

‘Viable knowledge: the centrality of practice’

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Abstract

This thesis investigates how individual student nurses construct a body of knowledge that is appropriate and able to support or underpin their practical experiences in the early part of their undergraduate pre-registration nursing programme. It is an exploration of how contemporary nursing students link theory, that is fit for purpose, with the art and skills that are pre-requisite for competent nursing practice. The study is written from the perspective of a senior academic and perceived gatekeeper of professional nursing standards, and uses personal and professional writing to illustrate the ontological stance adopted.

Working with the core concepts introduced by Bernstein (1975), Von Glasersfeld (1989), Mezirow et al (2000) inter alia, an emergent research methodology is employed. A questionnaire is used to confirm that the Higher Education Institution where the research was conducted was typical in the UK at the time; web logs (blogs) are used to explore the individual experiences of ten student nurses; and this is supplemented by interviews, naturally occurring and other data to illuminate, extend and contextualise the findings.

The findings underpin the construction of a recursive model that links heads, hands and hearts with a central focus on viable knowledge, this being the knowledge that guides practice.

The contribution of this study to practice relates to the recognition that knowledge must be presented and transmitted in a viable fashion with practice being maintained as pivotal to the educational process, and the recommendations of the study for curriculum design and delivery reflect this. The research concludes that viable knowledge that is dependent upon the centrality of practice in nurse education should become the defining attribute of the nurse of the future.

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Dedicated to my Dad, George Edward Hartill (1934 – 2009),
who would have been so proud.

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1. Introduction to the thesis

1.1 Introduction

This thesis is called 'Viable knowledge the centrality of practice'. The context of the research is that of nurse education within the United Kingdom in the first decade of the twenty-first century. This chapter introduces my research purpose, context and questions, whilst establishing the key concepts and historical background of the study. The origins of my research and the study itself are then summarised and the shape of the thesis outlined.

1.2 Research purpose

The purpose of this case study research is to explore how, within the undergraduate nursing programme at the University of Hertfordshire (UH), individual student nurses construct a body of knowledge that is appropriate and able to support or underpin their early practical experiences. It is therefore an exploration of how nursing students at UH link theory, that is fit for purpose, with the art and skills that are pre-requisite for competent nursing practice.

1.3 Context of the research

This study is particularly pertinent at this time as nurse education is poised on the brink of significant change. From September 2013 students will no longer be able to opt for a diploma preparation and all pre-registration nursing programmes will be at undergraduate level. This will bring nurses into line with other allied health professionals (AHPs) like radiographers, physiotherapists and dieticians for whom preparation at undergraduate level is the norm. Importantly, this change will signal parity for nursing with the other healthcare professionals both within a healthcare or professional context and within society more widely.

Within present day nurse education, students spend equal amounts of time in the classroom and in the clinical practice environment, with both components of the programme viewed as valid and necessary for the preparation of a competent practitioner. The Nursing and Midwifery Council (NMC) is committed to retain this balance between the two components and this study therefore looks to explicate how students at UH use the information/knowledge delivered in the classroom to support practice, in order to facilitate efficient and appropriate linkage in future programmes at the University.

My motivation to undertake this research is that I am the most senior nurse within the hierarchy of the university in which I work and am therefore ultimately responsible to the NMC for the quality of the undergraduate nursing curriculum. My practice is therefore concerned with the implementation of the new standards for nurse education (NMC, 2010), with the structure and content of the new curriculum viewed as my responsibility. This is therefore an appropriate practice focus for this doctoral level study.

1.4 Key concepts addressed

The key concepts in this study are knowledge, curriculum, pedagogy and practice. When discussing knowledge here a number of terms are used both discretely and interchangeably. Information is presented to students within the classroom and how this information is used by the students is explored by the interrogation of web log or blog entries. Wenger (1998) purports that 'knowledge consists of pieces of information that are explicitly stored in the brain' (p.9), acknowledging however, that that this is only a small part of knowing, as knowing also involves active participation in social communities. This description fits well with my research which considers the use of information/knowledge in nursing practice situations. Using a similar conception Von Glasersfeld (1989) refers to viable

knowledge which is pivotal within this study and describes an individual and personal way of thinking, constructed to support practice.

The information presented to the student in the classroom and subsequently internalised, may be classified as art or science and both are referred to in this thesis. The scientific way of knowing has never been the only way of knowing (Piotrowski, 1971) and empiric knowledge alone must be considered inadequate to represent the complexities of the practice world and must be complemented by the aesthetic (Chinn and Kramer, 2004). This study considers both the artistic and the scientific to be synonymous with knowledge; although both are used differentially as appropriate.

Hence, the rationale of this research is to explore how student nurses build a viable knowledge. I view the student nurse as an active participant in this process. The concept of agency is therefore important as 'it is the student who constructs meaning out of opportunities... and allows them to select from their knowledge appropriately in order to solve the problems and dilemmas they face' (Murphy, 2008a, p31).

Within this study curriculum and pedagogy are important concepts when exploring the transmission of knowledge. Both these concepts are referred to in the way that they are described by Bernstein (1975). He recognises the curriculum as valid knowledge, and pedagogy as valid transmission. With reference to knowledge transmission, Bernstein also considers legitimate understanding and, within this study, that is deemed to be understanding in the context of practice.

Murphy (2008a) asserts that a learners' knowledge is context dependent, as context is an integral aspect of making sense of any situation, combined with the learners' prior knowledge and understanding. Within this study

the context is that of the student nurse who spends 50% of the programme studied in practice. Practice, in this instance, is a situation away from the university in the care community, where the student is interacting with healthcare professionals and patients or clients. The words patient and client are used, by me, interchangeably; although generally a patient is accepted to be an individual who is sick whilst a client is someone with an explicit healthcare need who may or may not consider themselves to be unwell.

The concept of practice, Wenger (1998) tells us, is sometimes used as an antonym for theories and ideas. He, however, refutes this and I, like him, do not adopt this approach, instead acknowledging a synergy and a complex interactive relationship between theory and practice. In this study I recognise that the process of engaging in practice always involves the whole person, which includes both acting and knowing (ibid). I also acknowledge that student nurses can not be considered in isolation but are part of a community of practice (ibid).

1.5 Guiding questions

A number of questions have been used to guide this research. All have been similar in their orientation, although their specific emphasis has changed as the study has progressed. Initially the question addressed the impact of the nature of the curriculum on the relationship between scientific understanding and clinical practice. This reflected my early thinking around problem solving and how the students utilised curricula content, particularly the biosciences, to facilitate this. After consideration of the initial data collected, however, I came to the conclusion that to focus on the scientific curricula content alone would limit the scope of the study.

A number of new and specific questions therefore emerged. These were primarily:

- How do students perceive and participate in early practice experiences within the undergraduate programme at the University of Hertfordshire?
- How do they connect this experience to the information/knowledge that has been presented to them in the classroom?

In addition, it was anticipated that if these two questions could be satisfactorily interrogated then the following questions would also be answered.

- How might teachers design and structure the undergraduate curriculum to support a wide range of practice situations?
- How might the development of knowledge be facilitated in order that it supports practice?
- How important is the medium of clinical practice?

All the students involved in my study are following an undergraduate programme. The expectation of student nurses has changed over time and the type and amount of knowledge required to undertake the nursing role has also changed. In order to fully understand the context of present day nurse education, and therefore this study, it is necessary to both chronicle past events and to look to the future.

1.6 The historical background of present day nurse education

The decision to commute all nurse education to undergraduate level can not be considered in a vacuum and must be viewed in the historical context that has seen nurse education grow and develop over the last forty years.

In 1972 a committee of inquiry, set up by the Department of Health and Social Security and chaired by Asa Briggs, reviewed the role of nurses and the training and education necessary for that role, in order that best use could be made of the available manpower at that time. The resulting

report was comprehensive and made seventy five recommendations (Briggs, 1972). The body of the report was, in part, radical and proposed that the structure of nurse education be fundamentally changed and that nursing research units be established in collaboration with Higher Education (HE). There was an emphasis on the unique role of the nurse, the knowledge necessary to underpin practice, and the separation of the service and education aspects of pre-registration nursing programmes. This was the beginning of the establishment of evidence based nursing and a wider recognition, within the UK, of nursing as an academic discipline.

More than a decade later many of the recommendations of this report were incorporated into the Project 2000 initiative (UKCC, 1986) that relocated nurse education away from the hospital and into the HE sector, establishing the academic award associated with pre-registration nursing as a Diploma in Higher Education as opposed to the previously accepted Certificate. This resulted in the development of a new course to a new accepted standard (ibid) that required nurses to spend 50% of their preparation in pursuit of knowledge to support practice with the balance spent in clinical placement. This was a significant change from the previous 15:85 ratio which was the basis of the original apprenticeship type certificate programme.

The student experience within this new regime was very different. Students were no longer salaried and instead received a bursary and were super-numery. Instead of being regarded as employees whose first responsibility was to their patients they were now considered students with the rights and responsibilities that accompany that role. This new dual identity of student and nurse resulted in individuals simultaneously being a part of the healthcare practice culture and the university student culture, which at times results in dissonance for the individual.

In the last decade however the curriculum guidance that is provided by the Regulator (UKCC, 2001; NMC, 2004) has changed, no longer prescribing what the student should know, but instead adopting a largely competency based outcomes model. This kind of professional education is a sharp contrast to other types that emphasise what a learner should know on completion of the programme. Competency based education, Fearon (1998) tells us, is most concerned that learners can fulfil the daily role required of a practitioner. Competence, however should not only be concerned with skills and the performance of tasks or what the nurse can do but should also address the underpinning knowledge and attitudes of the learner (Von Glasersfeld, 1989). This continuing tension between knowing and doing, remains a challenge for contemporary nurse educators who are concerned with the holistic performance of the nurse, which includes problem solving and the application of relevant theory to the nursing actions and procedures under consideration.

This brief description of the historical context sets the scene for my research, which is conducted at a time when the future of the National Health Service (NHS) and the shape and rationale of the education of nurses is again under review. The NHS Next Stage Review sets out the current vision for the future of the NHS asserting that 'nursing must attract the best quality recruits in an increasingly competitive labour market' (Department of Health, 2008, p19). This time no direct reference is made to practical capability at point of qualification, but the report does allude to the academic level of such education and the possible positive effect that an all graduate profession might have. I interpret this in terms of increased problem solving ability and professional autonomy, both concepts that are pivotal in this study.

A recognition by the National Health Service (ibid) that the nursing

profession needs the best quality recruits coupled with the published intention of the NMC (2008a) to move nursing to an all graduate profession is seen by most of my contemporaries as an opportunity to subtly re-profile nursing and nurse education and re-evaluate the responsibilities associated with each. Dominant discourse would appear to suggest that nurses educated to a higher academic level will be responsible for less hands-on care, instead being charged with higher level decision making and care management. If this is to become a reality then well prepared assistants will be required and a system that controls and manages this introduced. This thesis argues for a new breed of registered nurse who, during the pre-registration education process, is facilitated to build a personal and unique body of knowledge that will support the organisation and delivery of care. By doing this, nursing will be ensured to remain a practice based and focused profession and not become merely an administrative act. As a result of the NMC (ibid) decision to move nursing to an all graduate profession, individual universities must review and re-engineer their curricula, making choices about how the curriculum should be presented to support this new conception of nursing and this thesis looks to guide that activity.

1.7 Origins and development of the research question

The origin of this research is my own experience as a nurse educator. In 1993 many hospital based schools of nursing merged with, or were assimilated into, university departments. My experience was that two schools of nursing, in close proximity to each other, merged with the same university. Each had a recently developed and validated curriculum and for two years these were delivered in parallel. Although both curricula were guided by the same outcomes and the content was broadly similar they were constructed very differently. One used an integrated approach whilst the other presented a more topic or science based rationale which much later I recognised as the two different categories of curricula

structure as described by Bernstein (1975). As an individual I soon noted that there was a qualitative difference between the two groups of students on completion of their differing programmes.

The two groups of students appeared to use their knowledge very differently. Where students had studied an integrated curriculum the patient appeared to remain at the core of all conceptualisation whilst some students who had studied science in a non contextualised fashion were happy and able to enter more readily into discussions relating to the underpinning sciences. On reflection these two groups of students had built their viable knowledge very differently, which resulted in differing approaches to patient or client problems. This was very noticeable with some hospital managers commenting on the different modes of operation in the individuals in question.

What is chosen as the focus of any research is a clear declaration of the researcher's interest (Weiner, 1989), and because of my experiences initially my research interest was specifically related to curricula structure as I believed that this was central to how nurses processed information and approached decision making. Later this focus was modified to focus on the individual student and more specifically upon how the foundations for a viable knowledge are laid and how the individual develops that within the clinical context. Curriculum structure remains of interest, although it is no longer **the** primary focus of my research study.

During the early part of the research process I did not consider my own identity and how my unique perspective, a product of the experiences outlined above, and my opinion with reference to the most efficient curricula structure would, affect the questions I asked and the interpretation I placed upon the answers. Savin-Baden (2004) highlights this as a potential problem and asserts that the researcher must constantly

reflect upon their own behaviour. I reflected little upon what I brought to the research, merely having the expectation that if the curricula structure was 'right' a competent nurse would be produced. I aspired to being able to measure the effectiveness of the curriculum, in order to be able to prescribe to others responsible for the education of pre-registration nurses, the most effective structure for the preparation of a competent nurse.

The experience of being a student within the EdD programme has challenged that initial perspective. Exploring, within the programme, my identity as practitioner-researcher in parallel with looking at appropriate literature and developing research knowledge and skills has resulted in my seeing the world and my research question from a very different perspective. In addition, at the end of my first year of study I suffered a skiing accident that resulted in a badly broken leg and a long period as an in-patient. During this time I was in a local NHS hospital surrounded by my own students. This was a very sobering experience as I was severely incapacitated and totally reliant upon the nursing staff. This experience allowed me to observe nursing performance over time and from a very different perspective. I was in this way enabled to critically reflect on some of the personal assumptions on which my research was predicated and this acted as a catalyst for the necessary change in the research design.

Taylor, K., (2000, p298) refers to this as 'subjective reframing', referring to a change in one's frame of reference, this being how the individual structures assumptions and expectations for sense making. The consequence of this subjective reframing has been a shift from looking at the research question from an institutional perspective to focusing on the individual student nurse.

Both the context and purpose of my research and my relationship with the data are kept under review as the conceptual framework emerges and

methodological decisions made. Ongoing reflection and consequential changes to my frame of reference are therefore acknowledged as a part of my developmental progression and my identity as researcher, which both remain explicit throughout.

1.8 The research study

Guided by the research purpose and the questions articulated in sections 1.2 and 1.5 respectively this case study research takes an emergent approach, in that it utilises 'whatever is called for during the processes of data collection, data analysis, and the construction of the final document' (Ely et al, 1997 p4). This approach incorporates a number of research and theoretical points of view and acknowledges such perspectives as significant in shaping the overall approach, whilst not adopting them in a formal sense. These perspectives are discussed and explored appropriately in Chapter Four, where the methodology adopted in this research is made explicit. After confirming the University of Hertfordshire as a typical Higher education Institution via a national survey which is included as Appendix One a qualitative methodology is employed as the student experience becomes the central focus of the research

In this study therefore I address how student nurses in a typical university use the knowledge presented in the classroom to underpin their early practice. The study recognises the relationship between the information/knowledge presented and the student's experience within clinical practice, culminating in the construction of a body of knowledge that is unique to the student, and varies according to their individual journey and their experiences with reference to clinical placements and the patients and clients cared for. The foundations of this viable knowledge are therefore established in the classroom and are common to all students. Subsequent development, however, is personal and contextual and will not be exactly the same for any two individuals.

The experience of these students is captured via weblogs or blogs which act as repositories of the students' early experiences and the information gleaned in this way is triangulated and extended by data collected during interviews with students, academic staff and others and by naturally occurring and other data. Hence, this study contributes to the debate around how knowledge should be presented to support practice and how the mediation between theory and practice can be facilitated. Learning is expressed in terms of the skills students are able to perform, what students conceptualise in terms of knowledge and the compassion/care with which their practice is delivered. The position and status of practice in the curriculum is thus interrogated at a point in history where there is a wide variation between regulators in different parts of the world with reference to how long a clinical practicum should be and how success is measured in that time.

1.9 The shape of this thesis

In this thesis an overview of relevant literature is presented in the next chapter. This chapter reviews the literature concerned with curriculum, knowing and practice in nursing. It firstly reviews different curriculum structures for contemporary nursing programmes. The chapter then focuses on different types of knowledge contained within a nursing curriculum, with particular reference to how such knowledge is used in clinical practice. The art and science associated with, and underpinning, nursing is then differentially explored and conceptions of knowledge in nursing explicated. The nature of the practice experience is interrogated from the point of view of its role in the socialisation of the student nurse and the establishment of a professional identity. Finally the contribution of knowledge to the development of professional practice and the perception of nursing as a profession are explored.

In Chapter Three my unique perspective is explored with a particular emphasis upon my ontological perspective. My inimitable view of the world is captured via the analysis of my personal and professional writing in the form of my personal diaries which span the whole of my professional life as both a student and practitioner, and the professional monthly comment piece that I have written for the British Journal of Nursing (BJN) for the majority of the time that I have been enrolled on this professional doctorate. This chapter provides a personal context for the presentation of the research findings and analysis and interpretation of the data collected, which are the basis of Chapters Five and Six.

Chapter Four gives details of the research methodology employed within this thesis and in so doing traces a personal journey and chronicles how my attitudes and philosophies changed during the research. A qualitative methodology was adopted within a case study approach, with a number of perspectives explored and acknowledged. Those adopted resulted in the previously mentioned emergent approach (Ely et al, 1997) that was continuously adapted to meet the needs of this specific study as it unfolded.

Chapter Five focuses upon the student experience as related via the blogs and following analysis of that data an iteration of the conceptual model, created by repeatedly immersing one's self in the data collected is shared. This model, which I refer to as a recursive model due to the fact that the data used in its construction is visited recursively, is then further developed and defined at the end of Chapter Six which considers data collected during interviews and naturally occurring and other data that illuminates the situation under review.

Chapter Seven reviews the key contributions to practice made by this study and finally Chapter Eight presents a number of conclusions and

recommendations which include implications for changes to practice, future research and policy within the arena of nurse education, with particular reference to the introduction of an all graduate profession which is about to become a reality in the UK.

1.10 Conclusion

This research is taking place at a point in history where nursing within the UK is about to become an all graduate profession, with all new students from 2013 embarking upon under-graduate programmes. The content of these programmes will follow standards for nurse education published by the Nursing and Midwifery Council who are charged with keeping the professional register and protecting the public (NMC, 2010). This research will thoroughly investigate how the information or knowledge delivered in the classroom is used to underpin early practice in the nursing degree programme at the University of Hertfordshire. It will chronicle how individual students develop their own viable knowledge and the importance of the practicum within that process. Conclusions will then be drawn, and recommendations made to guide nurse educators and policy makers elsewhere, with reference to how the curriculum should be engineered within new undergraduate programmes that will be responsible for moulding the nurse of the future.

2. Curriculum, Knowing and Practice for Nursing: a review of the literature

2.1 Introduction

This chapter will review the literature concerned with curriculum, knowing and practice in nursing. It will firstly review different curriculum structures for contemporary nursing programmes in line with Bernstein's (1975) interpretation of knowledge codes and how they are transmitted. Different types of knowledge contained within a nursing curriculum will then be explored, with particular reference to how such knowledge is used in clinical practice, and the concept of viable knowledge as articulated by Von Glasersfeld (1989). The art and science associated with, and underpinning, nursing will be differentially explored and the notion of duality as described by Wenger (1998) introduced and applied to conceptions of knowledge in nursing. The nature of the practice experience will be explicated from the point of view of its role in the socialisation of the student nurse and the establishing of a professional identity. Finally the contribution of knowledge to the development of professional practice and the perception of nursing as a profession will be explored.

2.2 The structure of nursing curricula

This thesis conceptualises the structure of the nursing curriculum using the work of Bernstein (1975) and his interpretation of educational knowledge, particularly how society reflects, classifies, distributes, transmits and evaluates knowledge. 'The structure of cultural transmission', we are told (ibid, p85), is a major regulator of how the student perceives future experience, leading Bernstein to question how such experiences are affected by the formal transmission of educational knowledge. Formal educational knowledge, he tells us, is communicated via three media: the curriculum, which defines what is considered valid knowledge; pedagogy,

which defines valid transmission; and evaluation, which defines legitimate understanding.

This thesis contextualises the three media used to communicate knowledge by looking at the types of knowledge contained within the nursing curriculum and the validity of that knowledge from the student perspective. Pedagogy is contextualised by considering the efficiency of the way that information and knowledge are transmitted to the student and evaluation or legitimate understanding by how the student assimilates what has been learned into his/her practice.

Bernstein (1975) uses the term 'educational knowledge code', which considers the underlying principles that shape such curriculum, pedagogy and evaluation. The form this code takes is dependent upon the classification and framing of knowledge. Classification refers to the nature of differentiation between the contents of the curriculum, whilst the frame is the structure of the message system and the context in which information is transmitted and received. He purports that within any society these two educational concepts reveal both the distribution of power and the principles of social control (ibid). In the context of this study, the form of delivery communicates implicitly whether the student nurse will use the information to make autonomous nursing decisions or merely to be able to understand the instructions given by others, whether or not those others are more senior nursing colleagues or medical practitioners.

Consideration of the educational knowledge code provides a form by which any curricula can be classified, and such differentiation separates curricula into two distinct categories which Bernstein refers to as Collection and Integrated (ibid). The former refers to situations where contents are clearly segregated by discipline and the disciplines are insulated from each other, which he suggests will involve both strong classification and framing.

Conversely the latter is when all subjects in a syllabus are subordinate to the general orientation of the whole curriculum, thus implying a weak classification and frame.

When applying this categorisation to nursing programmes either category could be seen to apply. Various studies imply that those responsible for planning the curriculum have retained scientific principles as the building blocks of the curriculum (see, for example, Eraut, 1994; Trnobranski, 1996), whilst others have integrated all content ensuring that the context of nursing is always primary (see, for example, UKCC, 2001; Wynne et al, 1997). For those employing an integrated approach, holistic care is seen to be the over-arching integrating force (UKCC, 2001). Although this classification of curricula can be applied with ease to contemporary nursing, few authors have made the connection. One exception is Cooke (1993) who interrogated the boundaries between subjects, with particular reference to sociology within the nursing curriculum, using the work of Bernstein to organise her thoughts.

Cooke (1993) reported that for many years nursing, as with primary school education, was taught by one teacher who was responsible for a cohort of students, with that teacher carrying out the majority of teaching. More recently, as programmes were relocated into Higher Education, they were modularised, with the resulting modules being organised in a number of ways (Phillips et al, 2000). This resulted in a move away from a single cohort teacher to a practice where curriculum delivery became the business of a group of nurse teachers and other academic staff. Different disciplines within the curriculum have conflicting cultures and this has been seen to cause significant tension, particularly as some academics see the disciplines to be hierarchically stratified and valued differentially (Cooke, 1993). Boundaries between disciplines within the nursing curriculum, from a sociological perspective, can result in the staking out of a subject's

territory and this is important in terms of the value/resources allocated to support its delivery (ibid). Confirmation of the value of one subject can therefore by implication depreciate the value of others.

The relationship between the organisation of the curriculum and the ideas that it transmits are seen to be paramount by Cooke (1993), with the structure of a nursing curriculum reflecting the kind of nursing that it seeks to reproduce. Knowledge, we are told (see, for example Von Glasersfeld, 1989; Murphy, 2008a) is constructed rather than discovered by the individual and much has been written with reference to how nursing knowledge/theory is developed (See, for example Chinn and Kramer, 2004; Walker and Avant, 1995) and what social processes influence its creation (see, for example Bernstein, 1975; Cooke, 1993).

In recent years, with the introduction of theoretical models to guide the delivery of care (See for example Roper, Logan and Tierney, 1996; Orem, 1995; Roy, and Andrews 1991), the education of nurses has become more holistic and an integrated model has, in most educational institutions, become the dominant curricula structure associated with nursing. Looking from a sociological viewpoint this has enhanced emphasis on the nurse-patient relationship. However it must be recognised that there are also grave reservations with regard to the amount of science, particularly bioscience, included in an integrated curricula. Wynne et al (1997) coin the phrase incomplete holism citing compelling evidence suggesting that biological sciences are neglected when an integrated curriculum is employed. The teaching of biological sciences within nursing courses by ill-prepared nurses or scientists ignorant of how physiology relates to nursing, as opposed to biomedical patient need, is cited as one reason as to why this may be so.

The initial curriculum guidance (UKCC, 1986) provided as nurse education moved into the Higher Education sector, identified requirements that included biosciences as a substantive component. More recent guidance for pre-registration nursing programmes however, has included no such directive (UKCC, 2001; NMC, 2004; NMC, 2010) with regard to either the depth or breadth of bioscience content. It is acknowledged by McVicar and Clancy (2001) that completing a pre-registration programme is only the initial stage in a practitioner's education and therefore expectations must be reasonable and should relate to a minimum requirement for safe and competent practice. A plea for subject guidelines and a suggestion that the professional body should develop these has been repeatedly articulated (ibid; Trnobranski, 1996) but the Nursing and Midwifery Council (NMC) have not, to date, seen this as part of their responsibility.

As the amount of science in the curriculum is so variable, and the way it is threaded through varies according to the curricula structure chosen by the HEI, it is difficult to articulate reasonable expectations, with institutions showing huge variations (Wharrad et al, 1994). Concerns as to whether students are able to conceptualise patient problems in terms relating to the supporting sciences and whether there is clear mediation between theory and practice in all curricula are key (Eraut et al, 1995). Other reported concerns relating to the teaching of science, include sharing between courses and the number of students participating and teachers delivering such courses (Eraut et al, 1995); all of which can be implicated when considering the quality of the nurses' learning.

Integrated curricula have been used widely within pre-vocational education and the motivation for such a structure can be viewed from two very different perspectives. Developed in response to various political and economic pressures and in many ways similar to vocational nursing curricula, such courses are claimed to be motivating and useful for the

learners concerned (Atkins, 1989). Some criticism is however acknowledged, the primary one being that this is in fact second-class education that further disadvantages those groups already failed by the educational system (ibid).

On a positive note however, pre-vocational education extends the range of educational opportunities available, progressively enabling individuals to make life choices, which reflect their skills and interests and do not cut them off from the benefits of education (ibid). Components of such courses allow individuals to develop skills and techniques and to appropriate knowledge for their own use. Individual autonomy is increased and the nation's workforce is enabled to become more flexible and adaptable. However, theorists influenced by a neo-Marxist perspective would articulate a different perspective. They would interpret the situation as a ploy to freeze out working class students from more prestigious studies. Offering them instead a lesser valued education that will effectively preclude them from entering jobs with real economic power and deny them access to the historically valued knowledge of the groups dominant within society (Bourdieu and Passeron, 1977, cited in Atkins 1989).

Applied to a nursing care or pre-vocational context, this could be interpreted as individuals only being taught that which is necessary for them to carry out a task; higher-level problem solving skills being retained by others educated using a different paradigm. Take for example a scenario where a nurse educated to degree level or a doctor is engaged within a practical situation, such as giving an injection. This task is viewed by the professional in a very specific context. They are able to conceptualise the anatomical structures involved, the physiological processes, and have a psychological understanding of the patient's reaction. A support worker or carer, on the other hand, whilst able to carry

out the same task, is only expected to master how to put the needle into the skin, carry out rudimentary procedural checks and press the plunger. Whilst both groups can effectively administer the drug only the former is enabled to solve potential problems and this dictates the limited range of situations in which those with a limited knowledge can participate.

This effectively results in individuals without a comprehensive grasp of the knowledge underpinning their practice being unable to engage in complex problem solving. In the past this may have limited the scope of some nurses and prevented them from becoming major players in the multi-professional team. Nurses, who were previously taught at less than undergraduate level, all engaged with theory that underpinned their practice although a lower academic level may have resulted in application being limited. The question is not whether valued knowledge was taught but whether it was taught in a way that could be conceptualised and applied by individuals to everyday nursing situations. Although Atkins (*ibid*) articulates this perspective persuasively with reference to vocational training I remain unconvinced as to its continuing applicability to nurse education. Indeed recent evidence would suggest that curricula presented in an integrated format can indeed be presented to students undertaking prestigious courses that are designed to enable them to undertake powerful roles within society.

In medical education there is recent evidence that suggests that integrated curricula can be an efficient means of transmission. This would move discussion away from the previously cited neo-Marxist perspective (Atkins, 1989) as the knowledge acquired by medical staff is synonymous with power and position in society. In Manchester, lecturers within the medical school, describe their curriculum as integrated, claiming that there were no courses in the traditional disciplines, citing the examples of biochemistry and surgery (O'Neill et al, 2000). Each module, instead, had an

overarching theme, which governed the integration of all the relevant disciplines. This curriculum employed problem-based learning. Such courses date back to the mid 1960s and result from the desire to move away from the compartmentalisation of knowledge and lack of integration with regard to content giving rise to contestation regarding ownership of subject matter (Neufeld et al, 1989). One of the identified intentions or purposes of problem-based learning is that learning is structured through integration of subjects within the course studied (Marks-Maran and Thomas, 2000).

Curriculum mapping is another technique used in integrated medical education and cited as the key to a really effective integrated curriculum (Harden, 2001). Using this tool teachers are encouraged to exchange information about what is being taught and to co-ordinate their teaching, in order that collective goals are reflected and achieved. Medical educators are reminded that the curriculum is multi-faceted, being a blend of educational strategies, course content, learning outcomes, educational experiences, assessments and educational environments. This message, again, illuminates the original work of Bernstein (1975) who asserts that staff relationships can be strengthened when the separate hierarchies of specialised education are removed and lecturers enter into a new social relationship that emerges from a shared co-operative educational task. Such new relationships are viewed as horizontal, as there is no obvious power differentiation. Teachers, united by a common endeavour, experience an altered power structure within the institution affecting both them and their students. This is therefore, not simply a question of what is taught, but of a differing order and control (Bernstein, 1975) with respect to pedagogy and the framing of knowledge.

Curriculum mapping (Harden, 2001) is therefore a tool used to facilitate a positive experience of integrated curricula. In both medical and nurse

education it can ensure the constant dialogue between the course contents and what students are expected to do in the practice arena. Used positively this can reduce the theory practice gap articulated by so many (see, for example, Dale, 1994; Melia, 1987). However, such experiences are not always constructive, and five prerequisites are required if integration is to work (Bernstein, 1975). The first two inter-relate and demand a consensus with reference to the integrating idea and a need for this to be explicit. Linkage between the integrating concept and all contents are also required to be coherently and systematically worked out. In addition, academics and students must develop systems to control the whole endeavour and include clear criteria for evaluation. Concept maps would appear to promote all these pre-requisites.

There is no doubt that collection curricula and integrated curricula offer differing strengths and this thesis will explicate the experiences of the nursing students in relation to the way curricula is structured. A move toward integration allows the outside to penetrate the lecture room in new ways (ibid). This could be viewed very positively within nurse education where the outside is the world of practice and integration is seen as a mediator between that world and the academic preparation within the University. This however must be weighed up against the need for the teaching of pure science, which may better enable practitioners to deconstruct the problems that they encounter in the context of practice and solve them using the scientific principles mastered within the curriculum.

2.3 Knowledge contained within the nursing curriculum

The structure of the curriculum would seem to be, at least in part, dependent upon the types of knowledge contained within it. Where an integrated curriculum has been embraced a shift in emphasis from educational depth to educational breadth and a focus on general principles is apparent (ibid). As has already been mentioned, selection and

sequencing of material to be included in a particular university's curriculum is the prerogative of individuals developing the curriculum, guided by the prescribed educational outcomes (NMC, 2004; NMC, 2010; QAA, 2001). As a result different university departments will produce nursing graduates with differing strengths (Wharrad et al, 1994), due in part to the balance of the curriculum taught.

For ease of discussion the knowledge contained within the curriculum can be categorised in a number of ways and I have chosen to use, in part, the four ways of knowing offered by Chinn and Kramer (2004). Predicated upon the work of Carper (1978) who asserted that 'It is the general conception of any field of inquiry that ultimately determine the kind of knowledge that that field aims to develop.... and what kinds of knowledge are held to be of the most value in the discipline of nursing' (p13), these fundamental patterns of knowing are considered to be comprehensive. They are asserted to be empirics, the science of nursing; ethics, the moral component of knowledge in nursing; personal knowing in nursing; and aesthetics, the art of nursing. I use empirics and aesthetics as main categories with the other two patterns of knowledge being addressed as appropriate.

Within this thesis the use of knowledge to underpin clinical practice is the main concern. To conceptualise this I employ the work of Von Glasersfeld (1989) generally, and his concept of viable knowledge particularly. Viable knowledge, we are told, 'is used to navigate the world' and 'is a viable way of dealing with some sector of experience' (p15). He asserts that such knowledge is constructed by the individual and relies upon an internalised conceptual framework and a match or correspondence between that cognitive structure and what it is supposed to represent. Within this study what is presented within the nursing curriculum therefore, must fit the

experience of the student and viable facts must not clash with what is experienced in clinical practice.

