher writes the factors on the board and explains them in detail. • Teacher asks pupils to give some examples. • The pupils take notes and answer the question.
Group discussion (20 minutes)	• Teacher divides the pupils into several groups. • Teacher assigns task to be discussed to every group. • Pupils move into groups and discuss the task given. • Teacher asks a representative from each group to present their work in front of the class. • Pupils present their work as directed.
Conclusion (10 minutes)	• The teacher makes a conclusion for the lesson. • The teacher emphasizes three types of international trade. • The pupils listen carefully and take notes.

As mentioned earlier, Reezal explained that he planned the activity on a 'trial and error' basis, that is he continued to plan the same activity when he found that the pupils liked

the activity and it helped him to find out whether the pupils understood the lesson. Therefore, when talking about changes, he said that after he planned and carried out a few lessons where he wanted the pupils to work in groups to discuss the tasks, he learned that the time allocated was not sufficient for them to have the discussion. He explains further:

> *Seven or eight minutes is too short, the minimum time allocated for group activity should be 20 minutes. This is because the pupils need time to understand my instruction about the tasks, and then move around to form a group, and then start the discussion to answer the questions given to them. I think that planning group work needs ample time, there isn't time to do this type of activity if the lesson is 40 minutes. (SR/FNL)*

It seems that his classroom experience helped him to see his weakness in planning the time for each activity. By having in his mind that group discussion needed ample time, I found that Reezal planned for group discussions if the lesson was 80 minutes, whereas for 40 minute lessons, he explained the concepts that he wanted them to learn, and then involved the pupils in a Q&A (question and answer) activity.

Apart from the changes in the time allocated for group activity, I also found that he gave more opportunity for the pupils to get involved in the entire lesson. For instance, the lesson plan on 19 June 2006 illustrates the changes.

Content	**Teaching and Learning Activity**
Import and export procedure (40 minutes)	• The teacher explains briefly about the topic which will be discussed among the students in groups. • The teacher divides the pupils into four groups to discuss import and export procedure. • First group: should discuss the import procedure from procedure one to three. • Second group: should discuss the import procedure from procedure four to seven.

	• Third group: should discuss the export procedure from procedure one to four. • Fourth group: should discuss the export procedure from procedure five to eight. • The pupils follow the instructions and discuss the task given.
Presentation (20 minutes)	• The teacher asks one representative from each group to present their work. • The teacher asks all pupils from the other groups to ask questions of the group. • The pupils present their work in front of the class. • The pupils listen to their friends' presentations.
Conclusion (10 minutes)	• The teacher makes a conclusion for the lesson. • The teacher reminds the pupils to be prepared for the next lesson. • The pupils listen to the teacher and take notes.

In the example above, to teach the topic 'Import and Export Procedure', Reezal played a minimal role in the teaching and learning activities and asked the pupils to work in groups for 40 minutes to learn about this topic. Later, a volunteer from each group had to come to the front and present the output to the class. In addition, the pupils from other groups were encouraged to ask questions to the first group about the tasks or topic they were working on.

Reezal describes how he put more emphasis on group activities as he learned from previous lessons that the pupils like to get engaged with their friends, rather than sitting down and listening to his explanation only. Although Reezal found that the pupils liked the group activity, he seemed eager to plan a variety of activities, because besides the pupils liking the group discussion, he claimed that:

> *'… trying to give full opportunity to the pupils to discuss the topic is good, in one learning session, I put them in groups and the topic was about import and export procedures. Then I asked them to present their work. I could see that the presenter*

> *understood the matter completely but I think it was only him/her who understood it. Not all pupils in the groups. This is because when I asked other pupils in the same group, they seemed clueless and couldn't answer the questions asked by their friend from other groups.' (SR/PL)*

Toward the end of his practicum, Reezal came up with another activity which he thought was good for the pupils. Instead of working in a group, the pupils were asked to do the task individually. Pupils were required to draw a mind-map as the reinforcement activity for what they had learned in the lesson. This can be seen as follows:

- teacher allocates 15 minutes for the pupils to draw their mind-map for today's lesson,
- teacher gives each student a sheet of A4 paper for them to do the task,
- teacher instructs the pupils to hand-over their work to the teacher,
- pupils listen to the instruction and draw the mind-map (26/6/2006)

Reezal learned from his experience that the lesson should provide activities that interest the pupils.

> *From my experience, the class will make progress if I give the students more activity. Make them move around the class, talk and do things. For example I asked them to do mind-mapping which I think they liked. The thing they don't like is reading paragraphs in the book, which might be boring for them. (SR/PL)*

In summary, Reezal changed in terms of deciding the learning outcomes for the lesson. He gradually learned that the outcomes stated in the Curriculum Specifications and the textbooks were only guidelines, and he had to decide how much is needed for his pupils in a specific period. The data from the interviews and the plan book suggest that Reezal came to understand that the learning outcomes were not accomplished as a

result of his classroom experience and from comments given by his university supervisor. Changes also occurred in his planning of activities. He gradually began to plan activities that involved pupils' participation as he learned from his experience that the pupils liked to engage with their friends, rather than sitting down quietly listening to his explanation.

6.4 RUBY

Ruby was assigned to do her practicum at a secondary school in a rural area near the university. The school has 950 pupils from Form One to Form Five. Ruby was assigned to teach Accounting Principles to Form Four pupils (age 16). The number of pupils in this class was 35. She also taught Geography to two different classes of form two pupils (age 14). The number of pupils in form 2B and 2G are each 40. As appeared in her plan book, Ruby planned 31 lessons altogether; 22 lessons for geography and nine lessons for Accounting Principles.

When talking about the role of the lesson plan, Ruby said she believed that it served as guidance, "*for me, a lesson plan is guidance for us to carry out teaching and learning activities efficiently" (RH/INT).* Later at the end of the practicum, she said:

> *It is a plan which we write based on what we think about the topic, and the activities for a group of pupils. It's a plan and is written based on what we are planning to do throughout the lesson, including what needs to be achieved by the end of it. If we go into the lesson unprepared, we can only go along with the flow of the situation, and might end up doing unnecessary things. This will waste a lot of time and things that should be achieved cannot be done. (RH/FNL)*

She pointed out that teaching without planning could not help to achieve the lesson objective as she might be doing unnecessary thing in the class. Therefore, she saw the

lesson plan as the means to achieve the objectives of the lesson. Initially, Ruby believed that lesson plan should be detailed:

> *Based on my experience, it can never be the same if we write it down or don't write it down. The more details we put into the plan, the clearer it will make it what we should do, for example, take a teacher who is very experienced, if we look at her lesson plan, she plans very briefly, not as detailed as a student teacher. I could also do the same but I think my lesson would not go as perfectly as a detailed one. (RH/INT)*

During the initial interview, Ruby believed that the more details she put in her plan, the clearer picture she would have of what she should do in the class. She compared herself to an experienced teacher, and although she found out that the teacher's plan was very brief, she still believed that a detailed plan would make her lesson go smoothly. Her notion about planning at the end of the practicum was:

> *The way we plan the lesson, either making it detailed or simple depends on one's own experience. When you asked me long ago, I said a detailed plan is much better but if you ask me now, simple lesson plans are much better. Even though the plan is a simple one, I remember all the steps in my head, so I don't need to write all of them down. (RH/FNL)*

Within the practicum period, it appears that Ruby gained more and more experience in planning and teaching. Before, she thought that the lesson plan should be very detailed to give her a clear picture of what will happen in the classroom, but at the end she thought a simple plan was better because she already had the entire steps planned in her head. Therefore it could be said that Ruby has routinized planning and she believes that it is not necessary to write it in detailed form because she has more experience now. She explained that she still wrote down the activities, but it was very brief.

> *Sometimes I write down what activities I will do but I just do a brief one. For example, if the teacher wants to have a discussion, I will write down 'the teacher will have a discussion with the*

student'. I will not write down the content of discussion. (RH/FNL)

6.4.1 Beliefs about Teaching the Subjects

When talking about the subjects given to her during the practicum, Ruby said:

> *I am really excited to teach Accounting Principles because I like this subject, moreover, I want to implement the theory which I've learned at the university. As I told you before, I'm majoring in this subject, so it's really exciting for me that I was assigned to teach this subject. Besides Accounting principles, I also have to teach Geography and I'm quite worried thinking about this subject because I have not learnt it at the university. I only know a little bit about this subject from my school days where it was a compulsory subject, and all pupils had to learn geography. When I was assigned to teach geography, I had no choice and I accepted it as a challenge. I talked to the teacher who teaches geography and she gave me the textbook to read. (RH/INT)*

The excerpt above shows that Ruby expressed her feelings differently regarding the two subjects offered to her during practicum. Accounting was her major subject at the university and she said that she liked this subject, therefore she believed that the practicum was the place for her to put the theory into practice. As she had also been assigned to teach Geography, she mentioned that the subject is beyond her expertise. Because geography was not within her expertise, though she has limited background knowledge of Geography from her school days, she said she felt worried about her content knowledge to plan and teach this subject.

However, she gradually built her confidence in teaching Geography. This was evident in my post-lesson interview with Ruby in the middle of her practicum. After the lesson, I asked her how she felt about teaching Geography. She said:

> *It seems okay for me now. I don't worry anymore. I don't say that I'm good at Geography, it's not my major or minor subject either. Because I teach Geography for Form Two, the content is*

> *not very difficult. By reading the textbook, and with my previous knowledge from school, I think I can deliver the content even though not as well as those who are majoring in this subject (RH/PL)*

In contrast to her early beliefs about teaching Geography, she now explained that she was not worried about teaching this subject even though it was beyond her expertise. From her experience of teaching this subject for few a weeks, Ruby found that Geography for Form Two was not very difficult. It seemed that Ruby acquired her content knowledge through reading the textbook. This explanation shows that her beliefs about teaching Geography had changed as a result of her classroom experience. She also viewed the nature of these two subjects as different:

> *It is different. This is because in Accounting, solving the problem is the most important part while in Geography, it's more about understanding and remembering. I've thought Accounting was important since long ago because I love discussion on how to solve the problem rather than remembering all the information. (RH/FNL)*

6.4.2 Teaching and Learning Activity

In the early days of her practicum, Ruby believed that the classroom was a place to practise the theories learned at the university.

> *I'm trying to apply what I've learned before at the university. I've learned that the more activities we plan, the better the lesson will be. Since at the university, my lecturer told us that a good activity must involve pupils' participation. But, the reality is different. When I first went into the classroom, observing their behaviour, it was hard for me to plan activities that involved their participation. (RH/INT)*

Her early experience with the pupils in the classroom seems to have alerted her to the complexity of the pupils' behaviour in the classroom. Ruby came to the school with an

ideal of putting theory into practice, but she was disappointed when she found that the real classroom was not as she had expected:

> *They totally ignore me. As soon as I set foot into the classroom, in my heart I want them to at least respect me, but they totally ignore me. With or without the teacher, the behaviour is still the same. Sometimes, I need to shout to gain their attention, and on one day, I even threw a piece of chalk at one of them. I know I wasn't supposed to do that but I was boiling mad at the time and it's really hard to control my frustration at their behaviour. (RH/INT)*

I asked Ruby to say more about this class. She explained that the pupils in this class are in Form 2G and there are 40 pupils in the class. She taught them Geography. When I asked her about the first lesson that she planned for this class, she described as below:

> *I planned activities that involved participation from them. For the first activity, I asked them to answer the questions in the textbooks, then I asked one pupil to the front to discuss the answer, and repeated the same thing with another pupil until we had discussed all the answers. (RH/INT)*

In her plan book we can see that the first lesson she planned during her practicum was Geography for Form 2G. The duration of the lesson was 40 minutes. The reflection written on this lesson was as below:

> *This was my first experience with them, therefore I was trying to find out their ability by giving them exercises to do in class. They were not able to answer the questions and the discussions did not work. I found that this class has problems in teaching and learning. They are a low ability group. The big problem was their behaviour. They like to make noise and talk to each other. It looks like they don't bother with my instructions. The learning outcomes were not accomplished. I have to think how to control their behaviour. (RH/PB/02.05.06)*

Because this lesson was the first lesson Ruby said that she was disappointed with the pupils in the class. It seems that Ruby thought that her lesson was not successful

because of the pupils' behaviour and the ability of the whole class. To understand how she planned the following lesson for this class, I looked in her plan book. The lesson was on 03.05.06. The duration of the lesson was 80 minutes. The topic was Migration in Malaysia. She planned three learning outcomes to be achieved. The activities were as follows:

- teacher explains the definition of migration,
- teacher asks the pupils to name the types of residence,
- teacher explains factors that attract people to migrate,
- the whole class were asked to stand-up. The pupils were allowed to sit down if they could answer the question correctly.

The reflection written on this lesson was as below:

> *I found that most of the pupils in this class were not able to understand the lesson even though I re-explained many times. There were lots of behaviour problems with this class. Because they were noisy and did not listen to me while I was explaining to them, I spent more time on controlling their behaviour. There are a few pupils who have potential in learning, but the lesson was disrupted by the mischievous. I will try to find ways to change their attitude towards the lesson. (RH/PB/03.05.06)*

As stated in her reflection, the lesson on 3 May was unsuccessful. The data shows that Ruby expressed her disappointment regarding the pupils' behaviour. As a result of such behaviour, she had experienced difficulty in implementing the lesson as she had planned. When talking further about how she responded to this issue in planning lessons for this group of pupils, she said:

> *I try to think of many ways to make them interested in the lesson. One approach is I praise them and I can see that some of them did change in some areas, like being more cooperative. I praise them even when their answers are wrong. But there are still*

> *those mischievous pupils, stubborn, who can't be bothered to learn. They like to disturb other pupils all the time. Most of them sit at the front while those who actually want to learn sit at the back of the class. So when I teach the class, it's hard for those who sit at the back to actually learn because of the interruptions from the students who don't want to learn. (RH/INT/)*

To see how she implemented lessons for this class, I observed Ruby teaching her lesson on 22 June, which was in the middle of the practicum. While observing the lesson, I made some notes about the pupils' reactions to the lesson and the activities planned for the lesson. After the lesson, I asked Ruby to elaborate her justification for planning the activities for the lesson. She explained as below:

> *I usually explain the concept to them, for example, I would explain the meaning of 'settlement' and then immediately ask them questions related to my explanation. I deliberately plan this way because I know them. For pupils in 2G we cannot explain too much. It is hard for them. We think that it is easy but for them, it is difficult. Even so I have to explain it again and again. Moreover, they will start making a noise or interrupting other pupils when they are bored with the explanation. (RH/PL)*

Ruby explained that she planned the strategy to suits the pupils' ability as well as their behaviour in the class. For her other class, that is 2B, the strategy was different. She said that pupils in 2B are better in their ability as well as their behaviour compared to pupils in 2G. To teach the same topic, for class 2B, she explained that the strategy was as follows:

> *I explained the entire concept, for example for this topic 'the early settlement'; I explained the definition of an early settlement, the types of settlement and the factors that caused early settlement. After that, at the end of the lesson, I planned for a group activity or doing exercises regarding the topic. (RH/PL)*

At this stage of her practicum, Ruby acknowledged the differences in the pupils' ability and their behaviour. Ruby was also developing her awareness of keeping the pupils engaged in the lesson towards the end of the practicum. She said that to make her

explanation interesting in the eyes of the pupils, she prepared materials that she believed pupils at this age would like. For example, she explained:

> *I brought in a 'manila card' to stick on the board. On the card I wrote the keyword 'factors that cause early settlement'. On the other card with different colours ... I wrote the factors, and cut them out separately. Each time I explained one factor, I stuck them on the first card. After it was completed, I pulled them off, then I asked the pupils to stick them on again. I found that they like this approach because they were eager to come out to the front to stick the answers on the manila card (RH/PL)*

The changes in Ruby's planning were influenced by her own experience dealing with the pupils, and there is evidence in the interviews that her cooperating teacher also had an influence on her planning. In the final interview, she said:

> *At that time when I was new to teaching the class, I was frustrated with their behaviour. I felt angry with myself because I could not teach them as in my plan. I shared my feeling with my cooperating teacher. She asked me not to feel angry but try to understand them because different classes are different in their behaviours and ability. Some of them come to school to learn but some come to school because of their parents. So, they come and play, even in the class. (RH/FNL)*

Ruby's cooperating teacher was seen by Ruby as giving her advice regarding the pupils in the school. She made Ruby realize the variability of the pupils and her advice about the pupils may have influenced Ruby in her planning.

In summary, I have discussed how Ruby was very idealistic about putting the theory into practice when she first started her practicum. However, as she learned that her lesson was not successful because the pupils in the class did not respond as she hoped they would, she gradually moved to planning activities that suit the pupils' characteristics rather than trying to apply all the theory which she learned at the

university to the pupils in the classroom. Her experience and her cooperating teacher were identified as the factors that made such changes in Ruby's lessons planning.

6.5 Conclusion

I have presented changes in the lesson planning of four student teachers. Although the changes were small, yet it shows that the learning process had occurred. Changes occurred both in their planning beliefs and planning practices. It seemed that all four of these student teachers learned to plan lessons that were appropriate to the pupils' characteristics in the classroom. Changes occurred as a result of their reflection on their own experience in the classroom. For Elly, Shirley and Reezal, their university supervisor was also found to have influence in the changes. On the other hand, Ruby was influenced by her cooperating teacher alongside her own experience in the classroom. The following chapter will discuss factors that influence the student teachers in planning a lesson.

CHAPTER SEVEN

INFLUENCES IN PLANNING

7.0 Introduction

This chapter answers the research question 'what are the factors that influence student teachers' planning and how do they influence them?' In my attempts to understand the factors that emerged as influences on the student teachers' planning, data were gathered from the interviews, thinking aloud protocol and document analysis. In my analysis, I found that the factors that influenced student teachers' lessons planning could be categorized into two broad categories, that is, internal factors and external factors. I have discussed how the internal factor, that is beliefs and knowledge, influenced the student teachers in planning lessons in Chapter Six.

In this chapter, I discuss factors such as the university supervisor, cooperating teacher, pupils' characteristics, textbook, and lesson plan format as external factors that influenced student teachers in planning lessons. I present this chapter using cross-case analysis to see the similarities and differences between the influences on the student teachers. First, I present how the university supervisor was seen by the student teachers as having influence on their planning process. This is followed by a description of the influence of the cooperating teachers. Although I have identified the same three ways in which the student teachers perceived the university supervisor and the cooperating teacher in their learning to plan lessons, nevertheless I present the two roles separately as they represent different authorities in their relationship with the student teachers.

This chapter also discusses how the pupils' characteristics influenced the student teachers' planning process. I categorize pupils' characteristics into three, that is, pupils' ability, pupils' behavior and pupils' enjoyment of the lesson. The discussion covers how the student teachers learn about the pupils in the classroom and how they gradually plan lessons for the pupils according to their ability, their behavior and their enjoyment.

I follow this with a description of the influences of the textbook on the student teachers' lesson plans. The discussion focuses on how the student teachers used the textbook in their planning process and in what way the textbook influenced them. Finally, I discuss the influence of the lesson plan format on the student teachers. This includes student teachers' perceptions of the function of the lesson plan format for them in their learning process and how their perception gradually changed as they become more experienced in planning lessons.

7.1 University Supervisor

The university supervisor was mentioned by most student teachers as having an influence on their planning. In my data analysis I identified three ways in which the role of the university supervisor is perceived by the student teachers: as the expert in planning and teaching, as the advisor to the student teacher in planning and teaching, and as the assessor of the student teacher during the practicum. Although the data show that all student teachers in this study perceived their supervisor to an extent and at different times as an advisor, an assessor and an expert in planning lessons, yet the degree of these influences varied among them.

Aina was an example of a student teacher who perceived her university supervisor as an assessor more than an advisor.

> *For the period of my practicum, I think my supervisor had her say over many things… everything depends on her. The overall marks, the teaching techniques all depend on her. What worried me was about her visits. She came only four times, observed me in different classes, and every time she came I tried to show her that I had already planned very thoroughly to carry out effective teaching. But to carry out an effective lesson also depends on the pupils' mood and behaviour, sometimes they are alright but there are days when they don't behave well. The class teacher knows the pupils well, knows how they behave, but my supervisor got to know their behaviour only when she came and observed me, so I'm worried that because she came on the days that I did badly because of the pupils, it will affect my grade. I'm worried that she won't take it all into consideration before giving me a grade. (AR/FNL)*

Here, it seems that Aina acknowledges the power is in her supervisor's hand to assign marks for her planning and teaching. The excerpts above indicate that Aina was worrying that her grade would be affected if she couldn't do well during the observed lessons because of pupils' characteristics, even though she thought that she had planned her lesson very thoroughly. Here, she perceived that her supervisor's observation was mainly to assess her performance rather than to help her to do better.