Substantiated by Von Glasersfeld (ibid), whilst the students are undertaking their first four weeks of clinical practice, their viable knowledge remains dynamic as each time there is a mismatch between their internalised cognitive framework and the clinical practice experience, their individualised cognitive structure has to be modified and as part of that process knowledge becomes more complex and extended. Von Glasersfeld (ibid) recognises that the ability to compute such results from any situation is a product of reflection. Whilst he accepts that such a process is not observable he claims that it can be inferred from subsequent behaviour. Von Glasersfeld's (ibid) conception of reflection is however different from that developed by Schön (1987; 1988) being an ability of mind rather than one concerned with action and behaviour. Von Glasersfeld's (ibid) talks of 'operative knowledge' (p12) which he defines as knowledge that is 'not associated with the retrieval of a particular answer but rather knowledge of what to do in order to produce the answer'.

The value of the internalised cognitive framework of the student is therefore 'the experiential adequacy, the goodness of fit with experience and the validity as a means for solving problems' (ibid, p7). This view of knowledge relies upon the students' successful conceptual organisation of what is presented in the classroom and subsequent application to the clinical practice experience. It is interpreted in my study as a laying of the foundations for competent practice. Von Glasersfeld (ibid) tells us that 'A student's ability to carry out certain activities is never more than a part of what we call competence. The other part is the ability to monitor the activities. To do the right thing is not enough; to be competent, one must also know what one is doing and why it is right' (p13).

This theory is complemented by the writings of Mezirow (2000) with reference to transformational learning or a change to one's frame of reference. He refers to the writing of Rosenfeld (1988) who contends that 'we appropriate symbolic models, composed of images and affective reactions acquired earlier through the culture and idiosyncrasies of parents or caretakers – a highly individualistic frame of reference, and make analogies to interpret the meaning of new experiences (p5). Mezirow (2000) also acknowledges that as adults making informed decisions, individuals need not only an awareness of the source and context of knowledge, but also need an ability to critically reflect on the validity of assumptions and premises.

Both Von Glasersfeld (1989) and Mezirow (2000) are corroborated by Murphy (2008a) and McCormick and Murphy (2008) who both assert that students actively construct meaning and knowledge, and use problem solving as an adjunct to knowledge construction. Both articulate the concept of agency purporting that it is the individual student who construes meaning from their experiences and gains explicit understanding of what and how it is known. Student nurses are therefore able to develop the ability to select knowledge appropriately in order to solve the problems and predicaments that they face. Both the artistic and the scientific are utilised by the individual and the origins of both types of knowledge within the nursing curriculum will now be considered.

2.4 Science in nursing: empirics

Nursing science is viewed as a cornerstone of nursing education (RCN, 2003) particularly in the American literature. The science of nursing or empirics (Chin and Kramer, 2004) can be traced back to the precepts of Florence Nightingale which were originally published in 1860 (Nightingale, 1969). These precepts concern the importance of observation and accurate record keeping. Such empiric knowing can be observed in a

practitioner as scientific competence and involves both logical reasoning and conscious problem solving (Chin and Kramer, 2004). Within my study the exact nature and characteristics of the concept of nursing science are acknowledged as the subject of considerable debate and whether such science is unique or borrowed from other disciplines is open to interpretation (McKenna, 1997). If the latter is true issues of power and control as addressed by Bernstein (1975) are brought into sharp focus, although are of little consequence if the science is presented by nurses in the context of nursing. If presented by others however, for example bio-scientists or doctors, it might be questioned whether nursing has or needs its own body of knowledge and whether it is a profession and therefore worthy of graduate status.

2.4.1 Nursing science: its status and origins

How ever nursing science is conceptualised, it must be viewed as a subset of science and I will therefore, in this section, focus upon science as an entity considering how it has evolved over time and how it is viewed not only by the profession of nursing but also by society.

For clarity I will look at how the term science is variously defined and understood in common parlance. A selection of dictionary and glossary definitions (see, for example, Hanks et al, 1979) profile science as a systematic field of study, a method of enquiry or a body of knowledge that sets out through experimentation observation and deduction to produce reliable explanation with reference to the material and physical world. Hypotheses generation and testing allow scientific knowledge to be validated and concepts to be arranged according to their rational connections and to be viewed as an organic and progressive whole.

Throughout history there has been an intellectual drive toward a rational understanding of the world, acknowledging that science is but a part of

man's efforts to understand himself, his culture and his universe (Greene, 1981). Moore (1993) tells us that, in modern society, many individuals have little first hand experience of nature. Over the last five thousand years, he asserts, evidence suggests that urban communities have grown in size and complexity and as society has become increasingly more differentiated the number of people securing their food directly from hunting, gathering or farming has slowly but significantly decreased. This has resulted in the average person having very little knowledge of natural science in relation both of where their food comes from and of other natural processes like birth and death, which have been medicalised and are no longer seen as the domain of the man and woman on the street. Aristotle was the first to describe the world in relation to natural causes as opposed to myth and the supernatural (Moore, 1993). Analysis of nature has since that time become increasingly rational and the data empirical. When individuals begin their nurse education the majority experience is one of ignorance with reference to these experiences.

In science, reality is assumed and is determined not only by our capacity for inquiry but also by the way it fits together and can be replicated. Piotrowski (1971) refers to the system of science purporting that although this does not explain reality, it does tell us how we get to know about reality and are able to validate it. Such a system is a valuable aid to understanding and is a device that can be used to reduce subjectivity. Piotrowski (ibid) offers a model for science structure where four components are identified and only the combination of all four constitutes an empirical science. This can be applied to nursing science and may also guide what an individual may include in that category.

The pivotal component is 'concepts and their definition', which I will explicate here. These largely determine the subject matter of the science in question and may, depending upon the situation, be either facts or

ideas. It is acknowledged here that every empirical science deals only with selected aspects of reality and to some extent this defines the science in question. Concepts are then related to two further components ('propositions and theories' and 'empirical referents'), although the two, in the model, are not related to each other. Propositions and theories refer to the interrelationships between concepts, thus describing stable and repeatable relationships. Before validation such propositions are hypotheses, that may ultimately be supported (or not) by relevant empirical evidence. Empirical referents establish a direct link between thought and reality and represent concepts in terms of sensory-motor experience. All science aims at objectivity and uses empirical referents to make concepts intelligible, communicable and repeatable. Clinicians begin with such empirical observation and look for appropriate concepts, making this component of particular interest to a practice based discipline such as nursing. The final component can be related to either of the two components just described and is 'validation of propositions'. This is the stage at which a proposition is corroborated by the relevant empirical evidence.

Originally this model (ibid) was conceptualised in the context of social science but is applicable to all branches of science. It acknowledges the fact that scientists are interested primarily in generalisations relating to impersonal empirical events. Piotrowski (ibid) however tells us that scientific thinking differs from non-scientific thinking only in the degree of care and precision. Non-scientific thinking, in the context of my study the art of nursing, is about practical and personal matters and therefore need not be concerned with approval of others, systematic analysis of evidence or scientific laws. Nevertheless we are assured that, both types of thinking utilise the same function to obtain satisfactory results. The difference is one of degree not of essence (ibid). Idea production, in any context we are told, depends upon concepts and propositions and the individual's ability to

critically evaluate his observation and authenticate them. New ideas are always subjective and personal. In science and indeed in nursing science, the subjective becomes objective through the interaction of the four described components.

The scientific way of knowing was therefore never the only way of knowing and for most of history it has not even been the dominant mode of understanding the worlds' phenomena (ibid). Explanations of concepts such as sickness have now moved from divine fury to justification that can be attributed to the natural world. The basic assumption of the scientist is that nature is, in principle, predictable and that phenomena have constant cause-effect relationships. Scientists therefore only recognise data obtained through observation and experimentation. The term 'beyond reasonable doubt' is the goal of any scientific statement; although the best science today will inevitably be replaced by better science tomorrow (Moore, 1993).

Greene (1981) reviews Kuhn's 'Structure of Scientific Revolution' recognising how important this is in the historical development of science. Kuhn's ideas are an important attempt to construct a picture of the processes by which a branch of science is born and subsequently undergoes change and development. Conceptualised to describe the emergence of a science like genetics, his theories can also be applied to other branches of science including nursing science. Kuhn's model can be summarised into six stages. Before the particular model of science emerges the phenomena under consideration are observed studied and described from widely differing viewpoints. From this a scientific paradigm emerges, which is published by one or more respected scientists illustrating concepts and serving as an inspiration. The third stage sees science conducted within the new paradigm, allowing new possibilities to be explored, predictions to be made and problems solved. At this point

new applications are developed. As science is conducted in the new framework, new possibilities are explored and predictions made. Crisis occurs at the next stage when discoveries made violate the paradigm as described to date. At this stage there is a shift in paradigm to accommodate the newly discovered knowledge leading to the final phase in which a new paradigm is born. This iteration could be applied from bio scientific knowledge to medical science and finally to nursing science with a variable number of developmental stages or iterations interspersed. With each iteration therefore, the science becomes more sophisticated and fit for purpose.

Nursing science is defined contemporarily as a domain of knowledge concerned with the adaptation of individuals and groups to actual and potential health problems, the environments that influence health in humans, and the therapeutic interventions that promote health and affect the consequences of illness (Stevenson and Woods, 1985). Practitioners canvassed by the RCN (2003) however, appear to perceive nursing science somewhat more simplistically as knowledge relating to health and illness embracing physical sciences such as physiology and social sciences like psychology thus reflecting the World Health Organisation perspective that nursing draws on knowledge and techniques derived from the humanities and the physical, social and biological sciences in addition to knowledge and skills specified by the discipline (ibid).

Having clarified the general use of the term science I will now focus attention on specific nursing science. This conception of nursing science was embraced by the RCN steering group (ibid) and is comfortable and contiguous with the working definition of nursing offered by them after wide consultation with and participation of members of the said professional body and others. This definition purports that nursing is: 'the use of clinical judgement in the provision of care to enable people to improve, maintain or

recover health, to cope with health problems, and to achieve the best possible quality of life, whatever their disease or disability, until death' (p25). These two definitions when considered together explicitly embrace both the logical reasoning and conscious problem solving identified by Chinn and Kramer (2004) as demonstrative of empiric knowing and convey a use of knowledge in action which is systematic and open to objective investigation. Although applied to nursing however, much of the theory referred to is in common use by and perceived to belong to other disciplines. It is in this sense that nurses 'borrow' the knowledge of disciplines like medicine, bioscience and psychology

2.4.2 The 'borrowed' curriculum in nursing

The concept of borrowing knowledge or theory within a curriculum is well documented (see, for example, McKenna, 1997; Slevin, 1996 and Chinn and Kramer, 2004), although it would appear to be becoming somewhat less contentious as time moves on. Various forms of borrowing are articulated ranging from adoption and adaptation of theories from other disciplines (Slevin, 1996) to theory derivation (Walker and Avant, 1995) which is best described as a process by which knowledge or theory is reinvented to suit a nursing purpose. In the first year of a typical nursing curriculum, as utilised in this study, all types of unique and borrowed knowledge are apparent. Biosciences generally are adopted in their entirety with application to a nursing context. Social sciences, on the other hand, such as psychology are adapted to fit that context. Concepts such as diversity rights and equality are the subject of theory derivation, in that in such a curriculum they are identified, examined in detail and reformulated in order to explain nursing experiences. Finally, nursing skills, nursing practice and professionalism are, in the most part, delivered as theory unique to nursing and rely upon specialist knowledge and texts developed specifically for a nursing context.

The balance of unique and borrowed knowledge in the curriculum provides substance for an interesting discussion, with particular reference to power and control of the curriculum within the nursing profession. Power in this context must be viewed in a particular way, with the traditional theories associated with economic and political contexts (O'Mally, 1994) having little direct application. Marx and Engels (2002) Communist Manifesto, however, referred to the bourgeois ego dominating the state in order to propagate its own rule. Parallels could be drawn here between the bourgeois and the medical profession and the state and the healthcare system. Power in terms of the Communist Manifesto was however economic power, whereas the supremacy under discussion in this context is one of influence and control with reference to the function of nurses and the knowledge that informs their practice. The proletariat or workers in a Marxist scenario would therefore be the nursing staff, who because of their number should be all powerful, although in reality history and tradition modify their behaviour and maintain the system at a status quo. This is often perceived as being sustained by a discourse that is perceived to define knowledge and truth (Wenger, 1998). Although these lenses could be perceived as useful through which to view power and control within the curriculum, they have only a limited application to the classroom context and are therefore only of partial use here and do not form a part of the guiding theoretical framework of my study.

Bernstein's (1975) discussion of power and control in the classroom is therefore much more applicable to my study. His concepts of classification and framing, as previously discussed, are both significant when power and control in the curriculum are under consideration. Both are significant as where curricula contents are perceived as having a strong classification and frame, they are seemingly more prestigious than those that are integrated in a curriculum where all subjects are subordinate to a general orientation or over-arching theme.

Nurses selecting knowledge from other disciplines therefore, must question whether they are advancing the knowledge base of that other discipline in preference to building the knowledge base of their own profession. Similarly the argument can be made that if nursing is not viewed from a nursing perspective, then it will continue to be merely the subject of research in another discipline. Nursing science, it is clear, can only be advanced if knowledge is built from a nursing perspective. Where other sciences (including medical science) are adopted and adapted in large volume, nurses are encouraged to identify with, or be subservient to that other discipline.

2.4.3 Conceptualising science in the nursing curriculum

The amount of borrowed science adopted within the nursing curriculum and the balance with and role of nursing theory are worthy of consideration when thinking about the preparation of the nurse. When science is presented in its pure form the resulting curricula type is referred to by Bernstein (1975) as collection, whereas if science is presented in the context only of nursing care, to explain and support practice the curriculum type is referred to as integrated. In the former, academics with scientific knowledge hold the power, whereas in the latter professional nurses control the curriculum. Science presented from the perspective of another could cast the nurse in the role of ancillary rather than promoting the unique role of the nurse and a value that is on a par with other healthcare professions. Over the three decades nurses, it would appear, have seized power and control of the nursing curriculum and have equipped themselves to teach the science components of nursing programmes.

However, where nursing lecturers consider themselves to be a hybrid with both nursing and scientific expertise and credentials, nursing may run the risk of being viewed as subordinate to science, as opposed to science

knowledge enabling students to gain a greater understanding of their role. Where knowledge is regulated by collection codes social order arises out of its hierarchical nature (Bernstein, 1975). The alternative is an integrated curriculum where subordination of previously insulated subjects (sciences) to some relational idea (the concept of nursing) blurs the boundaries between subjects. It can therefore be seen that if nursing allows itself to be viewed through the lens of other disciplines it risks being controlled by them. Nursing science must therefore continue to develop its uniqueness and always be presented in the context of nursing practice.

Science can therefore be viewed as an organising framework, validating nursing observation and guiding prescription of nursing care and treatment choices. However, powerful as science is considered to be, it is the decisions affecting human beings that must be made that are paramount; these decisions do not emerge directly from the science but require the skill of application. Thus, human beings select a goal, and it is the data and procedures attributed to science that can be used to facilitate the achievement of that goal. Alternatively science may suggest that that goal is not attainable, as human beings are part of the natural world and are therefore constrained by the basic laws of nature (Moore, 1993). This is when nursing is of particular significance as the practice of nursing, with its intrapersonal focus, then becomes very powerful. When science can no longer offer an answer the skill and wider knowledge of the nurse are paramount in the perceived experience of the client and family. Thus nursing science must be recognised as an important, although not the exclusive, domain of nursing knowledge.

The knowledge base required to practise nursing is created not only in academic centres but also in practise areas (Benner, 1984). It is the nurses' knowledge that makes a difference to his or her care of patients

and to be efficient that knowledge must be a dynamic mix of the theoretical and the practical.

Eraut et al (1995) discuss the use of scientific knowledge purporting that explicit self critical use of scientific knowledge is only likely to take place during active deliberation. Intuitive use of such knowledge, we are told, is more likely to be the norm. As practice develops there may be a greater awareness of rationale and specific underlying scientific knowledge but such awareness becomes dissipated over time, alongside the ability to explain or justify specific actions (Eraut et al, 1995). Intuitive practice is identified by some (see for example Benner, 1984; Schön, 1988), as a part of advanced practice. This whole progression of the deliberate processing of scientific knowledge through to intuitive practice is relevant to my study which sets out to explicate such development as experienced by the individual student.

There is wide agreement that all theoretical information in learning is more successful when it is context based (see, for example, MacLeod and Farrell 1994; Purdy 1994; Murphy 2008a). The relationship between theory and practice is therefore an important consideration when looking at the types of knowledge included within the nursing curriculum and two types of knowledge are generally identified (Eraut, 1994; Eraut et al, 1995), propositional knowledge the 'knowing that' and process knowledge the 'knowing how'. Academic and operational knowledge (Barnett, 1994) are similar constructs. Professional knowledge within nursing can therefore be thought of as the knowledge that all nurses acquire in order to carry out their role effectively, the understanding of what they are doing and why. The practical knowledge within the nursing curriculum and the practice experience that contextualises that knowledge must therefore be explored and explicated if this account of the knowledge within the nursing curriculum is to be considered complete.

2.5 The art of nursing: aesthetics

Nurses have been registering their intention to practise in the UK since 1919, and before and since that time have undergone practical preparation for the role. Nursing skill in those early years was acquired through apprenticeship type training where skills were passed from expert to novice in the context of everyday work on the hospital ward. Student nurses learned hands on knowledge in terms of knowing how (Rhyll, 1963; Eraut, 1994, Eraut et al, 1995) and their experiences mirrored the legitimate peripheral participation described by Lave and Wenger (1991), which offers an explanation of how a student absorbs and is absorbed into the culture of the clinical practice environment.

Wenger (1998) tells us that such social practice always involves the whole person and that so called manual activity is not thoughtless and mental activity not disembodied. Both, he tells us, gain their meanings within specific practices. These early students of nursing would therefore have received very little observable teaching and would have learned from the curriculum presented by the practice of the community in which they lived and worked. The strongest motivation for a student was to achieve full participation through a series of improvised learning opportunities that enabled them to acquire the art of nursing.

2.5.1 That which is not science: the art of nursing

Such knowledge orientated toward the art of nursing still forms a very important part of pre-registration nursing programmes. McKenna (1998) asserts that this hands on knowledge, is knowledge that is picked up, makes sense and happens to work. This view would be consistent with that of Parker (1997) who presents the art of nursing in terms of knowledge and behaviours that are not evidence based but are based upon fundamental beliefs. Such knowledge is not gained through systematic

reasoning and experimentation designed to isolate the variables established in scientific laws and it may be argued that as such it has nothing in common with scientific knowledge at all.

In the context of nursing, I would argue, many theories exist before the research to test them has been carried out, or do not exist in a form that can be satisfactorily empirically tested. Parker (1997) views such practices in nursing as nursing art and asserts that they have connotations of creativity and beauty. He recognises such practice as a learned skill or craft, which can be taught and is not instinctive. For example the positioning of a patient who is having difficulty in breathing is affected with gentleness and sensitivity, to allow the thoracic cavity to expand whilst calming and reassuring the distressed individual. The consequential positioning of the bedside table, the spittoon and tissues are all important and are passed from expert practitioner to student in the context of everyday practice. To suggest therefore that the art of nursing is instinctive is naïve, as this simplistic example illustrates.

Nursing knowledge is a defined entity and as such is something that can be shared with or communicated to others (Chinn and Kramer, 2004), but the nature of this knowledge varies considerably. Nursing science is important but, as has been already asserted, is not the only aspect of knowledge acquired by a nurse; indeed empiric theory is considered by some to be inadequate to represent the complexity of the practice world (ibid). Nursing science is the rational empirical objective portion of the curriculum and the remainder is something else.

That something else, or non-scientific aspect often refers to intimate caring and is personal to the individual experience, client and situation. It may later be the subject of reflection, thus allowing the individual nurse to employ a process of iteration to ensure that performance is enhanced and

practice in the future shaped by today's experience (Schön, 1988). Interestingly, ethnographers have provided little evidence that those who practice with an explicit scientific underpinning are more likely to reflect on their practice (Wenger, 1998) which may validate a dynamic mix of the aesthetic and the scientific. The non scientific aspect of the nursing curriculum I will refer to, in this study, as the art of nursing.

Others have categorised the patterns of knowing required by the nurse (see, for example, Carper, 1978; Chinn and Kramer, 2004). Carper (1978) examined earlier nursing literature and enumerated four fundamental patterns of knowing that are necessary for nursing practice. Chinn and Kramer (2004) then built upon this work using the same categorisation and illuminating each category in turn. The four categories identified were, the previously discussed, empirics or science of nursing; ethics, the element of morality in nursing; personal knowledge for nursing; and aesthetics or the art of nursing. Other authors have proposed additions to, or adaptations of, Carper's (1978) model (see, for example, Silva et al,1995; White,1995) but the model is widely accepted within nursing communities with the four categories appearing in all curricula, and art and science accepted as core categories.

Chinn and Kramer (2004) represent aesthetics or the art of nursing as a combination of knowledge experience intuition and understanding. Aesthetic knowledge, they tell us, is creative and is demonstrated by exquisite judgement that is often unconsciously initiated or intuitive. Such knowing is often acquired by personal imitation or role modelling of those who possess the art and demonstrate it in their interactions with the patients and clients in their care. They (ibid) cite Simpson (1914, p135) as saying that 'such art requires practice and some nurses never acquire it.' The personal knowing also cited by Chin and Kramer (2004) is closely aligned to aesthetics and is conceptualised in my study as the component

of compassion and is discussed later, whilst ethical knowing (ibid) can be conceptualised as aligned to both aesthetics and empirics.

If a typical nursing curriculum were to be represented by a continuum the poles of that continuum could be variously labelled. To the left we could write practice and to the right theory. Alternatively these two terms could be replaced by art and science, know how and know that (Rhyll, 1963; Eraut, 1994; Eraut et al, 1995), operational and academic (Barnett, 1994), or aesthetics and empirics (Chinn and Kramer, 2004) depending upon whose conceptualisation is being interrogated. Intuition as a concept could be variously placed on the said continuum according to whose ideas were being discussed.

In terms of art and science, it might be argued that there is no place for intuition within the scientific conceptualisation so by default it would sit within the domain of art. However it could also be argued that only when the underpinning scientific principles are completely understood, and the status of expert conferred on the practitioner, can intuitive behaviour be observed (Benner, 1983). In this case, although intuition is not coterminous with science, it could be considered that the science needs to be internalised so completely into the individuals' conception that it is able to be accessed and utilised on an unconscious level. This could be described using the concept of 'transformational learning' as described by Mezirow and associates (2000). If intuition, applying this conception of learning, were to be placed on the said continuum, it would therefore need to be placed at some point between the middle and the scientific pole.

2.5.2 Experiencing the art of nursing: learning as transformation

The conception of learning articulated by Mezirow and Associates (2000) and then further explained and developed by Kegan (2000) is cited by and acknowledged to be significant with reference to the art of nursing within

my research. Mezirow (2000) discusses the notion of transformative or transformational learning in the context of epistemic cognition and asserts that such learning may be intentional, incidental or the result of unconscious assimilation. All of these categories relate to the experience of the student nurses within my study. This theoretical framework would therefore seem to be particularly pertinent to the art of nursing and is considered here.

Transformational learning is purported to be a process that has individual and social dimensions and implications, and refers to the act of transforming our taken for granted frames of reference (ibid). Frames of reference in this context refer to 'the meanings, perspectives and habits of mind of the individual and transformation to the process that makes them more inclusive, discriminating, open, emotionally capable of change, and reflective; ensuring that they prove to be true and justified, from the perspective of the individual, to appropriately guide action' (p7), in this case nursing action. Such transformation, we are told (ibid), demands that we are aware of how we come to acquire knowledge and are as aware as we can be with reference to the values that lead us to the particular perspectives that guide the way we act and think. Again this matches the objective of my research which chronicles how students use the information/knowledge conveyed in the classroom to underpin early practice.

Kegan (2000) further develops this conception, differentiating transformational learning from informational learning using the work of Piaget (1954) to differentiate between the two. Informational knowledge, he tells us, is a form of assimilation, whilst transformation requires accommodation (Kegan, 2000). The first therefore fitting with an existing conceptual framework, whilst the second requires a modification of the cognitive framework or frame of reference to achieve a satisfactory fit.

Although this is a useful analogy, on reflection I think that the difference between the two is slightly more complex, particularly when applying it to the practice or art of nursing. Assimilation and accommodation can on occasion both refer to the processing of ever more complex concepts, whilst transformation refers to the process of using a prior interpretation of the meaning of an action in the past to guide a future action. Transformational learning is then, usually (although not always), related to social perspectives and social meaning. In the context of my study transformational learning is particularly applied to the process by which individuals change their frame of reference from that of member of the general public to that of nurse.

2.5.3 The concept of duality

Kegan's (2000) conceptualisation of transformational and informational learning could, as with the conceptualisations of knowledge cited earlier, be presented on a continuum. The concept of a continuum has however from my perspective proved to be misleading and inadequate. I will now therefore, in this chapter, focus upon what is meant by a continuum seeking an alternative conceptualisation that may better serve my purpose in this study. Within my study there is a recognition that in most situations the dimensions articulated as the two poles of a continuum can also be seen to coexist. So for example a learning situation may have both transformational and informational (ibid) tendencies with the student gaining and using information at the same time as changing their frame of reference.

Where both poles of a continuum can be perceived to coexist the situation becomes unclear. In such a situation, within the literature, the relationship is referred to as a duality (see, for example, Lave and Wenger, 1991; Bredo 1994; Wenger, 1998). Duality better explains the relationships that I

have identified and therefore I will use this conception within my study to describe a number of binary relationships.

Lave and Wenger (1991) introduce this concept by exploring the classical dualist oppositions that in many contexts are treated as synonymous using the abstract-concrete, and general-particular dualisms as examples. They tell us that:

‘in the Marxist historical tradition that underpins social practice theory, these terms take on different relations with each other, and different meanings. They do so as part of a general method of social analysis. This method does not deny that there is a concrete world, which is ordinarily perceived as some collection of particularities, just as it is possible to invent simple, thin, abstract theoretical propositions about it. But these two possibilities are not considered as the two poles of interest. Instead, both of them offer points of departure for starting to explore and produce an understanding of multiply determined, diversely unified – that is, complexly concrete – historical processes, of which particularities (including initial theories) are the result.’ (p38)

If this conception of duality is used as a template, then it can be seen that many of the so called continuums cited in this chapter could also be conceptualised as dualities; transformational – informational, academic - operational, knowing how- knowing that, being some examples. In this way a coexistence of nursing science and the art of nursing are not only acknowledged but also promoted as a positive dimension of the multi-faceted knowledge needed by a nurse.

Nursing knowledge, both art and science, is always applied within a nursing practice context, and as this is the only unique thing about this body of knowledge this may be what defines it. When Carper (1978) described aesthetics or the art of nursing, as one of her four patterns of knowing, she referred to it as unique, visible and expressive. A nurse who displays empathy and an appreciation of the experience of the patient in

his/her care is acknowledged to be practicing an art (Marcs-Maran and Rose, 1997) and at the heart of that experience is compassion.

2.5.4 Hearts and minds: compassion in nursing

Chinn and Kramer (2004) assert that personal knowing in nursing concerns an awareness of the inner experience of becoming a whole, aware and genuine self within the context of interaction with others. Without this component of knowing, Carper (1978) affirms, the idea of a therapeutic use of self in nursing would not be possible. This component of knowing may simply be referred to as caring or compassion in nursing and although both are used within my study I have predominantly used the term compassion. Compassion is that component of nursing care that is acknowledged to be appropriate and meaningful, in the moment, and transformative in its nature thus making the experience of the patient or client more positive or less destructive than it might otherwise have been.

The following extract from Marcs-Maran and Rose (1997) helps to frame my definition of compassion using the experience of one small boy. This patient, returned from the operating theatre after the reduction of a fractured arm under general anaesthetic. The child, who was distressed in the extreme, was cared for by two nurses, only one of whom was technically competent, creative, intuitive, knowledgeable and compassionate, seemingly able to gain the child's trust and calm his fears whilst carrying out the care and observations required. A second nurse appeared to care less and despite her attempts to make the appropriate observations she failed, as the child did not appear to trust her, remaining too frightened and distressed to co-operate. Her lack of compassion manifested itself as an inability to display competent caring skills in the form of technical competence, creativity, intuition and knowledge; the compassion deficit leading to all other observed deficiencies. Compassion

could in this way therefore be described as a pre-requisite of nursing art or the art of nursing.

Tschudin's (1997) idea of compassion relates to religious practice and although I would not limit my definition in this way I agree that a core component is the ability to not feel indifferent to, or dismissive of, others. We are told that in nursing paying attention to some aspects of an individual or their experience can be very painful, and that often all that is required is a presence, to be with the patient at their most vulnerable time. Tschudin (ibid) counsels that in order to be able to show compassion to others nurses must show the same concern to themselves, otherwise they will become weary and unable to continue to function in this desirable way.

It is suggested that nursing is an expression of emotions such as caring compassion and optimism (Rose, 1997). Similarly Benner and Wrubel (1989) developed a theory of nursing that grounds the essence of nursing in caring describing nursing as a process of helping people to cope, not by following prescribed rules but, by context dependent care and concern. In this way nursing is perceived to be a moral act that goes beyond the mere application of knowledge to the exhibition of a caring concern that is central to the human understanding of the situation of illness. Compassion is therefore seen as integral and significant when considering the fundamental patterns of knowing (Chinn and Kramer, 2004), although it is at its most visible in nursing practice which is discussed in the next section.

2.6 Practice within the nursing curriculum

Practice, in the context of this study, is any situation away from the university and in a care community, where the student is interacting with healthcare professionals and patients or clients. Murphy (2008a) asserts that a learner's knowledge is context dependent, and in this instance that context always relates to clinical practice. Similarly Mezirow (2000)

asserts that all justification for what a student knows and believes is dependent upon the biographical, historical and cultural context in which they are embedded. Making sense of any situation therefore, combines the, in the moment, perception of the clinical area with the individual learners' prior knowledge and understanding. 'The who what when where why and how of learning may only be understood as situated in a specific cultural context' (ibid, p7).

Within contemporary nurse education the student nurse spends 50% of the time associated with the programme in such practice. Here, much of what is known is expressed through action (Chinn and Kramer, 2004). Although the concept of practice, is often used as an antonym for theories and ideas (Wenger, 1998), that notion is not accepted within this study. Instead, this study acknowledges a synergy and a complex interactive relationship between theory and practice with the process of engaging in practice always involving the whole person, and both action and knowledge (ibid).

Best practice, it is argued depends upon integrating all patterns or types of knowledge to form an integrated whole (Chinn and Kramer, 2004). Practice therefore 'involves processes, dynamics and interactions that can only be fully understood when science ethics aesthetic and personal knowing all come together' (ibid). This study recognises this as happening in the clinical practice environment. It also acknowledges that student nurses can not be considered in isolation but are always part of a community of practice (Wenger, 1998).

Communities of Practice assume that engagement in social practice is the fundamental process by which we learn and so become who we are. Learning is in this way seen as a process of social participation. Lave and Wenger (1991, p98) say that a community of practice is 'a set of relations amongst persons, activity, and world over time and in relation with other

tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge... for making sense of its heritage...' In this conception therefore the socialisation of the student nurse and the establishment of their professional identity are key.

2.6.1 Socialisation of the nursing student

Theories of social practice, as utilised by Wenger (1998), address how individuals engage with the world and are concerned with everyday activity and real life settings. This is therefore pertinent to my study which centres upon ten student nurses in various practice situations each of which is a real social situation into which the individual student must become accepted through the process of socialisation.

Wenger (ibid) asserts that everyone has their own theories in relation to understanding the world, but it is within communities of practice that individuals develop negotiate and share those meanings. Practice is about meaning as an experience of everyday life. Wenger (ibid) talks about meaning purporting that 'meaning is not produced out of thin air' (p52). Meaning, we are told, is a negotiated product that may involve an extensive use of language, although this is not the only medium of communication. The meaningfulness of our engagement with the world is not a state of affairs but a continual process of renewed negotiation.

Participation in this conception (ibid) refers to the process of taking part and also to relationships with other members of the community. Building on this, Mezirow (2000) purports that, the act of transformative learning involves participation and communication between individual members of a community, which utilises common experiences to assess the underpinning ideas that lead to specific actions and decision making.

Wenger (1998) however does not limit his discussion to how human beings relate to each other but also explores how they relate to inanimate objects. The term reification, as used by Wenger, refers to the negotiation of meaning, by the use of objects. He uses the word in a very particular way asserting that the way we relate to and use particular objects, projects an image of both individuals and groups into the world. As such, a point of focus is created, around which the negotiation of meaning becomes organised. The term reification covers a wide range of processes. Within the context of my research the term may relate to the coding of names or terms, the production of theoretical models and concepts, the signing of treatment orders, and the use of nursing care plans. In fact any aspects of personal and/or professional experience relating to practice may be congealed into a fixed form and given the status of object.

In this way participation and reification are a duality, a concept introduced by Lave and Wenger (1991) and discussed earlier in this chapter. The two components of the duality come about through each other although can not replace each other. They are not mutually exclusive and therefore can not be the two ends of a spectrum. People and things can't be defined independently of each other. They are an integral part of how an individual becomes socialised into any established community of practice.