Because Aina perceived her supervisor more as the assessor, therefore she talked about planning a 'best lesson' for her supervisor's observation for the purpose of getting a high mark:

> *When I know that my supervisor is going to come and observe me, I always try to come out with a better lesson plan than usual so I can get a higher mark. For example, in one of the lessons when my supervisor came, for the set induction, I brought in a real object, and then for the activities, the teaching aids, and pupils' presentation, I planned more thoroughly. I prepared mahjong paper, manila card, and to feel more at ease and to gain confidence I read everything many times repeatedly to fully understand what I am going to teach. (AR/FNL)*

When I asked Aina the reason she brought a real object as a set induction, she said:

> *I think, if I bring something real, it will make the class much more interesting and different from a usual day. Say, if I just use the white board and manila card, my supervisor will not feel the difference, and perhaps she will be bored. So if I bring something different, I might make a good impression on my supervisor because she will think that I have initiative and make my pupils feel happy. (AR/FNL)*

Aina's intention in preparing the resources or the teaching aids was to impress her supervisor more than other reasons. Although she said that her bringing a 'real object' as the set induction would make the pupils happy, nevertheless, her intention was to make a good impression on her supervisor. According to Aina, she thought that preparing in such a way, could make her supervisor acknowledge her effort as 'having initiative', and this may help her to get a higher mark. I looked in her plan book to see the comments made by her supervisor:

1. The learning outcomes were too ambitious, could it be accomplished? Consider pacing in group work, some pupils will finish before others. You manage to draw the pupils' attention at the beginning of the lesson. However, the group presentation was not successful. Plan activities which are suitable for the pupils' ability. (first observation, 07.05.06)
2. Your explanations were good, but your voice is quite soft/slow. Before you ask the pupils to do the exercises, make sure everybody understands – go over the instructions together. Lack of involvement/loss of control towards the end. (second observation, 11.05.06)
3. Learning outcomes are clear and can be achieved, but steps are not timed. Lack of variety in stimulus. Try to cater for a mixed ability group. While slow pupils copy, better ones can try an additional problem. For problem solving, you may need to help pupils comprehend the problem (English) before asking for

> answers. Perhaps you need to give more than one sum to ensure they understand (demo + copy + practice). Try some group problem solving. An overall improvement in class control and interaction. You are more relaxed too. Explanations are clear and easy to follow. (third observation, 12.06.06)

From the comments above, it seems that Aina has changed her practice, and this may have happened as a result of her supervisor's influence. For example, in the first observation the supervisor commented that the learning outcomes were too ambitious, but later in the third observation; her supervisor did acknowledge that the learning outcomes were clear and could be achieved. When I asked Aina how she responded to the comments, she explained:

> *The previous comment that I got from my supervisor did affect my planning. She must have given the comment because she wanted me to improve on that. For example, last time, she commented about my voice, so in the next class, I tried to improve on it so my supervisor would think that I could take her comment and move on to the next step, and perhaps gain a higher mark. But if I didn't improve what I should improve on, she would think that I couldn't take comments from another and my mark would be the same. (AR/FNL)*

Aina acknowledged her supervisor's comment as the factor that affected her planning. She also believed that she had to respond to the comment given to portray herself to her supervisor as someone who can accept criticism. When she responded accordingly, she thought that she may be given a higher mark. Thus, it seems that Aina is most concerned about her marks and responded to the comments given by her supervisor because she hoped to improve the mark for her practicum.

Another student teacher, Ruby, knew that during her practicum she needed a supervisor to give her guidance and comments regarding her planning and teaching. She said:

> *I think it is important to have a supervisor who can guide me and comment on my work. There could be something that I need to improve and if I don't have anyone to watch over me, I would never notice it. So I think the supervisor is important especially during practicum time. (RH/FNL)*

When I asked Ruby to describe her perception of her supervisor and his comments, she explained that she was very scared the first time he commented on her lesson, but later on when her supervisor explained to her that the reason for those comments was to help her in learning to teach and to become a better teacher, then she saw her supervisor's role was to guide her in the learning process:

> *When it was my first time, I was really scared by his comments because it did put me down. But then he explained why he wrote those and it was to help me improve and be a better teacher. He gave me encouragement and helped me to improve my teaching skills. So I think its fine. (RH/FNL)*

When she explained more about this issue, Ruby described her supervisor's role as having an influence on her planning. Apart from acknowledging that the role was to give her advice and guidance in planning and teaching, Ruby also mentioned that her supervisor was in the position to assess her and to give a grade for her practicum. Here, she also saw her supervisor as an assessor, and her cooperating teacher more as advising, and this is the reason she gives for saying that her supervisor's comments as more influential for her.

> *From the point of view of planning a lesson, I think my supervisor had an influence on me because following his comments, I tried to plan as he suggested. But I think the class teacher is helpful and has her own role to play. However, I think my supervisor is more important during my practicum because he comes here to assess me and give a grade for my practicum. (RH/FNL)*

Early in her practicum, Ruby already knew that she would be assessed; therefore she said she had to do her best. She understood the system she had to follow and she knew that the supervisor would not necessarily inform the student teachers when they were to be observed. She saw her supervisor more as an assessor, and she knew that her supervisor may come and observe anytime without telling her in advance, and this is the reason she gave why she had to be prepared everyday throughout the period:

> *Because I will be assessed, so I just try my best. Only on the first observation he told me the date he is coming in to observe but on the second observation, he will come in anytime. I was told that during our meeting before practicum started, so I need to be prepared for this every day. (RH/INT)*

From Ruby's point of view, she prepared an activity which she described as 'special' for her lesson which was to be observed by her supervisor. She described the 'special' activity as follow:

> *Special activity means something that involves the pupils and uses appropriate teaching materials and suitable timings. So for the whole week I have prepared what activity I am going to do if my supervisor comes. So for example, if my supervisor comes, I don't think pupils' presentation and discussion is appropriate. Or if we just discuss the last exam papers, he won't be able to see my ability to explain to the pupils. He can't see my teaching technique if we discuss the objective ABC multiple choice questions… so I try to avoid doing those types of lessons if my lecturer is coming. I need something that involves the pupils as well as something through which I am able to show my ability and teaching skills. (RH/FNL)*

A 'special' activity, according to Ruby's beliefs, should have the combination of pupils' involvement, appropriate teaching materials and suitable timings. It seems that she has already made her own judgement about 'special' activity, and sees it as important in planning the lesson that is to be assessed by her supervisor.

In her plan book on the day she was observed by her supervisor (28.06.06), the activity planned appears as below:

Content	**Teaching and Learning Activity**
Step 1 (40 mins) To prepare a trial balance in columns (record a transaction)	Teacher explains the activity to the pupils. Teacher displays mahjong paper (contains questions) on the board. Teacher asks the pupils to read and understand the questions in 5 mins. Teacher asks pupils to record a transaction in a ledger account on the board. Teachers asks another student to do a transaction until all the transactions are complete.
Step 2 (20 mins) To prepare a trial balance in columns (balance the account)	Teacher reviews the activity done in step 1. Teacher asks pupils to balance each account in turns.
Step 3 (10 mins) To prepare a trial balance in columns (to list the balance of account)	Teacher reviews the activity in step 2 and relates it to the preparation of a trial balance. Teacher asks pupils to list the balance of account as a trial balance. Teacher recaps the activity done in step 3.

According to Ruby, the lesson above was observed by her supervisor. When talking about the comments given for that lesson, Ruby explained as below:

> *He did not comment about the type of activity I chose. He said everything was fine. But he did comment on me only asking girls at the back to do the activity. He said I should give some chance to the boys as well. But the thing is he doesn't know that the girls at the back of the class don't actually understand what I'm teaching. They just copy each other's work but when I ask them to do it in front on their own they can't do it. But he doesn't know this and I read his comment after he had left. So I didn't have the chance to explain to him why I did that in class. (RH/FNL)*

Ruby said that she was not quite satisfied with the comment, although she felt that her supervisor had a reason to comment on that action. She didn't have the opportunity to

clarify things for her supervisor because he left the comment in the plan book, and she read it after the supervisor had left the school. Therefore, this explanation may indicate that Ruby was influenced by her supervisor more in his assessor role than in his advising role.

Reezal was another example of a student teacher who perceived his supervisor as an assessor and an expert in planning and teaching. Early in his practicum, Reezal commented that:

> *... if my university tutor gives me a grade 'B+' and above, I might feel that I'm good at teaching. A good grade shows that we're good at teaching. So I want to get a good grade to show to people that I'm good at teaching. The only way to get a good grade is to impress my university supervisor when she comes to observe my work here. (SR/INT)*

It was the university supervisor who was seen by Reezal as the person he most needed to impress because he knew that his supervisor was in the position of assessing him and giving him a grade during the practicum. At the same time, his comment also implies that he thinks his supervisor's judgement is reliable. He believed that '*A good grade shows that we're good at teaching' (SR/INT),* therefore if he was given a B+, then he would feel that he is a good teacher. Thus, his comments acknowledge his supervisor as an expert in planning and teaching.

As he emphasised getting a 'good grade' in his comment, and he knew the relationship between the grade and his supervisor, he explained further:

> *My supervisor observed me, she commented on my lesson plan, and she was assessing me, my grade will totally depend on her, so I have to listen to her, agree with whatever she says and try to do my best to comply with her. (SR/INT)*

When talking about his supervisor Reezal expressed his disappointment that she did not help him to come up with a lesson that would satisfy her:

> *My supervisor should play her role more efficiently. What happened was she came and observed me during the lesson, and she did not spend time discussing it with me, she just spent a few minutes saying 'you shouldn't do this, you shouldn't do this', but she didn't make any suggestion about how to improve it. For example, she said that the activity was not good, but she didn't tell me how to come up with an interesting activity or what is a good activity for the pupils. So, I didn't learn from her. She just preached and went. (SR/FNL)*

Here, it seems from his comment, that the supervisor did not fulfil the advising role as was expected by Reezal. He would like the supervisor to advise him, but what was much more salient for him was her role as assessor because the advising side did not really work. From Reezal's comment, it seems that he did not learn from his supervisor. Later on I asked him how he went about planning activities in response to his supervisor's comments and he said:

> *it's more like 'trial and error'… for example, I ask the pupils to come to the front and solve the problem on the whiteboard, and I found they like this activity. From that I know whether they understand the lesson, and also I think they like it because they are always eager to come out and answer the questions. (SR/FNL)*

Jason's experiences of his supervisor were similar to Reezal's. Jason expressed disappointment when he perceived his supervisor as putting pressure on him. His impression was:

> *I like planning lessons because I know what to do in the class, but when thinking my supervisor will be there assessing me, I feel a burden weighing on me. She will come any time during the lesson, and her expectation is very high. My supervisor wants the lesson plan to be done exactly her way, and perfect. So this adds pressure to me and I can't do as I please. So I feel as if everything has to be her way and it feels like she controls me. (JL/INT)*

Jason's comment indicates that he saw his supervisor more in the assessing role, and it was a burden on him as he believed that his supervisor was fulfilling her role more as the assessor. Therefore, he mentioned that he has to prepare a perfect lesson plan and in his supervisor's way. His comment shows that he feels uneasy when thinking about his supervisor and feels like he has no freedom to plan as he wishes. I asked Jason to describe further what he means by his supervisor's expectation of a perfect lesson plan and he said: *'I'm not so sure, but she has already been twice, and every time she comes and observes, she keeps commenting on me' (JL/INT).* I asked him to give one example, and he explained:

> *My supervisor commented about the learning outcomes for one class. It was a class at that time where I knew a bit about the pupils' ability, and there are six pupils who don't know how to read. And the learning outcome I set was that the pupils should do the typing in the duration given. But the problem is, at the time my supervisor was observing me, there was one pupil who sat beside her who could do the task given much better than I expected. She then commented that the task I gave them was too easy, but actually there was only one pupil who could do it without any problem and the supervisor didn't know about the six pupils who can't even read. So I asked her how to sort out this problem, and what disappointed me was that she didn't give any suggestion, but instead changed the topic and went on commenting on other aspects. (JL/FNL)*

Here, because Jason perceived his supervisor more in the assessing role, he felt that the supervisor did not make an appropriate judgment of the work he had done. His comments also indicate that he believed his supervisor didn't understand the classroom context as he did. Jason declared that he was not given assistance regarding the issue commented on by his supervisor. He explained *'the guidance given was not clear; for that reason, I felt stressed and uncertain about her expectation' (JL/FNL/09/07/06).* Jason expected his supervisor to give him clear advice on aspects that he needed to improve because he was uncertain about the comments given. I asked Jason whether he asked his supervisor to clarify things and give appropriate suggestions relating to what

she had commented on. Jason said; *I did ask her, and she said 'find the average', so after that I felt reluctant to ask her anymore' (JL/FNL).*

Looking in his plan book, the comments written by Jason's supervisor are as follows:

1. You've skipped one step in your interactive lesson, which is activity 2. Make sure you've done the entire step according to your lesson plan. Need to allocate time for each step in your plan. Think of stimulus variation. Need to plan a closure. (first observation, 08.05.06)
2. Don't refer to your notes too often, it shows that you're not comfortable with the contents. After you teach, check the pupils' understanding. (second observation, 13.06.06)
3. Your lesson plan is fine, it shows improvement in all aspects (learning outcomes were achievable, the steps were reasonable). You also show improvement in presenting the content; however, you could make your lesson more effective if your intonation (pitch) changed so that it doesn't sound monotonous. (third observation, 18.06.06)

From the comments above, I noted that what was mentioned by Jason was not written in his supervisor's comments. This may indicate that she made comments during the debriefing session. Looking at his plan book, I discovered that Jason followed his supervisor's advice during the first observation. This is regarding the supervisor's comment about allocating time for each step in his subsequent lesson plans. The data from thinking aloud planning (which took place on 12.06.06, after his supervisor's visit on the 08.05.06) also shows that Jason engaged in dividing the times for the lesson (as described in Chapter Five). This evidence indicates that Jason changed his practice after he was given a comment about time allocation for steps in the lesson.

The data also indicates that Jason's supervisor had influenced his beliefs. According to Jason, his supervisor said he lacked confidence, and he thinks it is true. He explained that his supervisor advised him to increase his self-confidence by reading more on the topic before teaching. Jason agreed with the supervisor's comment about his self-confidence and this influenced his beliefs.

Another example, Afiq views his supervisor as a person who has authority as an assessor as well as an advisor. His opinion is as follows:

> *I am doing my practical teaching, so I tried to fulfil the conditions set by the university… and my supervisor has the authority to decide my grade. Because my supervisor decides the grade, I tried to comply with her comments… when she said; you should do it this way to teach the concept, I admit… because I know she is my supervisor and she has the right to say so… and so… (MFH/FNL)*

Afiq describes his supervisor as a person who has the authority to decide his grade for his practicum, and because of that authority, Afiq was not reluctant to comply with his supervisor's comments. He added; "*I listen to her, when she suggests any changes, I just obey… because my ultimate goal is to get through the practicum."(MFH/FNL)* Afiq's comment was closely related to the authority relationship between the supervisor and the student teacher, and by having in his mind the authority that his supervisor had to judge his capability in planning and teaching a lesson, he followed his supervisor's suggestions in order to fulfil his ultimate goal, that is, to get through his practicum.

One of the earlier comments given by his supervisor, according to Afiq, was related to the style in which he presented the content, for instance:

> *During the first observation, she commented on my teaching style. She said, I was more into teacher-centred teaching, and for the pupils to understand the concept, she said I should explain first*

> *before giving an example. What I did was I explained a little then gave an example, that's what she was not quite satisfied with. (MFH/FNL)*

From the excerpt above, Afiq explained that his supervisor was not satisfied with his approach in enacting the lesson. He was seen by his supervisor as not giving enough explanation to the pupils to enable them to understand the concept. Here, after having his supervisor's comments, it seems that Afiq acknowledged that he did not give enough explanation before providing them with the examples. His supervisor's comment during the first observation was *"before you do the exercises, do enough teaching first."* This comment was written in Afiq's plan book.

When talking more about the comment given by the supervisor, Afiq said that his supervisor commented on all aspects of his planning and teaching:

> *She commented on my lesson in all aspects… the content according to her is too great, I shouldn't teach too many concepts, and the way I explained the concepts to the pupils needed improvement. (MFH/FNL)*

Apart from talking about his supervisor's authority as an assessor, Afiq, however conceded that his supervisor's comments were helpful. This notion may also indicate that he saw his supervisor as an expert in planning and teaching. His remark was as follows:

> *Her comments, however were very helpful … , I think I learned from her comments; towards the end, I put more emphasis on explaining the concept first, after that I ask questions. That was what was suggested by my supervisor; she said 'do enough teaching before asking questions'. (MFH/FNL)*

Afiq admitted that he has learned from his supervisor that he has to do enough teaching before checking the pupils' understanding of the concept. Towards the end of his practicum, he said that he put more emphasis on explaining the concept before asking

them. This indicates that the supervisor influenced his practice and his beliefs. Looking at his plan book, it appears that Afiq was observed and assessed by his supervisor 3 times, and the comments written were as follows:

- I think you could spend a bit more time checking on pupils' understanding of 'if p, then q', before you move on to 'p if and only if…', because if there are any pupils who do not understand the first concept then they are not going to be able to move on to the second concept. Before you do the exercises, do enough teaching first. I wonder if it's worth it to focus just on one concept for this lesson and ensure that the pupils understand it well before you move on to the next (i.e. argument). The class ended before time? No back-up tasks? *(first observation, 08.05.06)*
- Your attempt to explain 'deduction' could have been more carefully planned. You jumped from 'court/lawyer' to 'computer programmer' to 'antidrugs' examples. Do you think your pupils understood what you were trying to teach? Why did you ask the pupils to take out their textbook and workbook at the very beginning of the lesson? Even if you wanted to use these, only ask them to take them out when they are about to use them. If you ask them early, they will be expecting to use them 'now', and that anticipating impacts on their learning. You wrote good examples of 'induction' and 'deduction' on the board. It's a pity however that you did not elaborate on it further (you only got 2 pupils to read). Don't go to the textbook definition yet, explain first! And make sure they understand. How would you do this? When you asked pupils 'what is the conclusion', they had yet to be taught what that means. Remember; teach first before you check understanding. I don't think you should move on to mathematical induction and deduction before pupils really understand the

concepts of deduction/induction. You should not proceed to higher level content if pupils still do not understand the basics. *(second observation, 20.06.06)*

- I think you've done very well in ensuring pupils understand the concept of gradient. Ample reinforcement exercises. To check whether they understand, another alternative is to get the pupils to repeat your explanation. I feel that this lesson went very well – they have learnt what you intended them to learn. Well done. I have seen you develop from Lesson 1 to Lesson 3. I think with enough reflection and continuous desire to improve yourself, you will make an excellent teacher. *(third observation, 25.06.06)*

There were several aspects highlighted by his supervisor; the aspect in which Afiq showed improvement, according to his supervisor, was related to the pupils' understanding of the concept. In Afiq's lesson on 25.06.06, the way he planned seems to reflect his supervisor's comment:

Content	**Teaching and Learning Activity**
Step 1 (12 mins) Definition of gradient	Teacher gives definition of gradient. Teacher emphasises that gradient is not a distance. Pupils pay attention.
Step 2 (12 mins) To define the vertical distance and horizontal distance in a gradient	Teacher gives explanation how to define the vertical distance and horizontal distance between point 'p' and point 'q'. Teacher gives questions to pupils to check their understanding. Ask pupils to show the answer in front of the class.
Step 3 (12 mins) To get a gradient of a straight line	Teacher shows a diagram and gives explanation of how to get a gradient of a straight line. Teacher asks pupils to do an exercise to check their understanding.
Step 4 (12 mins) gradient of a straight line in Cartesian coordinates	Teacher gives explanation about Cartesian coordinates. Teacher shows a formula for gradient in Cartesian coordinates. Teacher shows example of how to calculate a gradient in Cartesian coordinates. Pupils pay attention.

Reinforcement (12 mins)	Teacher divides class into 3 groups. Asks pupils to do exercises in groups. Asks each group to write the answer on the white board.

From the comments written by his supervisor in the plan book; it seems that the supervisor was concerned about Afiq's pedagogical content knowledge. Most comments were focused on advising him on how to teach Mathematics so that the pupils will understand the lesson. The comment on the third observation shows that the supervisor was pleased with Afiq. She acknowledged that Afiq had developed from lesson one to lesson three (referring to the lessons she observed).

Compared to the other student teachers discussed above, Elly was the example who saw her supervisor more as an expert and an advisor and to a small degree as an assessor. Early in her practicum, when talking about her supervisor, Elly commented:

> *I felt nervous thinking about my supervisor, I'm worried when I know she's coming to observe me, she will see my plan book, and make comments, I'm afraid that something will go wrong in my plan, like on her first visit, she commented that I did not write the time allocated for each step, so for the next visit, she might comment on something else, and she might say; 'what have you learned at the university, you have not applied it here'. (RAG/INT/)*

Elly's comment may indicate that she sees her supervisor as an expert in planning lessons. Because she sees her as an expert, Elly knows that the supervisor knows how she is supposed to plan and the supervisor can make a judgement whether the student teachers are doing the right thing. According to Elly, because the supervisor had made a comment during the first visit, thinking about her supervisor's next visit was frightening to her. She was worried about making a mistake in her planning that would be pointed out by her supervisor.

Apart from being worried about comments that might be made by her supervisor, Elly noted that the contributions from her supervisor informed and shaped her planning. Elly viewed her supervisor's comment in a positive way; she said that she felt comfortable working with her supervisor, although her supervisor always commented on her planning. Elly said:

> *If I have nobody here to comment on my planning and my teaching, I won't know whether I'm doing things correctly or not. I know her comment will affect my grade, maybe I won't get a full mark but it's fine, at least with her comment, I learn something. I learn from her comments to improve my planning. (RAG/INT)*

Because Elly saw her supervisor more as an expert and advisor, the role of assessor doesn't seem too important for her, and she says that the grade doesn't matter so much as she was interested in the advice to improve her planning. As can be seen in the excerpt above, Elly realized that the comment given might affect her grade, but for her it was more important to have her supervisor's help to improve. She said:

> *My supervisor commented on my lesson plan every time she came to observe my teaching. The first time she came, she asked me to write the time taken for each step in my lesson plan. Actually I had forgotten to write it because I thought it was not so important in the planning. The second time she came, she commented on the activity. She said; why was the pupils' activity not much? From there I learned that I should plan more pupils' activity. For my supervisor, pupils' activity is very important so that the pupils enjoy learning. From her comment, I learned more and from time to time, I think I was able to improve my planning and teaching. (RAG/FNL)*

According to Elly, what was good about her supervisor was her willingness to discuss and tell her the correct way to sort out her weakness. She learned from her supervisor to plan more pupils' activity so that the pupils could enjoy the lesson. Besides

commenting and giving suggestions on how to improve her planning, Elly was very pleased when her supervisor did acknowledge what was good in her planning.

> *I think how she guides me is brilliant. Every time she comes to observe me, she always discusses it with me. Even if she is short of time to discuss it, she will try to find a way to give me her comments. For example, in the ICT class the other day, I made a quiz to make the pupils cooperate with me even more. I think it worked because she noticed it and told me that the way I did it made an impact on the cooperation between the pupils and myself. She also told me she gets really excited herself by seeing the pupils more engaged and happy to learn. It really shows us what the students really love to do. So every time before I do my planning, my students come first into my mind - whether they will like it or not. (RAG/FNL)*

The excerpt shows that Elly had acknowledged that the way she was given guidance by her supervisor was very good. In Elly's view, she never failed to get feedback from her supervisor even when her supervisor was busy. She was also pleased that her supervisor acknowledged the activity carried out as having an impact on the pupils; the pupils were more engaged with the lesson and looked happy with the lesson. Thus, this explanation may indicate that her supervisor had a role in shaping Elly's planning, in which her supervisor was the person who advised Elly about planning more activities for the pupils, and she responded to this advice in a very positive way. She seems to have built a good rapport with her supervisor and she said *'I realize that her suggestions help me a lot' (RAG/FNL).*

7.2 Cooperating Teacher

The cooperating teacher was mentioned by some student teachers as having an influence on their planning. As in the case of the university supervisor, my data analysis also detected influences of the cooperating teacher on the student teachers in three ways: as the expert in planning and teaching, as the advisor to the student teacher

in planning and teaching, and as the assessor of the student teacher during the practicum.

Shirley is the example of the student teacher who perceived her teacher as an expert and advisor in teaching the subject. Having known her teacher since she was a pupil in the same school, Shirley acknowledged her teacher as an expert in teaching Accounting Principles. As she already knew her teacher from long before, she said that it was easy to seek an opinion from her teacher.

> *My cooperating teacher teaches Accounting Principles, and to me she is an expert in teaching this subject, as I have known her since I was her student in this school. Because I have already known her for a long time, it is easy for me to ask her for her opinion. She always says 'ask anytime you like, I'll help you'. (LPS/INT)*

When elaborating more about her cooperating teacher, Shirley continued:

> *My cooperating teacher is known as a very strict teacher in the classroom. Early in my practicum, she asked me to come and see her teaching. I sat down at the back of the class. For me she's not stern, but she's very firm. With that personality, the pupils are well behaved, and nobody dares to talk when she is teaching. The class was so quiet, and everybody seems to pay attention to her. Besides, her explanation was very clear; to me the pupils could follow the lesson. (LPS/INT)*

It seems that during her early days in practicum, Shirley learned about teaching and classroom management from her cooperating teacher through modelling. When her cooperating teacher asked Shirley to observe her lesson, Shirley said she learned that being strict with the pupils during the lessons will make the pupils listen and pay attention to the teacher. In Shirley's view this kind of personality, together with the teacher's explanation, which according to Shirley was very clear, helped the pupils to follow the lesson.

After a week of observing her cooperating teacher's lessons, Shirley was asked to work on her own and to take over two classes for the rest of the practicum period from her cooperating teacher. Although she was given the responsibility to plan and teach on her own, her cooperating teacher influenced Shirley regarding the syllabus to cover:

> *After the first two weeks, they had an exam. Mid-year exam. At that time, I had just started teaching chapter four. My cooperating teacher said, whatever happens, we need to finish chapter four, and chapter four was such a long chapter. But she insisted I still needed to finish it. I did what I'd been told to do because my cooperating teacher said I should cover the whole chapter before the pupils sat for their exam. (LPS/FNL)*

Even though Shirley said it was really hard for her to cover the syllabus in the time given, she complied because she knew her cooperating teacher had a reason for asking her to do so. Moreover, she tended to agreed that her cooperating teacher knew better than her in determining what should be covered before the pupils sat for their exam.

Another student teacher, Ruby, saw her cooperating teacher as giving her guidance and support during her practicum. Her cooperating teacher teaches Accounting Principles and for the whole period of her practicum, the teaching responsibility was given to Ruby. Ruby explains that she worked closely with her cooperating teacher and she describes her cooperating teacher as giving her ample advice and also taking care of her well-being during her practicum.

> *My cooperating teacher told me how to teach class 4B. She also told me that I need to teach in a way that makes the student understand so it's not just me that understands. This subject is really difficult, so she told me that I needed to use simple sentences and terms, an easy way to make things more understandable in my teaching. And I should not have higher expectations when I teach them simple stuff. It really helped me a lot, giving me advice on dealing with the pupils, from educational and social points of view as well. She sometimes dropped me off at home and carried my stuff, even though I did not expect that from her. (RH/FNL)*

The relationship between Ruby and her cooperating teacher seemed to be progressing well as she listened to and responded positively to the advice given. Because her cooperating teacher normally taught the class, she knew the pupils better and from her cooperating teacher, Ruby learned that she has to make the lesson easy for the pupils by using simple sentences, using simple terms, and explaining in a very simple way. She learned that although the subject is difficult; it could be understood well if the teacher taught in a simple way to convey the content. When explaining further about the advice given, Ruby said:

> *I really need her advice … for me, whatever she did for me was really helpful. If she did not tell me what I should do, I could do it in my way, but when she told me about the pupils, the subject and the class, it helped me…my supervisor would not know all the student behaviour but my cooperating teacher knows because she also teaches the students and she has got more experience with the students and in the subject itself. (RH/FNL)*

Ruby explained that her cooperating teacher knew the pupils well, therefore when she had listened to the advice given, she thought it was easier for her to plan and teach lessons to those pupils. She acknowledged that her cooperating teacher knew the pupils' behaviour better than her supervisor as she had been teaching them every day.

Unlike Ruby, Elly reported that her cooperating teacher was very busy with other commitments throughout her practicum. According to Elly, her cooperating teacher was always out of school attending meetings and seminars; therefore she seldom had the opportunity to see her cooperating teacher at school. She said '*my cooperating teacher has a tight schedule and is very busy attending meetings, so he's not around that much. (RAG/FNL).* However, Elly described her cooperating teacher as kind to her. She first met him during her first day at school, and in the first meeting he

explained the school culture, the pupils and approaches in teaching in general. One way in which Elly thought her teacher was kind was when her cooperating teacher said he understood Elly's feelings and her nervousness doing practicum. Elly explained that her cooperating teacher was the ICT teacher and Computer Lab Coordinator. However, she was informed by the teacher that the pupils have not been taught any ICT lessons since the school term started. The reason was the school has just completed installing new PCs in the Computer Lab, and he himself was very busy with other commitments.

Because her cooperating teacher was always busy, Elly said they didn't sit down together to discuss any matters or for her to ask advice from him. Moreover, she didn't see him at school very frequently and she also discovered that her cooperating teacher had not taught any topics yet. She said; "when *I took over the class, I found that the pupils had learnt nothing, they said they used to come into the Computer Lab and play games."(RAG/FNL)* Elly also said that '*my cooperating teacher leaves the class to me, and it totally depends on me how to plan lessons and to conduct the classes'. (RAG/FNL)* Even though her cooperating teacher was busy all the time and did not spend very much time giving guidance to Elly, he however performed his role as an assessor and an advisor. Elly said that she was observed twice by the cooperating teacher.

Regarding the supervision given, Elly said:

> *My cooperating teacher observed twice … and he commented about the set induction, and the closure. He said, if I just ask questions, it's not going to be a good set induction. He said I need to at least show something to the students. Like the other day, I taught the pupils how to create a form using MS Word, … so for the set induction, I showed them a real ball, because I was going to teach them to create a form for football membership, and I was told to*

> *show a real object to the pupils. About the closure, what I normally did was to do a teacher recap of the lesson or select one student to reiterate the concepts that they had learned. My cooperating teacher commented that I should do a social closure as well. That's all the advice he gave me when he saw me teaching. There is nothing else. (RAG/FNL)*

Having been observed by her cooperating teacher, she seemed to listen to the advice given and responded to it positively. Elly described how her cooperating teacher commented that a good set induction should be something the pupils can see. Taking the advice given, Elly said she followed the suggestion, for instance, in one lesson where she tried to show something real as a set induction. She also planned a social closure as suggested by her cooperating teacher. The lesson which she had mentioned was as below: (25.06.06)

	Teaching and Learning Activity
Set induction	Teacher shows a ball to the class, and asks a few questions about it of the pupils. Pupils give their opinion about the ball Teacher relates it to the topic.
Closure	Teacher asks pupils questions related to the lesson. Teacher made a social closure 'sports are good to make us healthy'.

Another student teacher, Reezal, highlighted his cooperating teacher as having experience in teaching for 24 years. Early in his practicum, he was given a brief explanation about teaching, and he said his cooperating teacher was very diligent and always busy in the staffroom:

> *My cooperating teacher has 24 years experience in teaching Maths. I always see her in the staffroom busy with her work. Because she is my cooperating teacher, I always take the initiative to ask her, but I am not very happy because she said 'eemm… you are a university student, and you have probably learnt more than me, university students are more creative, so I think it is up to you to do it the way that you've learned, moreover I am not a graduate teacher' (SR/INT)*

According to Reezal, his cooperating teacher thought that university students were more creative than her and had learned more than she had, therefore she thought that the student teacher would know what to do during practicum because they had learned this at the university. And his cooperating teacher said that she was not a graduate teacher, implying that Reezal should know what to do because he had learned at the university. Talking about the advice given, Reezal said:

> *I didn't get much guidance from my cooperating teacher. Not much … she only told me the pupils' ability in general, the types of activity which she did which according to her went well. (SR/FNL)*

I asked Reezal to indicate the activity described by his cooperating teacher, and he answered very briefly, '*she explained the concept to the pupils, asked them some questions to check their understanding, and sometimes asked them to discuss the topic and present it to the class.*'

Reezal explained that he sought advice from his cooperating teacher informally in the staffroom, and it was not long because his cooperating teacher always agreed with his ideas:

> *I asked her informally, about twice a week and only for a few minutes. She always said okay when I told her about my planning, perhaps she wanted to give me the opportunity to try out my plan, and it seemed to me that everything was fine for her regarding my planning, that was the reason I didn't ask her opinion that much. (SR/FNL)*

Reezal had the impression that his cooperating teacher always thought his ideas were suitable, and that his cooperating teacher was giving him the opportunity to plan and implement lessons in his own way. He said he didn't get much feedback or comment from his cooperating teacher, was and gave this as a reason why he didn't always ask her opinion.

During his final week at school, Reezal retained his view of the cooperating teacher as an advisor. Reezal saw the role in this way '*she teaches the subject and the class which I took over, so it is important for me to learn from her experience teaching the subject and the class' (SR/FNL).* According to Reezal, as a student teacher, he was still in the learning process. Therefore, he needed to learn from his cooperating teacher's experience, because he knew his cooperating teacher had a lot of experience teaching that class, and the subject as well. The expectation Reezal had of his cooperating teacher is that she would give him advice regarding planning and teaching the subject given to him. He also had in his mind that the cooperating teacher knows the pupils better than he does.

Apart from seeing his cooperating teacher as an advisor, Reezal knew that his cooperating teacher is also in the position of assessing him, '*She did observe me once, only once… I know that she come to assess my teaching. After the lesson, she said that my teaching was fine'.*

Jason also had a similar experience:

> *For the entire period of my practicum, I think I didn't get enough guidance from my cooperating teacher. As far as I remember, she didn't sit with me and give advice on how to teach the subject. What I did was when I saw she was free; I would go and ask her advice. It was not too long, just around five minutes. (JL/FNL)*

Jason said he was not given a regular schedule for him to sit down and discuss the lesson with his cooperating teacher. He would have liked his cooperating teacher to give him advice, and he expressed disappointment when he was not given the appropriate advice as he expected. The pattern of the meeting depended on the availability of his cooperating teacher and he asked for advice when he saw his supervisor was free from

other commitments. The duration of the meeting was short and Jason claimed that it normally lasted for five minutes. Talking about his expectation of the cooperating teacher's role, he said:

> *I need her advice to teach the topic, because she know the pupils better… she teaches the subject, therefore I ask her whether the examples which I have chosen are suitable to them, normally she says… its fine, that all. (JL/FNL)*

Jason sees that the role of his cooperating teacher is giving him guidance particularly on teaching the subject. He has in his mind that the cooperating teacher knows the pupils better as she has been teaching the subject for a long time, and he expected to learn it from the cooperating teacher. But his expectation was not fulfilled; in addition, he commented that the cooperating teacher thought that she did not have enough knowledge and experience to give Jason lots of guidance as he expected:

> *She was always saying that she was a new teacher, she had very limited experienced in teaching. Because she thought she was new, she admitted that in terms of knowledge, she couldn't guide me as I expected. (JL/FNL)*

In conclusion, the discussion above illustrates the variability of the roles fulfilled by the university supervisors and the cooperating teachers from the perspective of the student teachers. Although it seems that both the supervisors and the cooperating teacher fulfilled multiple roles as the assessor, the expert in planning and teaching, and the advisor, the degree of the role varied. Some are stronger as the assessor and some are stronger as the advisor. This issue will be discuss further in Chapter Eight.

7.3 Pupils Characteristics

In my data analysis, pupils' characteristics were identified as having an influence on student teachers' planning. I use the term pupils' characteristics to refer to their ability, behaviour, and enjoyment of the lessons. I describe these influences in the following section based on this categorization.

7.3.1 Pupils' Ability

In this study, the term pupils' ability is an "indigenous concept" (Patton, 1990), in which this term was the actual words expressed by the participants. The student teachers used the term pupil 'ability' as a contextual term to refer to their understanding of the pupils in their classes for teaching purposes. Using Woods' (1996:143) conception, "pupil ability refers to ability to understand (whether they would 'get the point') and to their ability to perform (whether they could 'do the activity') in terms of the whole class or in terms of individuals. Interpreting pupils' current abilities depended on the monitoring and on-going evaluation of their classroom performance."

Afiq is one example who was influenced by the pupils' ability when planning lessons. He said:

> *At the beginning of my practicum I was trying to teach them too many things in one lesson, later on I realized not all the pupils can follow and understand what I'd been teaching them, (MFH/ INT)*

To understand his statement, I looked in his plan book. The first lesson he planned was Information and Communication Technology (ICT). The learning outcomes stated for this lesson were:

1. To explain the steps to execute hard disk partitioning and formatting.

2. To determine the relationship between formatting a hard disk and Operating System installation (MFH/PB/3.05.06)

This was an 80 minute lesson. Afiq tried to cover all of this content in 80 minutes, whereas in the Curriculum Specification for Information and Communication Technology (CSICT, 2006), it is recommended that the content should be covered in 320 minutes. His reflection written in the plan book was *'the pupils could not follow the lesson and the learning outcomes were not accomplished'*. Afiq's written reflection was very brief as he didn't explain the reason why the pupils could not follow the lesson. However, the excerpt from Afiq's statement indicates that he understood that the pupils would not follow a lesson if it contained too much content in one lesson. Later in the final interview, he described his planning like this:

> *It depends on the pupils, for example, in one class I noticed there are three different abilities, a few pupils are the most able students, some of them average, and some of them are very low ability. These three groups of ability have influenced my planning. Because of this factor, I don't cover too much in one lesson so that the pupils of low ability can follow the lesson. (MFH/ FNL)*

Here, the pupils' ability was referred to as having influence in his planning. He had learned that in the same class there are differences in terms of their ability, so he explained that in planning lessons, he did not to cover too much in one lesson so that all the pupils of different abilities could follow the lesson well.

Another example is Aina. She taught Commerce to Form Four (age 16) pupils. In her first lesson in the practicum, she found that:

> *I have Form Four low ability pupils, during my first lesson with them, I did not know their ability yet, I asked them to present their answer in front of the class, but I found it was not effective (AR/INT)*

In her plan book the written plan for this lesson started with the set induction, and then she put the pupils into nine groups (the number of pupils in the class was 44). Each group was given one topic to discuss within the group for 10 minutes. Each group was also required to write the outcome of the discussion on the 'manila card' provided by the teacher. After 10 minutes, each group was asked to present the output of their discussion in front of the class. The time allocated for this task was 40 minutes. In her reflection in the plan book, she said that:

> *Pupils' presentation was not suitable, pupils could not understand the teacher's instruction about the presentation, and they didn't understand why they had to do it. Most pupils didn't give their attention while other pupils made their presentations. Pupils who did the presentations seemed to be reading from their notes, it was similar to reading from their textbook because they just jotted down what was in the textbook, and it was different from my expectation. I wanted them to explain what they understood about the topic, but they just read it without trying to explain it to the class. (AR/PB/7.05.06)*

Aina was referring to the pupils in her Form Four class which she has spoken of in my earlier discussion as being a class of low ability pupils. While enacting the lesson, she found that the kind of activity she planned for them was not suited for them to perform. In her reflection, she might have thought that the pupils could not understand her instruction because of their ability to understand what she was trying to do in the lesson. She had expected the pupils to explain the output, but what happened was that they read the notes which were taken from the textbook. Later when I asked her in the final interview about planning lessons for this class, she said:

For Commerce, I explained the concepts, then asked them to do exercises in groups and submit the work. (AR/FNL)

Aina said that this activity (direct instruction) fit the pupils in this class, and this was supported by her reflection:

Teaching and learning was more effective and controlled, pupils paid attention when I explained the concept to them, it seems that using a board to jot down the main points of the topic made it easy for them to understand the lesson. Moreover, I jotted things down in the form of a mind-map and it looked easier for them to relate all the points in the topic. I think this lesson was effective because they could answer my questions. (AR/PB/8.05.06)

In another example, Ruby mentioned that the pupils' ability influenced her planning. She describes how the pupils' influenced her planning as below:

I can say that class 2G is a second to last class (in terms of ability). I just transferred to teach 2G, also teaching Geography. Before I was teaching 2P, and now I am assigned to teach 2B. Because of that, I can see the difference between the pupils' levels. I did not expect 2B to perform at a certain level. For example, I asked them to do a group discussion, and then carry out a presentation. They were able to deliver although not all of them could deliver as well as the first group, 2P, and from then, I knew that I could do the same type of activities since they were able to go to the front and deliver. But for 2G, I have to explain first, then after that I can ask them to do a presentation. They usually have ideas, but the problem going to the front to present it, so at the end of the day, we end up discussing the ideas together rather than them having to present the ideas. Since they did not know how to explain and present that made me think that the pupils did not fully understand the lesson. (RH/PL)

Here, unlike Afiq and Aina, Ruby was comparing pupils from different classes. She described ability in terms of the whole class instead of the individual pupil. From her description of previous lessons, it seemed that Ruby could differentiate these three groups in terms of pupils' abilities. Ruby said she knew the types of activity that worked for each group, and for that reason, the activity for these three classes were not

the same even though all of them were in the same age group and she taught the same subject to them. She believed that for the low ability pupils (2G), activities such as group discussion and presentation, did not work as they didn't have the ability to present their ideas in the front of the class, but this approach worked for the other groups.

Shirley also had a similar opinion, for example:

> *Both 4T and 4P are accounts classes. If I want to teach the same subject to both classes, I have to use different approaches since 4P is a class with higher ability compared to pupils of 4T. Pupils in 4P will easily get bored if I explain things so many times and also if I give them exercises which are not very challenging. Therefore when I plan a lesson, I have to include more content and more exercises as well. But 4T cannot cope with that. I have to teach them step by step, and I also have to speak unhurriedly. The exercises must be simpler than for 4P. If I want to do activities, 4P can do it individually but 4T cannot, except for about 5 pupils who usually manage to do it. (LPS/FNL)*

Shirley compared the ability of two different classes in deciding on activities for them. She said that pupils with higher ability can easily understand her explanation, and the tasks given to them should be challenging so that they can stay engaged in the lesson; whereas with the low ability pupils, the lesson shouldn't look difficult, and she has to teach them slowly step-by-step.