Apprenticeship is an acknowledged form of socialisation although there is a wide recognition that the term is poorly defined (Lave and Wenger, 1991), whilst usually associated with the notion of situated learning. Lave and Wenger (ibid) introduced the concept of legitimate peripheral participation to describe an apprenticeship type situation where the learner is enabled to participate in a community of practice, mastering both the knowledge and the skills required to enable the student to move to full participation.

This is viewed (ibid) not merely as learning situated in practice but as an integral part of being in the social world. Legitimate peripheral participation is, in this way, viewed as an analytical stance or way of conceptualising learning as it happens in a social situation. It does however not prescribe any particular form of educational implementation, whilst conceding that the concept of apprenticeship could inform the structuring of an educational endeavour. Referring back to the questions that guide my study and that address the structuring and facilitation of the learning experience, this concept must be acknowledged as significant to my research.

2.6.2 Establishing the professional identity of the student nurse

Wenger (1998) asserts that 'there is a profound connection between identity and practice As a consequence, practice entails the negotiation of ways of being a person in that context' (p149). My study is concerned with how students use the information conveyed within the classroom to enable them to function in the clinical practice arena and as such is very much concerned with the social formation of the practitioner, and how they are perceived both by themselves and by others.

Wenger (ibid) tells us that attaining a particular identity, in the case of my study that of a (student) nurse, is more than merely seeing yourself as that person (a nurse). Instead it is about doing what nurses do and being treated in the way that they are treated. The experience of being a student nurse in practice is therefore a way of attaining that identity within that context. Who an individual is depends on the way they live in the day to day, and identity is in this way a layering of events, one event building upon the other. As with meaning it is a constant negotiation with the people and situation or with the context. Mezirow (2000) extends this offering transformational theory as a means by which individuals learn to negotiate, in order to act according to their own purposes, values, feelings

and meanings, rather than on those that they have uncritically assimilated from others.

There are certain official markers of transition within the context of any practice and with students of nursing these are very specific. Reification (Wenger, 1998) in nursing equates to stripes on the student nurses' hat or epaulets on their uniforms and with such transition comes recognition of expertise and a corresponding level of responsibility and privilege. Identity 'in this sense is an experience... a display of competence' (ibid, p152), making nurses a product of what they can do. Nurses know how to engage with others, understand why they do what they do, because they understand the concept of accountable. These are dimensions of student nurses' competence and become dimensions of student nurses' identity.

Students of nursing, in common with all other learners in communities of practice, learn how to engage within that context, develop expectations of how to interact, becoming the practitioner they aspire to be by engaging in relationships with both healthcare professionals and patients and clients. Wenger (ibid) acknowledges a temporal dimension of identity recognising such a dimension as dynamic. By placing student engagement in practice in a temporal context, one is able to recognise that students are enabled to develop through the situations in which they are involved and to individually develop a progressive identity as they gain experience within the community of practice.

Murphy (2008b) asserts that as learners move between different communities they may have conflicting experiences. This is primarily because expectations in even subtly different contexts may differ. Students of nursing move between clinical environments and this may cause some dissonance, but it must be acknowledged that the biggest conflict occurs between the students' experiences as a student on the

university campus and that of a student in clinical practice. Differing types of competence and a resulting different identity are needed in these two contexts and students are required to reconcile these two disparate experiences in order to arrive at one composite identity.

We are cautioned (ibid) against the underestimation of the act of reconciliation and told that such an act is neither insubstantial nor subconscious. In the experience of Murphy (ibid) the identity conflict relates to students studying both science and technology, with students variously either complying or disengaging in one or other context to minimise the dissonance experienced. These findings may have a direct parallel in nurse education, where students are on occasion noted to disengage in the classroom as a result of a perception of the taught material having little or no application to their nursing identity.

At the same time that the student is developing these dual identities they are also developing a personalised body of viable knowledge (Von Glasersfeld, 1989) which they are able to use to understand the situations in which they find themselves and to guide their decision making. Initially decisions are small and may appear non-consequential but over time the problems tackled and decisions made will become more significant until the individual student is able to make complex decisions to solve profound and complicated problems. Throughout, a viable knowledge is built in a step like fashion where small modifications are made on a minute to minute basis to ensure that the body of knowledge remains compatible with the practical experience.

It is acknowledged (Wenger, 1998) that students don't need to be centrally engaged in an event for it to be significant to identity formation. Similarly a peripheral involvement can foster the development of viable knowledge. Such peripheral involvement may therefore mould a student's identity and

viable knowledge base significantly because of the way the student is affected or reacts in the new situation. Whilst the newcomer to any given situation is forging their own identity they will, where possible, seek to link what they are experiencing in the moment to past experience and Wenger (ibid) refers to this as continuity, purporting that it is preferable to discontinuity. This notion is of course central to the development of viable knowledge that is appropriate and fit for purpose. If learning is a matter of fostering an appropriate identity, then it is an educational resource or teaching opportunity, to be utilised in the same way as, and in conjunction with, all other educational resources and teaching opportunities.

2.7 The contribution of knowledge to developing professional practice

Knowledge is emphasised as a central trait of professionalism with sociologists generally taking the model of rationalised scientific knowledge as their starting point when looking at the epistemological base of a profession and then relating this to a number of issues including social context (Halliday, 1987). Professions are knowledge-based occupations that only became possible after knowledge has emerged as a socio-cultural entity (MacDonald, 1995). Disciplines with an established body of formal knowledge (broadly speaking the sciences), frequently seek out practical applications for that knowledge with the assertion that the pure science has an applied counterpart (Prymachuk, 1996). However, the relationship between theory and practice can fit a number of models. Where the relationship is viewed as unidirectional the theory is utilised only to justify actions taken; whereas a bi-directional relationship will also guide practice (Prymachuk, 1996). The latter would appear to behaviour associated with professional thinking and reflect a definition to which nurses currently aspire to (Purdy, 1994).

Such professional behaviour is traditionally concerned with problem solving abilities that employ the application of scientific knowledge,

however such technical rationality is acknowledged to have limits (Schön, 1988). Based on the paradigm of Positivism, professional responses are described in terms of cause and effect and means and ends. In this way it is implied that concrete formulae guide every situation. In nursing and other practice based professions individual contexts can be powerful and mitigate against this rule. Schön (1988) therefore strives to identify a different rationalization. His conception of 'reflection in action' is offered as an alternative to technical rationality. Context driven, this model is not always able to demonstrate the conscious use of scientific knowledge. Instead intuition and spontaneous performance are terms used.

Knowledge presented within a nursing curriculum must fit the experiences of the student (Von Glasersfeld, 1989). Viable facts must not clash with that experience. The value of nursing knowledge is intrinsic to the context in which it is used (Purdy, 1994). This shifts the emphasis from students replicating the facts taught, to being able to organise successfully their own experience. In this way context forces one to modify concepts repeatedly. Student nurses must therefore constantly modify their knowledge base in order to accommodate new practice experiences. Only then can they make sense of the world.

Learning to use scientific knowledge in professional practice has been identified as requiring significantly more time than learning how to reproduce similar knowledge in an examination (Eraut et al, 1995). The balance between scientific knowledge presented in the programme and that internalised by the student is referred to as 'irrelevant' (Eraut et al, 1995) and the existence of such knowledge is acknowledged as a poor motivator to continued learning and development.

Where knowledge is assimilated in an effort to support practice it cannot be reduced to a stock of retrievable facts, but instead concerns the ability

to compute new results (Von Glasersfeld, 1989). This refers back to Piaget (1954), who asserts that knowledge is operative and not figurative. Operative knowledge is not associated with retrieval but instead is the knowledge of what to do in order to produce an answer. Operative knowledge is constructive and is therefore as easily demonstrated in a novel situation as in a familiar one.

It has been suggested that factual theory and practice theory are both relevant to nursing but they are different theoretical perspectives, which must be brought together through the experience of practice (Dale, 1994). It is possible that nursing programmes present propositional knowledge in the classroom and practice/process knowledge in the clinical area but do not enable adequate integration of the two to ensure experiential knowledge. Experiential knowledge enables students to attach meaning to events and interactions, although due to nurses and their teachers holding differing theoretical perspectives the opportunity to link these through experience may be missed and valuable learning therefore not achieved (ibid). This conception of experiential knowledge would appear to be similar to that of viable knowledge (Von Glasersfeld, 1989), being a dynamic entity that is constantly revised and modified in light of the student's experience. Such mediation of theory and practice enables students to behave in an appropriate manner and improve their performance. This knowledge is therefore useful and valid, and fits with the similarly described categories of utilitarian knowledge (Goodson, 1987) and authentic dialogue (Freire, 1989), which both view learning as a constructive and dynamic activity. Such integration of theory and practice would appear to be pre-requisite in pre-registration nurse education, the question being whether all curricular structures can accommodate this to the same extent.

2.8 Nursing knowledge to underpin practice

Nursing Knowledge has to be related to the practice of nursing and to the unique situation faced by the individual nurse. What is required is planning, problem solving and **all** types of knowledge working together to make appropriate decisions. Such knowledge could be described as viable knowledge (Von Glasersfeld, 1989) and is a conception of the world that is constantly modified to fit the situations experienced by the individual. It is unique to the individual who internalises and contextualises the propositional knowledge presented in the classroom. A strong educational preparation in the biological and psychosocial sciences is advocated as a necessary basis for advanced skill acquisition (Benner, 1984), as the individual with limited background knowledge will lack the tools needed to learn from experience. The notion of viable knowledge as the body of eclectic knowledge amassed over time is relevant and attractive to the proposed research which sets out to investigate how individual conceptions are constructed and relate to biological and social sciences as presented in the curriculum.

Clinical problem solving looks specifically at how individuals solve problems and there has been interest in the processes and techniques used. The Nursing Process (frequently referred to as a problem solving approach) requires a logical linear deductive approach, which is not the approach used in practice when care is being delivered (Taylor, C., 2000). Although no single approach can be identified problem solving in practice would appear to be more complicated and inductive in nature. Nurses must take responsibility for intelligible interpretation of patient problems rather than just concentrating on what the patient says. It isn't sufficient for a nurse to merely be a conduit for the voice of the patient; they must also add an interpretive dimension not previously present to successfully interpret patient need.

There are several requirements of knowledge in nursing. It must develop from practice, underpin practice and lead to competence (Barnett et al, 1987). Application of the knowledge gained is imperative if a satisfactory outcome is to be claimed. Knowledge must always be contextualised and non-professionals may not always apply material to the practice situation and propositional knowledge may not always provide all that is required (Eraut, 1994). Skills associated with nursing need to be developed alongside such knowledge in an integrated and meaningful fashion.

Finally, Carr and Kemmis (2002) review the work of Habermas (1984) who within his theory of Critical Social Science explicitly links theory and practice. Integration of these two elements is viewed as a dialectic process of reflection, enlightenment and political struggle. Habermas, we are told, clarifies the 'organisation of enlightenment' as a process by which theoretical ideas and practical priorities are inter-related. He distinguishes a process by which this is achieved. The first phase identifies formation or extension of critical theory, based upon the tradition of science. The second phase recognises an application and testing of that scientific knowledge via the medium of active reflection. The final phase culminates in the selection of strategies or solutions applicable to the situation of the individual. Science is identified and valued within this model, although self reflection is carried out within the student's own context to allow a decision that is valid in terms of practice. This model therefore explicitly pulls together the concepts under consideration in the proposed research. It is compatible with the work of Von Glasersfeld (1989) and others and therefore offers a basis by which the research to be undertaken can be evaluated.

2.9 Conclusion

The literature reviewed within this chapter and referred to later in the thesis conceptualises the key concepts of curriculum, knowledge and practice.

This literature generally corroborates a perceived dichotomy between the knowledge presented in the classroom and that accessed in the field when carrying out the practice of nursing. However, it has been identified within the literature that, Von Glasersfeld (1989) brings together dynamically these two types of knowledge, emphasising the notion of viability, and the requirement for everything communicated within the classroom to have an application to, or guide the nurses' interaction with, the patient or client. Similarly Mezirow's (2000) concept of an individual's frame of reference allows observation of the interpretation of the meaning of new experiences enabling awareness, within the student, of the source and context of knowledge.

There is also a recognition within the literature surveyed that students' actively construe meaning (Murphy, 2008a), from that which is taught, by appropriate selection of knowledge which is ultimately used, by them, in the nursing context, to solve specific patient problems. This thesis therefore seeks to identify how the knowledge presented in the classroom and that accessed and applied in the field can be brought together to enable the embedding of theory into practice. In this way knowledge, both empiric and aesthetic (Carper, 1978; Chinn and Kramer, 2004), is not compartmentalised in some collective (Bernstein, 1975) manner that prevents it being utilised in practice.

My study therefore sets out to investigate how students use the information presented to them, in whatever way, in the classroom to underpin their practice. Practice is perceived as central to this process and the clinical experience of the students within an initial community of practice (Wenger, 1998), is therefore the focus of this thesis which endeavours to explicate how information/knowledge within the curriculum might be best structured to explicitly support the practice component of the programme.

Having reviewed the literature in this chapter I will now explore my personal ontological perspective, through my personal and professional writing. The next chapter therefore sets out to provide an analysis of self, me as researcher, thus providing a context in which to view the introduction of the methodology employed within this study and outlined in Chapter Four.

3. Context for the Research – An autobiographical account in two parts

3.1 Introduction

If ontology refers to a theory of being which influences not only how I perceive myself but also how I perceive others within the context that I operate (Whitehead and McNiff, 2006), then my ontological perspective is a dynamic one and is something that has developed throughout my career as a nurse and a nurse educator. This chapter therefore sets out to chronicle that change and is utilised as a lens through which I view my career to date and the autobiography of the research questions (Miller, 1996) that have now been posed. I will use my personal and my professional writings, in the form of my personal diary and the column that I write on a monthly basis in the British Journal of Nursing, to illustrate and evidence how my ontological stance has developed over time and how that is inter-related with contemporary events and the changes that nurse education has undergone within the last three decades. Mezirow (2000) refers to a change of perspective as transformational learning, a key concept within this thesis with reference to the experience of nursing students, and the development of this ontological perspective is offered as an example of such learning. This chapter is therefore personal, reflective and introspective and the material contained here is considered as one of a number of sources of data within this research process, which is given equal weighting and validity to all other sources.

In this chapter I therefore set out to consider my trajectory as a nurse and nurse educator and chronicle how my ontological perspective and epistemological attitude have changed over time. The reader may detect a change of style between the two main sections of this chapter. In the first half of the chapter my account is phenomenological and very personal in nature. In the second half of the chapter however, my style changes and as I utilise my professional writing to illustrate the lived experience of my

transformational learning and my interaction with the wider nurse education community, my stance becomes much more formal and objective. This is partially because the comment pieces were not written for me but were engineered to engage a wide audience of practicing clinical nurses and others.

3.2 Ontology and epistemology throughout a lifetime

My ontological perspective throughout, recognises my professional roles and the resulting complexity of the relationships that define those roles with students, academic staff and others within the wider community relating to nurse education. The chapter is written at, and relates to, a particular point in history where nurse education is undergoing rapid and sustained development resulting in a change in which both the profession and the general population regard nursing and nurses. I see myself as an integral part of that change and of the nurse education community (locally, regionally, nationally and internationally) as well as being a senior member of staff in the organisation within which the case study in this research is based. As such I must acknowledge an insider participative approach which involves offering descriptions and explanations of how I and others have been involved in mutual relationships of influence (Whitehead and McNiff, 2006) in relation to the change considered.

My epistemological stance is compatible with my ontological perspective, in that I perceive knowledge as something that is co created as a part of the process of 'testing and critiquing what is already known and transferring it into something better' (ibid, p23). This explanation of epistemology resonates with my experiences in a nursing career which has spanned more than 30 years and a number of nursing related contexts. Like my ontological perspective, my attitude to epistemology has changed throughout my career. Early in my career I did not consider how knowledge underpinned my practice or indeed whether that knowledge was adequate

to perform in the role that was required of me. Personal diaries show evidence that my reading was centred upon the patients that I was caring for and the assessment within the curriculum that was the basis of my 'nurse training'. Expected academic outcomes during this training were not explicit and the driver for deciding what I should study was how I thought I was perceived during the practice experience, with a desire to be viewed as proficient at the forefront. I did not consider that there were different types of knowledge and that they were valued differentially by society. At the time I considered myself to be typical of my peer group.

Reflecting on my own experiences has been useful when considering my attitude to my context. I am self consciously drawing upon my own experiences as a resource to be used to inform this inquiry. This resonates with the work of Denzin and Lincoln (2000) who imply that I exhibit the behaviour of a typical qualitative researcher by thinking about myself reflectively and over time. These activities are however viewed by me as an extension of my normal day to day existence as throughout my life, I have kept a diary. For many years this was descriptive, but such description has now helped to trigger inductive thought that has facilitated analysis. That analysis has helped me to plot how my conceptualisation and attitude to nursing practice and the theory that underpins it have changed, and has allowed me to look back to long before I kept a formal reflective diary.

3.2.1 School day diaries

My personal diaries date back to my school days where my attitude to life is clear. I perceived myself as fairly typical within my peer group. Described as 'bright but poorly applied' in my final school report, I left school at the age of 16 with only 5 'O' levels and embarked upon a vocational nursery nursing programme which would last for two years and act as a bridge to the world of work. My diary shows evidence that I

enjoyed the practical aspects of the course and that I engaged with the theory necessary to prepare myself for my chosen occupation. Within my working class family no one had been to university and I was the first to attend a college course after school. My parents were proud but had no additional aspirations for my future. Until March of 1976 this was also true of me. It was then that I had experience of a placement with a health visitor. My diaries throughout the four week period were prolific

'Nan is the same age as my mum, she is down to earth and the women and girls she looks after think she is great.... Today one of the girls at the clinic told me that when they said that they were going to move Nan and give them a new health visitor because she had too many families all the mums decided to protest. These women come from a tiny pit village that is very very poor and most of them are what my mum would call mucky. They all care for their kids but not in the same way that my mum cares for us.... Lots of the kids of 4 and 5 still drink out of bottles and don't know how to use a knife and fork.... But they cared enough about Nan to make banners and go to the Town Hall.... Nan makes a real difference to their lives and.... I want to be like Nan.'
(Personal diary, 1976)

Nan was my first professional role model and my desire to be regarded as she was regarded was a huge driver in my early nursing career. At the time in 1976, I had the minimum qualifications required to gain entry to the registered nurse programme. I therefore applied and was delighted to be accepted on the programme and so instead of becoming a nursery nurse I became a nursing student at a large and prestigious teaching hospital.

3.2.2 Diary of a student nurse

Only a minority of students on the nursing programme fitted the minimal academic profile with the vast majority having stayed at school and achieved 'A' levels. Most of my new peers had the academic qualifications to go to university but instead had chosen a vocational programme. Although the School of Nursing was on the University campus the

experience of the students was not, at that time, a university experience. The programme followed was practice led with students spending approximately 85% of their time in the hospital wards and departments. I entered a new world where there was much to learn in the classroom and on the wards. Again my diaries evidence that classroom sessions were seen as a means to an end with, in the opinion of me and my peers, the real learning taking place out in practice. Diary entries during theory weeks were minimal which mostly chronicled what was being studied and the homework required. Whilst in practice, however, the entries were unconsciously more reflective.

'The best bit was watching how she deals with each situation, what she does and how she does it Mr Redfern has diabetes which means that.... Having never dealt with a colostomy before I was apprehensive A prosthetic limb can be cleaned by Checking the controlled drugs is a part of our responsibility....
(Personal diary, 1977)'

My diaries show evidence of knowledge gained in both the classroom and in the clinical area; although propositional knowledge, or the knowing that (Eraut 1994, Eraut et al 1995), which was presented in the classroom was rarely if ever integrated with process knowledge, or the knowing how (ibid) that predominated in practice. The diaries clearly evidenced that being involved in the act of nursing facilitated the acquisition of new knowledge by acting as a trigger to learning (Lave and Wenger, 1991). I now recognise that the knowledge that I acquired as a student nurse was generally attained whilst actively nursing a patient. Adequate integration of these two types of knowledge is necessary to ensure the generation of experiential knowledge, which as Dale (1994) suggested is rarely ever achieved.

An alternative conceptualisation introduces the notion of knowledge through action (Barnett, 1994) which is contextualised and highly individual. When considering this sort of learning the knowledge presented must fit the experience of the student. I, as a student nurse, would appear to have constantly modified my knowledge base in order to accommodate new practice experiences; viable facts having to be compatible with my practical experience if any sort of equilibrium were to be achieved. Von Glasersfeld (1989) uses these types of experience as the basis of his concept of viable knowledge, which is the knowledge that is used to guide our behaviour in practice. Von Glasersfeld (ibid) is clear that such knowledge can not be reduced to a stock of retrievable facts but is instead concerned with the ability to compute what is often contextual information to provide original results.

In Chapter Two I asserted that the acquisition of knowledge can be achieved in a number of ways. The concept of ways of knowing was introduced to the nursing community by Carper (1978), who in a short article enumerated four types of knowledge. She purported that each enjoyed equity with the other three and no one alone could be judged as sufficient for all purposes. Aesthetic, empirical, personal and ethical knowledge all contribute to the knowledge base of a particular nurse. Chin and Kramer (2004) build on this, telling us that the best educational practices depend on integrating all knowledge sources together to form a whole. Much of what is known by a nurse is expressed through action and may be context specific and hence may typically not be available except in the moment (ibid). If such knowledge is ever to be fully applied this depends on all forms of knowing being valued and an unpacking of the way they are integrated.

I discovered, to my surprise, that I really enjoyed increasing my knowledge, whether this was in the classroom or in the clinical areas. I

spent a great deal of time reading and for the first time really wanted to do well, becoming quite competitive and striving to be the best in my class. My family appeared surprised although proud. Again evidence in my diary of a conversation with my brother in which he commented that

‘You have discovered education like other people discover God’
(Personal diary 1978)

My experience may also have been affected by the expectation of others. I had become romantically involved with a medical student whose family lived locally and I was therefore spending a great deal of my time in their company. Within this family expectations were different and on reflection my perspective change was probably a motivation to be accepted as ordinary in their eyes. By the time I completed my initial nurse training I was perceived as a very good student who would go on to further my studies and do well in my chosen career.

Initial nurse education allowed me to enter a whole new social sphere with its own rules and expectations, and consequently how I perceived nursing and those around me in a hospital context developed and changed over the three years of training as the work of Wenger (1998), which was concerned with apprenticeships, suggested that it might. To begin with my preconceptions were sketchy. My diaries show apprehension and an expectation that I would be part of a team caring for patients. They also show surprise at the level of knowledge that was expected of me. For the most part they show acceptance that I would be told what to do by either the doctor or the ward sister and this frame offered shape and security to my new existence. I was part of a community of practice and although my contribution was often peripheral it was always legitimate and contributed to the holistic care of the patient or client (Lave and Wenger, 1991)

Of importance was, not only what knowledge was acquired but also, the culture within which the learning took place (Murphy, 2008a). On reflection I have identified theoretical perspectives that are significant to the way that I experienced my early years as a nurse. These perspectives contribute directly and indirectly to the context of my research and hence are worthy of inclusion here. They also, on reflection, help me to understand my behaviour and interpret my actions in a reflexive manner. Qualitative researchers increasingly use a theoretical lens or perspective to guide their study and raise political and moral questions that they would like to address (Crotty, 2003). Questions of gender, race, class and culture are often articulated in this way. My bias is thereby acknowledged and will illuminate for the reader how I, as the researcher, have arrived at this point.

3.3 Significant theoretical perspectives

Miller (1996) articulates the concept of the autobiography of the research question. Perceived from a feminist point of view she suggests that all situations are unique and affect subsequent perceptions. This stance is true whatever point of view, political or otherwise, is subscribed to and is affected by both personal experience and the attitudes and prejudices of contemporary society. The stance of the researcher is acknowledged to have developed over years, so that opinions and perspectives are well formed and contribute invisibly to how the context is perceived and the attitude taken to the question to be researched.

Although my research does not explicitly adopt a feminist perspective within its theoretical framework I acknowledge that such a perspective could be employed in the context of this research. Historically nursing has been a pursuit followed by women whilst certainly in the last century most doctors were men. Feminism speaks with one voice in the way it sees the world in which we live. It sees that world as 'patriarchal and its culture as

masculine' (Crotty, 2003 p161). From my perspective patriarchal is often seen to be co-terminus with a medical model and masculinity interpreted as medical domination. Nurses, like women, are noted to have been oppressed for many years. Crotty (ibid) asserts that only women can liberate women; so I conclude therefore that only nurses can emancipate nurses and as with men, doctors are both victims and perpetrators of the status quo (ibid). In the context of this research the presentation of nursing knowledge is central and medical staff are viewed as partners. This is a stark contrast to the situation where doctors dominate, and nurses are expected to unquestioningly carry out their instructions.

Marxist feminists concentrate on issues relating to women's work and this perspective and the perspective of Marxism generally, although again not explicitly adopted by the theoretical framework underpinning my study, is briefly considered as having some merit here. It is first of all worthy of comment that although Marx throughout his life advocated equality for all, his writings were limited to the unity of 'working men', a use of language that Stedman Jones (2002) acknowledged as appearing to date the original Manifesto of Marx and Engels which was written in 1846.

Marx was concerned with power relationships. Power in terms of the Communist Manifesto (ibid) was however economical power, whereas the supremacy under discussion in this study is one of influence and control, the power of ideas, with particular reference to the functioning of nurses and the knowledge that informs their practice. Marx, we are told (Crotty, 2003), was a man of ideas and his ideas led to the creation of the Communist Manifesto (Marx and Engels, 2002) and the emergence of 'Western Marxism'. In his early political writings Marx (O'Mally, 1994) described an oppression that affected the whole spectrum of human life and human affairs. He asserted that the tension between the bourgeoisie or ruling classes and the proletariat or workers permeated the whole of the

workers existence, shaping the way that people thought. An acceptance and positive framing of this situation was referred to by Marx as the emergence of a 'false consciousness' and a resulting acceptance of the ensuing 'ideology'.

Although I acknowledge that this has little direct relevance or application to my study, when considering power, parallels could be drawn between the bourgeoisie and the medical profession, and the state and the healthcare system. The proletariat or workers in a Marx scenario would therefore equate to the nursing staff, which because of their number could be all powerful, although in reality, history and tradition modify their behaviour and maintain the system at a status quo. Indeed, contemporary nurses work in a collegiate way with doctors and other health care professionals. In present day practice most would consider their position to be complementary to that of medicine and no longer subservient although economically there is still a significant differential.

The curriculum that I followed in the late 1970s was an integrated curriculum (Bernstein, 1975) in that all subject disciplines were presented together with an over-arching theme used to organize the contents. This could be considered from a neo-Marxist perspective. The rationale for what we were taught was a functional one that gave the students enough information to carry out the role that they were being prepared for (Atkins, 1989). However, although students were only taught what was relevant to and necessary for the job in hand, exposure to such opportunities filled me with enthusiasm and extended the range of options available to me, progressively enabling me to make life choices, which may not have previously been possible. Thus I was enabled to benefit from education beyond that that I had aspired to in school. The components of the course I studied enabled me to develop nursing and study skills that allowed me ultimately to access appropriate knowledge for my own use. I became

highly motivated and successful with a career that advanced at a pace. This resonates with the work of Atkins (ibid) that asserts that such education leads to an increase in individual autonomy.

Although during that time, nurses generally were excluded from studies that were seen by society as high status, with relatively few of my student colleagues aspiring to graduate level learning and progression from a ward environment where they were viewed, at that time, as adjuncts to a medically dominated system I bucked the trend and became a part of a small minority to study at degree level.

3.4 Paradigms of nursing

This neo-Marxist perspective therefore transfers with ease to a nursing context, where, the vast majority of students in the 1970s were only taught that which was necessary for them to carry out their role; higher-level problem solving skills being retained by others educated using a different paradigm. Clarke (1991) identifies two ways of looking at nursing; which in the context of this research I will refer to as paradigms or particular views of the world (Karstadt, 2008c). The first sees nursing as a collection of procedures, requiring some skill but initiated and directed predominantly by doctors, whilst the second views nursing as a particular kind of interpersonal interaction which has specific goals determined by the nurse, and uses clinical judgement based on specific nursing knowledge.

The former recognises only the collaborative role of the nurse and although competent performance is valued it does not necessarily require understanding of why the task is necessary, and the knowledge transmitted is not recognised as unique to nursing. Within this view nursing has no knowledge base of its own, nor does it need one; its skills are essentially manual and technical and reflect the knowledge of other disciplines (Clarke, 1991). The second paradigm, on the other hand,

acknowledges thought processes that are identical to those used in medicine and requiring sophisticated intellectual and social skills to solve unique and challenging human problems. The paradigm of nursing selected frames attitudes toward, and the position in society of, the nurse. The question here is whether this has changed over the course of my career and is now still in the process of changing?

The theoretical perspectives articulated in this chapter are viewed from a constructivist viewpoint (Von Glasersfeld, 1989) and therefore consider the area of interest to be firmly bounded in the context of the researcher/practitioner. My perspective as Head of School and the person responsible and accountable for the implementation of the educational standards of the professional body (NMC, 2004), gives me a very particular bias that must be acknowledged. Mason (2001) reviews the victories and difficulties of researching within ones own context, implying throughout that objectivity is difficult as personal constructs provide a unique lens that can not be fully shared with another.

Shipman (1997 p18) suggests that bias can 'prejudice the research process at the conceptual stage, the technical stage or the publication stage'; all these stages are recognised as a challenge as once the conceptual framework has been set from a unique perspective, design and interpretation will follow in that vein. Carr and Kemmis (2002) purport within their writing that practice based research in education is inquiry where critical examination is facilitated by a self-reflective spiral. Such a personal introspective stance must be recognised with the acknowledgement of appropriate theoretical perspectives serving to sharpen the unique lens through which the area of interest is interrogated. I therefore acknowledge my own perception of being as viewed through the lens of a nurse and will now trace the development of that ontology through my nursing career.

3.5 Ontology of a nurse

3.5.1 Reflection upon experiences as a student nurse

My experience as a student nurse was definitely practice led and could be perceived as leaning toward the first paradigm (Karstadt, 2008c) as described above. The curriculum was approximately 85% practice with the balance being in the classroom. Student nurses were, at that time, employees of the NHS and received a training allowance that was subject to tax and national insurance. Nurse training was considered to be an apprenticeship with more experienced nurses teaching new recruits what to do and how to behave in a clinical context. As a student I began by carrying out menial tasks and over time as I became socialised and took on a more complex role as I moved to full participation and competent practice. This mirrors the work of Lave and Wenger (1991) and their concept of legitimate peripheral participation or guided participation prior to full and appropriate participation.

Although contemporary nurse education still retains some elements of apprenticeship (ibid), student nurses now spend 50% of their time in pursuit of an academic underpinning for their clinical practice and have full student status; with salaries replaced by means tested bursaries and top up student loans. My experience of the programme as it was in the late 1970s is evidenced by my diaries as I chronicled new and exciting experiences on a daily basis

‘Today is the beginning of week three and this morning was hectic. I was on duty with Flo the enrolled nurse and Lesley the other student from my set. The ward was full. Flo and I began to serve breakfast whilst Lesley prepared the bathroom for what was to come next. As we got to bed 5 Mr Neville suddenly collapsed becoming very blue. Flo shouted Lesley to call the crash team and instructed me to lift one side of Mr Neville whilst she lifted the other. We put him on the bed and Flo asked whether I knew how to do mouth to mouth. I said I did and she

handed me an airway. I didn't know what to do with it, so threw it to one side, and proceeded to do mouth to mouth as I had been taught to do it at the swimming pool. As he came round Mr Neville vomited and some of the vomit went in my mouth.... Afterwards Flo showed me how to insert an airway and use the ambu-bag – something I will remember as I really do not want to taste second hand vomit ever again.'

(Personal diary, 1977)

Over the three years of training my diaries evidence a progression to more complicated procedures and the gradual acceptance of greater responsibility. I learned quickly, although there is evidence that this was often motivated by a need to know approach. I therefore illuminate the Atkins (1989) mentality of knowing only what was necessary to complete the tasks in hand. During my first shift in charge of the ward as a third year student my diary records the fact that I had unquestioningly carried out instructions as a more junior nurse. Although I now find difficult to rationalise I must concede that my attitude was subservient and that I clearly understood my position in the decision making hierarchy and the team responsible for looking after patients.

As the nurse in charge today I accompanied Dr Sharpe on the morning ward round and was then responsible for communicating his instruction to the others. Three of the patients in Bay 1 had had a cholecystectomy yesterday and therefore had naso-gastric tubes in situ. I knew that these patients would start to have fluids this morning but had never considered how the amount was decided. Dr Sharpe asked whether I had started fluids and I said no. When he asked me why, I couldn't really answer the question. Later in our conversation I learned that fluids can be increased when bowel sounds have been heard and until then sips only are given. I can honestly say that I had never considered when and why. Now I know what to do tomorrow.

(Personal diary, 1979)

Final examinations again centred on practice with knowledge of supporting theory being implicit. To achieve registered nurse status an individual had to prove they were safe and be able to discuss the management of

patients in a variety of care settings illustrating how problems would be prevented or solved in the particular scenario that was introduced in the examination question. Success in the final exam conferred qualified nurse status and the requirement to become a decision maker, role model and teacher to remaining students. My diary goes on to provide evidence of the challenges experienced in these early days as a qualified nurse and shows a growing confidence with the passage of time.

3.5.2 Transition to qualified nurse status

After my initial nurse education was completed my diaries showed much evidence of considerable further learning and this time the leaning is clearly angled toward the second previously described paradigm (Karstadt, 2008c), where thought processes are acknowledged as sophisticated and intellectual, and advanced social skills are utilised to solve unique and challenging human problems. This clearly required a change of perspective on my part and this was overt within my diary:

I am beginning to wonder whether my time as a student nurse has in any way prepared me for the job I am now expected to do.... The two are so completely different; as a student my responsibilities centred around my patients and they were my only responsibility. Now I am responsible for holding the whole team together, deciding who should do what. ... really quite scary as I decide when to call Dominic (the doctor) and what I ask him to do. I am on such a steep learning curve ... the adrenaline rush I get at work ... I don't want to take time off in case I miss something.

(Personal diary, 1980)

As time passed my transformation or change of perspective (Mezirow et al, 2000), which centred on the transition from student nurse to staff nurse, became apparent. Taylor, K., (2000, p296) cites 'meaning schemes' and 'meaning perspectives' as referring to specific beliefs and global beliefs which are both significant when considering how an individual views the world. With reference to this ontology, we are told, an overarching

characteristic is critical reflection on ones own assumptions as opposed to the assumptions of others (ibid). This is what is apparent from my diary where my taken for granted beliefs or understanding were observed, over my initial period as a staff nurse, to suddenly be my own as opposed to those of the more senior and powerful staff around me. My priority became the widening of my viable knowledge (Von Glasersfeld, 1989), in order that the decisions required of me could be made with confidence.

For me, this shift in paradigm (Karstadt, 2008c) has been maintained since that time. As I moved from staff nurse to ward manager, and then to nurse teacher the way that I viewed nurses and nursing continued to change at the same time as contemporaneous events continued to mould the nursing profession.

3.5.3 Changing attitudes to nurse education

During my early career attitudes toward nurse education began to change. I entered the world of nursing and the NHS only four years after the publication of the Briggs Report (1972). This report looked into the future, and saw nurses in a fundamentally different way. The role of the nurse portrayed by the report was more independent of, and complementary to, that of the doctor. Nurses were described as knowledgeable with an emphasis not only on what they could do but also on the knowledge that was necessary to underpin their activities. The report had called for radical changes in the way nurses were educated. Although this report did not bring about immediate change, it did begin to change the way that some nurses and nurse educators viewed themselves and their profession. Aspirations were also changed as both individual nurses and the profession generally began to look forward to a brighter future.

During the early days of my 'nurse training' I was told repeatedly that courses were changing and that they were moving away from task

orientation to a more systematic approach to patient or client care. Nursing models were introduced (see, for example, Roper, Logan and Tierney 2000; Orem 2001; Roy and Andrews 1998) promoting a greater conceptualisation and a more overt articulation of theory and practice. The documentation of nursing care also became more important, explicitly guiding rather than merely recording nursing care. Hence the emphasis on evidence and evidence based care was introduced as a tenet of good nursing practice. In education this began with a change that required written assignments to have a bibliography, then precise references, and culminated in students being required to cite the evidence that underpinned their specific actions in relation to patient care.

Within a decade of my entry to the nursing profession plans to move nurse education away from the NHS and into Higher Education (HE) were unveiled and nursing courses began to be viewed as academic as well as vocational. At the same time I had just made the transition from clinical nursing to nurse education. Analogous to the contemporary situation, the academic credentials required for this transition were changing. Having gained a University Diploma in Nursing and a Certificate in Education I was a typical, if very young, nurse teacher. It then became apparent that if nurse education were to move into HE, teachers would need to be graduates if they were to claim equity within the academy. My frustration was tangible as I wrote in my diary:

'Will I be playing catch up all my life!!!! Today Sheila had me in the office and told me that if I wanted to get on in this life I would have to get a degree. She told me that I could do anything I wanted as it is the graduate skills that are required not the content.... Maybe I will do Maths!
(Personal diary 1985)

And so the next phase of my education began. Throughout my early career as a nurse educator I first completed a degree in Mathematics and

then a Masters in Education, giving me the equity with my university colleagues that had by now become personally and professionally very important.

At the same time as my own personal/professional development the profession went through a large number of changes as nurses and nursing slowly became accepted as a part of the university system. This has culminated in the recent announcement (NMC, 2008a) that nursing courses will from 2013 only be available at under-graduate level.

My view of nurses and nursing has remained dynamic throughout my career. Following an initial scepticism and period of soul searching to establish my attitudes and priorities to nurse education and its relationship to academia, I have been a fierce advocate of a paradigm of nursing that sees practitioners as responsible for expert and advanced personal interaction which is goal orientated and requires sophisticated decision making, based on a sound body of nursing knowledge (Clarke, 1991; Karstadt ,2008c). It is from this viewpoint that I function in and communicate with the wider world. This perspective is evidenced in the following section.

3.6 Current ontology as viewed through my professional writing

As previously stated my ontological stance during this research inquiry is clearly evidenced by the regular comment pieces that I write for the British Journal of Nursing (BJN). At the time when I began to contribute to this journal my doctoral studies were well under way and my own ontological and epistemological perspectives had been explored and assessed within the assigned work in years one and two of the EdD programme. The journal pieces however show explicitly how I perceive myself and others within the wider context within which I exist and am carrying out this research. I am introduced in the journal as the elected England

representative on the Executive Committee of the Council of Deans of Health and as such have the both the power and authority that allows me to comment on educational issues that are of relevance to practitioner colleagues. I see myself as a conduit and gatekeeper of information – something that is discussed more fully in the methodology chapter to follow.

These comment pieces show clear evidence of my position nationally within the nurse education community. They chronicle some of the meetings where I have represented either the perspective of nurse education or that of higher education institutions more generally. Nurse education is a distinctive part of the nursing constituency and as such requires representation in arenas where policy and direction are decided. My comment pieces refer to many such situations. Annually the Chief Nursing Officer hosts a summit where the past year's performance is evaluated and priorities are set for the coming year. I am an invitee to these meetings which I have faithfully reported from an educational perspective (Karstadt, 2007f; Karstadt, 2009k). Similarly I have reported discussions taking place at the Department of Health Coalition (Karstadt, 2008d) and from other reference groups concerned with such issues as recruitment and practice nurse competencies (Karstadt, 2007d, Karstadt, 2009a).

During 2009 I represented faculties that host healthcare education on a Department of Health steering group concerned with the financial support of all healthcare students. This included medical students as well as nurses, midwives, physiotherapists, radiographers, dieticians, occupational therapists and podiatrists (Karstadt 2009c; Karstadt, 2009i). Representation of this wide student constituency was a challenge as was the rallying of all to be involved in the subsequent consultation process. A similar cross professional representation was my involvement with the

steering group looking at the new information or IT system development for the NHS; Connecting for Health (CfH) (Karstadt, 2008c), impacts upon all professionals, students, and consumers of the National Health Service.

The first BJN piece was written during the summer of 2007 and sets the scene in which nurse education was operating at that time (Karstadt, 2007a). It acknowledged that the profession was at a pivotal point in history with a decade of plenty behind it and a period of sustained reduction to come. From the outset I made it clear that I had an expectation of my reader and that was to be well informed with reference to contemporary issues. I told them that 'I work on the premise that knowledge is power' and that 'as a practitioner every little bit of power is indeed very valuable'. I ended that first piece with an invitation to seek out opportunity and shape the destiny of our profession, finishing with the words 'welcome to my world....'

Over the weeks and months that followed I shared my ontological perspective in the form of my view of the world and others within that world with my reader and on close examination of my contribution, a number of issues that add to that perspective can be seen to be made explicit. Although each month's piece was self contained and dealt with an issue or a number of related issues interrogation of the whole data set (all the BJN pieces) shows a number of recurring themes. These include the positioning of nursing with reference to other healthcare professionals and the voice of the nurse in relation to the setting of policy. The shape of nurse education and the blueprint for the future profession are also explored as is the way that nursing is conceptualised by nurses and by others. Some of the key themes that emerge from data collected as part of this inquiry are also illuminated and these include: compassion in nursing; the governance of nursing; and comparisons with nursing as it is practiced overseas where the context may differ slightly. Where appropriate the

content of individual pieces will be offered as corroborating data within the analysis chapters as well as being used here to illuminate my ontological perspective.

3.6.1 The position of nursing

This theme is visited repeatedly. Initially I asked 'Is nursing still the dominant voice?' (Karstadt, 2007b) at the moment when the Council of Deans for Health dropped the word nursing from its title. This influential lobbying body has existed for many years as a uni-professional affiliation but over the past five years has widened its membership to include representation of allied health professionals who are usually co-located with nursing in university faculties of health. Initially renamed as the Council of Deans for Nursing and Health, the move to remove nursing from the title altogether recognised that nursing was not in a unique position but shared its context with others, such as physiotherapists, radiographers, dieticians and podiatrists, and the assumption was made that all were strengthened by this strategic coalition.

Over the three years that I have contributed to the journal there have been a number of times when this equity has come into sharp focus. These include: the launch of the new 'Code' of professional practice (NMC, 2008b), which did apply only to nursing and midwifery although the tenets of the publication were equally applicable to all allied health professionals (Karstadt, 2008e); the publication of the Darzi Next Stage Review (Department of Health, 2008) that heralded more money for preceptorship in nursing, although no such commitment was made to other health care professionals (Karstadt, 2008h); and the discussion of the financial support that hitherto had been more generous to nurses (Department of Health, 2008) and is now destined to be the same for all healthcare students (Karstadt, 2009c; Karstadt, 2009i). My attitude to all these events was similar, seeking equitable treatment and cautioning that nurses should not

be treated as a special case unless there was overwhelming evidence that this could be rationalised. If more favourable treatment is based only upon the historical legacy that placed nurse education outside the Higher Education sector and a fear that more equitable treatment may deter some would be students, then my advice has been consistently to not seek different or preferential treatment (Karstadt, 2008h). My perception of nurses is therefore confirmed to be similar to that of other graduate healthcare professionals, with no special consideration sought.

3.6.2 Becoming an all graduate profession

The move of the nursing profession to join the majority of all other healthcare students and become all graduate has dominated discussions within the comment pieces over the three year period. In the beginning (Karstadt, 2007b) this was acknowledged as a possibility but by the end of 2007 the government had launched the consultation reviewing pre-registration education (Karstadt, 2007f) and all nurses were urged, by me within my comment pieces, to make their opinions count. Nurses were thus encouraged to participate in the consultation exercise and to craft responses that left the government in no doubt as to what the profession wanted with reference to issues like widening participation and the branch structure (Karstadt, 2008a; Karstadt,2008b). The outcome of the consultation became known over the following summer (Karstadt, 2008i) with nursing recognised as an intellectually demanding career and not merely a collection of tasks, roles and functions. This statement summarises my theory of being with reference to nursing and is the basis that I rally all nurses to engage with policy makers and mould the world to one that is acceptable to nurses and in harmony with our shared philosophy.

Since the outcome of the consultation has been known there has been a lot of speculation with reference to what the new graduate nurse will look

like, what they will do and how they will be received by others (Karstadt, 2009a). This is not a totally unknown scenario, as in the 1990s the introduction of the Community Specialist Nursing Practice (CSNP) qualification caused similar tensions. Then, we were told that the newer version of community practitioner would be educated to graduate level, have greater skills and would be prepared to be a future leader, with reference to both the multi-disciplinary team and service delivery. In reality however the anticipated new skill mix took a decade to be realised. Change was slow but sustained, with the final outcome being today's reality and matching the vision of the workforce planners (Karstadt, 2009a). Elsewhere in the world similar scenarios have been seen. In Australia and New Zealand, for example, such changes were introduced more than two decades ago and the workforce has now reached a stable state, which includes a second level nurse prepared to a lower academic level but pivotal to care delivery in these countries (Karstadt, 2009d). Over time the delivery of the pre-registration nursing programme has also changed in these places with the amount of practice contained within being drastically reduced. In the first year of undergraduate study in both Australia and New Zealand students often experience as little as 100 hours of practice experience (Karstadt, 2009h). As ever readers were reminded that there was no right or wrong but that they had constant opportunity to discuss and debate these issues and to make a contribution as to what will happen next here in the UK.

As my comment pieces discuss the blueprint for the future (Karstadt 2007c) I have conscientiously provided the facts and articulated pertinent questions; being sure not to just give the readers what I, from my perspective, perceive the answer to be. Assistant practitioners and advanced practitioners will no doubt become a reality. Nurses and nursing are essential to NHS reform although the exact shape of that reform is still to be determined. My perception of the nurses that I write for is that they

are in a position to influence this agenda and should therefore remain active and excited. Nurse education is reliant upon clinicians to deliver appropriate education to the nurses of tomorrow and to that end planning should be strategic and partnerships strong (Karstadt, 2008f), something that we all have to work together to attain. The final blueprint was of course still, in late 2009, under consideration with the two main political parties carrying out wide consultations with reference to the future of the nursing profession. My attitude to this, cast my readership as activists, urging them to talk together about the issues being consulted upon (Karstadt, 2009f) and advising them that whatever the colour of their personal politics they should consider both perspectives and register their opinions. The experience of being a nurse and their own unique understanding of the contexts in which they practice, I told them, meant that the future was in their hands and that they had the responsibility of making sure that it was indeed a future that they wanted to be a part of.

My ontology is therefore distanced from the view ascribed to the neo-Marxists and previously articulated (Atkins, 1990). I do not see nurses as only being able to carry out tasks roles and functions but instead being capable of problem solving and creative thought. This fits with my second paradigm (Karstadt,2008c) and the notion of a self regulating profession. Professional regulation was discussed in mid 2008, when the Council for Healthcare Regulatory Excellence (CHRE) reported serious weaknesses of the governance and culture of the Nursing and Midwifery Council (NMC). This piece (Karstadt, 2008g) really did see me in the role of commentator, interpreting what had happened for the practitioner on the ground. As a result of these difficulties recommendations were made that resulted in the removal of representative members on the Council and that suggested consideration be given to changes with reference to the Competency and Conduct Committee that could result in the loss of the right of the profession to regulate itself. I urged nurses to take this opportunity to put

our own house in order, rather than allow a third party to become responsible for our regulation. Again a strong indication of how I see contemporary nurses and nursing. A piece with a similar tone followed at the end of the year (Karstadt,2008k) and reported the establishment of an appointed Council with all that that meant and a call for nurses to know what they were paying for.

Throughout the comment pieces therefore the way that I perceive nurses and nursing students is constant. The qualities necessary to become a nurse are articulated (Karstadt, 2007e) and discussed. Compassion and an aptitude for caring are seen as primary, not only for nurses themselves but also for those that assist them (Karstadt 2009k). The 'too posh to wash' sentiment is challenged in this same piece, and questions as to whether a profession with higher academic aspirations will be devoid of compassion are asked. Although my position with reference to nursing is generally positive I do discuss the view of the Patients Association that declares that there is no room for complacency as it reports everyday situations where nurses lack compassion (Karstadt, 2008e). As ever I urge my readership to debate these issues in the classroom and coffee room rather than pretend that the profession is above reproach.

So, it is clear that I expect both qualified and student nurses to behave in a particular way, and this is a part of my theory of being with particular reference to nurses and nursing. Both the Code (NMC, 2008b) that prescribes how nurses should behave and the published guidance on how nursing students should conduct themselves (NMC, 2009; Karstadt, 2008e; Karstadt, 2009j) are used as vehicles to discuss the importance of how nurses and nursing students are perceived. The case of Margaret Haywood (A nurse judged not to have maintained the confidentiality of her patient by exposing poor practice within a television documentary and ultimately therefore removed from the Nursing Register) was also used to illustrate how the code is and should be applied to a

contemporary situation (Karstadt, 2009e). Some of the comment pieces may be seen as random discussions of contemporary events but whether I am discussing whether to administer first aid on the street (Karstadt, 2008j), or how to behave in the swine flu epidemic (Karstadt, 2009g), I am applying and evaluating the principles by which nurses exist and inviting my readership to do the same.

Finally, within these comment pieces, I have referred to the identities enjoyed by nursing students. These individuals exist as both university students and as members of the multi-professional healthcare team (Karstadt, 2009g; Karstadt, 2009j). Both identities place demands upon the individual student who has to satisfy the expectations of both personas. Having considered previously how nurses are viewed by the media (Karstadt, 2007f; Karstadt, 2009b) and how nursing is conceptualised by others (Karstadt, 2008c); in the final piece of 2009 (Karstadt, 2009k), I considered how the general public views the nursing profession and its students. I concluded that not everyone shares the same perspective and as ever urged my readership to be proactive and to promote an identity that they could positively recognise.

As time passes, so my ontological perspective will continue to develop and change and I expect that this will continue to be reflected in my writings. Although I will endeavour to modify this chapter as I progress toward final submission there is a feeling that it will never be complete as all experiences will continue to contribute to my personal point of view and from time to time that perspective will have to change to accommodate transformational learning (Mezirow et al, 2000). Both Mezirow's (2000) concept of transformational learning and Von Glasersfeld's (1989) concept of viable knowledge are in this way fused together and inextricable from my dynamic ontological perspective. All three, I feel, are essential to my experience of practice based research and the account of it contained

within this thesis. The research questions guiding this inquiry are framed by my ontological perspective which is integral to my research perspective and is dependent upon my viable knowledge base for illumination and understanding.

3.7 Autobiography of the research question

The research question considered within this inquiry originated from my own experience and is viewed from my own unique perspective. In 1993 many hospital based schools of nursing merged with, or were assimilated into, university departments. My experience was that two schools of nursing, in close proximity to each other merged with the same university. Each had a recently developed and validated curriculum, which were then delivered in parallel over the next couple of years. One boasted to be an integrated curriculum whilst the other was proud of its scientific basis. As an individual I soon noted that there were qualitative differences between the two groups of students on completion of the course.

This became explicit when one ward at a local district general hospital recruited, at the same time, four newly qualified staff nurses; two from each programme. The ward manager, within the first month of employment commented on the relative autonomy of the individuals in question and questioned the possible reasons for the scenario observed. After a couple of years a single course was validated within the university taking perceived strengths from each of the predecessors. The effect of curricular structure has however remained of interest and the success of mediating theory and practice is, as a result, a key consideration in this research

In the context of this inquiry, within the case study, the student experience is explored investigating how contemporary students use the information conveyed in the first semester of the programme to underpin their early practice. Evidence of problem solving and other student behaviours are

explored and conclusions made. If students do not have a comprehensive grasp of the theories that underpin the care episodes that they are involved in they would be unable to engage in complex problem solving and this may consign them to the first paradigm that views the nurse merely as individuals who carry out tasks roles and functions rather than specialist problem solving activities (Karstadt, 2008c) and preclude them from becoming major players in the multi-professional team. The question is not therefore what is taught but whether it is taught in a way that can be conceptualised and applied by individuals to everyday nursing situations and thus enable nurses to practise their craft in the way described in my second paradigm.

Having made explicit my ontological perspective I will now explicate the methodology employed within this study.

4. Methodology: the research perspective

4.1 Introduction

In this chapter I give details of the research methodology employed within this thesis. In so doing I trace a personal journey that chronicles how my attitudes and philosophy change during the research. This study of undergraduate student nurses at the University of Hertfordshire, which investigates how they use the theory presented to them in the classroom to underpin their early practice, uses a qualitative methodology.

Initially a questionnaire surveyed all University Schools of Nursing in England to determine the structure of their undergraduate nursing curriculum, the details of which can be found in Appendix One. A single school then forms the basis of a case study that investigates the student experience. Data is collected via student web logs and interviews with both students and academic staff. A plethora of other and naturally occurring data which included my own personal and professional writing are also used.

Although both qualitative and quantitative research methods are employed within my study, this can not be referred to as mixed methodology. This is because the quantitative data is used to validate the choice of case rather than to answer the research question. However, utilisation of both quantitative and qualitative data aids 'an understanding of the world with quantification', from my perspective, 'recognised not as an end in itself but as a means of making available techniques that enable identification and description of patterns within observations' (Miles and Huberman, 1994. p40). In my case this has been the ability to recognise the University of Hertfordshire's School of Nursing and Midwifery as typical within England.

Here I consider specifically, how the methods used are able to convey the experiences of the student nurses. To do this I refer to the four distinct but related dimensions of the research process based on the work of Denzin and Lincoln (2000): ontology (ideas about the nature of reality); epistemology (how individuals know that reality, how knowledge is constructed); methodology (theoretical and conceptual frameworks) and methods (techniques such as questionnaires and interviews)

When considering **ontology** Denzin and Lincoln encourage us to ask 'What kind of being is a human being?' (ibid, p19) and within my research this question must apply specifically to nurses as in 'What kind of being is a nurse?' Whitehead and McNiff (2006, p82) talk of 'ontological standards', this being the meanings and purpose given for being or existing, in the sense of a theory of being, and then of a criteria for measuring that. Starting from a positivist background, talk of criteria really brought this concept to life for me. I believed that as soon as such criteria were established ontology would become concrete within a particular context. Within nursing generally and in my study in particular, such standards of judgement are however more than mere checklists, as establishing that something has happened is no indication of the quality of that action. Ontological values are concerned with the importance of such characteristics as care and due regard, qualities that Whitehead and McNiff (ibid) apply to teaching that are equally relevant to the practice of nursing. 'They reflect our commitment in terms of who we are and how we understand ourselves in the world' (p82). A theory of what a nurse is therefore gives rise to the concept of what that individual needs to know and how that is achieved.

Secondly **epistemology** must be considered. Ontological assumptions give rise to epistemological assumptions (Cohen, Manion and Morrison, 2007), in other words the way existence is conceptualised frames what we

understand human knowledge to be. In this particular study, if ontology is framed with reference to the quality of nursing practice, then epistemology is concerned with an understanding of the knowledge that underpins nursing and how that understanding is developed. Epistemological values therefore emerge from ontological values and are to do with the capacity to identify and articulate what is being studied (Whitehead and McNiff, 2006). Denzin and Lincoln (2000, p19) refer to this simply as the 'relationship between the inquirer and the known.' In my research this applies to me as researcher and the curriculum that ultimately structures what the student is expected to know.

Thirdly it is important to state the **methodology** that I have adopted. For me, methodology moves us towards the practical aspects of the research and by asking 'How do we know the world or gain knowledge of it?' (Denzin and Lincoln, 2000 p19), we acknowledge the use of the theoretical and conceptual frameworks to frame the data collected. During the research design journey many methodological perspectives were considered. Initially I was drawn towards an ethnographic approach, and although this research does not fit the description of ethnography in a pure sense, if we accept that a distinct feature of ethnography is interpretation and application of research findings from a cultural perspective (Patton, 2002) then ethnographic tendencies must be acknowledged. A phenomenological perspective is core to my study. Patton (2002, p107) explains a general phenomenological perspective as one that 'elucidates the importance of using methods that capture people's experience of the world without conducting a phenomenological study that focuses on the essence of shared experience.' This perspective reflects the stance that I have adopted whilst undertaking this qualitative case study (Yin, 2003; Stake, 2000; Merriam 2009). Consideration of grounded theory methodology (Glaser and Strauss, 1967; Charmaz. 2006) also informed

the research design. Again this was not adopted in a purist form, the principal contribution being to inform some of the data analysis techniques.

Trying to fit this study into a particular category or type of methodology proved to be a challenge and having surveyed the landscape of available methodologies a number of perspectives were adopted and acknowledged. This emerged as a strength of the study as I found myself adapting my approach as the work progressed. This emergent approach (Ely et al. 1997) used methodological perspectives that suited the complexities of the case. Nurses are complex beings and nurse education a complex business; researching it therefore needed a unique and adaptable approach.

In this research the **methods** used for the data collection include the use of a questionnaire, student web logs (blogs), staff and student interviews and the documentation of 'naturally occurring data' (Silverman, 2001). I also address other data in the form of my own personal diaries and the regular comment piece or column that I write for the British Journal of Nursing (BJN) on a monthly basis. After the completion of the initial survey the subsequent methods chosen were qualitative and were selected because they are 'humanistic and interactive; seek the active involvement of participants and the development of a rapport and credibility with the individuals taking part in the study' (Creswell, 2003 p181). The participants selected made up a convenience sample as they were asked to self select on the basis of their willingness to get involved. Selection could however also be noted to be purposeful as the student nurses selected were new to the programme and undertaking the taught component of the first semester, they were therefore in a position where the application of that theory to practice could be evaluated.

In addition to the above four related dimensions of the research process as

highlighted by Denzin and Lincoln (2000), ethical and relational considerations inherent in this study, including tensions and opportunities, are also uncovered within this chapter and are investigated. Analysis of the data and the creation of a conceptual model are explored and the chapter concluded by pointing towards the structure used in subsequent chapters.

4.2 Approach to the research

This dissertation details the experience of practice based research in education and is an inquiry where critical examination is facilitated by a self-reflective spiral (Carr and Kemmis, 2002). Conclusions are based upon the interrelationships between the analysis of collected data and my context bound lived experience. The data that have been collected from institutions, lecturers and students therefore are only part of the data set that is used to inform the ultimate conclusion and the contribution made to the practice of education. In addition, naturally occurring and other data collected in a variety of professional circumstances and written up in a private reflective journal have also been used, as have my more public writings that are in the format of comment pieces written principally, although not exclusively, for the British Journal of Nursing on a monthly basis. These two data sources are an interpretation of my experiences and are written from my perspective.

Where practitioners are researching their own practice, it must be questioned whether that research can ever be free of bias (Carr and Kemmis, 2002), and whether the important issue of generalisability of research findings can ever be applied. Typical situations are highly valued as results can be transferred and applied to other circumstances (Schofield, 1993). Objectivity however, may be difficult to achieve and to demonstrate to the reader, so generalisability may be questioned. Some contemporary authors (Stenhouse, 1981; Yin, 2003; Whitehead and McNiff, 2006) extol the unique aspects of practice research, the

advantages often being context specific and involving the personal and professional judgement of individual participants.

In this piece of research, prior to the case study I carried out a national survey (Karstadt, 2005), the results of which are included as Appendix One and demonstrated that the majority of universities in the UK had similar curricula content and structure thus rationalising why the findings could be applicable in other similar contexts across the country. In this way the survey confirmed that the participants in this research could be considered a convenience sample of the total population of student nurses within England. This is reassuring as Shipman (1997) suggests that samples are designed for generalisation and abstraction whilst case studies are viewed as unique and are better suited to a reflection on practice that is context bound. So, although this is a case study and articulated as such, some potential for generalisation is anticipated as the context has been shown, via the survey of similar institutions in England, to be typical and therefore findings are likely to be useful to practitioners elsewhere.

There are a number of ways of interpreting a researcher's own perspective in relation to the research that they are carrying out. Positivist research, being generally seen as objectivist in epistemological orientation, would view a personal perspective as dangerous and would view human behaviour 'in terms of cause and effect' (May, 2001 p11), claiming that there is a reality out there to be studied captured and understood. I have not approached this research into nurse education in that way and do not attempt to reveal a particular real world, nor do I believe that there is a single truth out there waiting to be discovered.

Within a nurse education context I play multiple roles and throughout this research therefore I have been able to draw upon a number of different personal perspectives. These include that of lecturer and educational

manager within a typical School of Nursing in a new university, and from a wider perspective, that of an elected executive member of the Council of Deans of Health, a position that gives me access to individuals who set and monitor policy at a national level and allows me to act as a contemporary commentator by writing a regular column for the British Journal of Nursing. These multiple perspectives have facilitated the mediation, interpretation and construction of knowledge allowing a creative process that has conceived and developed a conceptual model from the data collected and construed in my own inimitable context. Although the research findings are not offered as objective truths and claims of generalisability are not made, it is anticipated that the findings, offered as interpretations, and the analysis of the data, may be useful to other nurse educators in similar contexts.

4.2.1 The role of metaphor in an autobiographical context

During the research process metaphors emerged from the data which on reflection were considered to be significant and are therefore worthy of attention. With this in mind, and when considering how and why this research was done as described, it is important to overtly acknowledge how my role and position in the organisation and the wider nurse education community have affected my interactions with those involved with the research and ultimately my interpretation of all the data strands. With reference to the collection and analysis of my whole data set, the role of metaphor must therefore be recognised.

The metaphors used here are those that are seen as relating to my multiple roles in nurse education as outlined above. The metaphor is therefore presented in order to illuminate interconnections between this situated research and emergent theory. Patton (2002, p514) advocates 'exposure to many different avenues of expression: drawing, music...

metaphors... Synthesising through triangulation, promoting creative integration....'

The principal metaphor, which relates to my context, was identified by my supervision team early in the doctoral process, when I was referred to as a 'gatekeeper' of the nursing profession. The identification and exploration of this metaphor has proved to be very useful in stimulating thinking. Associated behaviours have included the exploration of words and nomenclature related to gatekeeping, so items like letterboxes, knockers and handles, rulebooks, uniforms and signals have allowed me to interrogate the way I am viewed by the different people participating, in whatever way, in this research process.

The image of me as gatekeeper has proved quite helpful when considering how my research interrelates with my practice. As a senior manager my role could be considered as nebulous; my teaching contribution is token, as although I do teach regularly this is no longer my core activity. My main activities centre on management of teaching staff and related programmes, the educational environment and quality control of the curriculum.

As the most senior nurse in the organisation it is my responsibility to ensure that the curriculum is fit for purpose by facilitating peer validation (NMC, 2004) and leading the quality assurance process. I am also charged with confirming that all graduates are of good health and good character (NMC, 2007) at the end of their studies prior to them being included on the Nursing and Midwifery Council's (NMC) Professional Register. The label of gatekeeper or guardian of professional standards is therefore accepted by me and the metaphor is viewed as useful.

4.2.2 Extending the metaphor

In my wider professional role I am the England elected executive committee member of the Council of Deans of Health of the United Kingdom and it is in this capacity that I write a monthly comment piece for the British Journal of Nursing. Entitled 'Education Matters', this column explicitly sets out to make current issues affecting nurse education accessible to those whose first responsibility is clinical practice (Karstadt, 2007a). Decisions with reference to the content of this column are my responsibility and the framing of each months chosen issue is down to me. Again I accept that by writing this piece I act as a selective conduit disseminating only the information that I deem appropriate. Both these behaviours also apply to an international context, as in South East Asia I manage top-up degrees for Malaysian nurses and write a similar comment piece and sit on the editorial board of the Malaysian Journal of Nursing.

If I am viewed as a gatekeeper or guardian, this must be acknowledged as significant when considering the processing of the data. The way that the students perceive my role in terms of power and control and their resulting response to me may be affected by that relationship and that may adversely affect the collected data. I accept that our relationship does have a bearing on the data collected but believe that I have minimised this by presenting myself as removed from the day-to-day management of the programme and reinforcing my alternative persona as research student. The metaphor must also be recognised as potentially affecting the way that I view students and the way I view contemporary events and importantly my perceptions of the inter-relation between the two.

My position as elected executive member of the Council of Deans of Health and as Head of a School of Nursing and Midwifery has offered me the opportunity to survey the structure of nursing curriculum nationally and to investigate the experience of first year student nurses undertaking the

undergraduate degree level nursing programme within my own institution. The data collection was undertaken between 2006 and 2009, at a time when the nursing profession was considering its future and the decision to move to a position where all nurses were prepared via a graduate programme was made.

4.3 A case study approach

This study was carried out at the University of Hertfordshire (UH) between 2006 and 2010. In it, the BSc (Hons) Nursing Programme within the School of Nursing and Midwifery is viewed as a case study. Merriam (2009, p40) defines a case study as an 'in depth description and analysis of a bounded system' and the programme within the school is a contextualisation of this definition. I have found the image presented by Miles and Huberman (1994) particularly useful. They similarly present a case as 'a phenomenon of some sort occurring in a bounded context' (p25) with the image portrayed as a circle with a focus or heart in the middle. In the study under consideration there would appear to be circles within circles the outer being the School with the programme situated within it. Within the programme then, it is the student experience that gives the focus which during the course of this study is explicated.

The constraining circles representing the School, the programme, and student experience and the variables identified therein form the basis of a conceptual or recursive model that is discussed further in Chapter Five. I use the word constraining to depict a closed and bounded entity within which another element is confined, so the programme studied exists only within the School and the student experience depicted within, is peculiar to that programme.

The student experience was therefore explored within the aforementioned case study by gathering data from a group of ten student nurses

undertaking a degree level trajectory in pre-registration nursing. This was then triangulated and extended by further data collection from some of the academics involved in the same programme and from others. Yin (2003) asserts that case studies are appropriate when something is investigated in a real-life context with evidence being gleaned from a number of perspectives. Using this conceptualisation this group of students and associated lecturers are viewed as a single case study.