The data analyses also show that the student teachers believed that pupils at different ages have different abilities. For example, Reezal described the importance of deciding the right activity for the right pupils:

> *The activities have to fit the pupils in the class. Look at the pupils' capabilities. This is because I teach two different levels. They are form four and form one. With the form four pupils, we discussed, shared ideas and opinions a lot. In form one, I gave questions and*

> *exercises for them to complete. Then for pupils who got the right answer, I would ask them to come up to the front and write their answer on the board. (SR/FNL)*

Here, Reezal refers to age differences as levels. For Reezal, this difference has influenced his planning. I asked him to elaborate more on this:

> *They are different. Because of different subjects, and the pupils are different as well. I teach Commerce to form four pupils. Compared to form one pupils, they are more mature and self-reliant and they can work on their own, and they are responsible as well. But pupils in form one, I don't encourage them to do group or teamwork because if I do let them they will talk, chat and fool around. (SR/FNL)*

The activities, according to Reezal have to fit the pupils' levels. Knowing their levels, Reezal explained that his planning for these different groups was not the same. The activities for the pupils in form four were not the same activities for form one pupils. For him, form four pupils are more mature and they can work on their own or in groups compared to form one pupils with whom group work did not work.

7.3.2 Pupils' Ability and Behaviour

In this study, 'pupils' behaviour' refers to whether pupils conform to the teacher's expectations of focus on learning in the classroom during lessons. The student teachers used the term misbehaviour when the pupils were reported as making too much noise during lessons, interrupting other pupils during lessons, or talking to each other when the teacher was explaining during lessons.

The data analyses show that there are instances where the student teachers saw pupils' ability as being related to their behaviour. For example, Aina mentioned that she makes decisions on activities based on the pupils' ability as well as their behaviour:

> *For example with the star game, I can use it for 1B, but not for 1M, the reason was their behaviour … 1M is a class which is really hard to control. And they will not answer when I ask them to come up to the front, and it will be a waste of time since they will not answer or they will not know what to do. So, for 1M, I usually teach them. I teach and ask them to listen. The pupils in 1M also were not very capable. I have to take on more different roles in this class as they are hard to handle and they don't listen to my instructions. (AR/FNL)*

Both classes Aina speaks about are form one, and she taught Mathematics to both of them. Because she knew the pupils in 1M were not in the higher ability group, and she described their behaviour as 'hard to control', therefore she thought that activities such as the 'star game' were not appropriate to this group of pupils. It seems that for these groups of pupils, she sees a relationship between their ability and their behaviour. Aina thought it was easier for pupils with higher ability to participate in activities such as the 'star game'. I asked Aina to explain about the 'star game':

> *For 1B, I planned a star game for them and this was done as a reinforcement activity. In this class, I have 30 pupils. For this game, I put them in four groups. I prepared questions and made stars from coloured paper. There was a different colour for each group. Each member of the group had to answer one question. If they could answer correctly, the group got one star. So if they could answer all the questions, they would get many stars and I asked them to stick the stars on the board. When they got all the answers correct, they screamed and looked very happy and enjoyed the activity. (AR/FNL)*

Similarly, Elly mentioned that the activity that she planned depended on the pupils' ability and behaviour in the classroom:

> *Every class is different; the pupils' ability is at a different level. I have two classes in form one and the two classes were quite different. The pupils in form 1P, gave me a headache with their behaviour, I mean they were very noisy during lessons, and they did not pay attention at all. For this class, usually I planned less activity for them to make sure they could follow the lesson. For the other class 1B, I can plan more activity, it's okay for them, they can follow, but for 1P they couldn't because they were very noisy and always played around. (RAG/FNL)*

Elly mentioned that these differences had influenced the type of activity she chose for the pupils. For the pupils in the class that she described as misbehaving, she planned less activity, whereas for the pupils whom she believed had better ability and good behaviour, she planned more activities. Elly, like Aina, described pupils' ability as being related to pupils' behaviour. When I asked further about the pupils in class 1B, she mentioned that, *'the pupils in this class, in terms of ability and behaviour, are better than 1P' (RAG/FNL).*

7.3.3 Pupils' Enjoyment of the Lesson

In this study, pupils' enjoyment of the lesson is taken to be indicated by any positive responses described by the student teachers that relate to the pupils liking the activity, being eager to do the activity and looking happy doing the activity.

The data analysis shows that the student teachers were trying to plan so that pupils would enjoy the lessons. Hani is an example. She planned activity that she thought would make pupils enjoy the lessons.

> *During these couple of weeks, I planned lots of quizzes for them. Previously I did more demonstration, showing the skills step-by-step, then I asked the pupils to the front to show their skills. But this week, I have prepared a lot of quizzes. After I have taught them how to do it and seen that they can follow the lesson, then at*

the end of the lesson I give them quizzes that are related to the topic. (HH/FNL)

Hani taught Computers in Education (CiE) and Information and Communication Technology (ICT). I asked her the reason for planning quizzes for these two subjects, she said:

A quiz is like a competition between groups, so the pupils like this activity because they can compete against each other. I also prepared a little prize for the winner so it encourages them to do well. (HH/FNL)

Looking in Hani's plan book, the data shows that she planned quizzes for both subjects to test the pupils' understanding of the lessons. For example, this activity can be seen in her lesson plans for ICT on 03. 07.06. The topic is 'application software'. Hani planned the quiz to be carried out in 10 minutes. The quiz contains 10 questions which are related to the topic. She prepared the questions using computer software, and the pupils answered the questions on the computer. Hani said the pupils enjoyed this activity, and this was reinforced in her reflection:

The lesson ran smoothly. Pupils showed their interest in the lesson. It seemed that they liked the quiz. There were trying to compete with each other to get the highest points for the game. (HH/PB/03.07.06)

As mentioned by Hani, this kind of activity was planned because she found the pupils liked it:

Normally I prefer a lecture style, like explaining the concept to the pupils. And pupils' activity, I asked them questions out loud, or asked them to answer on a question sheet. But I found that they're bored with the same activity. Activities like quizzes involve the pupils more. I really think they enjoy it. (HH/FNL)

Similarly, Elly planned the activity that she believed the pupils would like.

...when I gave them quizzes, most of them could answer correctly. They could answer because they gave full concentration when I taught them, they stayed focused during the lesson… moreover

> *they are higher ability pupils. Besides quizzes, I plan other activities for them… ask them to answer questions which are not specific to the topic but related to the topic. To answer the questions, they need to surf the internet, the answer is not in the book. I know they like this type of activity because most of the pupils in this class are very fond of browsing the internet. (RAG/FNL)*

From Elly's point of view, as she had now understood the pupils, she planned the activity according to the pupils' ability and their interest. Because she knew that they liked the internet, she planned activity that required the pupils to go beyond the textbook in order to answer the question given to them.

Her consideration of the pupils' enjoyment is also attested to in her planning aloud, as can be seen in the following excerpt:

> *Are the pupils going to enjoy my activity this time? I really hope they will enjoy it because this is the improved version of activities compared to the last lesson. Last lesson they learned how to type in the document using very basic skills, how to 'centre' the text, and how to 'underline' some words. For this lesson, I will teach them how to make a 'column', how to make a 'line between two columns', and how to 'insert picture' in the text. Ok, it seems more attractive, so hopefully the pupils will become more engaged to learn. (RAG/TA)*

Securing the pupils' enjoyment seems to be her priority, therefore the activities planned were influenced by the pupils, whether the activities were attractive and whether they would keep the pupils engaged in the lesson.

Another example is Reezal. He believed that if he planned varieties of activity for the pupils, the lesson would be more exciting. After having several weeks experience in school, Reezal seemed to know his pupils' characteristics, and he learned what type of activity the pupils liked and disliked.

> *From my experience, the class will be more exciting if I give the students more activity. Make they move around the class, talk more and do things. For example I asked them to do mind-mapping which I think they liked. The thing they don't like is reading paragraphs in the book … it might be boring for them (SR/PL)*

In conclusion, the discussion above has described how the student teachers were influenced by the pupils in planning lessons. This happened after they had some experience planning and teaching for the particular pupils in their classr. These findings support the findings of various studies that in planning lessons, the teachers were influenced by the pupils' characteristics (Clark & Yinger, 1987; Sardo-Brown, 1988; Hollingsworth, 1989; John, 1991a; Sullivan & Leder, 1992; Woods, 1996, Yildrim, 2003).

7.4 The Textbook

This study provides evidence that the textbook had influenced the student teachers lesson planning throughout the practicum. For all student teachers, the textbook was reported as having influence on them as the main resource when they are planning lessons. Specifically, the student teachers used the textbook to define the syllabus, to determine the scope and the sequence of the lesson, and to suggest the content to be covered and activities for the lesson.

For example, Reezal described the textbook as follow:

> *For every lesson I planned, the textbook was the first resource that I look at. I refer to the textbook to see the learning outcomes, after that how the content is presented, and also the exercises. I found that the explanations in the textbook are simple, and easy for the pupils to understand. The way things appear in the textbook is in order. The content is well organized, and the examples are easy to follow and understand. Usually in the text books, their activities are at the right level, not too hard and not too easy. (SR/FNL)*

In his description about the uses of the textbook, it seems that Reezal relied heavily on the textbook to see the learning outcomes, the content and the exercises for the topic. For Reezal, the textbook provides information on every aspect of what to teach, how to teach, and what are the activities recommended for the lesson. He made the judgement that the textbook presented the content clearly and in order, thus, he believed that it is easy for the pupils to follow the textbook.

Another example was Afiq. He referred to the textbook to see the content for the topic.

> *Before I decide on the steps, I have to look through the text book first. A text book is important as I need to know how much content there is for each topic. (MFH/TA)*

During his final week he said:

> *I always referred to the textbook in the first place, to me the textbook gives a guide about the steps to be taken to teach the topic. (MFH/FNL)*

Compared to Reezal, as mentioned in the excerpts above, Afiq relied on the textbook to determine the content and the sequence of the lessons, whereas for Reezal, the textbook provided all the information he needed in planning the lesson, including the learning outcomes, the content, the activities, and the exercises for the lessons. But Afiq used the textbook to see the content and the development of the lesson. Afiq's notion was similar to Aina:

> *Normally, after identifying the topic, I would go through the textbook to see the content and the steps suggested in the textbook. The textbook was always my main resource to see how much content to cover for the topic. (AR/FNL)*

For Aina, the textbook was her main resource to determine the content for the topic. It was also similar to Jason as he commented that:

> *The textbook was central to me in planning a lesson, I used the textbook to see the content of the lesson, and it helped me a lot to divide the content into chunks (JL/FNL)*

For Afiq, Aina and Jason, it seems that the textbook was not only the resource that they consulted in order to understand the content of the topic, it also served as a resource to understand how to present the topic appropriately.

In another example, Shirley described how the textbook influenced her lesson plan differently according to the subject she taught:

> *For Accounting Principles, after I had determined the topics, I read the textbook first, I have to read the textbook first to make sure I know how much time I should give to the topic, usually I read the book for half an hour before planning the lesson. (LPS/FNL)*

> *For English Language, from the textbook, I can get an idea for an activity for the lesson because sometimes I can't think of any activities for some topics, by looking in the textbook, I get an idea and I adapt the idea to my own pupils. (LPS/FNL)*

Based on the excerpts above, Shirley used the textbook differently in planning lessons for two different subjects. It seems that in planning lessons for Accounting Principles, Shirley used the textbook to define the syllabus for her. She mentioned that she had to read the textbook in order to know how much time should be given to the topic. To do this, she spent half an hour reading the textbook. By contrast in her description of planning lessons for English Language, she said she relied on the textbook to get ideas about activities and she adapted the ideas to make them suitable to her pupils. Here, she concentrated on the activities, whereas for Accounting Principles, she read the textbook to understand the content and how much time was needed to teach it.

Unlike the other student teachers mentioned above, Ruby said that:

> *I rely heavily on the textbook because the pupils refer to the textbook and I think I should use the textbook as well. Normally, after I identify the topic and the learning outcomes from the Curriculum Specification, then I look at the content in the textbook. (RH/FNL)*

Although Ruby was similar to other student teachers in that she said that she looked at the content of the topic in the textbook, it was also interesting that she said that she used the textbook because the pupils used the textbook as well. When I asked her to elaborate on this idea, Ruby explained that the pupils bring the textbook to school for every lesson, therefore she thought that she ought to teach according to the textbook.

In conclusion, the discussion above indicates that for the student teachers, the textbook was the main resource in defining the curriculum for them, providing the content for the topic and guidelines on how to teach the topic. The textbook also defined what the subject is. For example, in the case of mathematics, it exists as a discipline separately from mathematics in the school curriculum, but because the student teachers seem to be relying on the textbook, the textbook not only tells them what to teach, but the textbook also tells them what the subject is. These findings support the findings of various studies that in planning lessons, the teachers relied heavily on their textbooks (Calderhead & Shorrock, 1997; Sanchez & Valcarcel, 1999; Sardo-Brown, 1996, Yildrim, 2003).

This study also found that towards the end of the practicum, there was evidence showing that the student teachers were no longer relying totally on the textbook. They

were not just doing what the textbook suggested, but they began to respond to the needs of their pupils. For example, Reezal said:

> *I still need to search for questions from other books to find harder and more complicated question fors the student. So for example, the mathematics questions are a mixture from many different books that have been put together. (SR/FNL)*
>
> *Recently I also use other sources such as the Internet, which helps the students to find more information. For example, I taught the students about Small and Medium Enterprises the other day, and I got an article from the internet and gave it out to the students. (SR/FNL)*

Reezal's comments show that he gradually began to integrate other resources in planning a lesson. He mentioned that for Mathematics he used other references to find harder and more complicated questions for his pupils. Interestingly, he started to use the internet to find information regarding the topics he taught for Commerce and pass them to the pupils.

7.5 Lesson Plan Format

One of the interesting findings the data suggest is related to the function of the lesson plan format for the student teachers (see Appendix J). According to the university supervisors, the format given during the practicum was the same as the one used by the lecturer when teaching the student teachers to plan lessons. The format shows a number of columns and rows. The first row/step is for the set induction, the second row is for the teacher to record the lesson introduction, the next step is the development of the lesson, and it is up to the teacher to determine the number of rows they use for the development of the lesson, the next row is for the evaluation, followed by a row for reinforcement, and finally the closure. Besides the rows, the format also shows several columns. The first column asks the teacher to state the learning tasks and to time each

task. The second column is specifically to identify the content intended to be accomplished at each step, the third column is to specify the teacher's and the pupils' activity, and finally the fourth column should remind the teacher of the teaching aids required for the lesson.

The data suggest that during the early stage of the practicum, the format seems to influence the student teachers greatly in learning to plan lesson. At this early stage, the student teachers reported that the way they plan was shaped by the format given to them. From the first day of their practicum, the student teachers reported that they followed the format given by the university. Elly was a good example that shows the format shaped the way she planned a lesson:

> *We've been given a format and I plan based on the way I was taught at the university, it is a format in which we must fill in the details for each class, for example the subject, theme, class, date, time and activities to be done. (RAG/INT)*

Elly reported that she followed every step of the format given. She said*, "I used a format which was given to me when I took the methodology courses, Methods in Teaching IT and the other one Method in Teaching Mathematics."(RAG/INT)* According to Elly, what was good and useful about the format was it gave her a guideline on how to prepare the lesson. Elly said, *"if we were not given any format, as a student teacher, I have no experience at all to do this, I think I would not know where to start from.'(RAG/INT)*

Elly perceived the format as good and useful because from the format given, she said she had an idea of how to go about planning. Elly added, "*for me, the format really helps me … by looking at it, I know the sequence of the lesson. It tells me what must*

come first, second and so on."(RAG/INT) She describes the format as showing her where to start with the planning. This indicates that she used the format when thinking about the structure of the lesson plan. Another example is Ruby. When talking about the format, she said:

> *It gives me guidelines what should come first and what step should follow next. When I follow the guidelines, I know that my lesson plan is right and complete; every step is in the lesson, the set induction, the development and the conclusion. (RH/INT)*

Ruby knew, by referring to the format, the steps and sequence that she should follow to satisfy herself that her lesson plan was correct and complete. She had the notion that by having every step in her lesson as suggested by the format, such as the set induction, the development and the closure, she was performing the action correctly. From her point of view, it seems that she was performing the action suggested by the format in order to be sure that her planning was right and complete. She added:

> *The lesson plan format does help me a lot. I reckon, the way I write my lesson plan is correct. Because I use the same format as I learned and apply it to my lesson plan, which means nothing can go wrong. If I hadn't learnt it that way, perhaps I would use my own way to plan a lesson. What I do is applying what I learnt from the university. (RH/INT)*

Ruby had the idea that she was on the right track because she used the format which she has learned, and by following what was suggested by the format, she thought that she was applying theory to practice. Also, she sees the format as an indicator of the right way to plan a lesson, saying *"because I use the same format as I learned and apply it to my lesson plan, which means nothing can go wrong."(RH/INT)*

Aina echoed that the format was very helpful for learning to plan lessons. Aina said, "*from the format given, I can see the flow of the lesson, starting with the set induction, then introduction, and the important part is the activities, and closure."(AR/INT)* According to Aina, each time she planned a lesson, the format automatically came to her mind, and towards the end she said that she could visualise easily the flow of the lesson without having to refer to the format any more.

In another example, Afiq tended to relate the reason he used the format to plan lessons to his status as a novice. Having in mind that he is new and has no experience planning lessons, he followed what was suggested by the format given. He said, *'because I am new and have had no experience in planning and teaching before, I plan according to the format given.' (MFH/INT).* Afiq described how the important things that he followed were the learning outcomes, followed by the set induction, then the development of the lesson, followed by the reinforcement and closure.

Apart from its function of giving a framework for how to plan a lesson, it seems to me that the format also served as a reminder of what they learned about how to plan lessons in the university-based course. Aina, for instance, recalled the methodology course she attended where the first thing her lecturer did was introduce the lesson plan format to the class. She explained:

> *I learned how to plan a lesson in my Methodology course… I learned it in semester four. The first thing, my lecturer showed the format…the lesson plan format. She explained that the lesson plan must contain activities, steps, set induction, introduction, timing, and teaching aids… and also must record details of the lesson such as class, number of pupils etc. (AR/INT)*

Aina said she used the same format during her practicum: "… *the same format, this is what I've learned before…"(AR/INT)* Aina described the method course as very helpful because from there she learned to plan lessons, and during practicum she referred to the same format which had been used by her lecturer before.

Shirley also mentioned the function of the format as a reminder of what she had learned before during her methodology courses. She said, *'I should start with the set induction, then after the teacher has made an explanation you need an activity, then evaluation and followed by closure. That is what I have learned. (LPS/FNL).* She added, "… *I use the format as guidance for planning, because without referring to the format, I might forget the sequence."(LPS/FNL)*

Reezal also had the same thought about the lesson plan format:

> *For me, the method courses were very useful in helping me learning to plan lessons. From there, I learned what should come first, what should come next, also the factors that we should take into consideration …, the format is just a guideline, because like anything else we do, we still need a guideline. Now, I'm doing my practical teaching, so I use the format to remind me of the steps that should be in the lesson. (SR/INT)*

Towards the end of the practicum, there was evidence that the way the student teachers perceived the format had changed, indicating that the student teachers' lesson planning had developed. Their experiences in planning and teaching during the 10 weeks practicum had made them think about the structure of the lesson plan. The example of Afiq shows that development had occurred. Here he commented at the end of the practicum on the format given to him:

> *I think the format should only consist of two columns instead of four. In the first column, we would write the time and content, and the second column would be for the teaching and learning activities. As for the format which we are asked to follow, I think it is too detailed… I would prefer it to be less detailed (MFH/FNL)*

Apart from commenting on the way the format should look, Afiq also commented on what should be written in the plan. He commented the format was too detailed and because it was very detailed, the plan was very long.

> *It shouldn't be very detailed, for me what I would like to write is … for example 'the teacher explains the concept of gradient', and no further explanation of what is the meaning of gradient, because for me if we write it, the plan will be very long, moreover we've written it in the appendix. If we write it in the plan, and at the same time it appears in the appendix, that's redundancy (MFH/FNL)*

Aina has the same thought about the format:

> *For me the format is very long, I think it would be appropriate if it comprised three columns instead of four. The first column is not necessary because we can write the time for each activity together with the content. One more thing, I found it not necessary to write down what the teacher has to do, and also what is the pupils' response. We could make it simpler and not so long. (AR/FNL)*

Aina's notion was consistent with the comment given by Afiq. For them, the format given to them was very detailed and too long.

Although the data suggest that the student teachers followed the format quite closely as their framework in the planning process, it was apparent that the process they went through was not linear as outlined by the format. There is evidence in student teachers' thinking aloud protocols that shows that the planning process, although appearing as a staged process, was recursive in nature during planning the activities. However, as I discussed earlier, the format was seen as having an influence on the student teachers in

learning to plan a lesson even though they criticised it towards the end of their practicum. To me, that was an indication that there has been development in the student teachers' planning ability.

7.6 Conclusion

In this chapter, I have presented the major factors that emerged as influences on student teachers' lesson planning. However, those influences did not act separately during planning but were tightly interwoven. For example, the student teachers mentioned that because they knew the pupils characteristics, they would plan accordingly. The decisions were also being made because the student teachers were given advice about the pupils' characteristics by the cooperating teacher and the university supervisor. Other factors such as the time of the lesson, their peers and resources were also found to influence the student teachers' planning, but the degree of these influences was not as great as the factors that I have discussed in this chapter. In Chapter Eight, I will bring together the discussion of the findings presented in Chapter Five, Chapter Six and Chapter Seven.

CHAPTER EIGHT

DISCUSSION AND IMPLICATIONS OF THE STUDY

8.0 Introduction

This chapter brings together discussion of the findings, implications of the study, limitations of the study and suggestions for future research. As explained in Chapter One, planning lessons involves both a psychological process and a practical activity by the teachers; therefore the first section will discuss the planning process of these student teachers and compare it to the literature. The process of planning includes what are the things they consider in planning a lesson, how the decisions are made and the sequence of the process. Because this study builds on the literature on how teachers plan lessons, this section will also discuss the student teachers' planning process and its relationship to the rational model taught in many teacher education programmes.

As this study was designed to understand the learning process of the student teachers in planning lessons, next I present a model of factors that have influenced student teachers learning to plan lessons. The student teachers in this study evidence learning which comes about through reflection on classroom experience under the influence of external factors. This model which effectively describes their learning is consistent with models constructed by other researchers, so that there are grounds to believe that the findings are not limited to this particular context.

Because the findings indicate that the university supervisors and the cooperating teachers have influence on student teachers' learning, this chapter also discusses the

role of the university supervisor and the cooperating teacher from the student teachers' perspectives: as the assessor, the adviser and the expert in planning and teaching.

This is followed by a discussion about the implications of this study for teacher education institutions, specifically in relation to the planning process and changes in student teachers' lesson planning, and the role of the university supervisor and cooperating teacher in student teachers' learning. Finally, I discuss the limitations of the study and make suggestions for further research.

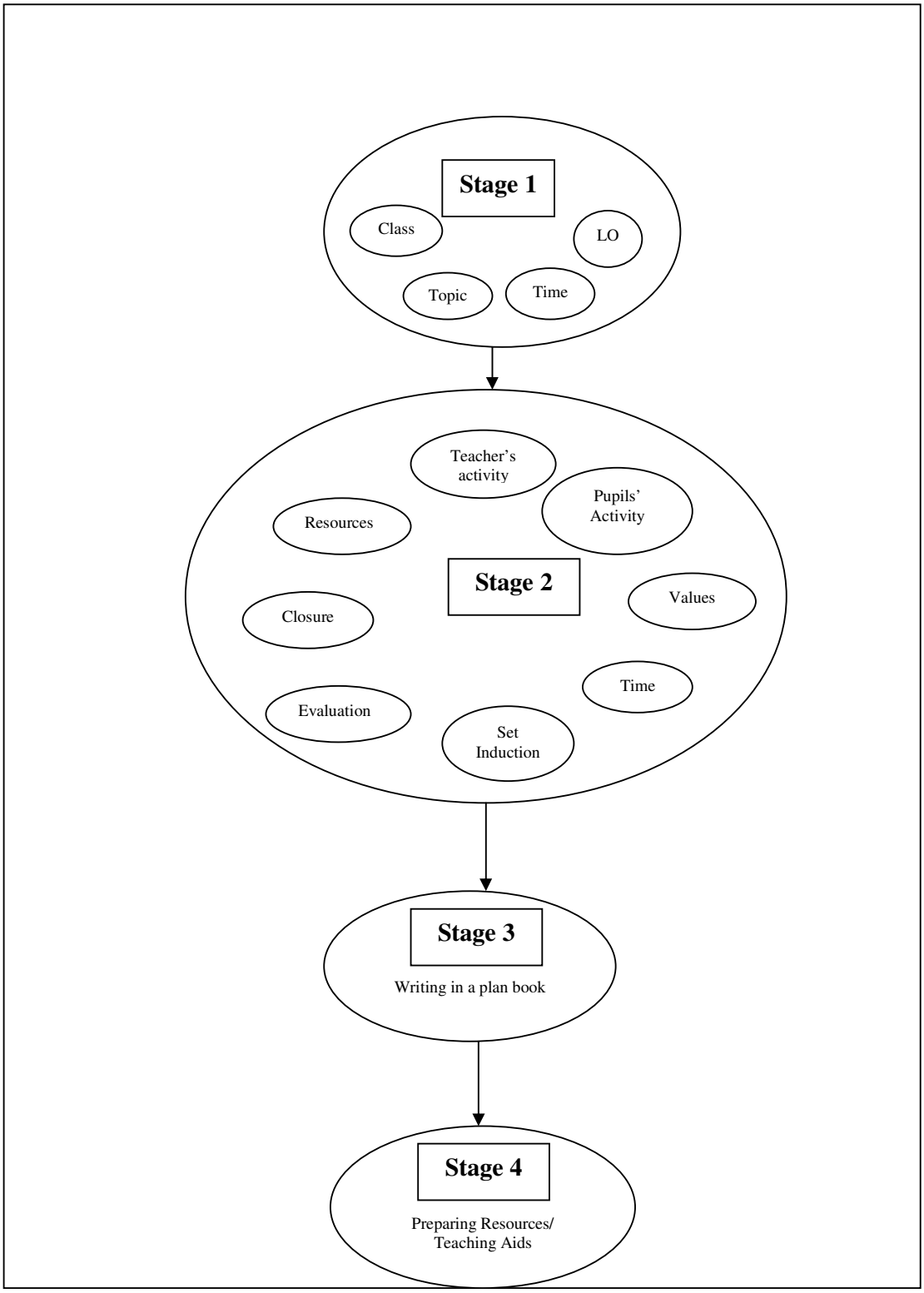
8.1 The Planning Process of the Student Teachers

Drawing on the findings which I explained in the foregoing chapter, in general, the student teachers in this study appeared to go through a four stage process of planning. A holistic view of the student teachers' planning process is shown in Diagram 8.1. This study has supported earlier studies of the student teachers' planning by Broeckmans (1986) and John (1991b), which found that planning by student teachers appeared to be a staged process. As described in Chapter Two, John (1991b) reported that the student teachers in his study appeared to go through a three stage planning process, while Broeckmans (1986) modelled the student teachers' planning process as having seven steps. Although my study depicts the planning process as a four stage process, it seems similar to those earlier findings both in terms of being represented as a staged process and to the processes that take place within the stages. Besides the similarity, due to the different context of the study, this study also shows evidence that there were some differences which related to the process that took place within each stage of planning. The similarity and the differences will be presented as follow.

DIAGRAM 8.1

STUDENT TEACHERS' PLANNING PROCESS

(A Holistic View)



In my study, as shown in Diagram 8.1, the first stage of the student teachers' planning was to identify the planning task, and this was the starting point of the planning process. At this stage, the topic and the learning objectives were their main consideration. To determine the topic and the learning objectives, it seems that the student teachers consulted the Curriculum Specification, the textbook or the yearly plan. Some of the student teachers also thought about the possible activities for the lesson at this stage. The data was clear that what I have called the starting point, that is, identifying the topic for the lesson, was the first thing they did, although four of the student teachers did not mention that identifying the topic was the first thing they did. For these four student teachers, the evidence shows that they did think about the topic first in their thinking aloud planning, even though they did not mention it, having taken it for granted. This process seems similar to John's (1991b), that within the first step of planning, the student teachers considered the topic and the possible activities, resources, and strategies, and Broeckmans's (1986), where the first step in lesson planning is the inspection, interpretation, and appraisal of the lesson assignment. The key aspect that differs from John's and Broeckmans's study within this stage is related to the emphasis on the learning objectives. Evidence from this study shows that learning objectives were decided prior to the determination of the resources and possible activities for the lesson. I discuss this issue further in the next section.

The second stage in the student teachers' planning was planning for the activities. This stage was central in their planning process and the student teachers claimed that they spent a large amount of time on this stage. Here the planning process was recursive in nature with the student teachers elaborating their initial idea repeatedly in trying to come up with the teaching and learning activities for the lesson. Teaching and learning

activities includes the teaching approach to use to deliver the content to the pupils, determining the set induction for the lesson, the pupils' activity and the closure. This process did not appear as a sequence or in a fixed order. There was evidence from the thinking aloud protocol that the student teachers' thinking moved back and forth repeatedly in determining the details for each activity. This I described in chapter Five.

While the student teachers engaged in planning the activities for the lesson, it was also apparent that they were influenced by their beliefs and knowledge, as well as the external factors, such as the university supervisor, and cooperating teacher, pupils, and the textbook. For instance, Shirley, in planning to teach Accounting Principles believed that the teacher must explain the concept first, because it was difficult for the pupils to learn this subject if they didn't understand the concept. Therefore, for her, direct instruction was the appropriate method to present the content to the pupils. On the other hand, because she believed that teaching English is more flexible and the pupils could learn on their own without having the teacher to explain it first, therefore pupils' activities such as role-play and acting were planned for this subject. She believed that for English Language, learning could be done either through pupils' activities or by direct instruction. This findings confirms the assertion by Calderhead (1984), and Borko et al. (1988) that lesson planning will differ by content area, and John's (1991a) claim that the student teachers' perceptions of their subject had a strong influence on their planning.

It also appeared that within this stage, the student teachers thought about the resources which they would use to help facilitate learning for each activity. Here, it seems the process of deciding the resources was influenced by the availability of the resources and

whether the resources were suitable for the subject and the pupils. It was also at this stage that the student teachers thought about 'good values' to inculcate in their lesson and also they thought about the justification for choosing them. The Ministry of Education of Malaysia has published a list of 'good values' that the teacher should implement in their teaching across the curriculum, for example: cooperation, diligence, carefulness. All teachers in Malaysia are required to instill good values in the pupils while teaching any subject because by doing this the government aimed to produce pupils who meet the National Education Philosophy, that is, "individuals who are intellectually, spiritually, emotionally, and physically balanced and harmonious, based on a firm belief in and devotion to God." (Ministry of Education of Malaysia, 2001: 16)

Although the data suggest that all the student teachers engaged in planning activities, timing for each activity, thinking about suitable resources and values to inculcate in this stage, the amount of time and the emphasis they gave to each element varied enormously from one student teacher to another. The data from the thinking aloud planning illustrates that although they went through the same stages, there were also differences in the emphasis given to each element. For example, Afiq gave only a little thought to the teaching aids and resources for the lesson, but Ruby took much longer as she justified the reason for using the teaching aids for each activity.

The process the student teachers went through within this second stage confirm John's (1991) findings that the student teachers' planning was more formal than the first stage, and involved ordering and structuring the ideas in the previous stage in more detail and more comprehensively. Broeckmans (1986) labeled this stage as the exploration stage (determination of content, acquaintance with content, looking for suitable activities),

followed by the third and more comprehensive stage in deciding the activities. In terms of what their planning looked like at this stage, it appeared that the student teachers made sketchy notes of their planning without having properly written down a plan as the end-product of their thinking process. This confirms Broeckmans's (1986) findings, as he found that the result of each planning attempt is usually noted on a provisional lesson plan.

The third stage is writing the lesson plan in the plan book. This was consistent with the finding reported by John (1991), that student teacher at this stage engaged in a formal writing up of the plan which included any final revisions or changes that had to be made. This study also confirms the literature that much of what actually happens in the teachers' thinking does not appear in their written lesson plan (McCutcheon, 1980; Morine-Dershimer,1979). The element which was not written in the plan book was related to the student teachers' thinking process, that is, how they decide or make justification about the activities, the resources, and time allotted for each activity.

The fourth stage is the stage where the student teachers were preparing resources. In stage two, in deciding the activities, it was apparent from the data that the student teachers have thought about what would be appropriate resources to use during the lesson. In this final stage, the data suggest that the student teachers engaged in preparing the resources. For example, Shirley already thought of using 'mahjong paper' to display the example of ledger, therefore at this stage, she referred to her decision and prepared the resource as she had thought before. The process that happened during this stage mirrored Broeckmans's (1986) findings that the student teachers made a 'direct

preparation of interactive teaching' which includes preparation of the planned materials and all sorts of resolutions regarding the lesson.

8.2 The Student Teachers' Planning Process and the Rational Model

My aim in conducting this study was not to test any model taught to the student teachers on how to plan lesson, but rather to understand how they learn to plan lessons during their practicum. In relation to the prescriptive model (rational model) taught in most teacher education programmes, this study suggests that the student teachers did not plan according to the prescriptive model in a linear and straight forward process, however there are some aspects where their planning process seems similar to the elements suggested in the model. This confirms Sardo-Brown's (1982) finding, that the planning process of the least experienced teachers followed the prescriptive model more closely, and Mutton et al.'s (2008) finding, that new teachers continued to plan within a relatively structured model but developed the ability to be flexible and anticipate the way which the plan might need to take into account the unpredictability of the classroom itself.

The prescriptive model (Tyler, 1949) begins with the specification of behavioural objectives, specifying students' entry behaviour, selecting and sequencing learning activities and ends with a lesson evaluation. The student teachers in this study reported that the learning objectives were the most important thing for them when planning and they decided them in the first stage of planning. Previous research (Kagan and Tippins, 1992) suggested that learning objectives are included in most curriculum guides and textbooks and that listing them would be unnecessary. However, in the case of the student teachers in my study, although they said the learning objectives are stated in the

textbook and in the Curriculum Specification for every subject, it was still mentioned as their main consideration prior to planning activities and resources for the lesson.

For these student teachers, the activities were planned in order to achieve the learning objectives. There is evidence that deciding the learning objectives was the first thing the student teachers did after identifying the topic and it was said that it is important before planning the activities. For example, Afiq said that, when planning, he thought about the learning objectives because he had to determine what he wanted the pupils to know and do prior to planning the activities. This is a key point where this study is different from previous studies on teacher planning (Zahorik, 1975; Peterson, Marx and Clark, 1978; McCutcheon, 1980; Sardo-Brown, 1988; John, 1991a; John, 1991b; McCutcheon & Milner, 2002).

The findings in those studies did not deny the importance of the learning objectives in planning a lesson, but the emphasis given to the learning objectives in those studies was different from mine. Zahorik (1975) found that the question that most of the teachers asked themselves first was not what specific objectives are pupils to achieve, rather the question asked was what is the range and particulars of the subject matter of the lesson to be taught. My finding also run counter to the study by Peterson, Marx and Clark (1978) where learning objectives were said to be the least important thing in teacher planning. McCutcheon (1980) also found that teachers gave more attention to subject matter, pupils, school practices and policies rather than learning objectives. In his later studies (McCutcheon & Milner, 2002), he confirmed that the teachers thought learning objectives were not as important as the curriculum of the entire course. Sardo-Brown (1988) also found the teachers did not think about the learning objectives first during

their planning practice, instead activities were the teachers' main concern when planning.

The differences between the previous studies and my study may be due to several reasons. First, the student teachers in my study are new to this profession, the practicum was their first attempt in practising the theory which they have learned at the university, whereas, those earlier studies were carried out on experienced teachers. Experienced teachers, according to John (1994) have well-developed routines and classroom procedures as well as a store of professional knowledge, which includes information and images on how typical lessons will run. In addition, experienced teachers are farther away from the time when there were taught how to plan a lesson. Sardo-Brown (1988) for instance, conducted a study involving a middle-school teacher in the United States with 15 years of teaching experience. Having taught for 15 years, it may be their practice had changed as they became more experienced and possibly forgot what they had learned during teacher training.

Because the student teachers in my study have no experience in the real classroom, though they enter the practicum with their own belief about teaching and planning, yet they lacked both professional knowledge and experience to depend on in planning and teaching. This mirrors Westerman's (1991) assertion that student teachers did not have enough knowledge about the overall curriculum nor sufficient awareness of pupils' characteristics to allow them to perform an adequate cognitive analysis of the lesson they were planning. This assertion also confirms Mutton et al.'s (2008) findings that student teachers in particular lack the very knowledge that experienced teachers have; a combination of teachers' own craft knowledge and knowledge of the pupils which built up over a long period of time.

The student teachers reported that without having any experience at school before, they entered the classroom to practise teaching dependent on the university-based courses they had learned before. As suggested by the data, the student teachers in my study used the format given to them during methods courses in planning lessons and it seemed to be very influential for them. It was apparent that the student teachers reported the way they planned was shaped by the format given to them. Since the first day of their practicum, the student teachers reported they followed the format given by the university. The format required the student teachers to decide the learning objectives prior to planning the activities which comprise the set induction, the teaching approach, pupils' activity, evaluation and the closure of the lesson. These two reasons, that they were still new, and that they claimed that they were required to plan according to the format given to them, may explain why the student teachers in this study thought about the learning objectives prior to the activities.

The data also suggest that the notion of the importance of deciding the learning objectives first before planning the activities remained the same towards the end of the practicum. The data from the final interviews remained consistent with the data in the initial interviews, in which they perceived learning objectives were the most important aspect to decide before proceeding to plan the activities for the lesson. However, changes occurred in the way the student teachers identified the learning objectives. During their early days in school, most of the student teachers relied on their instincts in applying the learning objectives provided in the Curriculum Specification (CS) to their lesson plan. Later, towards the end of the practicum, changes had occurred in which

they considered the pupils' characteristics in determining the learning objectives for the lesson.

Compared to the previous findings, another reason why this finding was different may relate to the facts that those earlier studies were conducted in different countries, therefore, this factor may contribute to the difference in my study compared to those studies. The study of McCutcheon and Milner (2002) helps to explain this assertion. McCutcheon and Milner conducted a study in the United States. The teacher who participated in their study had 25 years' experience of teaching and was found not to plan by objectives. It was also reported that the teacher did not follow any curriculum but rather developed a curriculum himself for the course and taught a stand alone English Literature course which had no prerequisites and was not a prerequisite to other courses. Thus, the context of their study shows there was no indication that the teacher had to comply with any specific curriculum as the nature of the course he taught was independent and not centrally administered.

It is also the case that those earlier studies were carried out decades ago (Zahorik, 1975; Peterson, Marx and Clark, 1978; McCutcheon, 1980; Sardo-Brown, 1988). The extent to which the curriculum was specified during those times was much less than what is practised now. In my study, the student teachers were doing their practicum at national schools in Malaysia. Malaysia is a country where curriculum planning and development is done at the federal level and the national education system is centrally administered (Ahmad, 1998). The Ministry of Education is responsible for every aspect of primary and secondary education. The role given to the Ministry of Education includes drawing up the syllabi for all subjects. As an extension of the curriculum,

there are national examinations for the pupils at the age of 12, 15, 17 and 19 years. The results for these examinations are very important for the pupils and the school. Soon after the result for each examination is released, the Ministry of Education will publish the results for each school and this will determine the school's position in the achievement league table. The publication of these league tables has a significant impact on both the schools and the teachers, therefore, the national examination is seen as putting pressure on the school and the teacher to get through the curriculum to make sure the pupils are ready for the examination.

The student teachers in this study were not excluded from preparing pupils to sit the examination. As suggested in the data, they were required to plan and teach 'solo' for 10 weeks. It was also apparent that the period of the practicum, that is, from May until July was in the middle of the school calendar. For this period, the student teachers took over the class from the class teacher and were required to continue teaching according to the specified syllabus given to them. Because they were new and lacked professional knowledge as a teacher, the Curriculum Specification (CS) and the textbooks were reported as the main resources to ensure the continuity of the lessons. To accomplish the task of preparing lessons, the data suggest that the student teachers decided the learning objectives in the first stage of planning as they were taught to plan lessons according to the format given during their university-based course. This was consistent with John's (2006) findings in the UK, that the student teachers needed to follow the model because the National Curriculum and various standards documents required them to do so.

This study also suggests that deciding the learning objectives was difficult for the student teachers. Reezal offers an example. In his early days of planning lessons, it seems that Reezal relied on the CS and the textbook to determine the learning objectives for his lessons. Because he had no experience of planning and teaching, he followed his instincts in applying the learning objectives from the CS into his lesson plan, but he found that the learning objectives were not accomplished and his instincts were inaccurate. After being observed by his university supervisor, as well as extending his own experience of planning and teaching, he gradually learned how to decide the learning objectives for a lesson. Here, the evidence shows that the student teachers had difficulty in constructing the learning objectives to match the time for each lesson and the pupils in the class, and this happened during the early days of their practicum. It seems that early in the practicum, the student teachers were trying to cover as many learning objectives as possible in one lesson. It was difficult for them to decide on appropriate learning objectives to match the pupils' characteristics within the time allotted for the lesson. This finding was parallel to John's (2006) and May's (1986) arguments in the sense that novice teachers were seen to have difficulty constructing objectives, before they considered the methods, activities, resources, or central idea of the lesson. Despite these difficulties, the data suggest that the student teachers in this study keep planning by determining the learning objectives first, and they got better at it with their experience, as well as supported by the university supervisors comments about the learning objectives planned for the lesson.