Yin (ibid) points out that the case study often transcends mere description and promotes the development and testing of theories. This study is therefore typical as it proposes to use a number of data collection techniques with information being sought from a number of students and others within my practice context and beyond it. The decision to include only degree level students resulted in the target group being significantly smaller than it would have been if all the first year nursing students had been included. However, it ensured maximum relevance to the contemporary situation and the expected developments within nurse education in the near future.

An alternative conception of case study is that offered by Stake (2000, p435) who expresses this type of strategy as a 'collective case study', thus describing the joint study of a number of cases, in this instance the nursing students are used to inform the understanding of a phenomenon, the student experience. With this rationalisation, cases are chosen because it is believed that by investigating them a better understanding and possibly better theorising will be achieved. My investigation of individual students will therefore enable me to interrogate how nurses generally use the theory delivered in the classroom to underpin their developing practice. However it must be acknowledged that my experience is context bound and will therefore be pervaded by my interpretations philosophies and purpose

(Carr and Kemmis, 2002), and may therefore be perceived as of limited use to others.

Merriam (2009) however takes a different stance suggesting that knowledge learned from the interpretation of a case study is superior to knowledge gleaned from other types of research, a similar view to that held by Stake (1988). She considers such knowledge to be more concrete, being able to resonate with the experience of the reader for whom it is more vivid and sensory rather than being merely abstract. A lack of abstraction results in knowledge that is more contextual and because in nurse education we all operate in a similar context the recognition of parallels is facilitated. Readers are also able to interpret the findings in their own (similar) contexts and in this way possibly further develop the findings. They are in this way able to extend generalizations, and to apply the practice knowledge generated to other particular populations who are identified by them as comparable.

Objectivity is one of the most cherished ideals of the educational research community and like democracy and virtue should be strived for (Eisner, 1993). However to be objective is to be without bias and prejudice and to be detached and impersonal. Procedural objectivity refers to the use of methodology that aims to eliminate personal judgment (ibid). Carr and Kemmis (2002) cite the philosophy of Habermas (1984) and reject the notion that knowledge is the product of a pure intellectual act in which the knowing subject is disinterested. Knowledge, they tell us, is the outcome of human activity that is motivated by natural and social need and interest. The reality that the findings of educational research will inform and change future educational activity mitigates the notion of a disinterested researcher. Merriam (2009) adds to this by asserting that it is the reader not the researcher who decides what applies to his or her context. The

reader will also add, subtract, and remould the information presented, in ways that result in it being more likely to be personally useful.

What is chosen as the focus of any research is a declaration of the researchers interest (Weiner, 1989) and this research fits that blueprint. These interests declared in Chapter One and illuminated later in Chapter Three grew out of personal experiences and observations which took place over a number of years, from my perspective as student nurse, nurse teacher, educational manager, external expert and patient of the National Health Service (NHS). I have throughout however, striven to retain objectivity whilst acknowledging that this may be mitigated. Phillips (1993) cites the work of Myrdal (1969) and asserts that bias is not confined to the conclusions of research but is also the result of concealed value statements at all stages of the research process. Miller (1996) articulates the concept of 'autobiography of the question'. Perceived from a feminist point of view she suggests that all situations are unique and affect subsequent perceptions. This stance is true whatever point of view (political or otherwise) is subscribed to and is affected by both personal experience and the attitudes and prejudices of contemporary society. I acknowledge that my stance has developed over years, and therefore my perspectives and opinions are well formed and contribute invisibly to the attitude taken to nursing and nurse education. I have however attempted to explicate these in Chapter Three which interrogates my ontological perspective viewing this as both significant and dynamic.

4.3.1 Selection of the sample

The decision to use the undergraduate nursing programme at the University of Hertfordshire as the focus of the case study was a conscious one. Having considered my position within the University and my consequential relationships with staff and students therein, I decided that any significant disadvantages were outweighed by advantages.

As the programme being followed was an EdD, consideration of the impact upon my own practice was paramount. By using my own institution the findings could be used, with almost immediate effect, to enable curriculum modification. If another institution were to be used then the results, at best, would be tangential to my own practice. In addition, the ease of data collection and convenience were considered as was my knowledge of the Managed Learning Environment (MLE), which meant that the technology available could be easily harnessed to support the data collection from the students. My knowledge of, and familiarity with, the undergraduate nursing curriculum also facilitated easy interpretation of the data, as there was no necessity to familiarise myself with a new curriculum and its underlying philosophy.

4.3.2 The curriculum studied within the case study institution

During the first semester of their nursing programme the students included in the case study methodology studied four modules. These were:

- Core Knowledge and Values
- Diversity Rights and Equality
- The Fundamentals of Nursing Practice
- Bioscience to support Nursing Practice

Each module is delivered independently of the other three, although they all complement each other to give the student a holistic introduction to Nursing and preparation for their first practice placement. Each module is recognised as requiring 150 hours of student effort and the first three in the list each have an overarching theme that is used to structure the content, which is holistic in its orientation, and would be described by Bernstein (1975) as an example of an integrated curriculum. In contrast the final one Bernstein would describe as being an example of collection curriculum, with bioscience being delivered discretely and not necessarily related to the work of a nurse or the patient or client experience. All are however

considered to be relevant to nursing practice and contribute to a 50:50 ratio of theory to practice which must be adhered to if the programme is to be recognised and accredited by the Nursing and Midwifery Council who maintain the professional register for nurses and midwives in the United Kingdom.

Each module is assessed independently with a variety of assessment methods spanning both theory and practice being used. In addition all students are expected to keep a reflective diary and this concept is introduced to them in the Core Knowledge and Skills Module. They are invited to use the blogging facility on the university's managed learning environment (StudyNet) or to keep a paper version. When the students return to the lecture room following their initial practice experience this reflective diary is utilised by the students to provide living examples and facilitate vicarious experience. It is also used to source examples that make up a reflective practice part of the assessment of the Fundamentals of Nursing Practice Module. Participation in this research study therefore, extends the student's experience of reflective practice.

4.4 Phase one: the questionnaire

This research considers how student nurses use the information presented in the curriculum to underpin their developing nursing practice. Phase one of the study adopted a largely quantitative positivist stance and set out to map the domain, in relation to curricula types in higher education institutions (HEIs) delivering nursing programmes in England.

A summary of the national survey conducted confirming that the University of Hertfordshire was a typical HEI delivering undergraduate nurse education can be found in Appendix One. The survey consisted of a questionnaire (see Appendix Four), that was distributed to all the universities in England that delivered nurse education. 53 questionnaires

were distributed and 28 were returned by the requested date. Following a further reminder this increased to 38 (72%). The focus of the study at this point was the curriculum and the questionnaire explored how the art and science relating to nursing were packaged in each HEI. The questionnaire looked specifically at whether the curriculum was modularised and if so whether the modules were organised according to the science underpinning nursing or the practice of nursing.

4.4.1 Analysis of the questionnaire

The questionnaires were analysed using the 'Statistical Package for the Social Sciences' (SPSS) and the results showed that within the sample there were a range of curriculum types with the mode being an eclectic curricula structure with features of both integrated and collection curricula, as described by Bernstein (1975). Results showed that for the vast majority nursing practice was used as the over-arching organisational feature with only a minority teaching biosciences or social sciences as discrete subjects. These results began to illuminate the individual experience of the student nurse which subsequently became the focus of my research activity. The main frame of reference therefore became the lived experience of the individual student and not the curriculum structure employed by a particular institution. This represented a change of perspective on my part and which I now recognise as part of the transformational learning process that I have experienced through completing this research (Meizrow et al, 2000) as outlined below.

4.5 Subjective Reframing

My preference for the qualitative research methods ultimately employed within the substantive part of this study is a reflection of my personality and my current perspective. This however was not my starting point and this research has taken me through a transformational learning process (Mezirow et al, 2000). Initially my perspective was aligned to the positivist

tradition. As a graduate of mathematics, I felt most comfortable with data that was clearly quantifiable and that could be presented as a credible solution to the research question. My experiences, both personal and educational, early in the programme resulted in my questioning this perspective. Initial data collection was not as rich as I had imagined and as I struggled and reflected on this I was involved in an accident and spent a significant amount of time as an inpatient in an English NHS teaching hospital, allowing me to observe nurses and nursing. This acted as a catalyst, allowing me to critically reflect upon the personal assumptions on which my research was predicated. Taylor, K., (2000 p298) labels this as 'subjective reframing', referring to a change in the frame of reference, this being how the individual, in this case researcher, structures assumptions and expectations for sense making. This arguably was a shift in my ontological, epistemological and methodological perspectives.

The research methodology which emerged from this ontological shift consciously draws upon my own experiences which are used as a resource and this enabled me to think reflexively, historically and biographically (Denzin and Lincoln, 2000, pxi). This fits well with my personality as I am a natural story teller and get a great deal of satisfaction from both listening to and telling stories. I am intrigued by lived experience and identify closely with Van Manen (1990, p115) when he asserts that 'all human science has a narrative quality'. I have for many years used anecdotes within my teaching and therefore any perspective that recognises such accounts as methodological devices and does not trivialise them is viewed by me as very attractive. Van Manen (1990, p124) also promotes writing as part of the research process considering the keeping of a journal as 'mediation between reflection and action.'

Despite the synergies indicated above the development of a research methodology was the aspect of my studies that challenged me the most.

No single perspective provided a satisfactory template for my emerging conception. As a student I discussed my developing methodology with fellow students and interested colleagues. The qualitative study was recognised and subsequently labelled as a 'reality orientated qualitative inquiry' (Patton, 2002, p92), this being a perspective that is post-positivist. Without disregarding objectivism it is more modest than pure positivism, considering probability and levels as opposed to absolute objectivity, and approximation rather than absolute truth. I however continued to question this evaluation, as although there was a study of causes and their effects on outcome I was, as this is practice centred research, conscious not to take a reductionist approach and reduce the concepts under consideration into a discrete set of ideas to test (Creswell, 2003). Furthermore, the findings are offered as interpretations, and the data analysed from my perspective only, although well triangulated. However, as a post-positivist stance is one in which research is influenced by 'a number of well developed theories apart from, and as well as, the one that is being tested' (Cooke and Campbell, 1979 p24) then the label can be applied.

However, the dominant epistemology that I have promoted in the context of this work, is a constructionist one. Crotty (2003, p44) tells us that a constructionist perspective 'brings together objectivity and subjectivity indissolubly.' Objectivity is seen as independent of the conscious mind whilst subjectivity sees meaning imposed on the object by the subject, the object making no contribution to the generation of meaning. When considering how student nurses use information such as the bioscience to underpin their practice the conceptual framework is clear and objective in nature, allowing myself and my reader to consider two categories of curriculum and ultimately therefore enabling us to place participants and their experiences within one of those categories. However, as the research is firmly situated in practice, it relies upon the participant's (or subject's) interpretation of the world and events. Constructionism, we are told (ibid),

has much in common with phenomenology in so far as it relies on individual perceptions that are unique and assembled as a result of the lived experience.

A phenomenological perspective is core to my main study and I have spent a great deal of time considering whether the study has a phenomenological focus or perspective. Although the study does not satisfy all the characteristics necessary to be considered as a pure phenomenological study a phenomenological perspective is viewed as a reasonable claim. Patton (2002, p107) explains a general phenomenological perspective as one that 'elucidates the importance of using methods that capture people's experience of the world without conducting a phenomenological study that focuses on the essence of shared experience.'

4.6 Data collected via web logs

The substantive part of the research carried out could therefore be described as a case study (Merriam, 2009) or a collective case study (Stake, 2000). After trying out the instructions for blogging on the daughter of a friend who was a student nurse, and ascertaining that she was able to follow my instructions a further pilot study involving two students was followed by the collection of data from a further eight students. As the students all followed the same instructions and had similar experiences this data was interpreted as one data set, although in a temporal context the two groups were considered separately. A conceptual framework was then constructed to depict the theory generated by the analysis of all the blog data collected. This framework was what I termed a recursive model, so labelled because it was the product of constantly revisiting the data and repeatedly examining it looking for patterns and themes. The resulting recursive model was then, over several months, disseminated and

discussed with colleagues in the UK and internationally and their views considered within the analysis.

The first cycle of data collection from the initial two students is therefore presented followed by a detailed account of the subsequent cycle of data collection from the remaining eight students. Finally a consideration and analysis of the one amalgamated data set is offered.

How students use the information presented to them in the classroom to underpin their early practice at the University of Hertfordshire, at this point, had become the focus of the research. A decision to collect data relating to student experiences was made and the medium of electronic weblogs or blogs (Boulos et al, 2006) selected. The medium of web log like the term is somewhat contemporary with the web log itself being a product of convenience rather than design (Williams et al, 2004). The term web log was, by users, quickly reduced to blog and the use of this media has grown exponentially. In educational circles the use of such Edublogs has become widespread with a preponderance in professional education where the use of a reflective journal as a teaching tool is already accepted custom and practice (ibid). This fitted well with my experience, as all nursing students are required to keep a reflective journal and blogging is viewed by most as an extension of that.

Boud (2001) asserts that journal writing for learning can be used to capture an experience, record an event, explore our feelings, or just make sense of what we know. He tells us that although primarily intended for our own use, with occasional access from others, the journal is a tool for creating meaning and context from events and experiences, thus leading the learner towards creating new meanings and further enhancing their ability to contextualise and progress towards self-directed and deep learning.

Again this all fits with the expressed objectives of my study, making the choice of journals via blogs a valid one.

The decision to utilise blogs was, in the end, based largely on conversations with my own teenage children, the oldest of whom was an undergraduate student himself. They informed me that this was a contemporary means of communication which would be well accepted by their peers and may in itself engender motivation for the project as it would allow the students in question to become familiar with some of the lesser known features of the managed learning environment (MLE).

In this instance the blogs were not free flowing but were constructed according to precise instructions to yield specific data that was relevant to the case study being undertaken. On reflection however, the eventual sample were not stereotypical 18 year olds and therefore the original rationale for using the weblogs was not as powerful as had been hoped and an alternative paper-journal may have, in the final analysis, increased the sample size. Subsequent interviews however, with both blogging students and others revealed no new information and therefore confirmed that the student perspective had been adequately captured within this case study.

4.7 Phase two: The blogging study

4.7.1 The first cycle

New first year students were targeted during their induction week. A large group of students commenced the pre-registration nursing programme in September 2007, with more than one hundred students studying at degree level. A sample group of between ten and twenty students seemed realistic as this would have potentially generated more than 200 blog entries. This amount of data was viewed as substantial but not overwhelming.

I was aware throughout that my position in the organisation, in relation to these students, could be construed by them to be a position of power. As a mature manager I was older than the average student and as the most senior nurse in the organisation was removed from their normal day to day sphere of activity. This could also have been framed positively as the students involved in the research could have perceived me as a role model and a position like mine something that they could achieve later in their career. I was able to model to them the notion of a senior and powerful nurse. Having reflected upon these power dynamics I considered, at this point, that the students may feel intimidated by a face to face invitation to participate in the research and that such an approach could be viewed as coercive. I therefore made my request via a letter (see Appendix Five) in which potential participants were asked to agree to keep a journal/blog on a daily basis throughout their first practice placement.

These electronic dated journal entries would be entered by the student and appear in reverse chronological order with each discrete posting to the blog having a unique URL. Although some blogs are visible to all, the ones utilised in this study were visible only to the individual participant and to me. This gave the potential of ease of use, rapidity of deployment and seemingly effortless collaboration (Boulos et al, 2006) which could facilitate anytime anywhere learning and encourage an enhanced engagement for the student, giving some perceived advantage to being involved in the study. However this relied upon students identifying with the technology and seeing this as attractive as previously discussed. The response rate to my invitation however was extremely poor, which may have been an early indicator that my target audience did not find the prospect of blogging as attractive as I had hoped, as only ten students initially agreed to participate.

The student group had received a great deal of information in the initial weeks of the programme and on reflection an anonymous request from a faceless 'manager' remained low on their list of priorities. There appeared to be little or no advantage to being involved in the project, which may have been perceived as requiring a concerted extra effort. Although students were all required, as part of the programme, to keep a reflective journal this was, for the rest of the cohort, a private activity that was not necessarily shared with peers or lecturers. Those agreeing to be included on the other hand left themselves open to the scrutiny of the researcher. The students who did come forward appeared to be either highly motivated or intrigued. It proved hard to differentiate between the two as communication was kept to a minimum.

Further contact with the ten willing students was facilitated by a personal letter sent via their university email account. This letter gave clear instructions as to how to access the unique online journal/blog (see Appendix Six) and what to include in the daily entries.

'You are asked to select one episode of care that you have been involved in. This may have been alone or in collaboration with a colleague or mentor. As you tell this story think about your role as student nurse in what you were doing. How did you implement (or not) what you were taught in the classroom?'
(letter introducing the blogging process, see Appendix Six)

Students were given both my mobile telephone number and email address to enable them to ask any questions that they may have had. Upon receipt of this information two students emailed and one telephoned to say that they had reconsidered their position and they no longer wished to participate in the study.

The sample size was therefore reduced to seven, and although smaller than originally anticipated I still considered that a reasonable amount of

data could be generated. Throughout my communications with my targeted students I did not refer to my position in relation to their own, but did not attempt to deny who I was. Detailed instructions were posted on the front page of their unique blog site (Appendix Six) and although I attempted to make them friendly and inclusive this alone failed to engage all the students in question. Only two of the remaining seven students completed the blog over the four week period and although useful insights were gained by me I was forced to consider this group as a further pilot.

4.7.2 The subsequent cycle

At the next available opportunity I again targeted a new first year cohort. Because this was a February cohort the numbers of students studying at undergraduate level was somewhat smaller. Having reflected long and hard on my experience of the first cycle of data collection I decided to approach this group directly. I did so early in the programme at the end of the first bioscience lecture. This time I decided to be open with regard to my position but to stress that the data collection activities were separate to any other interactions with these particular students. I had introduced myself to these students during week one and used a power point presentation that introduced me as the Head of School. In contrast when I met them again I showed the same introductory slide but this time put a red cross through my management role and then replaced the words 'Head of School' with an alternative role descriptor. This time the role of 'Research Student' was used.

I intentionally dressed very casually in jeans aiming to depict my alternative role. I explained to the group of about 25 students what the aims and purpose of the research were and made a direct appeal for help. The students were very welcoming and appeared genuinely interested in what I was doing. I left the original introductory letter and consent form with the students and informed them that during their next lecture I would

leave a cardboard box for their replies. I received 17 replies and although these were not all positive there was evidence that most of these students had engaged and considered participating. 12 students expressed an interest in finding out more about the study and a lunchtime group was convened where the students were invited to bring their sandwiches and participate in a group discussion. I provided biscuits and fizzy drinks and the atmosphere was informal.

The group discussion lasted approximately forty minutes during which time the students were encouraged to discuss what they had done before and what their expectations of the programme were. I finished by explaining the expectations of participants within the study. Detailed field notes were kept of this encounter and these formed a part of the data set that was later subjected to detailed analysis. Of the twelve students attending the group eight went on to complete the blog/journal over the four week period requested.

I re-established contact with the group of twelve students one week prior to the commencement of the first practice placement to remind them how I would be collecting the data and the mechanics of accessing their own personal blog. In keeping with this personal approach I furnished each student with my mobile telephone number and my email address and invited them to contact me if they felt that they needed to. I also invited them to communicate with me via the blog if they had burning issues assuring them that I would do my best to reply. At this point two students informed me that they had changed their minds and that they no longer wished to participate. I thanked them for their interest and wished them well.

During the first week of the data collection period I visited each of the blogging students within their placements. This was not considered

unusual activity as students can expect to be visited at least once during each placement. I liaised with the programme tutor to ensure that I had up-to-date information that would allow me to answer the types of question that I could expect the students to ask during such a visit. Placements varied between students with some placed in the hospital in either an acute ward or the staff day nursery and others in primary care clinics within the wider community. Whatever their context the instructions for blogging were the same. Generally speaking the students were very happy to see me and keen to share their early experiences.

During the meeting I checked with them that they were able to access the blogging site and understood the remit given. The two students who ultimately failed to blog were both technically unsure at this point and although I spent some time with them on the internet rehearsing what was necessary they both failed to access the blog independently. One of these students did not have her own computer and was dependent upon the communal facilities in the university library or in the placement. On reflection it may have been beneficial to offer these students the option of keeping a paper journal. However, this was not recognised as an appropriate action at that time. After each meeting I wrote up comprehensive field notes which were subsequently used to complement the blog entries.

4.7.3 The blog data collected

Initially in the blogs students were asked simple questions which provided a crude profile of the group. In short, the participants were all female and their ages ranged from 18 to 43, with the mean age being 29 years. This figure relates to all ten bloggers and is fairly typical of a February cohort but slightly, although not significantly, higher to what would be expected in September. Previous educational attainment was variable with 2 students already having a degree, one with a diploma, five with 'A' levels and the

remaining two having completed an access course. This was not considered atypical for this convenience sample. Students also had varying life experiences before commencing the programme with more than half of them reporting some sort of previous employment in a care context, again not untypical

Once these questions had been answered an encouraging message was placed by me on the blog site. Where students had successfully accessed the blog this had the desired effect of confirming my interest and encouraging the students to continue. Students who were not successful at blogging failed to engage in any way and contributed nothing leaving me to believe that their difficulty was in accessing the site when they tried to do so alone. The student blogs were diverse with reference to content, this to some extent, depending not only on the placement type but also upon choices made by the individual. Blog length varied from a single paragraph to more than a page; varying from student to student and from day to day. There was a blurring of academic and informal uses of language with some students using text speak and others presenting the blog as they would a course assignment. Most students did not blog every day with the average number of blogs being twelve over the twenty day placement. Of the ten students that participated seven, when asked, reported finding blogging difficult and four at some point reported lack of time for blogging.

As a data collection technique the blogs in many ways were disappointing. I had anticipated longer more personal blogs and I found the use of text speak a little disconcerting. However enough information was gleaned, as during subsequent interviews nothing new was learned. It was therefore concluded that within the context of the whole case study the collection of information via student blogs was valid.

4.8 Phase three: the Interviews

4.8.1 Student Interviews

Interviews were used to facilitate the exploration and probing of the blogger's experience in order to better understand the experience from the perspective of the student. Working in the same context as the interviewees enhanced my ability to listen to and empathise with the students during these encounters (Knight, 2002). I was familiar with the wide range of clinical contexts experienced by the ten bloggers and on a practical note understood the culture of the wards and clinics, so was able to select a time when the students could be released from their duties to talk to me. On the other hand my approach and my position as an involved researcher could be criticised for lacking objectivity or for over familiarity with the context. Although my role facilitates such understanding, I would not be viewed by the nurses and mentors in these clinical contexts as an insider; although those external to the healthcare context may view this differently.

Only five students were interviewed from the possible ten. Only two students in the first group completed the blogging cycle described above, and therefore to ensure that the students in the second group had the best possible chance of succeeding with the blogs a face to face meeting was facilitated. The initial interviews therefore, as already chronicled, were intended to be an opportunity for the bloggers in the second group to ask any questions and for me to ensure that they were able to access the technology necessary to participate. Field notes were made but the meetings were not tape recorded as they were viewed by me merely as functional and I did not want to detract from the blogs. The data collected during these interactions on first inspection appeared to augment the blogs and therefore a commitment to follow up the students further was made. Of the eight students participating in the second group, only five had

placements that were local and therefore easily accessible and therefore only five students participated in the interviews.

These students were therefore contacted again some weeks after blogging was complete and five further interviews were completed. Again I kept detailed field notes. The interviews were approached as informal conversations. I had already attempted some early analysis of the blog data and this influenced these semi-structured individual interviews. I wove questions into my conversations with the students. Such as:

- What did you do on a typical day?
- How did what we taught in the classroom relate to what you did?
- Were there memorable or unusual experiences?
- What about relationships with clients and colleagues?
- What was the value of this early practice?
- How has your behaviour and thinking changed now that you are a student nurse?

Throughout the interviews I constantly checked with the students that what I had heard was correct allowing them to refine and clarify what I fed back. I noted evidence of the already identified emerging themes which were further illuminated and I documented this. In this way the interviews had a definite agenda (Burgess 1984 p107) which was set by me and addressed what was emerging from the early analysis of the collected data.

As the data generated from the five interviews did not appear to add anything to the data from the blogs, but instead to illuminate it, no detailed analysis was performed and the content used only for context. The interviews with the academic staff were however seen to be a rich source of new data and treated accordingly.

4.8.2 Interviews with academic staff

Once the student data was complete and analysis well under way it became apparent that the perspective of the academic staff teaching on the four modules that were being studied by the students would be another rich source of data within the context of this case study. These interviews, which were tape recorded and later transcribed, facilitated triangulation between what the expectations of the lecturers were and the experiences of the students. Again the interviews were organised to be conversational with an agenda designed to complement the already collected data. I started by explaining to the academic staff the study to date and the results of the early analysis. I then went on to explore their perspective by asking the following questions:

- How important do you feel that your module is in preparing the student for practice?
- Do you consider your module to be based upon the art or the science of nursing?
- Is the curricula structure employed integrated or collection?
- Does it relate primarily to theory or primarily to practice?
- Where does it fit if there is a hierarchy?
- In what way would you expect the students to use what you teach?

I then introduced the recursive model in its iterative state, as it was at that point in time, and continued the questioning:

- Are you concerned with heads hearts or hands?
- Does compassion feature in the content of your module?
- Do you primarily impart information or change the student's perspective (where on the continuum of informational-transformational)?
- Is there a particular way of knowing that you are trying to engender?

- Knowing how or knowing that?
- Is reflection integral to your module?
- How important is practice to your module and how does your module fit with the practice experience?
- Finally, are there any anecdotes or stories that you think that I might find useful?
- Is there anything else that you would like to say?

The academic staff interviewed were enthusiastic with reference to the recursive model, appearing to recognise its dimensions, which were further illuminated during the conversations.

4.9 Other data sources

In addition to the student blogs and the interviews previously outlined there were a number of data sources that informed my perspective and the subsequent analysis. Initially I considered all of this other data to fit the category of naturally occurring data. However, after considering the definition of naturally occurring data offered by Silverman (2001), which describes such data as existing independently to the researcher I had to concede that although some sources fitted that category most did not.

Data illuminating the context of the research, conversations overheard or incidents observed are categorised as naturally occurring data. However, most of the other data in this study did not exist independently of me. I therefore refer to this final data category as other data. This data is similar to naturally occurring data as it was not engineered in a purposeful fashion and therefore did not require the same ethical consideration as the blog and interview data.

I include in this category of data my diaries, the monthly comment pieces written for the British Journal of Nursing and the notes referring to

supervisions and conversations relating to the research process. I also include interactions relating to the recursive model. The model was shared with a number of colleagues both within the UK and internationally. This was done via informal conversation and discussion that was ad hoc and largely unstructured. One particularly rich data source was a tape recorded conversation between myself and an Australian professor that took place after I had presented the first version of the recursive model as a work in progress at an international conference.

This conversation was serendipitous and initiated by the professor. Having heard my presentation he was keen to have a further discussion with reference to my findings and their relevance to the international/Australian context. We both decided that a professional dialogue engineered to discuss and interrogate my early findings would be mutually beneficial as it was relevant to both of our research interests. We therefore agreed to conduct a tape recorded conversation that we would both hold a copy of, to use as we saw fit to inform our future research. For me, this conversation facilitated the consideration of my findings within a much broader context allowing the consideration of alternative models of nurse education.

The naturally occurring and other data therefore served an interesting purpose in this research as they were used, not only to inform my perspective, but also to triangulate test and validate the themes emerging from the data and tentative findings. Much of this other data illuminated the fact that my multiple roles in relation to nurse education often over-lap making my role as researcher sometimes indistinguishable from the other roles enacted.

4.10 Ethical considerations

When considering the overall trustworthiness of a study and therefore its credibility one must consider the ethical code adopted by the researcher (Merriam, 2009). For the most part, I have integrated this dimension into the general dialogue of this thesis. However, I will now summarise and recap my ethical approach.

The purpose of the enquiry and the methods used were articulated to the participating students in a number of ways. They were outlined in the introductory letter and with the published instructions relating to blogging. For the latter eight students they were also outlined in the presentation made to them to solicit their participation. Their role in the research was made explicit in each of the media and opportunity to ask questions made available either in person, via the blog or by making a call to my mobile telephone.

Students were invited to be involved in the study, but it was made quite clear that participation was voluntary and that students could leave the study at any point. Student anonymity was guaranteed by the allocation of pseudonyms. All blog data was kept secure and could only be accessed by the students and by me. All annotated notes were kept in a locked filing cabinet and similarly restricted.

It was not considered that the content of the blogs posed any psychological threat to the student as this was the same material that they would normally use as the focus of a private reflective diary. Conversely, should the student have encountered an emotionally difficult situation the blog would have flagged this up allowing appropriate support to be offered in an appropriate and timely fashion.

With reference to the staff interviews the concerns were the same. Staff were invited to participate but not obliged to do so and at the outset the purpose of the research was outlined. Anonymity was again a concern with staff anonymised and gender assigned to the lecturer on a random basis. As there was some possibility that a reader of the final report may identify a member of staff this was explained carefully and verbal consent elicited. Data was again stored in a secure manner and accessed only by me. All perceived risks were in this way identified and managed in a systematic and secure way.

The collection of naturally occurring and other data was managed in the moment, in that it was usually not pre-meditated but was opportunistic. As a nurse I am required to follow a strict code of conduct (NMC, 2008b) and would automatically apply these standards to all aspects of my professional life. In addition I am a diarist and during the course of this research chronicled related experiences in my research diary, in this way the diary also served as a self regulating ethical tool as it enabled me to explicitly reflect on ethical considerations as they arose.

Ethical approval was sought and gained from the University Ethical Committee that appropriately scrutinised and approved all aspects of the study before it was carried out.

4.11 Analysing and theorising

At the point that analysis begins decisions must be made with regard to the essential story that is to be told and the research narrative that will be incorporated into the final report. A detailed plan for such activity is therefore fundamental to this next stage of the process. Such a plan was duly constructed and predicted how I was to structure the presentation of findings and organise the inter-relation of ideas. 'This is an aspect of the

craftsmanship of the qualitative researcher, a fitting together of parts to produce a finished mosaic' (Ely et al, 1997, p182).

Merriam (2009) advocates beginning analysis early and during the data collection phase, with completion once all the data have been collected. As suggested my analysis began with the first blog, whilst the students were still blogging and was completed after all ten students had completed the process. In this way as the data evolved so did my conception of it as I progressively focused on the concepts that later were manipulated to create the conceptual model that was ultimately created and is referred to as the recursive model throughout this thesis.

Allowing theory to emerge from the data is fundamental to what Strauss and Corbin (1998) refer to as grounded theory: 'In this method, data collection, analysis, and eventual theory stand in close relationship to one another' (p12). Whilst the main feature of this method is grounding concepts in the data the 'creativity of researchers also is an essential ingredient' (ibid). Although this study does not claim to be grounded theory, as the accepted rules of engagement were not used, these principles were embraced as the data were analysed and interpreted. Merriam (2009) reassures that the constant comparative method of data analysis first proposed by Glaser and Strauss (1967) as being inductive and comparative, is widely used by qualitative researchers with no necessity to build a grounded theory. For me, the creativity aspect of this process was paramount and I used writing as a vehicle to enable this.

I identified closely with the writings of Van Manen (1990), who asserts that writing is a mediation between reflection and action and goes on to say that writing can be an integral part of the research process. 'This is not a supplementary activity,' he tells us, 'it is 'the essence' (p126). By writing about what I was researching I was able to interpret and understand the

student experience. Writing about what I was doing and the connections that I was making with what others have done and chronicled influenced the way I looked at the data and enabled me to draft and redraft my ideas until ultimately I was able to construct a conceptual framework that gave my work shape and meaning. The words of Ely et al (1997) resonate with my experience as she tells us that writing 'reveals an interpretation as filtered through your own sensibilities and theoretical perspectives (p223) ... Working in an interpretive mode helps us to shape meaning and know more than we are saying.'

An ethnographical perspective must also be acknowledged here as for me writing as an exercise is interpretive as opposed to factual, with the experiences and opinions recounted in the data interpreted 'through my own awareness and then presented in order to augment the appreciation and comprehension of the reader' (Peacock, 1986, p223 cited by Ely et al, 1997).

It was with this notion of interpretation that I approached analysis and theorising from the various strands of data that I had collected. Analysis, as already stated, began long before the data gathering was completed. In this way early analysis was intertwined with the ongoing data collection and theory development took place during the latter data gathering as well as afterwards (Merriam, 2009; Denzin and Lincoln, 2000; Charmaz, 2006). This allowed emerging concepts to be checked out systematically within the data and for some data collection techniques to be manipulated to ensure that as the study progressed appropriate information was collected.

I rejected using available software packages, NUD*IST NVivo and Atlas, after experimentation during the early stages of working on the transcriptions, feeling a reluctance to identify themes too early, preferring to treat all the data with the same method and pace. I concluded that to

use computer software would have merely created the appearance of objectivity. In this case study, the challenges in terms of ethics and the analysis deserved exploration rather than circumvention. As I was working with a large but manageable amount of data produced by the bloggers and others, a manual analysis was possible, although with a larger number of participants software might have become a necessity.

My approach was methodical with the data being read and reread many times, this approach being both speculative and reflexive, systematic and rigorous (Coffey and Atkinson, 1996). During the first reading I was getting the feel of the data, looking for patterns and shared experiences. At this point I identified broad themes as advocated by Merriam (2009). This early analysis was an inductive data led activity (Coffey and Atkinson, 1996) that was also informed by my knowledge of existing literature. I employed a process of 'open coding' (Strauss and Corbin, 1998 p101). The pilot blogs were read repeatedly and analysis of each daily contribution carried out. Each line was interrogated but emerging themes were noted to usually belong to the whole account and not just one line or a few words. Emerging concepts were identified as:

- Doing/skills/hands on experiences
- Thinking/conceptualising/cognition
- Recognition of a holistic perspective
- Recognition of importance of practice experience
- An extension of the taught material achieved via practice
- Developing a nursing perspective (Identity)

These concepts were then searched for in the remaining blogs. In addition all the blogs were read repeatedly and new concepts sought. One significant new data category did emerge after the first cycle of data collection and that was:

- Recognition of professional language acquisition

On retrospective reading of the blogs collected during the first cycle there was some evidence of this final concept. Detailed memos were recorded outlining the rationale for each concept thus recorded.

Finally, the other data streams including the transcribed interviews, field notes and naturally occurring data were interrogated looking again looking for emerging concepts and identifying concepts that had emerged from previous data scrutiny. All the concepts identified within the blog data were recognised in the wider data set and one other category, that later changed the shape of the recursive model was identified. This was:

- the role of empathy/emotion/feelings

Again when the earlier data was revisited there was clear evidence that this concept was present throughout, although it was often recognised as implicit rather than overt. All the identified concepts were then reconceptualised and classified.

To assist this procedure, very early on, a model was created. This allowed both appropriate literature and personal and professional interpretation of context to frame the study and facilitate personal theorising with regard to my stance, assumption and opinion (Ely et al, 1997) leading to the development of a new way of conceptualising the situation and the creation of a conceptual model. This model then formed the basis of a paper presented at an international conference (Appendix Seven) after which a number of the other delegates from the conference engaged with me to discuss and debate my conceptualisation. This allowed me to see the findings afresh before engaging again with the data.

The process of model construction remained an iterative one and the model presented at the conference was referred to as a work in progress at that time. When reengaging with the data at a later date a more complex version, including newly identified variables, was constructed. This was facilitated by a technique referred to by Charmaz (2006) as diagramming and by Merriam (2009) as the use of visual devices, where the data is afforded a visual dimension that serves to bring clarity and steer the direction of the analysis. This strategy was useful in that it facilitated theoretical development. Recursion or repeatedly returning to the collected data also facilitated this process. The resulting model is therefore referred to as a recursive model (See Chapter Six) and this was developed and refined over time.

4.12 The significance and role of personal and professional writing

Earlier in this chapter I have acknowledged that there are two data strands within this thesis, the first being the data collected from students and academic staff, which have undergone interpretation and analysis as previously outlined; and the second being the other data that was generated as a part of day to day existence. The latter is recognised as a powerful data source that contextualises and validates the former. My writing, in the form of my own private reflective journal and the more public comment pieces that were regularly submitted to the nursing press both within Britain and the Far East throughout the duration of the research, were considered later and used to complement and contextualise the collected data where they were considered by me to complement and offer something significant to the unique contribution made by this work.

The inclusion of the other data recognises how my practice, within the nurse education arena, has contributed to this doctoral offering. The

interpretation and analysis of the data collected can not be considered in a vacuum and the inclusion of the other data goes some way to acknowledging the influence that my peculiar perspective has had on the final interpretation.

4.13 The role of the recursive model

As previously chronicled, early in the interpretation and analysis of the collected data the construction of a model was utilised to aid conceptualisation of the interrelationship of emerging themes. At each stage of the analysis the model was revisited and as the conceptualisation became more complicated and sophisticated so did the model. The first version was developed after the interpretation and analysis of the student blog data. This representation of the data analysis allowed for discussion with academic staff via interviews and in other naturally occurring situations. This process facilitated the focused collection of data that was likely to further illuminate and extend the themes as they emerged. Iterative versions of the model were constructed in this way and are offered; each illustrates analysis and thinking at a point in time and helps to structure the chapters that follow. In Chapter Six a version of the recursive model is included. This version was constructed after interrogation of data relating to the students. A further developed version is offered toward the end of Chapter Seven after the data relating to the academic staff has also been considered. The recursive model is therefore offered as summary of the analysis and interpretation of the data collected and the subsequent theory generated within this study.

4.14 Conclusion

Having utilised the methodology outlined in this chapter, the findings of the study are presented in Chapters Five, Six and Seven.

5: The Student Experience

5.1 Introduction

Having established the bounded system (Merriam, 2009) that represents my case study in Chapter Four and identified the School of Nursing and Midwifery and the undergraduate nursing programme therein as typical via a national survey that is included as Appendix One, in this chapter I will explore how learners perceive and participate in their early practice experiences and connect this to the theoretical concepts presented in the classroom. I will do this by analysing the content of the blogs completed by students during their first clinical placement.

I previously cited the image presented by Miles and Huberman (1994), which portrays a case study as a circle with a focus or heart in the middle. Having identified two constraining circles representing the School and the programme as the outer parameter, I went on to identify the student experience of clinical practice as the heart or focus of the study. I therefore now turn my attention to this focus and will consider the primary data collected during this study to illuminate the student experience.

As previously chronicled, data relating to the student experience was collected from ten first year student nurses. The first or pilot group contained two students and the subsequent or main group contained a further eight. The data from these ten students will now be analysed individually and collectively. The data collected from all participants has been interpreted through a process of reading and re-reading that started as soon as the first student blogs were available. Beginning the analytical phase of the research before the data collection phase is complete is, Merriam (2009) tells us, a basic tenet of the qualitative researcher. For me, data collection and analysis happened simultaneously and guided by

Merriam (ibid), I allowed myself the luxury of deciding the exact schedule for analysis as the study unfolded. Being reminded that the process of data collection was 'recursive and dynamic' (ibid, p.169) empowered me to make decisions about this important phase of the research as I progressed. As advocated I looked at one data set at a time and progressively focused my thoughts. I also felt empowered by Merriam to use visual devices to bring clarity to the analysis and the way that my 'doodling' progressed will be used throughout this chapter to track my thoughts and present the theory generated by the analysis under consideration.

To maintain confidentiality and anonymity of both staff and students from whom I collected data I have used fictitious names which have been allocated to the participants alphabetically.

5.2 Analysis of the pilot blogs

5.2.1 Student profiles

Although the participating students are considered as one group with regard to the data, because analysis began as the blogging started it is useful to profile the two students involved in the initial or pilot study first. Students were asked to give nominal data on day one as a part of their first blogging experience. I judged both students from the pilot group to have a satisfactory "A" level tariff, as both had attained in excess of 240 UCAS points, which is the minimum tariff set for inclusion in the September nursing cohort. The first blog entry confirmed to me that these students were articulate and had a good grasp of the English language evidenced by the use of appropriate grammar and spelling. Both used continuous prose and were reasonably formal in their approach. Throughout this chapter, where I have cited blog entries I have reproduced them as the

students wrote them and where there were grammatical or spelling errors these have not been corrected.

The initial two students were both aged between 18 and 21 years with the younger coming straight from “A” level studies whilst her peer had both travelled, and worked in the care sector. These two students both provided rich data sets from which the initial categories for data analysis were identified.

5.2.2 Day one

Initially I took the blog of Student A, Anna and interrogated it. I chose to look at Anna’s first as she had the least experience in a health care setting and my experience indicated that, as everything was new, her blogs would be the most expansive. After reading only her first entry (that can be found in the Appendix Six as an example of the blog data collected) I induced, from the obvious time and effort that she had expended on this initial entry, that she was committed to the research process. This blog, in common with all the blogs that were provided over the subsequent four week period, was detailed and meticulous, providing a benchmark against which other student blogs could be compared.

Instructions relating to the blogging process were introduced in Chapter Four and can be found in the Appendix Six. I evaluated the data provided after the first day, the first week and on completion of the placement and the blogging process. I however read and annotated the blogs to aid my analysis as they were generated. I employed the process of open coding (Strauss and Corbin, 1998) and as advocated by Merriam (2009) I first identified segments of data that responded directly to research question. In order to keep myself focused I wrote a purpose statement on top of notebook ‘the purpose of this research is to better understand how student

nurses at UH use the theory presented in the classroom to underpin their early practice' to guide my activity.

At the end of the first day Anna completed the blog promptly. After contextualizing her placement as 'a school for children aged between two and nineteen years with severe physical and/or neurological disabilities', she outlined some of the things that she had been involved in. The first thing that I noted on inspecting this blog was that Anna used a very formal style to convey her account and that she had used language that was appropriate for nursing. This suggested to me to me that she had quickly become familiar with the vocabulary used in this new context of nursing practice. She talks of 'watching' with reference to 'administering medication' as opposed to merely giving of pills or potions, and of feeding via a gastrointestinal tube. Both these examples show me that Anna is attempting, consciously or unconsciously, to portray an image associated with professional behaviour. I was also aware that I was a senior figure within the Faculty and that she may wish to impress me with her newly learned skills and associated behaviour

Anna's activity on day one is primarily as an observer. The verb 'watched' is used repeatedly in her account of the morning. Each time she talks about 'watching her', and although she does not qualify this I have assumed that Anna is talking about her assessor/mentor who is, by necessity, integral to the early experience of all student nurses. I noted this as associated involvement as her main actions are watching and assisting another, this becomes a potential data category. However, as requested, Anna has confined her report to her own actions and therefore there is no indication as to the efficiency (or not) of that relationship and whether it is formal or informal, friendly or cold. Later in the day Anna gives a rich description of an episode of client care and the associated practice. This time she clearly articulates that her practice is guided by a

more senior student. She explains the episode of practice using language that was typical of a more experienced student nurse, using appropriate terminology in an informed fashion, and this was probably framed for her by her peer. She is able to locate the theory applied in one of the modules studied and quotes from what she was taught

'I took a urine sample from a child together with a more experienced student nurse and used a dipstick to check levels and it was noted that this was slightly outside the acidic range. However we learnt in bioscience that ranges for urine pH vary depending on factors such as medication and age so when we looked up the range for her age it was noted that this was within the range.'
(Anna, Day 1)

Toward the end of the blog Anna's writing style became less formal and she commented that she had enjoyed the day's experience and that it was 'not nearly as scary' as she had anticipated. In this final sentence she has separated her personal perspective from the emergent professional perspective that she has employed previously. This final comment was outside of the remit given and therefore I assumed that it was for me as a person and not as the researcher.

Having completed my interrogation and preliminary analysis of Anna's blog I then examined the blog of Student B, Becky. Becky had been assigned to a community learning disability team which was not directly related to her previous healthcare experience of being in a mental health ward for older people. However, I anticipated some advantage when compared to Anna, as she did have some previous experience of a healthcare perspective and because of her previous familiarity would have a greater understanding of and socialization into this new context.

Becky's blog was shorter and more functional. However scanning this new text and keeping in mind my impressions of the first blog I did recognize some parallels. Again Becky was reliant upon a silent or largely invisible mentor/ assessor whose presence is recognized via the use of the word 'we' within the account. However, I noted Becky to be less tentative and there is a clear indication that she is comfortable to be involved within the care setting from the outset. Her account of day one outlines two visits. On this first day she uses the words 'participated' and 'took part' to describe what she did, although she does not give detail as to exactly what she did.

Becky refers to those that she is involved with as clients and the nature of that involvement as an interaction. Again I interpret this as an indication that she has assimilated language that is appropriate within this new professional nursing context. Despite the detailed directions provided by the remit Becky does not refer her actions back to what had been delivered in the classroom but does use words in her account which she puts in inverted commas. These would be terms that had been introduced in the theory part of the course studied and although there could be a number of explanations for this action I interpret this as Becky, from her perspective, satisfying the instructions given.

After the formal task was completed Becky writes 'Lovely setting – with individualised care.' Again I think that this is an aside for me personally. I interpret this as Becky letting me know that she is enjoying this experience and that she is comfortable in this clinical situation.

On examining the emerging categories of analysis after the first day I concluded tentatively that these were:

- Associated involvement, as in watching
- Active involvement, as in participating with others

- Acquisition of language appropriate to the clinical situation

These categories were noted and kept to hand to inform the next phase of analysis.

5.2.3 Week one

On completion of the first week of clinical experience I again sat down to evaluate the blogs actively comparing the new entries with what I had identified after day one. I again began with Anna's writing. Her engagement remained my benchmark with lucid entries for each of the first five days. There was no more reference to watching although on day two she did refer to 'sitting in on' the clinic that was organised for the school's paediatrician and took place on a weekly basis. This description of her involvement, I think, indicated that she felt like a visitor with reference to this activity. This may have been due to the fact that she was still very new to the placement and was not yet fully socialised as a member of the team or it could have related to the fact that this clinic was led by a doctor. Most student nurses are in awe of medical staff when they first become involved in clinical practice viewing themselves in a supportive role as opposed to a collaborative role.

Anna however, did engage fully in the experience offered and showed evidence of being able to interpret the situation in an appropriate fashion:

'He saw 3 pupils with their parents. One pupil was new and his parents speak no English so a translator was present. However gestures also had to be used while the translator was not present and things had to be explained clearly and slowly',
(Anna, Day 2)

and was able to locate the supporting theoretical component of the course.

'We had learnt about this in the Communication lecture of Inter-professional working Module.'
(Anna, Day 2)

During the rest of the week Anna provides evidence of 'active involvement' in client care and gives many examples. Again, for the most part, she works with a silent mentor although there is an account of working with a physiotherapist who is acknowledged explicitly. She relates this to the module where the preparation of intra-professional working is provided making some suggestions in relation to future development of this module. She refers to curricula content of all four modules delivered and confirms them as relevant to underpinning her practice, using the vocabulary that has been introduced in an appropriate manner. In some instances she cites explicitly what was taught and how it is being applied:

'She is deaf, dumb and partially sighted and has Quadrapledic Cerebal Palsy. To communicate I had to use some makaton (simple sign language) gestures and her communication book. I spelt my name for her using her communication book and then she typed my name using the button by her head, and she remembered the spelling perfectly. *This taught me how important it is to get to know each individual child and how they communicate because each child in the school has very different abilities communication wise (DRE) and it is important to know how much they understand and how they like to communicate for example so they can give consent in situations where they are deemed competent, such as whether they want their feed to continue.*'
(Anna, Day 3)

The section in (my) italics is very significant as I recognize this as a change of perspective, this indicating that Anna is beginning to think and act as a nurse, I therefore suggest that what is being observed is the student beginning to internalise the philosophy that underpins the care being given. I note this as 'the development of a nursing perspective' which becomes a potential new category within the data.

The word interesting is often used in the blogs to describe information offered that has not previously been presented in the classroom. In my opinion this gives some sense of the information being separate to the practice experience, in some ways therefore being closely associated with the notion of watching or being cast in an associate role i.e. not yet fully engaging or considering or integrating the information into the practice experience.

Becky's blogs continued to be shorter than those of Anna although they were recognised by me to be equally illuminating. The mentors/assessors again remained largely silent except when they played a more active role. During week one for example Becky 'shadowed an on call nurse' which was categorized by me as 'active involvement', this activity included working with drug charts and visiting the pharmacist, which were both explicitly described.

Because of the nature of the clinical practice that Becky was involved in most of her activity involved visiting patients in their own homes and networking with other professionals. Becky did not always provide lots of detail instead she commented that she visited, went or attended. However as time progressed, she did begin to give extra detail. Two examples are provided from this first week:

'Visited same client as yesterday in mental health unit, patient appeared better than day before, as their speech appeared less slurred.'
(Becky, Day 2)

and

'Went to a review meeting for a client I met yesterday at the Aspergers syndrome support group. It was good to see how positively the care staff interacted with each other and the client on some difficult issues. The client appeared to

like having a student there and showed me their room.'

Becky, Day 2)

Both these excerpts illustrate that Becky continues to use an appropriate vocabulary and is actively thinking about her exposure to clinical practice and extending her understanding of the relationships therein and the conditions encountered. I noted this to be 'thinking' which emerged as an additional category.

In this first week there is explicit reference to the taught modules and how they apply to practice. Becky acknowledges that the Diversity Rights and Equality Module underpins the policies that relate to diversity in practice. There are still however lots of instances where curricula content is implicit within the blogs.

'Learnt how mentor works inter-professionally with ward staff and how they interact with clients in a manner which puts the client at ease.'

(Becky, Day 2)

I noticed that Becky appears confident in the clinical setting and does not seem to be intimidated in any way by others in the multi-disciplinary team including the medical staff. This may be due to the fact that she has previous exposure to the healthcare setting or may be a personality trait, in that she is not easily daunted in any situation. At this point there does not seem to be any evidence of a change of perspective with reference to becoming a nurse. I have considered two alternative explanations for this, the first being that this has not happened and the second that such transformation had already occurred in Becky's previous role. There is some evidence of the second alternative in the blog data:

‘..... It was good to see how positively the care staff interacted with each other and the client on some difficult issues’
(Becky, Day 2)

This excerpt indicates that Becky has already internalized the need to interact positively and appropriately with clients with learning disabilities and is relieved to note that this is happening in the area to which she is assigned for clinical practice.

Looking back over the data set for the first week I note a number of recurring categories. The first is observation or an associated involvement in patient and client care and the second the use of appropriate language supported by what had been introduced in classroom activity. Anna and Becky proved to be typical in that they were involved in care giving or ‘doing’ from the outset but also gave consideration to what had been introduced in the classroom in isolation from patient or client care. In this first week a change or confirmation of a nursing perspective was also noted. These categories can therefore be summarized as:

- Associated involvement
- Acquisition of appropriate language
- Doing/hands on experience
- Thinking/conceptualization/cognition
- Development of a nursing perspective

5.2.4 The first month

As advocated in the research literature (Charmaz, 2006) these identified categories formed the basis of the subsequent scrutiny of the remaining data. Anna and Becky continued to complete their blogs at the end of each shift outlining an episode of care and relating it to the preparation that they had received at the university prior to their clinical placement. Anna completed nineteen of a possible twenty blog entries and Becky sixteen.

From my perspective the students engaged with the process because they could see that it was useful and aided their understanding, illuminating their experience of the programme.

Anna's blogs always followed the remit given, whilst Becky's were occasionally short and lacked the detail sought. Initially she had a couple of blogs that gave just one sentence: 'Went to a strategy meeting..... Read policies' with no exploration or detail. On reflection she may have been succinct because having been directed to do these things her understanding of how the experience fitted what she was trying to achieve was limited. Her previous experience confirmed that such activities were appropriate for a student of nursing, but this early in the programme her interpretation of the resulting opportunities was limited. However as the final three weeks went on I noted that Becky's blog entries became more confident and informed as well as being longer and better fitting the remit given. I interpreted this as a sign that she was growing with reference to her understanding and confidence, a process possibly facilitated by the keeping of the blog.

During the latter evaluation it was noted during reading and re-reading that both students were largely participatory, the word watch was no longer in evidence and where students visited clinics and alternative placement areas they used active language to describe their involvement.

'I attended a clinic this morning, which I found very useful as we shared an overview of three children's conditions and all the professionals they are seen by.'

and

'I went to a support group for people with Aspergers syndrome, played pool and table tennis and interacted with the clients. Had to explain to a client about my professional boundaries.'

(Anna, Day 7)

My notations contained words like skill, do, verb and active. The exception to this participatory stance was where both Anna and Becky reported reading policies or notes, as during such activity they were the passive recipients of information. This usually occurred when either the mentor or clients were not available or it was necessary to consult such written material to understand the context of a particular episode of care.

The use of clinically appropriate language continued to be an important category. I noted that both students used such language which grew in complexity as the placement progressed. As Anna and Becky were operating in very different contexts the language used mirrored the placement and client group. Anna's language became progressively more specific. For example she was earlier cited during the first week to refer to gastrointestinal tubes, later these are differentiated into more than one type which included gastrostomy tubes. The language used by Becky was the language of mental health and embraced challenging behaviour as well as a number of syndromes and diagnoses that she became comfortable with, being able to manipulate the terms with ease. Both reported being able to work out the use of language using principles introduced in the classroom – a skill they implied appeared to win them acceptance with their new colleagues.

Both talked about what they did, this fitting broadly into roles skills and functions within their allocated context. For Anna her role was a caring one and the skills documented were associated with physical care. These skills were progressively honed and included 'drug rounds and calculations, use of syringes and nebulisers, feeding, toileting and changing, and emergency procedures.'

I noted that moving and handling which had previously been described as interesting was reassessed by Anna to be useful. This seems to indicate a concrete use of the equipment and principles introduced in contrast to the earlier more abstract representation, a representation she did not apply to her own practice within this placement.

When Becky writes about the roles, skills and functions that she is acquiring they have a predominantly social dimension. Within the learning disability community team, her role revolves mainly around social care meaning that the skills she is acquiring are social skills which are captured using verbs like 'talking, bowling and playing'. She also refers to the function of carrying out 'risk assessments' and values this as a core activity within her new role. The blogs make appropriate reference to the taught element of the programme citing all the modules with a tendency to see the Fundamental Skills course as the most significant.

Both students make reference within the blogs to their developing conceptualisation of what they are doing and of nursing more generally and my notations during the identification of the themes refer to notions such as thinking, conceptualisation, cognition, understanding, theory etc. This thinking often took place separately to the practice experience in discussions with peers, mentors and teachers

'This helped with a discussion that I had with my link lecturer about the psychosocial effects of being a child with a disability for the child and for the family'
(Anna, Day 7)

and

'Today was the first time where I saw how the biology lectures fit into practice. It depends on which part of the brain is damaged to the affect it has on a person. The more

servere the learning disability the higher the chance of mental health issues and epilepsy. I learnt (in this discussion) how medication can inter-react with one another, and how one medication can cause adverse side effects worsening another condition, for example a medication for a mental health issue can have an effect on someone's epilepsy this can be positive or negative, as one medication carbamazepine is used in epilepsy but can also help stabilise someone's mood. I have met many people with learning disabilities who had varying severities and individual needs to reflect this.'

(Becky, Day 11)

Within the thinking, which I recognise as separate to practice, both the students at some point make a direct reference to reflection. Anna does this very early in week one. Whilst away from the clinical area and looking at patient care plans and notes she blogs:

'I was given the task of researching the psychosocial effects of their conditions on themselves and their families. I found this really interesting as I didn't know much about a lot of the conditions. I also spent some time reflecting using the Rolfe model, as we learnt to in our Foundation Skills module.'

(Anna, Day 5)

Whilst Becky recognizes that she is reflecting after taking a group of clients on a day out.

'We also went out for lunch, every group member appeared to enjoy the outing, and however it was identified that before the next outing some risk assessments may have to be updated. This demonstrates reflective practice.'

(Becky, Day 15)

Both students also bring thinking and doing together within their blog entries. I note that this is generally seen later in the experience and I recognise this as an ability in both Anna and Becky to inter-relate their developing thinking and what they are experiencing in the clinical areas. They use the information to illuminate what they are doing and to enable

them to appropriately guide practice where there may be a choice or decision to be made.

'It was really good to see all the equipment used to help the children to remain independent whilst eating. In the eating and drinking skills session it would have been useful to have had a go at using some of the specialised equipment. There was an eating and drinking plan for each table group which I found very useful as it explained if food needed to be mashed / chopped and what level of help each child required..... At lunch time I did 1to1 feeding with a girl. I had to cut up her food very smally and watch her carefully as she is at high risk of choking because her meds to dry secretions and prevent drooling are currently not working effectively and are under review'
(Anna, days 9 and 10)

and

'The nurse supports people who have a learning disability who are going through a mental health crisis or are expressing 'challenging behaviour'. The team become involved when clients needs 'out grow' the CLDT. This is because the intensive support team in theory have smaller case loads therefore have more time to visit the individuals. The teams primary role is to keep people in the community (as in the NSF it states that people recover best at home) and so therefore avoid hospital admittance.'
(Becky, Day 16)

The blogs therefore illustrate that both students are connecting what they know with what they do. I also note that there are occasions when both Anna and Becky acknowledge that they will behave differently next time, due to the fact that they have learned something new in the course of their normal daily activity that they recognise will modify their behaviour in the next similar circumstance.

I read about midazolam, as it is now being trialed with some of the pupils and a side effect is that breathing can stop. Yesterday when midazolam was administered following a seizure breathing stopped for a few seconds so from now on

when we get an emergency bleep and it is for a child who will require midazolam we will bring oxygen as well.

(Anna, Day 13)

I can see that both students are throughout the placement developing a perspective that is appropriate for a nursing professional. This has been fostered in the classroom although I note that this change in perspective is an individual experience and a realisation that is very personal.

'I realise that I see this girl in a different way now than I would have 3 months ago. She has her own personality and I am beginning to see what she wants.'

(Anna, Day 10)

'I was made to feel very welcome and enjoyed interacting with the service users who are ex-institution patients who portrayed the situation in a positive light which I was surprised at as I have only ever heard institutions portrayed in a negative light. I heard many differing stories of their lives, played board games with them and we had a Christmas sing song, the atmosphere was lovely, everyone accepted each other for who they were and accepted that others communicate differently to themselves. '

(Becky, Day 13)

A last look through the pilot blogs confirmed the emerging categories and reaffirmed for me the importance of this early practice experience. The final entries confirmed that the bringing together of theory and practice for these students was dynamic and developmental. For Becky the movement had been from a single descriptive sentence to a more complex integration of theory and practice.

'This was an eye opener, as I learnt that when someone with autism goes to a place they are unfamiliar with their behaviour can change, this can manifest itself in what can be seen as 'challenging behaviour', anxiety or appeared lack of awareness of others, this could have been due to the

high level of stimulation or the different environment as both can affect people with autism.’
(Becky, Day 15)

Whilst for Anna the final entry gave the holistic comment that every nurse educator hopes for

‘I have really enjoyed my placement and have learnt loads of new things and developed and practiced many skills. I now feel more like a nurse.’
(Anna, final day)

At the end of the pilot process I again reflected, this time on the whole data set, and noted the recurring categories. Associated involvement in patient and client care was less prominent when considering the whole data set, but still significant. The use of appropriate language was strongly represented, as was ‘doing’ and thinking. In addition a category that integrated doing and thinking was confirmed alongside the development of a nursing perspective. These emerging categories can therefore be summarized as:

- Associated involvement
- Acquisition of appropriate language
- Doing/roles/skills/functions
- Thinking/conceptualization/cognition
- Synthesis of thinking and doing/reflection
- Development of a nursing perspective

The categories cited above were produced by collapsing all the coding or interpretations of the data, up until this point, together to create axial (Corbin and Strauss, 2008) or analytical (Richards, 2005) codes. These categories were then the basis of the next analytical cycle. During the next section I will continue to develop these analytical codes by reflecting on and interpreting the meaning of the collected data. However, alongside development of the

analysis a model will also be generated by the manipulation of the categories already described and others that emerge from the remaining blog data to illuminate and explain the student experience.

5.3 The remaining blogs

5.3.1 Student profiles

Of the remaining 8 students the profiles provided in the first blog established that only one was aged between 18 and 21 and the other seven were mature. Although they were all considered capable of degree level study they entered the programme with a range of qualifications, two were graduates already, three had previously studied at “A” level, one had an appropriate diploma level qualification and the final two had come via Access Courses. Similar to the mature teacher training students encountered by Duncan (1999) these students had had a variety of life experiences, including previous careers in various sectors of society. But what they all had in common was a diverse experience of paid or voluntary work that had introduced them to the nursing/caring context and a strong desire to study nursing at degree level.

The eight students were again allocated fictitious names alphabetically. Cathy, Danni, Ellie, Fiona, Gina, Hatty, Iris and Jo completed the blogs using the same instructions as Anna and Becky. Although all were appropriately qualified for entry to the programme their levels of English language proficiency, as evidenced by the blog entries, was variable and some took a more casual approach to the blogging process using symbols such as smiley and sad faces and, some of them, using text speak on occasion. This was a stark contrast to the pilot blogs which had both been formal in their orientation. After some consideration I attributed this, at least partially, to the fact that I had gone to great lengths to be informal with this group, presenting my identity as that of fellow student and not senior manager. I therefore interpreted their informality as a confirmation

that this alternative identity was accepted. Another explanation could be that having convened the group as a group they talked amongst themselves about the task and this gave them the collective confidence to approach the blogging in the same way as they would have approached other communication via the internet, using similar discourse to that they would have employed on Facebook or other social networking sites. A final explanation was, of course, that these students lacked the pre-requisite skills to write in a more formal manner.

This second group of student blogs were also far more variable, this possibly being due to the diverse clinical placements which spanned both the acute hospital and the wider community and the choices the students made with reference to what to focus on. I noted that blog length varied from one paragraph to more than a page and varied from student to student and from day to day. I noticed that most students did not blog every day and over the twenty day placement the number of entries varied from seven to sixteen with the average number of blogs over the twenty days being twelve. This was not as high as in the pilot group but given all the other demands made on these students a 60% response rate was still considered, by me, to be reasonable. On some occasions students made only a short entry and this was usually accompanied by a personal note to me to rationalise why.

'Can't really reflect on anything today. Been thinking but nothing really exciting happened.'
(Fiona, Day 4)

'Haven't forgotten you. Will start again Tuesday evening.'
(Jo, Day 11)

'Sorry I have not blogged for the past few days. We had some sad news regarding my nan on Thursday and I went home to be with my mum'

(Gina, Day 8)

'Sorry no time to blog I feel lousy – think I have a cold.'

(Danni, Day 14)

'Off sick!!!'

(Danni, Day 16)

This signified to me that the students remained engaged throughout and felt some loyalty toward me as a researcher, or felt that they had to rationalise their absence in the blogging process to me as a senior educational manager. I however noted that invariably the tone remained friendly and they talked to me as a peer, with no indication that they felt intimidated in any way. Personal notes of this kind often began with Hi Lyn, Dear Lyn or Hi there. Again, this language was similar to that they would have employed had they have been using any social networking internet site, but as the blog was effectively a personal diary this was viewed as appropriate. All of these students were female and there was something about this type of chatty discourse being comfortable between women or girls. Although I am not adopting a feminist stance here I acknowledge that such analysis may result in interesting reading.

As chronicled briefly here and in more detail in the methodology chapter I had made a more personal connection with this second group and I therefore felt it appropriate to interact, with them from time to time to give encouragement and reassure each student that I was receiving the blog content. I could generally see clear evidence that my interaction did encourage students to continue, as often after an encouraging note the student would appear to be re-energised.

Each of the blogs was again individually examined in the light of the categories that had already been identified. These were used as a starting

point, although the possibility of new categories was not disregarded and the blog documents were read actively and new meanings sought.

In this section I will illuminate the data category scheme developed in order to facilitate understanding of the phenomenon under investigation. Merriam (2009) advocates the visualisation of how the categories link and work together in order to create a visual representation. Below my findings, conceptualised in terms of the categories and their properties will be manipulated to construct a model or visual representation that will illustrate how student nurses use the knowledge presented in the classroom to underpin their early practice. This will be corroborated using appropriate literature, thus showing how the conceptualisations of others can be used to substantiate the findings of my particular study.

5.3.2 The context

I again feel compelled to remind my reader that this is a case study and as such is a bounded system (Merriam, 2009). Represented visually this would consist of two concentric circles. The outer representing the School and the inner the undergraduate programme. Anything represented within the middle of the inner circle would therefore be seen to explicate the student experience which is the focus of this study.

The students generating the data that is being considered here are documenting how they experience the practice component of the programme, particularly how they use perceive and participate in early practice experiences and connect this to the theoretical concepts presented in the classroom. Data from the pilot study has been interpreted and associated involvement has been identified as significant. Again, in the new blog data, there are numerous examples of students observing and watching practice in the first day or week of the placement. Several of

the students chronicle being shown around and being 'shown stuff' as well as the 'watching' of mentors and more senior students.

In addition in the new data I was interested by the fact that some of the students appeared not to value this associate role. Danni referred to 'Just watching' whilst Hatty asserted that 'I was with the orthoptist today so just sat observing her!' Both use the word 'just' to question the value of watching. In a similar mood Fiona writes 'I feel I am only watching here and am not sure what use that is to me in my nursing career.' I found this interesting as students of all disciplines observe as a first activity when exposed to practice. Lave and Wenger (1991) talk of an initial peripheral participation to convey the perception that Fiona is expressing. For them watching takes a different significance as it provides the first approximation to the framework of the structure of the community of practice and usually affords the student with a legitimate if peripheral role.

In nursing participant observation is encouraged and this is done for a number of reasons. Firstly nurses are often defined by what they do and the desire of the student to participate is usually high. More significantly however, in my opinion, due to the often intimate nature of nursing care, non participatory observation is often interpreted by both students and clients as voyeurism which is not perceived by either group to be helpful.

I recognise this associated involvement phase as being an important orientation to the new context to which the student nurse must become orientated. Although this study does not set out to identify a developmental process, as it is confined to the first episode of practice, even during this first four weeks the students are seen to grow in their sophistication.