8.3 Changes in the Student Teachers' Lesson Planning

The cases presented in Chapter Six have shown that changes occurred in the lesson planning of the student teachers. These changes albeit small, indicate that a learning process had occurred. In this study, learning means the occurrence of changes (Carter, 1990), changes in what they know and believe, how they plan, how they teach, and how they think of themselves as professionals and people (Borko & Putnam, 1996). This study suggests that changes occurred as a result of the interconnected factors that influenced the student teachers' planning. The conceptual framework for this study (as discussed in Chapter Three) explained the factors that contribute to this learning process.

Diagram 8.2:

A Model of Student Teachers' Learning

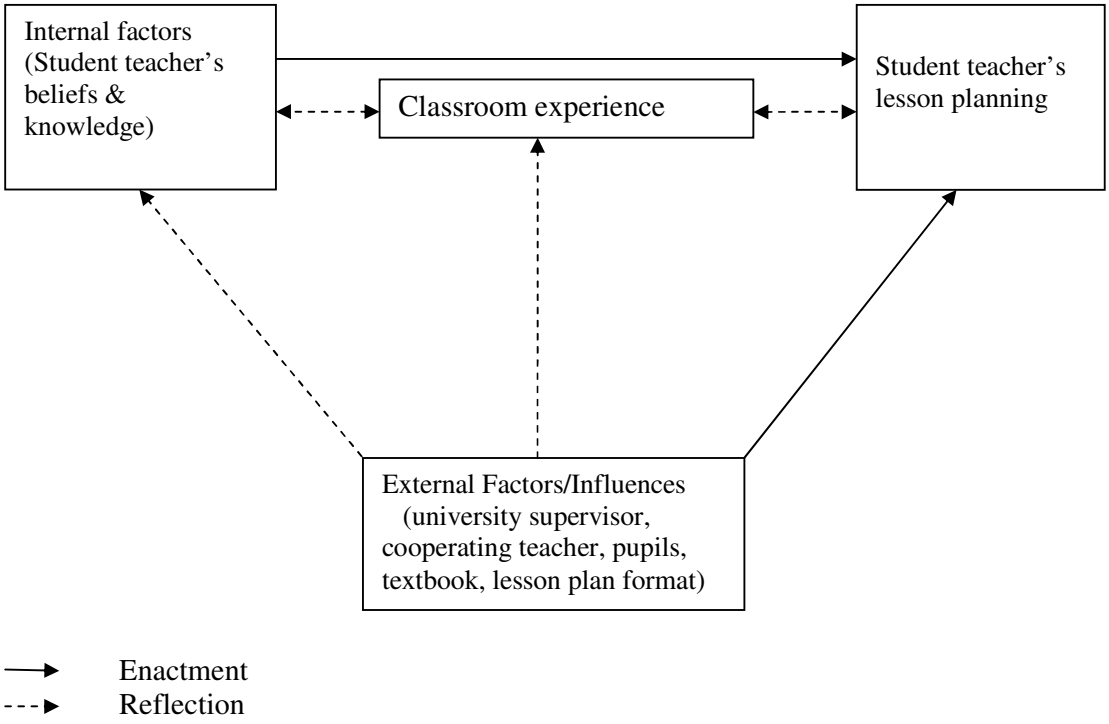


Diagram 8.2 (as presented earlier in Chapter Three) illustrates factors that influenced student teachers learning to plan lessons during their practicum. As presented in Chapter Six, these student teachers came to the practicum with their own beliefs and knowledge about planning lessons and they planned lessons accordingly. However, as they continued planning and teaching for several weeks, their planning practise gradually changed towards the end of the practicum. Although each of the student teachers exhibited different kinds of changes, the classroom experiences were found to be the mediating factor that contributes to changes in all cases. In this regard, the role of classroom experiences was consistent with John's (1991a) assertion that the

classroom plays a powerful mediating role in the sorts of lessons planned by the student teachers. McDermott et al. (1995) and Doyle's (1979) description of the role of classroom experiences for student teachers' learning support this assertion.

Evidence presented in Chapter Six supports the argument that through reflection on their classroom experiences, the student teachers gradually moved towards planning lessons that they thought were appropriate to the pupils' characteristics, and thus helpful for pupils' learning. For example, Ruby was very idealistic about putting theory into practice when she first started her practicum. However, her classroom experiences gradually changed her beliefs and knowledge as she learned that her lessons were not successful because of the pupils' characteristics in the classroom. The pupils in the class did not respond as she hoped they would, therefore she gradually moved to planning activities that suited the pupils' characteristics rather than trying to apply all the theory which she learned at the university to the pupils in the classroom. This change is in line with Doyle's (1979) assertion that learning will occur from teaching if the teachers are able to sustain the cooperation of the pupils in an activity.

As I presented in Chapter Six, the student teachers' reflection on classroom experiences was not the only factor that caused changes in their beliefs and practices. It was also intertwined with the advice given by the university supervisor and the cooperating teacher about their lessons. Although student teachers in this study can and do reflect on their own teaching themselves, this reflective process is strengthened when it is systematically supported by an experienced practitioner (Furlong & Maynard, 1995). Changes in student teachers' beliefs or practises evolve out of a process of weighing of factors which are mediated by their classroom experiences. This study reveals that the

university supervisor and the cooperating teacher had a major impact on the student teachers' learning to plan a lesson, and so the following section will discuss this.

8.4 The Role of the University Supervisor

This study was not specifically designed to investigate the role of the university supervisors in the student teachers' learning, however, as shown in Chapter Seven, there is overwhelming evidence that university supervisors were regarded by most student teachers as having influence on them in learning to plan lessons. Hence, this influence does provide valuable information about the university supervisors' role in helping student teachers' learning. However, the degree of influence of the supervisors varied between the student teachers, and this is parallel to previous findings where university supervisors were found to have some influence on student teachers during their practicum (Hughes, 2006; Calderhead & Shorrock, 1997; Borko & Mayfield, 1995; Dunne & Dunne,1993; John, 1991a; John, 1991b; Feiman-Nemser & Buchman, 1987). Therefore, in this section I will discuss the role of the university supervisor from the student teachers' perspective; the supervisor was seen as fulfilling their roles as the expert in planning and teaching, the advisor to the student teachers in planning and teaching, and as the assessor of the student teacher during the practicum. I will also discuss from the supervisors' perspective how they see their roles in their attempt to assist student teachers' learning during practicum. Together with the perspectives from both parties, evidence from the student teachers' lesson plan book and the Student Teaching Handbook (2006) will be used in this discussion.

As outlined in the Student Teaching Handbook (2006), the university supervisor was expected to see the student teacher in the classroom three to four times during their practicum. While observing the student teacher's interactive teaching, the supervisor was expected to see the strength and the weakness of the student's teaching, and provides them with constructive feedback after the lesson. This, according to Dunne & Dunne (1993), was the most important aspect of the supervisor's role as the impact of feedback is to make the student-teachers more thoughtful and analytic about their own practice. In addition, the supervisor was also expected by the university to give appropriate guidance related to the teaching and learning needed by the student teachers. In line with the university's expectation outlined in the Handbook, all the supervisors whom I interviewed described how their vital role is to assist the student teacher, either providing them with appropriate feedback regarding their planning and teaching or to overcome any problem arise during the practicum. For example, Mizal, explained that what he always said to the student teachers under his supervision was "*come and enjoy your teaching, I'm here just to share with you some of my experience, and offer assistance to you, and you also have to use your experience when you learnt at the university.*".

Based on the findings presented in Chapter Seven, this study suggests that all student teachers perceived the university supervisors as fulfilling the role of advisor, assessor and expert, however, the degree of each role varied. It seemed that some university supervisors have stronger influence as an advisor, and some are stronger as an assessor and expert in planning and teaching. In most instances, when the student teachers were given advice and comments regarding their planning and teaching, and they liked the way the advice was given to them, they perceived the relationship that existed as good

and positive. When they had a positive relationship, the student teachers explained that they felt comfortable to ask questions regarding the comments given to them, or to seek advice in planning their lessons. For these student teachers, the supervisor was a valuable source of ideas and information (John, 1991a). Perhaps the supervisor was seen more as an advisor although at the same time they knew that the supervisor was also in the position to assess them. This was what was emphasized by Boydell (1986) that the quality of the human relationship between the supervisor and student teacher is important in their learning process. The student teachers did not only express satisfaction because of the way the advice and comments were given, it is also interesting to highlight the fact that the student teachers expressed satisfaction when the supervisor did acknowledge their strength and what was good in their planning.

This study found there is some evidence that when the student teachers saw their supervisors more as an advisor rather than an assessor, the university supervisors may also have influenced the student teachers' beliefs. In other words, the student teachers were not only influenced by the supervisors when they expected the supervisors to visit them, but this study shows that the student teachers planned their lessons as suggested by the supervisor, even when the supervisor wasn't around to see them. The data from the plan book corroborated this assertion. As discussed in Chapters Six and Seven, Elly was a good example to illustrate how the supervisor may have not only influenced her practice but also may have influenced her belief. In the final interview, Elly explained that the pupils came first into her mind every time she planned lessons, and that was because of the feedback given by her supervisor after observing her planning and teaching in the classroom. In fact, it was the supervisor's comments constantly on her planning and teaching that made Elly think about the pupils in the first place. Thus, this

may explain how the supervisor not only influenced the student teachers' practices, but the supervisor also influenced the student teachers' beliefs in planning lessons. The supervisor was a mediator (Stones, 1984) in changing the student teacher's beliefs. The data from the plan book show that Elly began to focus on pupils' learning rather than her performance as a teacher after getting feedback from her supervisor. This is consistent with Furlong's (2000), and Furlong & Maynard's (1995) assertions that the university supervisor's role is vital in assisting student teachers' change, and without this support, student teachers often find this transition difficult (Calderhead, 1987).

It was also apparent in this study that there is some evidence to suggest that the supervisor has a stronger influence as an assessor rather than as advisor. During the practicum, it has always been the responsibility of the university supervisor to determine and assign the final grade for the student teachers (Slick,1997; Slick, 1998). Stones (1984) claims that no matter how supportive the supervisor is, the day of judgement eventually arrives when a grade has to be awarded. As long as the supervisors are responsible for assigning grades, student teachers are likely to perceive them in an assessment rather than assistance role (Borko & Mayfield, 1995). There were instances where the student teachers explained that when they were expecting the supervisor to come and see their planning and teaching, they planned lessons according to the supervisor's suggestion, and tried to plan a 'best' lesson for the purpose of getting a good grade. The student teachers also explained that they knew the supervisor was in a position of assessing and giving them a grade for their planning and teaching, therefore, although they had their own beliefs about planning, they may be compelled to pay heed to the advice and comments in order to please the supervisor. Evidence from the plan books suggests that for some student teachers, they planned as they were told to

do for the lessons observed by the supervisors. For example, Aina was very explicit about wanting to obtain a good grade in her practicum, thus, she said she planned a 'best' lesson when she know her supervisor would come and observe her. Her plan book shows that she complied with the suggestion and the format given, and interestingly, it was against her belief about planning (as shown in Chapter Seven). It seems that when the student teachers saw the supervisor as an assessor more than an advisor, the impact of the supervisor's influence was stronger on student teachers' practise rather than on their beliefs. This is parallel to Kagan's (1992a) assertion that beliefs cannot be inferred directly from teacher behaviour, because teachers can follow similar practices for very different reasons. In this study, it seems that in order to achieve a good grade for the practicum, some student teachers practised their planning according to the supervisor's suggestion, albeit it in contrast to their beliefs.

It was also evident from the supervisors' point of view that the student teachers see them more as an assessor rather than an advisor. For example, Azam, a supervisor who also taught the Method course to the student teachers, commented that most students saw him as an assessor because they were concerned too much with the grade that they would get at the end of the practicum rather than concentrating on the learning process. According to Azam, the student teachers' perception was also influenced by the fact that during observation, university supervisor have to fill in an observation form which not only includes comments on their planning and teaching, but also reflects the grades obtained by the student teachers. The observation form is a major source for determining student teaching grades (Borko & Mayfield, 1995) and also serves as a resource for reflection. Azam gave the example; the student teacher should reflect and think why she got three marks instead of 10 marks for planning. Azam thought that the observation form could help the student teachers to be critical of themselves; the student

teachers could know their strengths and their weaknesses in planning and teaching by looking at the marks given to them after each lesson.

Another supervisor, Zack, claimed that whenever the student teachers saw the supervisor bring the observation form to the class when they were teaching, they would think of the grade rather than their learning process. He noted that this perception may also be influenced by the supervisor's comments; some supervisors explicitly comment that the student teachers may obtain grade 'A' for this lesson plan and 'B' for this lesson plan. Therefore, according to him, when the supervisor always gives a clue as to which lessons could get a good grade, this automatically will relate the observation to the assessment rather than the learning process. Although he claimed that he always told the student teachers that he came to observe them for the purpose of helping them in their learning process, the student teachers' perception never changed as they constantly asked "*could I get A for this lesson*?" This may explain the reason why the student teachers saw their supervisor more as an assessor in their relationship as the student teachers are more concerned to get a good grade than to improve their planning and teaching.

This study offers some evidence that student teachers' perception of their supervisors' role as an assessor is associated with their role as an expert in planning and teaching. The Student Teaching Handbook (2006) specified that the student teachers should obtain a minimum of grade 'C' in their practicum as a requirement to be recognised as a qualified teacher to enter the profession. Hence, for the student teachers, the result or grade awarded to them during practicum is the indicator of their performance. For instance, one student teacher commented that if his supervisor gives him a 'B+' and

above, he feels he is a good teacher because he believes that a good grade shows that he is good at teaching. Therefore, his comment implies that he thinks his supervisor's judgement is reliable. This may explain that the student teacher perceived the supervisor as an expert in teaching and planning. The supervisor, according to Stones (1984:8) is "the adjudicator of teaching competence and arbiter of a student's right to enter the teaching profession."

While evidence suggests that the student teachers perceived that the supervisor fulfills the role of advisor, assessor and expert in planning and teaching, it is also interesting to highlight that the nature of the relationship that emerged seemed to be associated with the role fulfilled by the supervisor and it varied from one student to another. As discussed earlier in this section, when the student teachers perceived the supervisor more as an advisor rather than an assessor, the nature of the relationship was also perceived by the student teachers as good and positive. On the other hand, some student teachers expressed disappointment in the relationship when the role fulfilled by the supervisor was seen more as an assessor rather than advising them. Evidence presented in Chapter Seven shows that, for a student teacher who expressed disappointment in the relationship, the supervisor was said not to give any constructive feedback to improve his planning, instead he perceived the supervisor as putting a burden on him in planning lessons. Thus, this may result in a poor relationship, and according to Dunne & Dunne (1993) poor relationships meant that there were constant tensions. It seems that the student teachers who expressed disappointment in their relationship wanted more attention from the supervisor, and this parallels Lasley & Applegate's (1985) notion that the university supervisor's attention, not only the grade, is important to the student teacher during this learning process.

In conclusion, the discussion above illustrates the variability of the roles fulfilled by the university supervisor from the perspective of the student teachers and the supervisors. Although it seems that the supervisors fulfilled multiple roles as assessor, expert in planning and teaching, and advisor, the degree of the role varied, with some stronger as assessor and some stronger as advisor. This study suggests that student teachers who perceived the supervisors as fulfilling the role of advisor express satisfaction with their relationship, whereas, student teachers who perceived the supervisor as fulfilling the role of assessor express disappointment and tension in their relationship. Furlong (2000) noted that the university supervisors have a working knowledge of practice in a wide range of schools and they have access to different kinds of professional knowledge, therefore, with this knowledge, it may useful for the supervisors to place more emphasis on the advising role in order to facilitate student teachers' learning.

8.5 The Role of the Cooperating Teachers

This study also provides evidence that for some student teachers, the cooperating teacher was regarded as having influence on them in learning to plan lessons. However, there was also evidence that cooperating teachers were seen by other student teachers as having a minimal influence on them. Research in the UK and US suggested that the teacher was the key element in the school-based part of the programme, but there were enormous differences in the manner in which the teachers worked with their student teachers (Jubeh, 1997; Borko & Mayfield, 1995; John, 1991, Calderhead & Shorrock, 1997). Although this study did not specifically focus on the role of the cooperating teachers during student teachers' practicum, it does provide valuable information about their roles in helping student teachers' learning, therefore, I shall discuss the role of the

cooperating teachers from the student teachers' perspective; the cooperating teacher was seen as an advisor, an assessor and an expert in planning and teaching. On the other hand, to see how cooperating teachers see their role as cooperating teacher, I also discuss what the cooperating teachers thought about their role and its implication for the student teachers' learning. Together with the student teachers' perspective and cooperating teachers' perspective, I incorporate the university expectation of the role of the cooperating teachers which I derived from the Student Teaching Handbook provided by the university.

It was very evident that from the student teachers' point of view, there were cooperating teachers who they saw as very helpful to them. This happened when some student teachers (as shown in Chapter Seven) perceived the relationship that emerged with the cooperating teachers as good. These student teachers described how, by having a good relationship with their cooperating teacher, they felt comfortable to consult and seek help when needed. In most instances in my study, the student teachers claimed that early in their practicum, their lesson plans did not work satisfactorily; this was primarily due to pupils' characteristics such as behaviour patterns and their ability to follow the lesson. Because they had little knowledge about pupils' characteristics prior to their practicum, some of the student teachers claimed that they learned from their cooperating teacher that in planning a lesson, they should consider the pupils' behaviour and ability first before deciding any activities for the lesson. Specifically, the cooperating teacher was a person whom the student teachers described as helping them to see the differences in the individual pupils in the classroom. This supports McIntyre & Hagger's (1994) assertion that the distinctive strength of the cooperating teachers is their knowledge of the situation. The cooperating teacher was regarded by the student

teachers as a person who knew the behaviour patterns and the strengths and weaknesses of individual pupils in the classroom and approaches to teaching them. Thus, these student teachers who consulted their cooperating teacher and were given advice in their learning to plan lessons may see their cooperating teacher as a person who plays the roles of advisor and expert in planning and teaching.

Not only did the student teachers perceive the cooperating teacher as their advisor, specifically relating to knowledge of the situation, it was also apparent in this study that the student teachers perceived the cooperating teacher as expert in content knowledge and pedagogical content knowledge (Shulman, 1987). Although the student teachers entered the classroom with some existing knowledge (Calderhead & Shorrock, 1997; Schoenfeld, 1998; Furlong, 2000), there was evidence (as in Chapter Seven) that the student teachers listened to and followed suggestions given by the cooperating teacher regarding the content to be covered and teaching strategies that work successfully in teaching the subject.

There was also an instance of the cooperating teacher having influence over the student teacher by providing a model (Furlong & Maynard,1995; Calderhead & Shorrock,1997). There was evidence (in Chapter Seven) that the cooperating teacher seemed to be providing her students with a model where she demonstrated her own teaching to the student teacher in order for her to use the ideas as an example or to copy, or to use as a basis of comparison. For example, as I described in Chapter Seven, Shirley learned by observing her cooperating teacher teaching in the classroom. She used her cooperating teacher's model as a basis to shape her own planning practices. In

other words, by making a close observation of how her cooperating teacher taught the subject to the class, she adapted the method to her own planning and teaching.

While evidence suggests that the lesson planning of some student teachers was affected by their cooperating teachers as they perceived the cooperating teacher as their advisor and an expert in teaching, there was also evidence that the other student teachers expressed disappointment regarding their relationship with their cooperating teachers. The nature of the relationship, which the student teachers described as 'distant' appeared to be the result of several factors. One student teacher claimed that her cooperating teacher was very busy dealing with his responsibility outside school such as attending seminars and meeting. Therefore, she said she had little opportunity to see her cooperating teacher in the school context. Here, mentor inaccessibility (Hardy, 1995) was the factor that contributed to this type of relationship. In this situation, the student teacher may have very little chance to get in touch with the cooperating teacher. In fact, it was said by the student teachers that the only opportunity for them to speak to the cooperating teacher was during the classroom observation.

In line with student teachers' perspectives, the cooperating teachers explained that along with their 'new task as mentor teacher', they were already busy with their other work that had to be done within the school context hours. In other words, when they were asked to supervise the student teachers, it meant that they would have more work to do. All cooperating teachers whom I interviewed reported that they did not have regular meetings with the student teachers, instead, guidance and advice were given to the student teachers when the student teachers approached them for advice. When talking about the teachers' availability during school hours, most of them did mention that most

of the time, they were at the school. For example, Asiah claimed that '*I'm always available*', therefore she preferred to use an informal meeting give guidance and assistance about planning and teaching to the student teachers. She said, "*as we share the same staff room, he can ask me anytime if he has anything or any problem during his practicum."* In another example, Lily explained that the student teacher came to see her regularly to seek advice regarding her lesson plans although she did not set a regular meeting with the student teacher. In contrast, Amer explained that he rarely had time at school as he was assigned to attend a course while the student teachers took care of his class. Therefore, he said that he was not able to watch closely the progress of the student teacher's learning.

However, all cooperating teachers reported that they had fulfilled their responsibility to observe the student teaching as are required by the university. As indicated in the Student Teaching Handbook (2006), alongside the university's expectation that the cooperating teacher should give sufficient guidance and advice to the student teachers, they were also required to observe the student teacher's teaching episodes and make an assessment of their performance in planning and teaching lessons. The student teachers reported that the assessment was done twice by the cooperating teacher, and debriefing session followed immediately after classroom observation. However, some student teachers revealed that the debriefing sessions were too short and brief. The cooperating teacher was also reported as not giving constructive feedback to the student teachers regarding planning and teaching. This is parallel to Borko & Mayfield's (1995) assertion that conversations between student teachers and mentor teachers rarely included in-depth exploration of issues of teaching and learning. Evidence from the notes written by the cooperating teachers on the student teachers' plan books

corroborates this assertion. For example, one comment read 'the lesson plan was well prepared, teacher has done a good job, and the explanation was clear and understandable'. Certainly, this comment suggests that the cooperating teacher in this case was fulfilling the role of assessor rather than advisor.

Another factor that may contribute to a 'distant' relationship between student teachers and the cooperating teacher was related to the 'absent' teacher (Jubeh, 1997) who took no apparent interest in the student teacher's learning and progress and who seemed from the student teacher's perspective to make no effort to assist or advise them. Although the student teachers were placed in the same staff-room with the cooperating teacher, the student teachers claimed that conversation between them rarely occurred; the reason given was the cooperating teacher seemed very busy with their own work, therefore, they felt uncomfortable to interrupt them. In another case, it was reported that whenever the student teacher approached the cooperating teacher to discuss the lesson which they had already planned, the feedback was always the same; it was either that the cooperating teacher agreed with the plan or that the lesson plan was fine. It seems that the cooperating teacher was regarded as always agreeing with the student teacher's lesson plans without showing interest in giving constructive feedback. In the learning process, Feiman-Nemser and Buchman (1987) noted that, by themselves, student teachers can rarely see beyond what they want or need to do or what the classroom setting requires. Consequently, with this little support, the student teachers may have felt abandoned and resentful at the lack of guidance, features which were not conducive to learning (Dunne & Dunne, 1993).

Cooperating teachers' experience in teaching and experience in mentoring was also a factor that may have resulted in this kind of 'distant' relationship with the student teachers. There was evidence (as shown in Chapter Seven) that in some cases the cooperating teacher revealed to the student teacher that they thought they had 'very insufficient experience' to guide the student teachers. Despite having enough experience in teaching, there were also cooperating teachers who claimed that this was their first attempt at working with student teachers. For example, Ida described herself as a novice teacher with two years' teaching experience. Being appointed to become cooperating teacher, she pointed out that she couldn't give much guidance as her knowledge was 'more or less' the same as the student teachers. Ida's notion was corroborated with the data from the student teacher. For example, Jason explained that his cooperating teacher thought that she did not have enough knowledge and experience to give Jason lots of guidance as he expected. Wong & Chuan (2002) assert that learning to teach is best done in school under the guidance of experienced teachers. Although the cooperating teacher thought her experience was only two years, yet she has the experience. It may be that the cooperating teacher has not learnt to articulate her craft knowledge to the student teachers. This explanation may also suggest that the cooperating teacher lack of confidence in fulfil the task as cooperating teacher, as a result of her beliefs that she has insufficient experience to guide the student teachers.

Although all the cooperating teachers in this study believed that their role was to offer guidance and support to the student teachers, nevertheless, their belief and knowledge about how to offer guidance and support may have influenced their practices. In practice, cooperating teachers bring their own perspectives about mentoring and their own initial teacher education background to bear in their work as mentors (Elliot &

Calderhead, 1994; Hawkey,1998). For example, Faiz said that the guidance he gave was based on his previous experience. When he was a student teacher five years ago, he claimed that he never consulted his cooperating teacher in terms of planning and teaching. He explained that what he did in planning lessons was based on his knowledge learned at the university. Therefore, he believed that the student teachers in this study had adequate knowledge about planning prior their practicum. Therefore, when he was assigned as cooperating teacher, he saw his role as a resource person to the student teachers. In other words, he explained that as he taught ICT to the pupils, he would provide the syllabus and materials related to the subject to the student teachers, and prepare facilities needed by the students, such as the computer lab and any software that they said they needed for teaching. He added that regarding methods and teaching strategies, he did not make comments because in his view the students were strong in this area as they had learned it at the university. This cooperating teacher's notion was parallel to Shen's (2002) suggestion that the cooperating teacher's role was to provide the facilities needed, but not to take a more critical stance to challenge the student and make the student more conscious of the underlying assumptions of the teaching strategies.

It was also the case that some of the cooperating teachers perceived that the university supervisor was expert in planning rather than themselves. All the teachers whom I interviewed had the impression that university supervisor had more knowledge than them about the process of planning and the elements that should be in a lesson plan. This factor may also explain why the cooperating teachers played a limited role in helping the student teachers learn to plan a lesson. In addition, when talking about their own practice in planning lessons, all the teachers reported that their lesson plan was

very brief compared to the student teachers' lesson plan which they perceived as 'very structured and detailed'. They described their own planning as 'already in their head'. This mirrors the assertion that experienced teachers' engage in mental planning (Morine-Dershimer, 1978/79; McCutheon, 1980), and experienced teachers do not follow the rational model in their planning practices (Clark & Peterson, 1986; Clark & Yinger, 1987; McCutcheon, 1980; McCutcheon, 2002).

As practising teachers, the cooperating teachers believed that they were more concerned about pupils learning rather than planning in detail. This notion was strengthened by their comments on the student teaching they observed. Most of the teachers described how student teachers were prepared in terms of planning, but they had problems with subject knowledge and contextual knowledge. For example, one teacher pointed that the student teacher had no sense of humour; therefore it was difficult for him to grab pupils' attention to stay focused on the lesson. Another example given by this teacher was related to the student teacher's subject knowledge. He said that they depended heavily on the content available from the textbook, hence, the student teacher gave examples to the pupils' from the textbook rather than thinking of the examples themselves so that they could be related to the pupils' experience.

In summary, the discussion above exemplifies the variability of the cooperating teachers' role from the perspective of the student teachers and from the teachers as well. Although the teachers perceived that the university supervisor was more expert in helping the student teachers learn to plan lessons, this study suggests that the cooperating teacher may be an important factor in helping student teachers learn to plan lessons, particularly helping them to understand the pupils and the classroom contexts.

Understanding the pupils and the classroom context are important elements to enable the student teachers to plan a lesson that will work satisfactorily.

8.6 Implications for Teacher Education

The purpose of conducting this study was to understand the student teachers' learning to plan lessons during their practicum. An understanding of their learning process may inform teacher education about the process they had gone through while planning, changes in their planning, and factors that shaped their planning. The following is a discussion of the tentative implications of the findings from this study.

8.6.1 The Planning Process

This study indicates two features that are prominent in the student teachers' planning process. First, the student teachers believed that the learning objectives are the most important element to determine prior to planning the activities. This feature is consistent with the rational model prescribed in teacher education. However, this study also revealed that the student teachers reported that they faced difficulty in the process of determining the learning objectives for each lesson. This difficulty in determining the learning objectives was experienced by most of the student teachers, particularly during the first and second weeks of the practicum.

The second feature is that planning activities is a central focus of their planning process. In planning activities, the student teachers considered and made a decision about the teaching strategies, pupils' activities, timing, and resources that will help teaching and learning. Most of the time in planning was devoted to planning the activities. I have

discussed in the previous section that the process the student teacher went through within this stage did not happen in a fixed order. The student teachers' thinking seemed to move back and forth repeatedly in determining the details and decisions for each activity. Planning activities, therefore, is a process that is recursive and not a straight forward process as suggested in the rational model. To determine the activities that would help the pupils to accomplish the learning objectives was a difficult task for some student teachers.

It is also interesting to highlight that the student teachers' planning process appeared to undergo a few changes towards the end of the practicum. At the start of the practicum, the student teachers had difficulty in deciding the learning objectives, integrating their knowledge of pupils, context, and the curriculum because their knowledge of pupils and context was very limited. As they moved on, gradually they acquired knowledge of the context, pupils and curriculum and it seems that they learned to integrate that knowledge in their planning. Acquiring this basic knowledge in learning to plan, is only the beginning of their development as a teacher. Therefore, the student teachers in this study still needed assistance, in terms of developing awareness that planning had to be flexible. This in line with Mutton et al.'s (2008) suggestion that developing the capacity to visualise, to anticipate the response of the pupils and to be flexible enough to accommodate such responses was the biggest focus in learning how to plan lesson.

Given this, what should teacher education institutions make of these results? This study suggests that in relation to the teacher education institution, the lesson plan format and the university supervisor may have a strong relationship that may influence the student teachers' planning process; therefore, I would like to suggest that teacher education

institutions review the methods courses taught to the student teachers so that they can be best suited to practice in the real classroom environments. The approaches used for teaching the student teachers how to plan lessons, should be informed by research findings on teachers' planning. The literature highlights the need to revise the rational planning model so that it is better suited to practice if the prescriptive model is used to teach planning (Floden & Klinzing,1990; John, 1991a, John, 1991b; John, 2006; May, 1986).

Decades ago, May (1986) argued that novices teachers had difficulty constructing objectives before they considered the activities for the lesson. In addition, research suggests that the student teachers planned each lesson as a discrete entity based on prescribed objectives (Westerman, 1991). Recently, John (2006) talked about a similar notion of the difficulties for the student teachers in constructing objectives-first planning and he suggests planning could use the 'dialogical model' where problem-level processes are emphasized rather than seeing planning as a step-by-step process. This study reveals that the student teachers experienced difficulty in constructing objectives to match the pupils, activities and time allocated for each lesson. Therefore, it is important for teacher education institutions to consider this issue in teaching the student teachers how to plan lessons; rather than simply teaching the students to consider the objectives first, to include teaching them how to learn to plan or to prepare the student teachers to learn to plan in school. In other words, student teachers should be taught to think about the complexities of classroom teaching in their planning. These include the integration of knowledge of pupils' ability, pupils' behaviour, pupils' prior learning experience, instructional materials and environmental constraints (Borko & Shavelson, 1990). Perhaps, by knowing how to integrate the contextual knowledge in

planning lessons, the student teachers would be more able to plan lessons for pupils' learning rather than for teacher's performance. Furthermore, planning exists to support pupils' learning, not to satisfy the teacher educator in terms of what planning should look like (Bage, Grosvenor & Williams, 1999).

In the realm of the lesson plan format (planning template) which is translated from the rational model taught to the student teachers, this study suggests that during the early stage of the practicum, the format seems to influence the student teachers greatly in learning to plan lesson. Therefore, it would probably be more effective to help the student teachers' learning by encouraging the student teachers to use the format as a guideline, instead of using the format rigidly in the planning process. In addition, as noted by Kagan and Tippins (1992), none of the lesson plan format was inferred from novices' own experiences in classrooms. If the teacher education institution were required to provide the student teachers with a lesson plan format because it is imposed by policy-makers, teacher educator should not portray the elements in the lesson plan format as linear, instead all elements should be considered simultaneously before arriving at the decision making stage.

Considering the fact that teaching how to plan within the context is challenging for the teacher educator, and that it is difficult for the student teachers to acquire the integration of knowledge of pupils' characteristics and other contextual factors without having field experience, therefore, I would like to suggest that teacher educators could model their planning process for the student teachers. Teachers teach as they were taught (Nettle, 1998), thus, modelling planning might be an effective method for the student teachers to understand the process of planning. Through modelling their own planning and

teaching, as suggested by Koeppen (1998), teacher educators could help student teachers learn to view planning as a tool to promote learning instead of merely a task to be completed. Indeed, this approach may be very helpful to help student teachers learn to plan lessons as it will allow them to understand the process of planning in the real situation prior to having their own experience in the classroom. Together with this approach, it could also be more effective to provide opportunities for the student teachers to engage in collaborative planning with their cooperating teachers during their practicum. Burn (1997) asserts that this process may help student teachers to access to the developed thinking of the experienced teachers and thus draw on their professional knowledge in learning to plan a lesson.

As presented in Chapter Two, the literature on teacher planning describes the process of planning teachers go through in the real classroom, so teacher education could consider including these research findings on how teachers plan lessons in the course curriculum. Although most research was conducted with experienced teachers, and it was carried out in different contexts in the West, the findings are important to the student teachers' learning. In other words, by including the model of planning that derives from the research in the course curriculum, the student teachers would have more knowledge of planning, both from prescriptive and descriptive models. By having this knowledge, perhaps the student teachers would have a better understanding of the complexities of planning, as an addition to the theoretical model prescribed in the course.

8.6.2 The University Supervisor and Cooperating Teacher

This study adds to the body of evidence (Borko & Mayfield, 1995; Furlong & Maynard, 1995; McNamara,1995; John, 1991a; John, 1991b; Dunne & Dunne, 1993) that suggests both the university supervisor and the cooperating teacher are important in contributing to the learning process for the student teachers. Although the degree of influence varied, yet the contribution was vital in helping the learning of the student teachers. This study strongly supports the contention that without guidance, the student teachers can rarely see beyond what they need to do or what the classroom setting requires (Feiman-Nemser,1987). In addition, this study reveals that the student teachers' perception of the roles fulfilled by both the university supervisor and cooperating teacher has a strong influence on the kind of relationship that emerges between them. An implication here is of the need for teacher education to reconceptualise the roles of the university supervisor and the cooperating teacher in order for them to be able to focus more on the advising role in helping student teachers' learning.

The findings seem to indicate that the student teachers who saw the cooperating teacher and university supervisor more as an advisor tended to undergo changes in their practices as well as their beliefs. In contrast, the student teachers who saw the cooperating teacher and the university supervisor more as an assessor tended to plan lessons in the way they were told to do. Although the literature suggests that in the process of change, there is a constant interaction between beliefs and practice, and that professional development may be initiated by a change in either beliefs or practice (Richardson, 1996), yet I would suggest that changes in both belief and practice are

essential for the student teachers' learning process. As noted by Speer (2005) and Pajares (1992), beliefs appear to be, in essence, factors shaping teachers' decisions about what knowledge is relevant, what teaching routines are appropriate, what goals should be accomplished, and what the important features are of the social context of the classroom, therefore, changes in beliefs could helps student teachers to develop their understanding of the decisions made while planning lessons. In other words, by having such beliefs, the student teachers will be able to articulate the reasons for the decisions they make rather than making a decision in their planning to please the university supervisor.

The literature suggests that many factors influence teaching practices (Borko and Putnam, 1996), however, this study offers some evidence that the university supervisor and cooperating teacher played a dominant role in influencing student teachers' beliefs and practices. From this study, it seems that the university supervisor and the cooperating teacher helped the student teachers learn to integrate knowledge of pupils, curriculum and other contextual factors in their planning, and the student teachers saw that this was successful, and this gradually changed their beliefs about planning lessons. Calderhead (1996) noted that when student teachers could be helped to adopt a new practice and could see that it was successful, changes in beliefs followed rather than preceded changes in practice. Moreover, supervisor and teacher should 'assist not assess' on the ground that student teachers are more likely to ask for help if they are not assessing the student teacher (Feiman-Nemser, 1996).

I have discussed in the previous section that several reasons may contribute to the kind of roles fulfilled by the university supervisor and the cooperating teacher. One

suggestion that might help the university supervisor to give more attention to the advising role rather than the assessing role is for teacher education to rethink the evaluation procedure during practicum. This study has some evidence that the assessment procedure influences the student teachers' perception of the role fulfilled by the university supervisor and the cooperating teacher. Assessment of practicum was made using an observation form that consists of a set of specified competences in the areas of planning and preparation, presentation and organization, class management, evaluation and personal characteristics (The Student Teaching Handbook, 2006). This study has shown that although the observation form was used as a basis for providing feedback to the student teachers, yet the student teachers believed that it was an indicator of the grades given to them. Therefore, a possible way to reduce the association of the university supervisor with the role of assessor is to reconsider the grading system for practicum. Rather than continue to use the grading scale, "A" through "F" that matches the grading system on all courses within the university, teacher education should consider a 3-point grading system; distinction, pass, fail. Having a 3-point grading system could help to minimise the assessment role of both university supervisor and cooperating teacher. Implementing this grading system would mean that the observation form would be used for the purpose of giving feedback to the student teachers without having to give marks for each specified competence explicitly as is currently the case.

This study reveals that the reasons why the cooperating teacher did not give guidance as was expected by the student teachers were because of time constraints, inexperience in mentoring, and their personal beliefs about their role as a cooperating teacher. However, as presented in the previous section, the teachers' distinctive strength is that

they have knowledge of the situation (McIntyre & Hagger, 1994), practical knowledge (Richardson, 1996), and craft knowledge (Calderhead, 1996) of the classroom. These strengths could be fruitfully joined with the university supervisor's contribution to support the student teachers to learn to plan lessons effectively. Therefore, if teacher education sees this potential of the cooperating teacher as well as the university supervisor for helping student teachers' learning to plan, effort should be made to make this known to all parties involved in student teacher learning.

As suggested by Borko and Mayfield (1995), one way of increasing cooperating teachers' sense of efficacy is to provide them with preparation for their roles in the partnership. This could be done by inviting them to a joint seminar together with the university supervisors before the practicum begins. In this joint seminar, they could together develop a discourse which defines their roles, as well as recognizing their different strengths as school teachers and as university supervisors in helping the student teachers to learn to plan lessons. In this study, had the cooperating teachers been provided with sufficient information regarding their roles and the university's expectations of them, the cooperating teachers might have been able to play their roles effectively. Had the cooperating teachers who had no experience in mentoring student teachers been given sufficient information regarding their roles and support in carrying out these roles, they might have gained more confidence and been in a better position to assist student teachers. Borko and Mayfield (1995) have shown that helping classroom teachers to fulfill their roles by providing preparation and support for their new roles leads to a number of positive effects.

If teacher educators believe that the contribution of the cooperating teacher is important in helping student teachers' learning, they should offer an equal partnership for the cooperating teacher and the university supervisor. This study reveals that both the university supervisor and the cooperating teacher were seen by the student teachers as fulfilling the roles of adviser, assessor and expert in teaching and learning. It is possible to argue therefore that in determining the grade for each student teacher, it should be jointly decided by the university supervisor and the cooperating teacher as both parties are involved in the student teachers' development and know the achievement of each student from different perspectives. In addition, this approach may help to develop collegial relationships between the cooperating teacher and university supervisor, and ultimately to acknowledge the school contribution to student teachers' learning to plan lessons.

8.7 Limitations of the Study

There are several limitations that should be considered in relation to the results of this study. Because the student teachers of this study were selected from only one teacher education institution, we cannot generalize to the student teachers in all teacher education institutions in Malaysia. As discussed in Chapter Four, there are some differences in implementation of the practicum at this institution compared to other institutions. This is related to the timing and the length of the practicum. Within 10 weeks of the practicum, the student teachers in this study planned lessons for only eight weeks. Because the timing of the practicum was in May to early July, the pupils have their mid-term examination for a week, followed by mid-term break in June. In some other institutions the practicum is 12 weeks long and the timing is in January, thus the

findings might be different to the student teachers in other institutions. However, the main outcomes of the study are related to the nature of the methods course and the influences of the university supervisor, cooperating teacher, lesson plan format and pupils' characteristics. It is unlikely that these influences would be substantially affected by a small variation in the length of the practicum.

The understanding gained of the process of planning lessons for these student teachers has drawn heavily on the 'thinking aloud planning'. However, using think aloud planning also presents some limitations. As discussed in Chapter Four, the student teachers were asked to plan aloud without my being present as an attempt to prevent reactivity. I also did not prepare any questions or guidelines for them to follow, rather asking them to plan in a free-flowing manner as they would normally plan a lesson. Retrospectively, this method may have some research effect where the student teachers may have planned their lesson before they started to audio-tape their thinking aloud planning. Because teachers do not naturally verbalize their thoughts as they plan, the student teachers may have reported what they had recorded in their written plan, without verbalising their thought process. This was obvious in the thinking aloud data of Afiq, in which there was very little direct evidence of thought processes occurring in the data. Afiq's thinking aloud data tended to be relatively structured as appeared in his written plan. Despite this limitation, as Patton (2002) asserts that thinking aloud aims to elicit the inner thoughts of the participants, and Erricson and Simon (1993) suggest this method as an appropriate way to access ideas, I believed that the data from thinking aloud planning had gave some insight on their actual planning process. My cross-checking of data from different sources means that the most serious 'research effects' are avoided. If the research effect noted in Afiq's data was more widespread, then the

main impact on my study would be that I would describe the student teachers' planning as more structured than it is in practice. This is a risk that I acknowledge, but the main elements of the structuring of the students' planning are confirmed by interview data and documentary evidence, so I am confident in my conclusions.