If the student is to make sense of, and function in, this clinical context they must be able to interpret what they are seeing and this initial orientation is therefore of paramount importance. Hence, they spend the initial time in the placement watching, and organising a conceptual representation of what they see, in order that they are able to represent future episodes of practice conceptually. A similar organisation is employed with reference to professional language acquisition. Students are introduced to the rudiments of 'nursing language' within the classroom and conceptually they build on this whilst in the practice area. This will be further discussed later.

This conceptual organisation can be lucidly explained using the work of Von Glasersfeld (1989). He purports that for many years educators have been concerned with getting knowledge into the heads of their students. However, he tells us that such knowledge transfer is far from straightforward and if one is relying purely on linguistic communication such confidence is naïve. He talks of a 'match or correspondence between cognitive structures and what they are supposed to represent' (ibid, p6). If one accepts this conceptualization of knowledge, then it is reasonable to suggest that at this point in the student nurses trajectory they are beginning to build an internal conceptual framework on which everything else will be hung. What determines the value of these conceptual structures, Von Glasersfeld tells us, is their experiential adequacy, their goodness of fit with experience, their viability as a means for solving problems....' (ibid, p7). This view of knowledge relies on the student's successful conceptual organisation of his or her own experience and it is this organization that I suggest we are seeing here.

5.3.3 Doing: the nurse with hands

Having identified the categories of 'doing' and 'thinking' in the pilot blogs I interrogated the remaining eight blogs to establish whether these categories were replicated. I found numerous examples to illustrate these

two categories and include a small sample below. The three examples of 'doing' all come from the first week of student experience:

'.....one of the patients there on the ward was almost ready to go home, but all of a sudden felt very clammy and shouted for help help..... I went running and pressed the emergency buzzer. Other nurses came to help they went through all the procedures and I also helped them with what I could, very unfortunately could not save the pt'

(Jo, Day 4)

'.....my experience at a baby clinic today. A mum attended who had recently had an operation and had stitches, she was feeling tired and uncomfortable so I was asked to help to get her baby ready to be weighed. I also carried her baby to the car after they had finished in the clinic. This was a really valuable experience for me as I have had little opportunity for contact with infants/babies in my life.'

(Gina, Day3)

'I've been with the teen midwife 2day and what a fantastic day it has been! Liz the midwife showed me how to palpate so I did it on 2 girls 1 was 30 weeks and the other 37wks. FANTASTIC!!!!!!,'

(Cathy, Day6)

All three students are actively participating and making an authentic contribution to nursing care. These blogs show them to be busy and each one of them is noted to be an active character in the scenario that they are describing. Gina and Jo both have a clear function in the care situation and are performing skills that are appropriate at the novice stage of their programme. Gina is involved in the drama of an emergency something that she has been actively and meticulously prepared for in the classroom, whilst the tasks carried out by Jo are more generic and are carried out within a framework of general care which requires her to be sensitive, sensible and safe. It could be argued that if these two students were not able to perform the actions described then another healthcare worker

would be required. Both these episodes of care are examples of legitimate peripheral participation as described by Lave and Wenger (1991) and enable both Gina and Jo to become appropriately socialised into their new context. Cathy on the other hand is learning by modelling the behaviour of her midwifery mentor. In doing this she is imitating a skilled performance and experiencing the role of the mentor by doing the task, in this case the palpation. Cathy comments later in the blog that she would like to be a midwife at some point in the future. Having carried out some of the practical aspects of the role she projects herself into the future, seeing midwifery as a real possibility.

5.3.4 Thinking: the nurse with a head

The blog excerpts offered as evidence of 'thinking', 'cognition' or 'concept manipulation' are all chosen at this point because they are clearly separate to practice. Although practice is never far from the students thoughts each of these entries is evidence that the student is able to recall useful information delivered in the classroom that illuminates the care given or the condition of the client. These excerpts show that the nursing students are appropriately processing information so as to create order in their thoughts and organise the material conceptually in a manner that may aid problem solving at a later date. This could be interpreted as laying the foundations for competent practice, as Von Glasersfeld (1989) tells us 'A students ability to carry out certain activities is never more than part of what we call 'competence'. The other part is the ability to monitor the activities. To do the right thing is not enough; to be competent, one must also know what one is doing and why it is right.' (ibid, p13). By processing information in this way therefore the students are organising their thoughts and preparing for their problem solving role in the future.

‘.....explained different types of colostomy to me be drawing some diagrams. This was useful and I could relate it to what we did in the bio lectures where we talked about

stoma meaning mouth and the different bits of intestine that might feed into a bag.’
(Ellie, Day 6)

‘Today I sat listening to the continence team and realised I understood a lot more because I had knowledge of the anatomy surrounding the urinary system!’
(Cathy, Day 8)

‘.....leaflet was based on who to contact if continence problems were suspected I needed to be aware that whatever medical conditions a client may have, continence is usually an issue which also needs to be addressed.’
(Gina, Day 5)

5.3.5 Paradigms of nursing

In order to further develop my conceptualization or model, I firstly considered each of the two coding categories ‘doing’ and ‘thinking’. Each is represented as a separate circle within my diagram which is reproduced as diagram 6.1 on the next page. This representation is similar to the view presented by Clarke (1991), who in an editorial written for the British Medical Journal (BMJ) offers a view of nursing which comprises of two alternative conceptions. The seminal nature of this editorial was reflected on when my ontological stance was considered in Chapter Three.

The first conception so described sees the nurse as a practitioner who is viewed merely as a doer, carrying out a collection of procedures that require skill but little if any cognitive ability. In this world view manual and technical nursing activity is directed by others and the knowledge base underpinning nursing activity is eclectic and not therefore recognised as unique to the profession. In short, nurses are valued for their hands. The second conception, on the other hand, is one where nursing is viewed as a particular kind of interpersonal interaction, which has specific nursing orientated goals which are reliant upon clinical judgment and specific nursing knowledge. In this world view the nurse is valued for her head.

The two separate circles within my diagram therefore represent two world views or paradigms relating to nursing. Congruent with the alternatives described by Clarke, the two conceptions are presented here as paradigm one, where nurses are recognised for the roles skills or functions they perform (labelled by me as 'Hands') and the paradigm two where nurses are recognised for their cognitive or problem solving abilities (labelled as 'Heads'). I first offered this conceptualisation of nursing activity, in relation to the maintaining of patient care records, in my column (Karstadt, 2008d). Concurrently I also identified the phenomenon within the data I was analysing within this study.

5.3.6 Viable knowledge

On further detailed examination of the data a category of activity relating to the synthesis of thinking and doing was identified. Further development of the diagram or model represents this new data category as an intersection of the two circles with the overlap representing showing how the student is able to relate theory and practice. This overlap can be effectively described using the concept of viable knowledge as outlined by Von Glasersfeld (1989). Viable knowledge, he tells us 'is used to navigate the world' and is a 'viable way of dealing with some sector of experience' (ibid, p15).

Von Glasersfeld (ibid) talks of using conceptual material that is already embedded within the individual's consciousness to make sense of a new or novel situation. This cognitive representation is built up from conceptual structures that have been created from previous experience. Viable knowledge in this way is dynamic and grows throughout a lifetime as each novel situation results in a modification of the individual's viable knowledge, which becomes increasingly complex and sophisticated.

Diagram 5.1 The emerging model showing the mutually exclusive 'Head' and 'Hands' data categories and their relationship to the identified paradigms

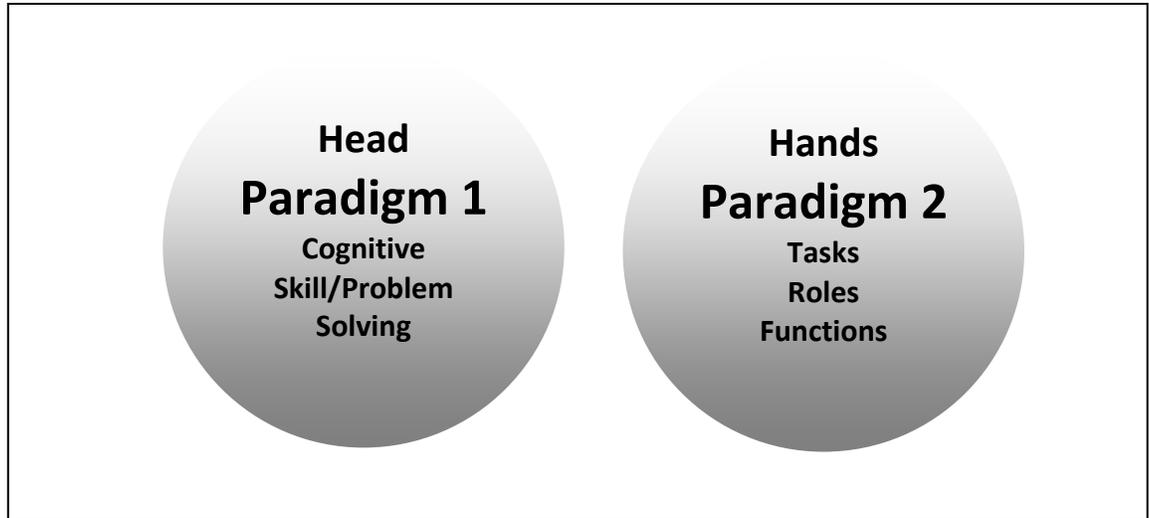
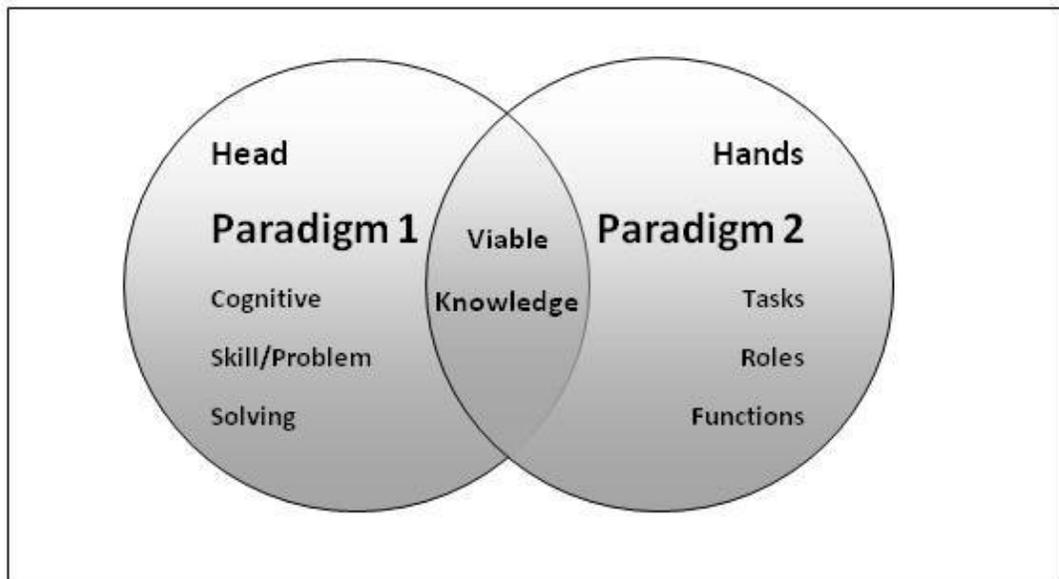


Diagram 5.2 The emerging model showing the intersection of doing and thinking or the 'head' and the 'hands' to give concept of viable knowledge



Within the early practice experience of the blogging students' examples of viable knowledge can be clearly identified. These students are novices in the context of nursing and therefore the problems that they can address are for the most part simple problems. Wherever a student or practitioner is required to choose a course of action viable knowledge is being used.

'..... She asked me about her operation and my mentor helped me to explain what they had done. This was really useful and I was able to use what I had learned in bioscience to draw Angela a picture and then to explain (with help of my mentor) the operation she had had.'

(Danni, Day 5)

In this excerpt Danni clearly uses what she has internalised from her classroom experience, to communicate an appropriate explanation to her patient. Although she is a novice and there is no doubt that the concepts she uses will become more sophisticated as she becomes more experienced. Although she refers to her mentor to shape and guide her practice she is clearly using a cognitive framework or representation that fits with this experience and is presented to her patient and the outside world as knowledge. In the excerpt below Cathy is shown in a situation where she makes a competent choice. Again to a more experienced and skilled nurse this might seem obvious but for Cathy this is only Day 12.

'When attending bio and skills I thought how am I gonna remember all this but today showed me that I have taken a lot away from this. Not only did I understand what they were talking about but when asked for the needle I was able to select the correct one from the 3 available on the table'

(Cathy, Day12)

Jo relates, quite emotionally, what she feels she has learned from her first experience of cardiac arrest and how her behaviour may be modified in the future.

I cried because it was my 1st time to see something like this. My reflection on this incident is that I have to be strong as being a student nurse I will have to do this again sometime in the future. Next time I will make sure that I am able to hand the laryngoscope the right way round!!!!!!!!!!,
(Jo, Day 4)

Again this is appropriate learning for a novice nurse that is articulated in a format that confirms her cognitive representation of emergency situations has grown as a result of this incident.

Jo refers overtly to reflection, a concept that all the students have been introduced to during their university based studies. Von Glasersfeld (1989) recognizes that the ability to compute new results from any situation is a product of reflection. He tells us that although 'reflection is not observable. Its products may be inferred from observable responses (p12). Von Glasersfeld's (ibid) conception of reflection is that which was originally introduced by Locke and is therefore the ability of the mind to observe its own operations rather than the conception developed by Schon (1987, 1988) which is more concerned with action and behaviour. The extension of Von Glasersfeld's explanation to include action is however comfortable and would seem to fit with what I am observing. Many of the students in the blogging study overtly reflected.

'I am going to reflect on a multi-disciplinary team meeting '
(Gina)

'today the only thing I can reflect on is.....'
(Fiona)

'...on reflection, I realized that I had not considered.....'
(Danni)

Most, although not all, episodes of reflection resulted in students talking of an emotional response. The other episodes were noted by me to facilitate the holistic view of a particular situation.

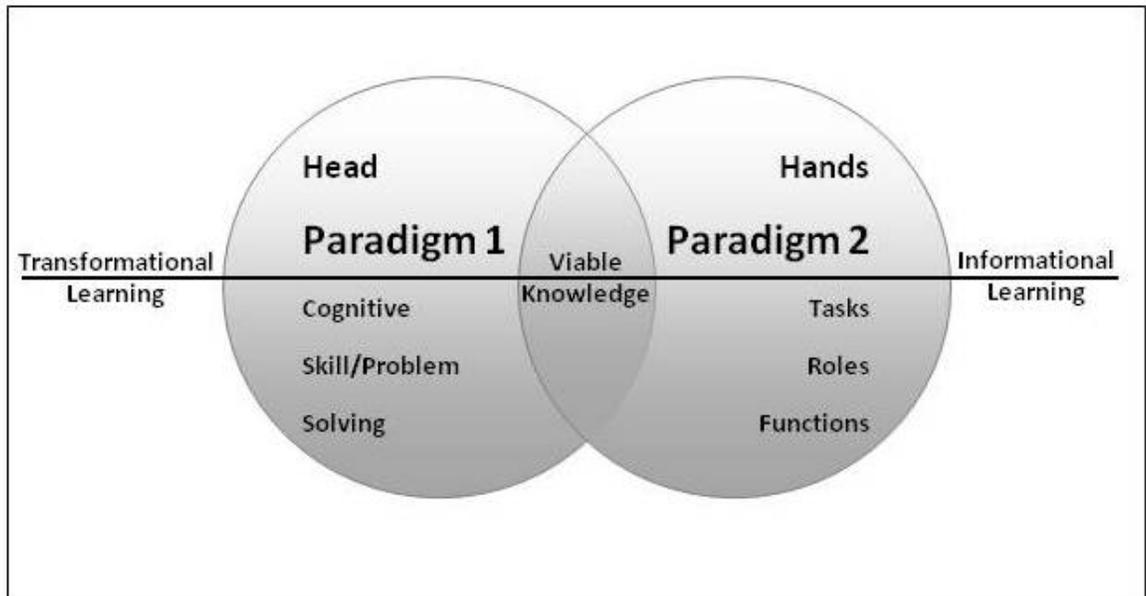
To recap, the model that is being constructed from the analysis of the findings of my study and the exploration of meaning is made up of two circles, the first of which represents a nurse who exhibits roles skills and functions and the second a nurse who has cognitive or problem solving abilities. Where the two overlap the nurse is seen to use problem solving in the context of practice and this is referred to as viable knowledge. If nurses need both cognitive ability and skills and these are integrated in the form of viable knowledge then it is reasonable to hypothesise that in order to support both sets of outcomes more than one type of learning is required. The next coding category to be integrated into the developing model is the development of a nursing perspective. This can be substantiated using the work of Mezirow (2000) which categorises two distinct types of learning.

5.3.7 Assimilation of knowledge: information or transformation

Key to my study is how individual students assimilate nursing knowledge to support their own practice, and the model provided by Mezirow (2000) provides a useful lens through which to view my research findings. He asserts that transformative or transformational learning is 'a process where we transform our taken for granted frames of reference to make them more inclusive.....and reflective' (p.8). Kegan (2000) further develops this, differentiating transformational learning from informational learning and citing the work of Piaget (1954) to aid his explanation. Piaget refers to assimilation and accommodation, the first being when new experiences are cognitively configured to fit with existing conceptual frameworks and the latter when such frameworks require modification to achieve a match between reality and the cognitive structures in question. Kegan (2000)

likens informational learning to assimilation and transformational learning to accommodation. I use these two categories as the labels on the two extremes of a continuum (Diagram 5.3).

Diagram 5.3 The emerging model showing the relationship between the Paradigms of Nursing and Mezirow's types of learning



Informational learning is defined as deepening and extending the individuals established body of knowledge and repertoire of skills. It is about the content of what a person knows and is highly organised and apparently infinitely extendable. In the context of the nursing students within this study it is about being able to name and identify things, about being able to operationalise a known formula to get the right outcome. I have placed this informational learning at the end of the continuum that is associated with doing as this often requires concrete facts. This is not to say that cognitive ability does not also require information to inform it but other types of learning that are more evaluative are also required.

There are many examples of assimilation or informational learning within the blogs under scrutiny. As the students begin their professional journey

they are already extending their established cognitive capacity with the crucial purpose of deepening the resources available within their existing frame of reference or within the accepted rules of engagement. Kegan (2000) tells us that 'no discipline or field is well nourished without continuous opportunities to engage in this kind of learning' (p49) illuminating this by commenting that no passenger wants a pilot who does not know how to land the plane in a cross wind or a doctor who is unable to differentiate between a benign and malignant lesion. Both these examples are concerned with skilled professionals who compute information in an established and accomplished fashion. The examples from the blogs that are offered below are similar.

'Today I managed the shift handover for 2 pts. I explained what was the matter with them and what we had done using what I had done at uni and what my mentor had told me in the placement. I felt that I could not have done this without what I had learned in placement but realise that without Lecturer A I would not have understood the surgery the pt had had and without Lecturer B could not have described the care we had given.'
(Danni, Day14)

'I had learned a little about autism/asperges syndrome in the DRE module when we discussed learning disabilities – so I had a basic idea of the condition. The boy was being assessed on his use of language. I was able to observe his interaction and communication and was given an assessment sheet of my own where I could document my observations. I was then able to go through the sheet with the speech and language therapist after the consultation had finished. The SLT agreed most of my scoring and I was pleased that I could expand and justify the rationale behind my choices.'
(Gina,
Day10)

'The client was struggling to check his blood sugar and administer the treatment. The district nurse showed me the results of the blood test and he was registering 20+. This I realise was very high as blood glucose levels are normally

around 4-6 mmols..... It was decided that a visit from the doctor was required and possibly admission to hospital.'
(Jo, Day 10)

All three of these examples rely on information that has been previously assimilated by the student. In the case of Danni it is both factual and procedural and it is informing the way she behaves. Gina and Jo, on the other hand are making evaluations with regard to their patients/clients based on previously received information which is used to define what is usual/normal in the given circumstance.

In the context of this study the acquisition of professional language can also be classified as a form of informational learning. During blogging students give implicit and explicit examples of how they are able to use language in this early phase of their nurse education that they would not have been able to construct only a few weeks earlier. Kegan (2000) offers the analogy of filling in a form stating that informational knowledge consists of the facts and figures necessary for complex form filling and is made up of specific contextual details and complex information. This type of learning should therefore not be minimised as without it the nurse would not be able to make a diagnosis or select an appropriate piece of equipment'

'Tonight I watched a video on diabetes and although I was on my own with no one to ask I was able to work out the terminology by applying what we had done in the interactive bioscience lecture. As the session was such fun I easily remembered the fronts and backs of complicated words.'

(Ellie, Day 4)

'In clinic today I had the chance to try out dummy inhalers. As I sat listening to Sam the respiratory care nurse I realised I only knew what he was talking about coz I had knowledge of the anatomy surrounding the chest.'

(Cathy Day 8)

Both Ellie and Cathy recognise that they have acquired the specialist terminology required to operate in a nursing context as a result of information or knowledge that was imparted in the university. In both instances their acquisition of this information or informational learning is related to the bioscience module in the programme. I also noted many instances where students were using the language of nursing which would have not have been a part of their vocabulary only a few weeks before. 'Mrs Jones was pyrexial' 'This girl was a primagravida' and 'We used a glucometre' being three such examples. In some instances this new language was attempted with an incorrect spelling which may suggest that at this early stage these were words that they were hearing rather than seeing.

Transformational learning on the other hand is nothing to do with the details required to fill in a form but instead can be likened to an evaluation of what that form is for. With transformational learning, Kegan tells us, the form itself is at risk. The individual experiencing the learning being enabled to assess the adequacy of the form, for the job at hand, and redesign it as the need arises.

To do with an individual's frames of reference, transformational learning is concerned with the perspective of that individual with particular reference to implicit and explicit ethical dimensions and the person's moral code. When an individual modifies the way that they see the world they are said to have changed their perspective. This can be applied directly to the last of the coding categories identified during the pilot blogs and confirmed within this iteration which was 'development of a nursing perspective'.

The students all attribute this change to the content presented to them in the Diversity Rights and Equality module. As implied in the title this

module is concerned with how individuals are viewed and treated and advocates equity of experience for all. Students are able to articulate how their perceptions have changed and the following blog entries illustrate this.

'Today was a strange day. I found myself thoughtful about the care of Bert. Bert is 79 years old and dying of prostatic cancer. He does not have many visitors but today he had several from his church. They were all friendly and gave Bert lots of attention. They tempted him to eat bits and pieces that they had fetched in, but mostly they prayed with him. Bert was quite agitated but became calm during this process. I realised that I had not really considered this part of Bert's life at all and had not thought about what made him tick before he was here. By not knowing about him being religious maybe I had not treated him as a whole person. This made me feel quite guilty. I think this relates directly to what we did in DRE.'

(Hatty, Day12)

'.....all the child needs is some positive praise instead of all negative. Later that day in the garden, I asked her to help me dry the slide and toys - she must have spent about half an hour doing this and I just kept praising her all the time saying well done, thank you etc. She seemed to be in her own little world and enjoying the positive attention. Little Sara had been stereotyped and had become a self fulfilling prophecy – she was just behaving as everyone expected her to behave – BADLY. Today taught me, that something so simple can be so rewarding. This again reflects on lecture that we have had in university Core Knowledge and Skills and DRE.'

(Fiona, Day 9)

'.....when hiding a little boys feet in the sand pit ! Although he was only 2, he did not speak much, but his body language and his facial expression said it all, the excitement he was getting over something so simple was unbelievable! To relate this to the lectures it is true that children have the right to give consent. His body language said it all, he was happy for me to bury his feet in the sand and I will be able to use this experience to judge when children are giving implied consent in the future.'

(Fiona, Day14)

‘.....patient finger nail was very long and dirty and she refused to cut it. She was diagnosed with a personality disorder (self harm) and was very demanding. I took her into the quiet room to established what I was to do. In the quiet room as I was washing her hands and feet we talked. She is very worry that when she is discharged she will have not place to go and live and she needs her social worker to help her sort out her housing issue. She would not agree to me calling her social worker – she did not trust me.....

This patient was smelly and I realized that before starting this I would have left the tube carriage to get away from such a person BUT I used the nail cutting time 2 build a bond I was quiet sometime, talked sometime and listen.Two hours after the nails she called me back into her cubical and asked me to call her social worker. I was soooooooo pleased.’

(Iris, Day 5)

All these examples of transformational learning show that the students have internalised the principles of tailoring the care package to the patient or client, no matter who the patient and what their diagnosis or social circumstance. All these students appear to have internalised the moral principles of respecting individual difference and not being judgemental and in the examples given the students seem to have some insight into the transformation that has occurred.

5.4 The final data categories

All categories seen in the pilot blogs were therefore confirmed and further evidenced within the eight remaining blogs. This analysis using the identified data categories allowed the process to be extended beyond description, and interpretation, and reflection on meaning facilitated the construction of a conceptual model that now offers an explanation of how learners perceive and participate in early practice experiences and how this connects to the theoretical concepts presented in the classroom.

The final naming of the six data categories, as advocated by Merriam (2009) was sensitive to what was in the data, thus enabling the reader to gain a sense of their nature.

- Watching others
- Development and use of appropriate language
- Hands on doing
- Thinking
- Thinking and doing
- Gaining a nursing perspective

Additional themes were also recognised within the eight remaining blogs. Each blog was again inspected separately and in addition to annotations that confirmed the original six categories a small number of other themes were also noted. Once all the blogs had been interrogated these were grouped together for final analysis.

One of the remarkable aspects of these remaining blogs was the students ability to view their patients and clients holistically. Some of the blogs included accounts of interactions in which these novice nurses were immersing themselves in the whole situation and consequently their behaviour toward particular patients and clients was sensitive and appropriate.

'The best bit was seeing how my mentor tried to get her to take a peek (at the colostomy). Sharon did not look but I could tell that she was tempted. Afterward I went back 2 chat 2 her and although neither of us mentioned her op I could c she was more relaxed than before.'

(Iris, Day 8)

'We visited Mr Shah who had poor circulation to his legs and had developed sores. He also had poor eyesight and was trying to manage a recent diagnosis of diabetes. The dressing took a long time and whilst she did it I talked to him

about his diet and his daughter.'

(Hatty, Day 17)

Having considered several examples of holism from the blogs I decided that this was in fact another sub-category, being an integral part of 'gaining a nursing perspective' which was already an established category.

Another new theme that I had noted and constructed a succession of memos on was the importance of practice. At several points in a number of the blogs I had the overall impression that the student was recognising the importance of their practice experience to their overall education and preparation as a nurse. When I returned to these annotations I found that they were not nearly as powerful as my memos suggested and each one was re-categorised into an existing category. For example:

'The most important thing was being here with her on the ward watching everything that she was doing, how she relates to the women both with her words and her care'

(Iris, Day 9)

was after consideration coded as a part of 'watching others'. Similarly

'This situation enabled me to see that washing a patient was more than just making him clean. It was an opportunity to talk and find out his worst fears'

(Hatty, Day7)

was recoded to 'gaining a nursing perspective'.

Finally I noted that a theme indicating an extension of the taught material achieved via practice. This was noted by me to be evident in the blogs that chronicled each student's unique experience. What they learned in the

context of the programme, which was half theory and half practice depended partially on what they were exposed to in their clinical practice experience. Each student has a unique experience and becomes a unique practitioner as the professional identity that they acquire depends largely on what they are exposed to along the way.

'We had not handled this type of syring that was specifically desined for this procedure in the skills lab and it was more difficult to handle. I got it in the end though and the second time I was able to do it on my own. After we had finished I went back to the nurses station and read an article which helped me to see why we had done it that way'

(Hatty, Day 9)

'I worked with my mentor who helped me collect everything together. She told me about the procedure..... We had not done this in uni but I would now feel confident to explain to the others what to do'

(Iris, Day 4)

'liz asked about their lifestyle and I realized that the most important question was "Have you got support" not all of them did and I found it hard to know that some of these girls as young as 16 were alone in the world!'

(Cathy, Day 6)

Looking back over the whole data set confirmed that this new category was also in evidence in the pilot blogs as evidenced below.

'I had watched them do this procedure a number of times last week and had read up on it as well – it would have been useful to have done this in uni before the placement'

(Anna, Day 6)

Adding this final category resulted in there now being seven categories available for use in the subsequent theorising.

5.5 The model

When the categories were then integrated with and substantiated by the writings of others the category labels moved to be more theoretical and as part of an iterative process were relabelled as outlined here. These new labels are also the concepts that make up the conceptual model offered within this conclusion of the data analysis.

The data categories, old and new, are summarised in the table below:

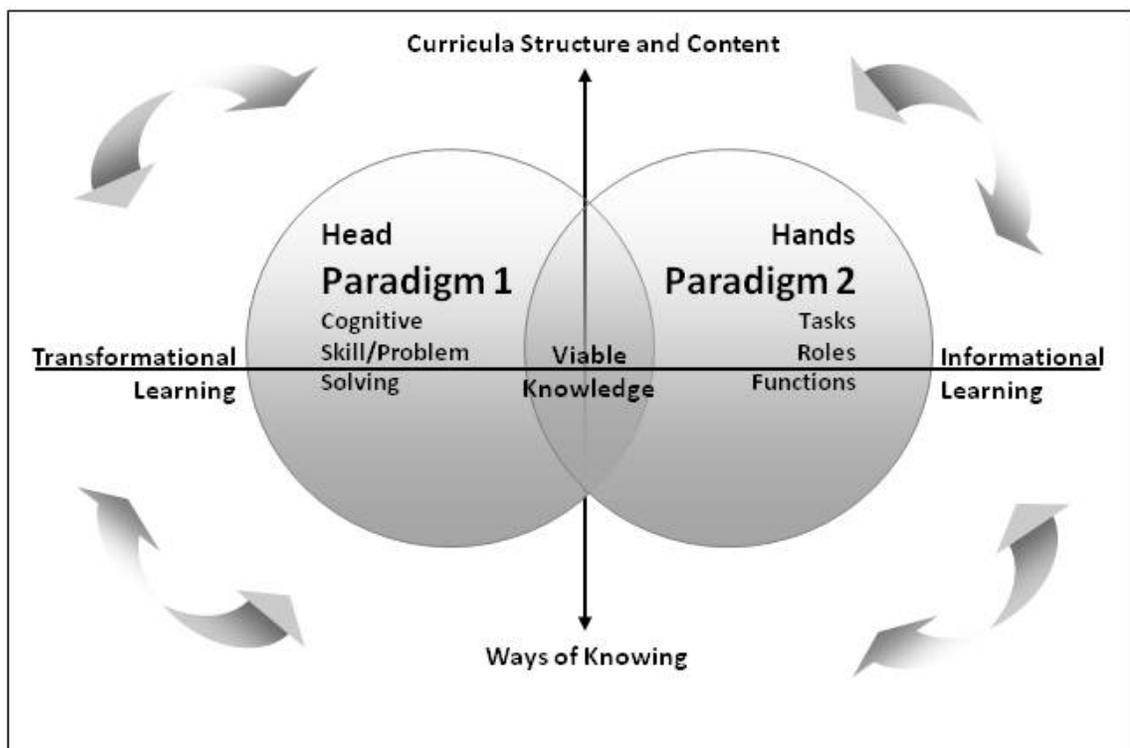
Table 5.1 Modified data categories

• Watching others	Context
• Developing language	Informational Learning
• Hands on doing	Hands
• Thinking	Heads
• Thinking and doing	Viable Knowledge
• Gaining nursing perspective	Transformational Learning
	Extension beyond what was taught in the classroom

The bounded system representing this case study was established as the undergraduate programme housed within the School of Nursing and Midwifery at the University of Hertfordshire and the properties relating to the programme such as its structure and content were established via the collection of data as apart of a national survey and included in this study as Appendix One. In the final model this survey data is simplified to the curriculum structure and content, and the ways of knowing which form the two poles of the vertical axis. Rather than two opposing extremes these are viewed as being related one to the other, in that the ways of knowing embedded in a curriculum are related to its structure and visa-versa. The model therefore, at this point looks like the structure reproduced in diagram 5.4.

Within the middle of the diagram and the absolute focus of this study is the student. Represented via the two previously described paradigms it is accepted that nurses do in fact need both practical and cognitive abilities (or heads and hands) and that the overlap between the two should be as large as possible. This overlap is labelled viable knowledge and is key to nursing practice and nursing education.

Diagram 5.4 The implied importance of curriculum structure



5.6 Conclusion

In conclusion the model offered at this point links together the categories identified in the data to provide a whole and explicate the experience of a particular student. Within the two previously described concentric circles this is the heart or focus referred to by Miles and Huberman (1993). Within the curriculum the student is exposed to the validated structure and content which facilitate a number of ways of knowing. (see for example:

Chinn and Kramer, 2004; Carper, 1978) and learning. Particular credence is given to the work of Mezirow and Associates (2000) with all learning represented on a continuum between transformation and information (Keegan, 2000). The arrows connecting the four points on the axis acknowledge that none can be considered in isolation as a change in any one will affect the resulting context in which the student studies and practices.

In the next chapter the model will be further developed after the consideration and interpretation of further data. Merriam (2009) tells us that triangulation is the principle way that validity and reliability can be ensured. I will use data collected from academic staff via interviews and naturally occurring data to corroborate and extend the analysis outlined here. An account will also be given of the responses (within the interviews and elsewhere) to multiple stakeholders with reference to my emerging model. Finally the emerging model will be extended and further developed as a tool to guide the practice of nurse education.