This study found that some changes occurred in student teachers' planning. Alongside data from the interviews, I also relied on student teachers' plan books to see changes in their planning. For each lesson, the student teachers were expected to record their reflection- on-action as part of the lesson plan. As reflection-on-action (Calderhead and Shorrock, 1997) helps a teacher to reflect back on particular events of the lesson, to analyse where difficulties arose and to consider how they might improve on it, drawing data from their reflections in the plan book helps me to track changes – what has changed and what triggered the changes. Looking back, if I were to do the study again, I would also ask the student teachers to keep a journal detailing their decisions and thought processes as they planned for their lessons. Perhaps I could gain more robust data, following Clark and Peterson's (1986) suggestion that journal keeping is suited for recording teachers' thinking over time, as they keep records of the contexts in which their plans are made and the reasons for selecting one course of action over another. Moreover, journal keeping is not a formal representation of student teachers' lesson planning that needs to be seen by the school administrator and the university supervisor. So, this approach might provide more insight into their thought processes together with the reflections recorded in the plan book. On the other hand, journal keeping makes heavy demands on the teachers, and would restrict the study to those who are very committed to the research project or to recording their own reflections, so that the sample may be less representative of student teachers in general.

This study reveals that the university supervisor and the cooperating teacher played an important role in helping student teachers to learn to plan lessons. A shortcoming of this study is that although I have interviewed both the university supervisor and the cooperating teacher, yet not very much information was gathered as the questions asked were not specifically designed to investigate their roles in depth. Therefore, in terms of drawing implications of the study, the limitation was related to the quality of this data, which I considered to be very general. Perhaps, I could get more information about the role fulfilled by the university supervisor and the cooperating teacher through observing the debriefing sessions held after the classroom observation. I would also have got information related to the case studies of particular student teachers if I had interviewed the university supervisor and the cooperating teacher who were supervising the specific student teacher.

Since the researcher is the key instrument (Creswell, 2007) in any qualitative research, in addition to the limitations above, my skills as researcher also present a limitation. Looking back on the process of conducting this study, I can see some weakness regarding my skills in conducting the interviews. With hindsight, I would have probed more to see student teachers' thinking in the initial interviews. But, this limitation did not affect the richness of the data as I was also able to use other sources of data. As I gained more skill in conducting interviews, more probes were used in the final interviews; for example, when the student teacher said the most important thing in planning lessons were the learning outcomes. Then I used more probes, like "why are the learning outcomes very important?", and "how do you decide the learning outcomes for a lesson". My training and development as a researcher also allowed me to

accurately portray the participants' planning process and the changes that had occurred in their planning, as well as my acknowledging any personal biases that may have influenced the overall process of this study.

8.8 Suggestions for Future Research

Following the findings of this study, several areas arose as the next steps that need to be explored in relation to the student teachers' learning during practicum. First and foremost, the findings indicate that student teachers were influenced by the university supervisor and the cooperating teacher as experts in planning and teaching, as advisors to the student teacher in planning and teaching, and as assessors of the student teachers during the practicum. Although the degree of these influences varied, yet these influences have an impact on student teachers' learning. Therefore, this issue needs to be addressed further from the university supervisors' and cooperating teachers' perspectives on their roles in helping the student teachers' learning. For example, questions such as "Are the university supervisors and the cooperating teachers aware of the difficulties experienced by the student teachers in planning a lesson?", "Are the university supervisors and the cooperating teachers aware that the way student teachers see them influences student teacher planning beliefs and practice?", "How can the student teachers best be supported by the university supervisor and the cooperating teacher in dealing with the difficulties in planning lessons?" need to be addressed further. I believe that a thorough investigation about university supervisors' and cooperating teachers' perceptions of their roles could shed additional light on this issue and may lead to suggestions for reform of the organization of student teachers' learning.

Stemming from my beliefs that a good lesson begins with good planning, and supported by the findings of this study that the student teachers believed that planning lessons is essential for teaching, a further issue for future research would be exploring the effectiveness of the lesson plan. For example, questions such as, "is there a relationship between lesson planning and pupils' learning?", "does good planning help the pupils learn better?" need to be investigated further. While the literature (as presented in Chapter Two) has shown how teachers planned lessons, why planning a lesson is important for teachers, and factors that affected teachers' planning, the next step that seems important is to see the relationship that exists between teacher planning and pupils' learning, or to investigate the effect of teacher planning on pupils' performance. By researching this aspect as the next step, the findings may further contribute to our understanding of the relationships between the teachers' planning, teaching and learning.

While this study investigates student teachers' lesson planning in general without being specifically designed to investigate the planning of lessons for specific subjects, yet the findings indicate that student teachers' beliefs and knowledge about the nature of the subject they are teaching impacts on the way they initially approach their planning. Thus, this is another interesting area to explore in the next step. Literature (Calderhead, 1984; Borko et al., 1988; John, 1991a) has shown that lesson planning will differ by subject area. Related to this would be investigation of their beliefs and knowledge of the specific subject matter and their confidence level in the specific subject and its relationship with their planning practice. It would also be interesting to see factors that might change their beliefs about the subject, and thus influence their planning practice.

In terms of the implication drawn for this study with relation to the roles of the university supervisors and the cooperating teachers, I have suggested the introduction of a joint seminar for the university supervisors and cooperating teachers as a platform for them to recognize their complementary strengths in helping student teachers learn to plan lessons during practicum. This issue needs to be addressed further in terms of the consequences of its implementation. It would be interesting to explore the effectiveness of this joint seminar from the university supervisors' perspectives and cooperating teachers' perspectives, thus naturalistic inquiry seems most appropriate to gain detailed understanding of this issue. As this kind of seminar is common practice in other countries, lessons could also be learned from international collaboration.

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APPENDIX A

Interview Schedule

Interview Schedule (Student Teachers)
(May 2006 – July 2006)

Name	**Initial Interview (INT)**	**Thinking Aloud (TA)**	**Post – lesson (PL)**	**Final Interview (FNL)**
Afiq (***MFH)***	18/05/06	27/06/06	28/06/06	06/07/06
Aina (***AR)***	17/05/06	19/06/06	29/06/06	05/07/06
Elly (***RAG)***	23/05/06	17/06/06	22/06/06	06/07/06
Hani (***HH)***	23/05/06	15/06/06	21/06/06	05/07/06
Jason (***JL)***	15/05/06	12/06/06	20/06/06	09/07/06
Ruby (***RH)***	23/05/06	20/06/06	22/06/06	09/07/06
Reezal (***SR)***	15/05/06	02/07/06	27/06/06	11/07/06
Shasha (***NN)***	17/05/06	19/06/06	29/06/06	04/07/06
Shirley(***LPS)***	24/05/06	21/06/06	22/06/06	06/07/06
Zulie (***ZY)***	23/05/06	21/06/06	25/06/06	11/07/06

APPENDIX B

Initial Interview Questions

General Background

1. Could you tell me about your educational background before university?
2. Tell me about your family background and where did you grow up?
3. When did you decide to be a teacher?
4. What do you think the role of a teacher would be? What do you think of the conditions of being a good teacher?
5. Have you had a teaching experience before?
6. Are you happy with the subject you teach? How do you feel about teaching this subject? Are you confident that you can teach this subject?
7. Tell me about your cooperating teacher and university supervisor? When did you get to know them? Are you happy with them?

Planning a lesson

8. How do you go about planning a lesson?
   Probes:
   a) What are the first things you think about when planning a lesson?
   b) What are the important things came into your mind when planning?
   c) How are you go about finding and choosing resources?
   d) How are you go about deciding activities for your lesson?
9. Do you find lesson plan format valuable in planning a lesson?
   Probes:
   a) If yes, what do you find valuable about it?
   b) If no, why it is not valuable?
10. What are the things you find difficult about planning?
11. How long you spent your time on planning for each lesson?

Influences on student teachers' planning

12. What/who influenced the way you plan your lesson?

Beliefs about planning

13. What does 'planning a lesson' mean to you?
14. When did you first come across teacher planning?
    Probes:
    a) What have you learned about lesson planning at the university?
    b) When did you learned about lesson planning?
    c) Did you find it valuable in helping you planning a lesson?
15. How do you feel about planning a lesson?
    Probes:
    a) Do you enjoy it?
    b) Do you think planning is important?
16. What do you think are the purposes of planning a lesson?

APPENDIX C

Final Interview Questions

Planning a lesson

1. How did you go about planning a lesson?
   Probes:
   a) What are the first things you think about when planning a lesson?
   b) What are the important things came into your mind when planning?
   c) How did you go about finding and choosing resources?
      (What type of resources did you choose in your planning? Tell me why you use these resources?)
   d) How did you go about deciding activities for your lesson?
      (What type of activities did you choose in your planning? Why you choose these activities? What are the first things you think about when you choose the activities? Were there any problems with these activities?)
2. How long you spent your time on planning for each lesson?
3. What are the things you find difficult about planning?
4. What aspect of planning do you still have to learn?
5. Based on your experience, could you tell me how has this practicum changed your lesson plan?
   Probes: Are there any differences between your second weeks planning with the last week planning? If yes, what make changes? What aspect has changed?

Influences on student teachers' planning

6. What/who influenced the way you plan a lesson. What/who influenced you the most?
7. How much freedom do you feel you have to decide what to teach and how you teach it?

Beliefs about planning

8. I would like to talk again about teacher planning. Towards the end of the placement, could you explain what does 'planning a lesson' mean to you?
9. How did you feel about planning a lesson? Did you enjoy it? Did you think planning is important?
10. Could you compare the knowledge about planning a lesson you got at the university and the knowledge that you got from your teaching experiences?
11. Was there anything that you found it valuable from your teaching experience in shaping your belief about planning a lesson?
12. What do you think planning a lesson should be?
13. Is there anything more about planning and placement which you'd like to share with me?

APPENDIX D

Thinking Aloud Commentary

SHIRLEY

The first thing came in her mind while thinking aloud is to identify the subject and class without saying anything more about it. Then she thinks about learning outcome, and to identify the learning outcome, she refers to the topic and she mentioned the topic was chapter 6, Trial Balance. She might refer to the textbook as she mentioned about Chapter 6. She looks in the Syllabus and Curriculum Specification (SCS) for Accounting Principle form four to identify the learning outcomes. Besides thinking about the learning outcomes, she also thinks about the time allocated for the whole lesson. She was quite explicit about the learning outcomes, that is, explaining the function of trial balance, explaining the meaning of trial balance limitation, and preparing trial balance in column.

After having decided the learning outcomes, she then concentrated on dividing her time; she was thinking whether all learning outcomes could be done in 80 minutes. She made it explicit where she clearly dividing time, for instance explaining the function of trial balance will take about 8 minutes, explaining trial balance limitation may take around 10 minutes, and preparing trial balance in column may be 15 – 20 minutes. It seems to me that while dividing the time to accomplish the tasks, she did not explain the reason why it will take only 8 minutes to explain the function of trial balance, or why it will take only 10 minutes to explain about trial balance limitation. (In the final interview, she said; *I read the textbook first, I have to read the textbook first to make sure I know how long I should give time to the topic, usually I read the book for half an hour before planning the lesson).*

Besides dividing time for her to explain, then she thought of planning the activity for students. In her mind, she made it clear that she has 43 minutes for explanation and 37 minutes for students' activity. After making a consensus in her mind that she has clearly divided the time to achieve the learning outcomes, she then started thinking about the teaching approach. She said, how am I going to teach all of these? It seems that she was a bit confuse here, earlier on she already make a decision that she will explain, later she tried to make a decision again how she would go on doing the task. She was trying to make a judgment between explaining the topic in detail and later on give the students one question, ask them to discuss in group or give them a very hard a long question, explain a bit and ask the student to come out and finish up the question. In deciding these two options, she considers the number of students in the classroom. Asking the students to discuss in a group, she thinks it will be noisy afterwards, but she then decided of having a group work. The students discussed in group and present it to the class, and this activity will take 30 minutes. Looking at her thinking process, it was apparent that she is dividing the time for the lesson between teacher explanation and students' activity.

By having in her mind that she has done the students' activity, she then move on thinking on her teaching step. It was interesting here; she already decided that she will explain the topic to the students, now she thought of students to be active. She said; *I don't want to make it teacher centred, not only me who talk in front and they just listen.* She was thinking how to get the students participation. Instead of trying to resolve that problem, she proceeds to plan the first step again. In planning the first step for her to explain the function of trial balance, she thinks of preparing the resources, she chose mahjong paper to list down the functions of trial balance. She was thinking of asking the students' opinion about the functions of trial balance, then listen their opinion and finally give them the answer. She did the same thing for the second objective. At the same time, she was thinking whether her lesson going to be boring and she was really stuck in thinking of making the lesson fun and interesting. For the third objective, she decided to show how to create a trial balance and the students listen to her.

What she did next was planning the students' activity. She decided to forms the groups on her own to ensure that there is no unwanted noise during the discussion. She had done this by grouping the noisy students with the discipline students. In planning the activity, she made it very explicit. She thought of having 8 groups of 4. She identified who is in each group and explains the reason she chose them to be in the group. She also did mention this class is form 4 Pearl. (According to Shirley, students in 4 Pearl are top ability students – initial interview)

After having done all the steps which including the teacher and the students' activities, she started thinking of preparing the set induction. She tried to find out how to make the set induction interesting. She thought the set induction must be interesting in the eye of the students and it must be related to the topic. She tried to figure out what things those balance. The first thing came in her mind about balance are balance diet, but then she thinks it was inappropriate to the topic. Later, she thought of using the analogy of human legs, she said; 'legs have same length, if it's not, it is not balance, and we will fall down easily'. Eventhough she thought the starter was not good enough, she decided to use it to start the lesson.

It looked easier for Shirley to plan a conclusion for the lesson. She thought of doing the same thing which she usually did in the previous lesson. She chose to ask 3 students to explain what they have learned in the lesson, followed by giving them questions to be done as homework. In the end of her planning aloud, she was quite satisfied with the plan, but she has a thought of giving more ideas to make the starter and step one and two more interesting. However, looking in her plan book, it was obvious that she did not giving any changes, meaning that she stick to the set induction and activity which appeared in her thinking aloud planning. It was also apparent that her thinking aloud planning was very detailed compared to her written version in the plan book.

APPENDIX E

Interview Questions
(University Supervisor/Cooperating Teacher)

1. How long have you been teaching at the university/school?
2. What experiences have you had that could help you in supervising the student teachers, and how you supervise them?
3. During the placement period, how many student you have to supervise? How long you spend a time with the student?
4. How do you view your role in helping the student teachers learn to plan a lesson?
5. Tell me why the student teacher must plan a lesson?
6. Describe how the student teacher should plan a lesson?
7. Explain the reason the student teachers have to plan in such way.
8. What aspect of planning is seen difficult to the student teachers?
9. What aspect of planning they still have to learn?
10. How much freedom do you feel the student teachers have to decide what they teach and how they teach it?
11. How do you feel about being a supervisor?

APPENDIX F

Initial List of Codes

Codes / Initial interview	Codes / Final Interview	Codes /post-lesson
Education background	Planning process / first thing	Belief/ teaching Mathematics
Family background	Planning process / important things	Belief/ teaching Commerce
Reason to be a teacher	Planning process / time taken	Belief/ teaching ICT
Belief /know about planning	Planning/Changes in planning	Belief / teaching TESL
Belief/Content knowledge	Difficulties in planning	Belief/content knowledge
Belief/Teaching Maths	Influences in planning / pupil	Teacher activities
Belief/Teaching ICT	Influences in planning /university supervisor	Student Activities
Belief/Teaching Commerce	Influences in planning/cooperating teacher	Strength/activities
Belief/Teaching TESL	Influences in planning / textbook/resources	Weakness/activities
Planning / first thing	Influences in planning/subject taught	Resources/ Textbook
Planning / important things	Planning/Aspect need learning	Pupils ability
Planning / time taken	Resources/textbook	Pupils behaviour
Planning/pupils activities	Learning objectives	Flexible/changes planning
Planning/ Teacher activities / Teaching approach	Belief about planning	
Resources/teaching aids		
Planning/Learning objectives		
Influences in planning / university tutor		
Influences in planning / student		
Influences in planning / teacher		
Difficulty in planning		
Lesson plan format		

APPENDIX G

Codes and Categories

Student Teachers' Background	**Planning a lesson/process**
Academic background	first thing
Family background	important things
Why teacher	Syllabus /curriculum specification
Teaching experience	Content
Placement / subject taught	Resources
Major / minor course	activity
Planning experience	Set induction
	student ability
Belief, Knowledge	pro-forma
Belief / teachers' role	Time
Belief about content knowledge	time taken
Belief / teaching Mathematics	Textbook
Belief / planning a lesson	Topic
Belief~teaching ICT	pupil behavior~attitude
Belief~teaching Business	Learning outcome
Belief~teaching Economi	class size
Belief~teaching Accountancy	
Belief~teaching Geography	**Difficulty in planning**
Belief~teaching English	Content knowledge
Belief~teaching Maths 2	format
knowledge gain from placement / teaching & learning	PCK
knowledge gain from the Univ	Activity
knowledge gain from placement / relief class	pupil behaviour
Source of Knowledge about planning / first time	pupil ability
Source of Knowledge about planning / learn at Univ	Set induction
Influences in planning	time for each activity
syllabus	lesson objective
pupil ability	value inculcated
university tutor	Resources
school teacher	
resources	**Teaching approach**
time	TA~Maths
pupil behavior	TA~Business
subject taught	TA~ICT
computer lab	TA~Geography
textbook	TA~teaching English
peer	TA~Economics
Proforma/lesson plan format	
Changes in planning	**Aspect need learning**
time	Activity
pupil	PCK
activity	Timing
Supervisor /mentor	content knowledge
brief	
experience	**University tutor**
Learning outcomes	**School teacher**
	Freedom in planning
Reflection after lesson	**Adjust planning during teaching**
Strength	**Weekly planning**
Weakness	
planning&teaching	

APPENDIX H

Final Codes and Categories

Student Teachers' Background	**Planning a lesson/process**
Academic background	first thing
Family background	important things
Why teacher	Syllabus /curriculum specification
Teaching experience	content
Placement / subject taught	resources
Major / minor course	activity
Planning experience	Set induction
	pupil ability
Belief, Knowledge	pro-forma
Belief / teachers' role	time
Belief about content knowledge	time taken
Belief / teaching Mathematics	textbook
Belief / planning a lesson	topic
Belief~teaching ICT	pupil behavior~attitude
Belief~teaching Business	Learning outcome
Belief~teaching Economi	class size
Belief~teaching Accountancy	
Belief~teaching Geography	**Changes in planning**
Belief~teaching English	time
Belief~teaching Maths 2	Pupils behaviour
knowledge gain from the Univ	activity
knowledge gain from practicum	Supervisor /mentor
	brief
Influences in planning	experience
Syllabus / CS / textbook	Learning outcome
student ability	Teaching strategy
university tutor	Pupils ability
cooperating teacher	pck
resources	
time	
student behavior	
subject taught	
textbook	
peer	
lesson plan format	

APPENDIX I

A Written Consent Form

Dear Student,

I am writing to ask you if you would be willing to participate in a research project which I am carrying out for my PhD degree at the School of Education and Lifelong Learning, University of East Anglia, United Kingdom. I am researching how student teachers learn to plan lesson during placement at school. You are invited to take part in this research because you are student teacher and have some experience in planning a lesson during your placement.

I am interested in understanding how you learn to plan a lesson during placement. The research will be carried out during your placement, it will begin on the first week of your placement and it will be ended at the end of your placement. I wish to understand your learning process by asking you some questions at the beginning of your placement, and asking you some questions at the end of your placement. I also would like you to verbalize all your thoughts, or think aloud while you are planning your lesson in a free-flowing manner.

I should point out that your contributions will be anonymous and confidential, and that any published research will contain changed names. At the end of the research project the recording and the transcript will be destroyed. As a participant in this research you are free to withdraw your consent if you decide that you do not wish to be involved without question or consequence.

Thank you for your time and kind consideration.

Nafisah Mahmud
PhD student

……

I …… consent to participate in the study. I understand that I can withdraw from the study at any time and that I will not be identified in the research report.

Signature of participant …….. Date …….

APPENDIX J

Lesson Plan Format

Subject
Form
Number of pupils
Date
Time
Topic
Subtopic
Learning Outcomes: At the end of the lesson, pupils will be able to:
(i)
(ii)
(iii)
Prerequisite(s) : In general, pupils.....
Teaching Aids :
Values Integrated:

STEPS	CONTENT	TEACHING & LEARNING ACTIVITY	VALUES/TEACHING AIDS
Set Induction (Minutes)			
Step 1 (minutes)			
Step 2 (minutes)			
Step ... (minutes)			
Step .... (minutes)			
Closing (minutes)			

Reflection:

_____
_____
_____

Supervisor's / Teacher's Comments:

_____
_____
_____