6 A Recursive Model: widening the lens

6.1 Introduction

Having established that the undergraduate nursing programme at the University of Hertfordshire was typical within England at the time of this study, and having considered the data offered by the students in their blogs with regard to their experience of the first semester of that programme, this chapter will now widen the lens to include the perspective of others both within the University and beyond it. The chapter will firstly consider interview data collected from four of the academic staff delivering the programme and then will explore a range of naturally occurring and other data (Silverman, 2001), collected in a number of settings both within the UK and internationally, from individuals operating in similar contexts and facing similar challenges.

In the previous chapter I chronicled how, as the analysis of the student blogs progressed, I extrapolated a number of data categories that ultimately were used to build the first iteration of a cognitive framework or model. This model was used to explicate how the student's perceptions and participation in their early practice experiences related to the theoretical concepts that had been presented to them in the classroom, thus reflecting the first two questions guiding my research.

In this chapter I will analyse the transcripts of four interviews carried out with the academic staff responsible for leading the four modules which make up the theoretical component of the first semester of the nursing programme studied. The analysis will centre upon the latter two research questions that relate to my study and address the curriculum delivery and its ability to support the practice experience and facilitation of the development of knowledge that supports and informs that practice. Data from the blogs and from the interviews are perceived as complementing

and corroborating each other. These interviews thus illustrate triangulation by considering data relating to differing perspectives of the same situation, collected from different sources and using different data collection methods (Denzin, 1978).

Analysis of the interviews will be followed by a further iteration of the cognitive framework or model. Recursion is a process of repeatedly revisiting the same thing, in this case the data, which is considered in an iterative or progressive way. This recursion has facilitated the development of a model which is seen to change or develop in sophistication as more evidence is considered. An iteration of the model following consideration of the data from the interviews will therefore be shared and this process of modification discussed. The notion of a recursive model will then be explored and evaluated.

Finally, the naturally occurring data and other data collected as a part of this research study will be explored. Silverman (2001) recognises that there is a preference for naturally occurring data in the qualitative researcher recognising the value of a natural situation when compared with a manufactured opportunity. He promotes the idea that an observation rather than an experiment and an unstructured conversation as opposed to a highly structured interview will result in more authentic data. His definition of naturally occurring data is 'data that exists independently of the researcher's intervention' (ibid, p159), I have therefore included in this category, observations I have made and conversations I have had relating to my emerging results and the emerging model. I present these as a further triangulation of the analysis or interpretation offered.

6.2 The interviews

To maintain anonymity of the staff interviewed I have again allocated fictitious names to the lecturers alphabetically. In order not to inadvertently identify them I have allocated two male and two female titles on a random basis Mrs Kay, Mr Lowe, Ms Miles and Mr Neal were all experienced academic staff who had previous nursing experience and had maintained their registration status with the Nursing and Midwifery Council. Typical of all the academic staff involved in the delivery of the four modules, each was appropriately qualified to teach the module under consideration. This is particularly pertinent with reference to the 'Bio scientific basis for care' module where the pure scientific content is significant. The other three modules: 'Foundation skills', 'Diversity rights and equality' (DRE) and 'Core Knowledge and Skills' are more integrated (Bernstein, 1975) in their orientation, but even so the academic profile of each member of staff is noted to be appropriate to the content. This information is derived from the content of the interviews and/or my experience of all the staff members in the School.

Because I have a detailed knowledge of these academic staff and the context in which they work I have taken care to focus only on what was said in the interviews and not allow my impressions of what they were doing more generally to influence my interpretation and analysis. As at the time of the interviews I had line management responsibility for all of these members of staff. I therefore endeavoured to be cautious with reference to my approach to these individuals, emphasising that participation in the study was optional and my interpretation of their contribution to the research would **not** be recorded as an evaluation of their overall performance. I told them that this was an interaction between peers. I explained to each one the purpose of the research and outlined my early analysis of the data already collected. I made great effort not to lead their

contribution, but to ask truly open questions and actively listen to their answers.

Although I had a set of questions to guide these interviews they were conducted very much as natural conversations (Burgess, 1984). The guiding questions are outlined in Chapter Three. The interviews naturally split into two halves the first explored the structure and content of the module and its perceived relationship to the forthcoming practice experience, including how the individual lecturers interviewed thought the content of their module would be utilised. The second half of the interview followed a sharing of the conceptual model in the iteration that appeared at the end of Chapter Five.

After a brief explanation of the recursive model and how it had been constructed, staff were asked to locate their own module within this diagrammatic representation and about their opinion as to the goodness of fit. Another set of questions, also found in Chapter Four, was then used to explore any aspect of the model that had not been already been spontaneously discussed in the conversation. Finally, the interviewee was invited to give appropriate anecdotes and to add anything else that they thought may be appropriate, leaving the decision as to relevance up to the individual.

The interviews were tape-recorded and subsequently transcribed. The transcripts were then scrutinised in a similar fashion to the previous blogs. This analysis began as soon as the first interview had been completed and the interview schedule was reviewed after the analysis of each transcript had been completed. After the first interview a data category that had not been identified in the blogs was added to the model and this, over the time that the interviews were taking place, acted as a catalyst for further refinement of the model. In addition to an initial scan that revealed largely

similar coding categories to the blogging study, the emerging recursive model was also used as the template against which to analyse the data.

6.2.1 Perspective of the academics in relation to their own modules.

On questioning, the explanation of the module content given by each lecturer closely matched that available to students and prospective students. The four modules were confirmed to be delivered independently although all interviewees made reference to all of the modules. The 'Fundamental skills' lecturer was interviewed first and Mrs Kay made explicit reference to the 'Bio-scientific basis for care' module content early in the interview stating:

'Ms Miles and myself have got together and we are actually trying to get the bio science to reflect what we're teaching in skills. '

'They want the macro to start with then the micro. ... Ms Miles is fantastic... she is absolutely brilliant... that's what we want.... and then we look at the nursing; we look at the skills needed for that.'
(Mrs Kay, interview)

Ms Miles corroborated this later by saying:

'.....needs to be considered alongside the skills, we give them some insight into normal parameters.... indicating what they are looking at as far as patient observation is concerned..... They need to see bioscience from point of the view of what they do everyday... the skills.'
(Ms Miles, interview)

Later in her interview Mrs Kay referred to the content of the remaining two modules, again positively and with reference to 'how it all comes together'. This excerpt acknowledges her recognition that it is the language of bioscience and the other two modules that gives these students the discourse of practice:

'Now they do the DRE, they do the fundamental skills, they do the Core Knowledge and Skills and in the Core Knowledge and Skills you know all those things like consent and all that it's absolutely pivotal and they use all those terms and what they've got in bio-science.'

(Mrs Kay, interview)

Mr Lowe similarly recognises the inter-relationship of the four modules with an acknowledgement that the construction of new concepts is a very individual and personal thing

'Which (module) is the most important depends on the student. I think that it would be a toss up between skills and physiology for most.... Yeah'

(Mr Lowe, interview)

He then goes on to make his own evaluation of which module is the most important from the perspective of a teacher

'I think they are all equally important actually, because it's a bit like a box of chocolates. You need all the varieties to make up the box. The minute we start saying that one's more important we've just lost the whole ethos of the practitioner we are trying to evolve. So every... I think they are all important. One isn't more important.'

(Mr Lowe, interview)

Mr Neal similarly recognises all, but sees his own module DRE as a balancing or integrating force.

'They're all important yes, but DRE...DRE is the balance. Other than that they become very clinically focused... focused on what they do... you know doing dressings and giving injections. DRE opens their eyes to a different dimension... the people, the vulnerable. When they leave they see people not just as dressings leg ulcers and op sites but as individuals.... That's how it works.'

(Mr Neal, interview)

The theoretical content of the programme in its totality has, from the perspective of these interviewees, been designed to support the practice experience and to facilitate appropriate knowledge development. However each lecturer would appear to perceive the curriculum primarily from the perspective of the module for which they are responsible. Each is however clearly informed as to the activity of the others and of the collective goals of the curriculum. There is an emerging horizontal power relationship (Bernstein, 1975) between module leaders and the overall co-ordination and perceived harmony associated with the technique of curriculum mapping (Harden, 2001) is seen, by me, to be developing. However, when the interviewees were asked about integration between modules they were all aware of limitations.

6.2.2 Curricula structure and content

When asked whether their modules had taken an integrated or collection approach (Bernstein, 1975) to the academic material contained therein, all four module leaders confirmed that in their opinion an integrated approach had been adopted. When quizzed with reference to the whole semester and the way the four modules fitted together, there were however a number of opinions. Comments like:

'It could be done so much better'

(Mr Lowe, interview)

'We're getting there now but.....'

(Mrs Kay, interview)

'We work very closely with skills but less so the other two.'

(Mrs Miles, interview)

and

DRE is the balance..... when they leave they see people.'

(Mr Neal, interview)

These comments indicate that although there is a will to work more closely, the reality is that the perception of the lecturers is that the four modules each retain their separate identities albeit with some collaboration.

Each module leader, with the exception of Mr Lowe (Core Knowledge and Skills) saw their module as the most important and made some reference to it being the integrating force for the whole semester. Mr Lowe did not make such a claim but instead purported that in his opinion the content relating to intra-professional working came a little too early and if it came later it would be the integrator. It failed to do so in semester one, in his opinion

‘.....because they haven’t found their own identity yet...’
(Mr Lowe, interview)

As each interview looked at the whole curriculum from the perspective of the module that the interviewee was responsible for, each therefore had a very different flavour. Mrs Kay was very interested in what the students were able to do as a result of studying her module and refers to the supporting role of the theory, particularly the bioscience module, in relation to that. Ms Miles considers nursing to be predominantly a science and approaches skills and practice as an application of the bioscience she has taught. Mr Neal is clear that inequality in healthcare drives the whole thing with his module enabling students to see patients as individuals with the rest necessary to support that view. Mr Lowe on the other hand sees it all as necessary and complementary ‘like a box of chocolates.’

Looking at all these comments through the lens provided by Bernstein (1975) gives a unique view. He was interested in the sociology of education, and particularly how society reflects, classifies, distributes, transmits and evaluates knowledge which, he tells us, is a major regulator

of the structure of experience. In the context of the taught material in this first semester each module defines an aspect of valid knowledge which is transmitted from a particular perspective and contributes to enabling the student to function in the practice environment.

When applying his concept of 'educational knowledge code' which considers the underlying principles that shape curriculum, pedagogy and evaluation, Bernstein (1975) tells us that we must consider the classification and framing of the knowledge presented. In this context classification refers to the nature of differentiation between the contents of the curriculum, whilst the frame is the structure of the message system and the context in which information is transmitted and received. He purports that within any society these two educational concepts reveal both the distribution of power and the principle of social control. The interviews would suggest that all subjects presented in the first semester are subordinate to the general orientation of the whole programme and this implies a weak classification and frame and confirms the label of integrated with reference to the curriculum.

For those employing an integrated approach, holistic care is characteristically seen to be the over-arching integrating force (UKCC, 2001) and the interviews would confirm this to be so at the University of Hertfordshire. However, interrogating the boundaries between subjects/modules confirmed the relative value of the curricula contents from the perspective of the interviewees. Cooke (1993) applied the work of Bernstein to nurse education looking particularly at sociological content of the curriculum, and suggested that the confirmation of the value of one subject could, by implication, depreciate the value of others. My impression on completion of the interviews was that all the lecturers appreciated the need for all the modules and that within this institution and this curriculum there was no absolute hierarchy.

Modularisation of programmes has been reported positively in the context of post-qualifying nurse education (Skinner et al, 1997), although when referring to pre-registration education more caution is advised (Phillips et al, 2000). Such a structure can, we are told, result in fragmentation of what is being taught and loss of ownership of the whole curriculum, with a poor articulation between theory and practice. I saw little evidence of this and although the interviewees conceded that overall integration could be improved there was indication that this was being addressed

The relationship between the organisation of the curriculum and the ideas that it transmits are seen by some to be paramount (Cooke, 1993), with the structure of a nursing curriculum reflecting the kind of nursing that it seeks to reproduce. The blogs and interviews within my study, from my perspective, illustrate that at the University of Hertfordshire there is a desire to create a practitioner who values the contents of all of the four taught modules, hence considering the relationship between the art and science of nursing to be dynamic and mutually supportive. An integration of all contents of the curricula was therefore perceived by the interviewees to be necessary for students to construct the knowledge base necessary to underpin their early practice, a notion that is further interrogated within the next section.

6.2.3 Art, or heart and science

In the first interview Mrs Kay outlined her module in terms of nine sets of skills that were presented to each student, acknowledging that in her opinion the skills module was the most important

‘...it is because they can’t go out there without it. I mean they only get an introduction. They practice washing their hands, they practice moving patients and changing sheets and beds. It is all necessary because they’re going to be

doing it. Moving and handling they have to know how to get a patient up, they have to know how to use a hoist so it's vital. The theory can come....I know theory is supposed to precede skills..... We give them theory with it'

(Mrs Kay, interview)

Mrs Kay emphasised the holistic perspective of nursing and when asked whether her module was based on the art or science of nursing she asserted:

'.....practice is the art of nursing.... but I always say to them nursing, science and art and you cannot have one superior to the other. I always say it's a combined effort. I say that all the time.' (Mrs Kay, interview)

Each interviewee answered the question relating to art and science from their own perspective:

'Its a bit of both because you need the skills but some things are rather innate in people and we're trying to create practitioners. I suppose what we're trying to do is mould them to be...mould is the wrong word. Develop them to be... of their full potential so that then they will enhance quality care for the patients they come into contact with. The thing is... is communication an art or a science? A bit of both? Is professionalism an art or a science? I think it's getting them to understand the rationales and it's the application that they need a little bit of a hoisting up with..'

(Mr Lowe, interview)

'Nursing is a science not an art, just my opinion, although if practice is the art of nursing then we do cover both.'

(Ms Miles, interview)

'I guess there's a crossover between the two... can't say if it is one or the other... scientific because we look at statistics with reference to healthcare but the discussions and debates are definitely private and personal, so it's a bit of both really.'

(Mr Neal, interview)

Mr Neal makes an interesting distinction between the private and personal and the objective, the former being considered, by him, to be art and the latter science. This view would be consistent with that of Parker (1997) who conceptualises practice in terms of behaviours that are not evidence based and are based upon fundamental beliefs. He signposts explicitly a change of writing style between the two halves of his article (ibid) indicating an individual more relaxed articulation associated with art whilst the language of science is objective with scientifically validated knowledge or facts presented as a superior conceptualisation. Like my interviewees Parker (ibid) views the practice of nursing as nursing art, which he refers to as a skill or craft, which is not instinctive but is learned and carries connotations of creativity and beauty (p7).

My interviewees all however, acknowledged a synergy between art and science and between theory and practice advocating a dynamic mixture of the two in the preparation of student for their first practice placement. Parker talks of 'critically integrating within practice the richness of the wide range of perspectives available' (ibid, p5) and that knowledge derived from research needs to be transformed into personal knowledge through application to countless situations in nursing practice. Parker cites the work of Johnson (1994) and asserts that science alone will not solve all the problems of nursing (p9), a view shared by Chinn and Kramer (2004) who assert that empiric knowledge alone must be considered inadequate to represent the complexities of the practice world and must be complemented by the aesthetic.

In the process of considering whether the skills module was predicated upon the art or science of nursing Mrs Kay introduced the notion of compassion into the interview:

‘.....and this is caring nursing..... in many ways the caring nursing is the absolute **art or heart of nursing**..... if I’m doing loss and bereavement say.. I always mention compassion. I mention it. I always say it’s not the patient you’re looking after it’s the whole family and you must empathise not sympathise, you must empathise and be compassionate and respect their dignity... all this. All the arty things of nursing

(Mrs Kay, interview)

I found this intriguing as at this time I had not identified this dimension within the blogs. This was then therefore further explored using the technique of open questioning and reflecting what Mrs Kay had said back to her, to encourage her to expand and illuminate her points. She articulated some concern with reference to the whole workforce and the ability of particular staff to model this aspect of care for the students:

‘It is only a minority that don’t have enough compassion... the cold ones. When a nurse does not have compassion we rely on the mentor to reflect that in the mark she gets in placement..... But some of the mentors the quality of staff in some areas.... not in most areas... but in some... maybe 8% are without compassion, not up to the mark.’

(Mrs Kay, interview)

Although compassion has been identified by others as a fundamental component of the knowledge required to nurse (see for example: Carper, 1978; Chinn and Kramer, 2004) it is a dimension of knowing that is personal and concerns an awareness of a genuine and caring interaction with others resulting in a therapeutic use of self. Like Mrs Kay, Marcs-Maran and Rose (1997) observe this application of knowledge and assert that it is pivotal to the functioning of the nurse. This analysis of the interview transcript therefore led to the identification of a further coding category which ultimately changed the shape of the recursive model. After reading and rereading the transcript of the first interview and identifying this reference to the heart and compassion in nursing as significant in the

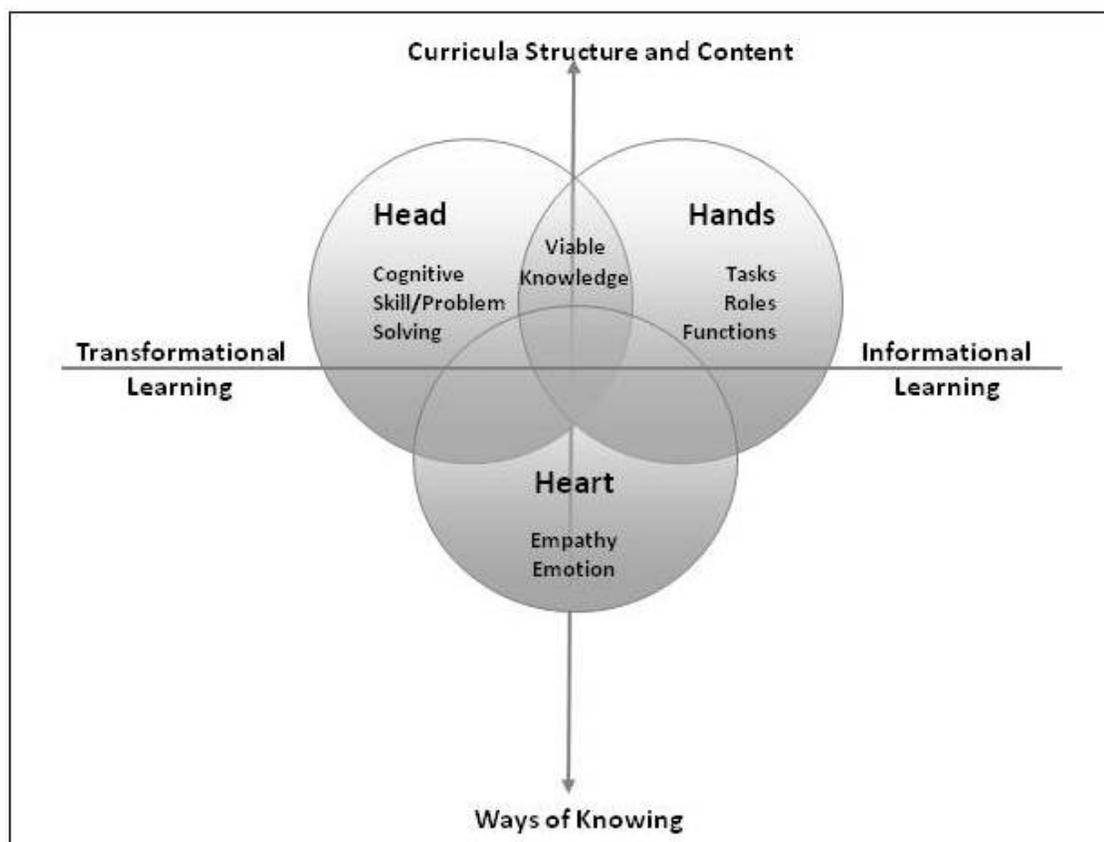
context of the study as a whole my frame of reference changed (Mezirow, 2000). I therefore modified the interview schedule for the remaining interviewees to incorporate this emerging concept and ultimately revisited the blog data, and re-examined the recursive model.

6.3 Analysis using the concepts of the recursive model as a template

The recursive model was presented to each of the interviewees and a brief explanation given as to how the blog data had been interpreted and the model constructed with its underpinning theories. This part of the analysis of the interviews was then guided by the template offered by the emerging model. The model guiding the first interview carried out with Mrs Kay was that presented at the end of Chapter Five, and included the guiding concepts of thinking and doing or 'heads' and 'hands', viable knowledge, and informational and transformational learning. However, as a result of the analysis of that first interview a further iteration of the model was constructed. This iteration resulted in the inclusion of compassion or 'the heart'.

Using the components of this new iteration of the recursive model as a template the transcripts were examined and the coding categories identified during the analysis of the blogs and the first interview transcript, searched for. This section will therefore use the concepts associated with the recursive model as coding categories and section headings, and consider the contributions of the four interviewees and the theories that substantiate and illuminate this interpretation. The updated iteration of the recursive model is presented in the diagram below which now has three guiding concepts of thinking doing and caring or 'heads, 'hands' and 'hearts': Viable knowledge remains at the intersection of 'head' and 'hands' only, in acknowledgement that a caring attitude is not pre-requisite for this phenomenon to be observed.

Diagram 6.1 Iteration of the recursive model as it appeared after integrating the heart, or compassion in nursing as a new guiding concept



6.3.1 Heads and hands

The interviewees were consistent, in that they all considered 'doing' to be pivotal during the initial stages of this nursing programme:

'Doing... the practice is so important... they need something to hang their hats on.... Practice brings it all together and most of them extend far beyond what we teach them in the classroom'
(Mr Neal, interview)

'First years spend a lot of time working out their identity... where they fit in and just getting by really... finding out what's appropriate and what's inappropriate...trying to get their heads around skills. If they do any sort of problem solving that's an absolute bonus.'

(Ms Miles, interview)

'.....and to go and do urine testing you know to get them into little groups like a round robin. So you've twenty five students in today so five of you can do TPRs and blood pressures, five of you can do urine testing, five of you can do moving, five of you... doing....and that's the way I want it.'

(Mrs Kay, interview)

Building a nursing identity as a part of doing was a recurring concept and this fits well with what is found in the literature (see for example: Lave and Wenger, 1991; Wenger, 1998). This was facilitated by the use of modelling and the use of narrative as a teaching tool:

'If you tell them a story about what you did.... A typical service user... for example... I worked with a girl with a moderate learning disability who had a STD. I worked with her for a year and a half.... She was a prostitute, self harmer, drug user, had a very poor vocabulary and was lost on the streets of London. I used that as an example of what LD nurses do it generated so much debate.... They love it.... You've got them straight away. If you go out there and just talk theory their heads drop, lap tops close, they start texting and you've lost it.....'

(Mr Neal, interview)

Mr Neal acknowledges how the link to practice is used as a motivator and a catalyst to get the students to think about how what happens in the clinical area links to what is taught in the classroom. Thinking was however seen to be absolutely essential in its own right:

'You expect them to think out in practice. It should inform everything they do everyday. It is core. It's about being professional. It's in everything they do, every breath they take'

(Mr Lowe, interview)

Here Mr Lowe emphasises thinking but links it with practice, stressing the inter-relationship of the two a connection that I recognise as the identification of viable Knowledge (Von Glasersfeld, 1989).

6.3.2 Viable knowledge

Although relatively little reference was made to thinking in isolation from doing, the coding category of viable knowledge as described by Von Glasersfeld (1989) was identified a number of times in the transcripts.

‘You’ve got to know what you are doing but you’ve also got to know how and why you’re doing it ‘
(Mr Lowe, interview)

‘They realise how important biology is a little later....soak up applied stuff.... What is the condition... what’s the treatment..... what’s the nursing care. I tell them its down to you.... Just telling me that you are doing obs is not enough....what are you looking for... what are you likely to see? They need to understand the pathophysiology and how it relates to the care.’ (Ms Miles, interview)

‘Well they have the theory here and then they go out and they see the diverse community out there, yes? So they know that people have different dietary needs. They know that the Muslim has to wash under running water so they will make sure they have a jug for that person or they will give them a shower if possible and I think...’
(Mrs Kay, interview)

These excerpts capture the essence of viable knowledge which is described by Von Glasersfeld (1989) as the knowledge that guides practice. He also tells us that such knowledge relies on an internalised conceptual framework and a match or correspondence between that cognitive structure and what it is supposed to represent. Where there is a mismatch the cognitive structure has to be re-evaluated and modified and as a part of this process knowledge becomes more complex and is extended. Reflection was seen by some of the interviewees to be a pre-

requisite for the synthesis of thinking and doing and therefore integral to viable knowledge. This is seen implicitly and explicitly within the blogs and is a phenomena that is recognised within the interviews where individuals talk about knowledge being extended within a specific context:

‘As the course goes on the two circles overlap more and more they do more reflection they understand it more.’
(Ms Miles, interview)

‘Problem solving for these students is context bound.... they find out about specifically what they are experiencing.’

(Ms Miles, interview)

‘Well of course they reflect on their experiences. So they remember it was 4 o’clock in the morning. They remember the context don’t they, the detail.... why they did what they did..... each individual patient increases their repertoire... their practice’
(Mrs Kay, interview)

‘Stories are really important because it gives you the human element. They want to hear the stories... reflect on them...how it was emotional.... How it all fits together. They like to hear your disasters how you dealt with it ...vicarious problem solving.’
(Mr Lowe, interview)

These extracts provide evidence that the classroom presentation prior to the placement provides an effective mediation between theory and practice and is consciously structured to provide such a bridge with vicarious experience and numerous contextual examples of application. The last example emphasises an implicit human or compassionate perspective and illustrates how the analytical categories overlapped.

6.3.3 The heart of Nursing

Detailed analysis with reference to this new coding category revealed some explicit references to compassion and the ‘heart’ of nursing,

exhibiting how this dimension of knowledge is integrated with the rest of the theoretical content:

'DRE is probably more heads and hearts than it is hands. Hearts really come through in this module. People want to talk about vulnerable groups and what they did with them. People feel better about themselves.... They like to care for the vulnerable
(Mr Neal, interview)

'...a lot of that is to do with feeling and empathy and the emotional side of things. So when I give examples my examples are to do with the way I feel about the children I care for so the students get much more of that element..... I wear my heart on my sleeve – your character defines how you actually teach'
(Mr Lowe, interview)

'.....some of them say excuse me will we get used to it, I said no never and somebody said surely it's part of the job. I said no. If you've cared for a person for any length of time no matter how short a little bit of you breaks away and I said that's what you should be.'
(Mrs Kay, interview)

'In the first year..... compassion?.... not sure it really comes into it at all.... Not really. In the second year yesbiology is combined with the nursing care.... Much more integrated.'
(Ms Miles, interview)

Mr Neal however, recognised in his interview that reference to the heart and compassion is not always explicit:

'Do we even say how nurses care from the heart.... I don't think so Compassion does not feature explicitly.... Not as something we actually teach... but I would suggest that it is implicit... with all the lecturers.'
(Mr Neal, interview)

and

'Generally speaking those with previous experiences have had good experiences, but sometimes..... not so... They talk about clients as 'they;... have an attitude that stinks.... A difficult mix but interesting from the teaching perspective.... I've given up making assumptions about students.'

(Mr Neal, interview)

'When you go on the wards and you see them and you see that little pest who is always talking and you see them giving the attention to an elderly person or somebody who's complaining. When they have patience and understanding..... when you see them feeding somebody'

(Mrs Kay, interview)

The interviewees generally seem to echo the perspective of Marcs-Maran and Rose (1997) who assert that a lack of compassion can be manifested as an inability to display competent caring skills with a deficit in compassion leading to a number of other observable deficiencies; compassion therefore being seemingly confirmed as a pre-requisite of the art of nursing.

6.3.4 The informational, transformational continuum

After a brief orientation to Mezirow's (2000) concept of transformational learning, and the explanation offered by Kegan (2000) of informational learning, all the interviewees were able to offer examples from their own experience. Informational learning was recognised as being of great importance at this early stage in the programme.

'We set out to impart information.... They just have to sit down and learn it! Maybe it is a realistic expectation that they use the bio for information.....we sow the seeds for later..... continue to pull on it as they progress.'

(Ms Miles, interview)

There is a recognition by those interviewed that the information given to students is used to provide the discourse of practice and therefore utilised by the student to gain acceptance into the multi-disciplinary team

'They don't think I'm now taking the diastolic blood pressure which means the heart is relaxing. No they think that's the word Ms Miles said and I can impress this medical student or this doctor and let him know that I know that whatever number is at the bottom is the diastolic.'

(Mrs Kay, interview)

'Patients cooling down and heating up vaso-constriction and vaso-dilation they need to hear the qualified staff use the terminology and then utilise it for themselves and ape them.'

(Ms Miles, interview)

Mrs Kay, on the other hand, recognises the learning of her students as something of a hybrid, having features of both informational and transformational learning:

'Skills are half information and half transformation and I'm not sitting on the fence by saying that I really believe it..... We give them information but we really do change them'

(Mrs Kay, interview)

This interpretation intrigued me and was a motivator to look at this continuum again within the final iteration of the recursive model, to assess whether the representation was indeed appropriate.

The notion of transformational learning (Mezirow, 2000) was generally welcomed by the interviewees who all readily recognised the concept:

'You mean when the student changes their perspective, when they change from being a member of the general public to being a professional nurse.'

(Mrs Kay, interview)

'We expose people to stuff that is uncomfortable they have to expose themselves... explore their feelings.'

(Ms Miles, interview)

'.....but if you haven't made a transformation in the time that you've been with me in the classroom then, I haven't failed but..... the whole idea is when you come into a classroom something must change. Something about you must develop. Its almost like a plant, I'm the water, and you expect something to happen.....'

(Mr Lowe, interview)

They were then all able to give lucid examples as to how such learning could be applied to their module content or their wider experience:

'...you know one of the Muslim girls took off her hijab the other day because we were doing OSCEs and I said eh put your scarf on, I said, sorry hijab. Don't worry about that Mrs Kay she said. Her other little friend kept it on but loosened it and she said no, no she said it's easier this way. So I thought bless her. So she's changed her perspective. Suddenly it's more important to be comfortable and for the patient to be comfortable than it is to wear this symbolic scarf. So... It's all right Mrs Kay this is more important. So she's changed her perspective. She's become a nurse'

(Mrs Kay, interview)

'Transformational learning with reference to bioscience happened for me after I qualified when I went to work in ITU. It was all about advanced nursing skills ... I internalised the physiology then..... I regretted not knowing more.... Not listening or committing when I was a student.... Intuitive learning comes later you 'just know' the normal parameters.'

(Ms Miles, interview)

'We teach them not only how to put their hands on people but how to do that in a compassionate sort of way – change their perspective.'
(Mr Lowe, interview)

These extracts would appear to illustrate Mezirow's (2000) view that the act of transformative learning, involves participation and communication between individual members of the community utilising common experiences thus assessing and modifying the underpinning ideas relating to their practice.

6.3.5 The next iteration

On completion of the analysis of the interview data, it was noted to be compatible to that collected from the student blogs. The conceptual framework however was noted to be no longer adequate or viable to deal with all the identified inter-related concepts. The model was therefore extended and further developed as a result of the additional data and this process is covered in section 6.5 below.

6.4 Revisiting the blogs

After completing the analysis and interpretation of the interview transcripts I was able to confirm that the seven concepts that had been noted to make up the earlier iteration of the recursive model were all evidenced. In addition further dimensions or coding categories had also been established and it was now necessary to return to the blog data to establish whether there was evidence there relating to compassion or the 'heart' of nursing.

Further interrogation of the blog data reassured me that the student experience showed evidence of compassion as well as thinking and doing. Interestingly the lecturers had reported that compassion was often implicit in their teaching rather than explicit and the blogs also showed this to be so. Revisiting the episodes of care that had been used as evidence of transformational learning I noted evidence of empathy and compassionate

behaviour. I also found a small number of excerpts that explicitly showed a caring perspective.

'I learned about moving and handling of disabled children today. I learned how to use the different hoists and equipment. I also learnt correct techniques for posture. By watching Sharon I learnt to move Josh *gently* and *talk to him* all the time. Sharon told me that *stroking his back and hands* helps him to relax.' (Anna, Day 17)

The words that I have highlighted and put in italics emphasise a compassionate and caring approach to this little boy and provide an overarching attitude to his care. As with the excerpt from Marcs-Maran and Rose (1997) cited in the literature review on page 38, compassionate caring is noted to manifest itself as an ability to display competent caring skills in the form of technical competence, creativity, intuition and knowledge, all facets of care that are modelled here by an experienced nurse to the student whom she is responsible for developing.

I reflected on the fact that there were only a few explicitly caring entries in the blogs and came to the conclusion that most of the time a nursing perspective was synonymous to a caring one. These students were new to the practice of nursing and for the most part were trying to take a professional stance and to have been explicit about empathetic or compassionate behaviour may have, in their minds, detracted from the professional aspect of caring that they were trying hard to establish.

The dimensions of knowing and reflecting were noted to be already embedded in the discussion of Chapter Five and their inclusion in the emerging model were therefore validated.

6.5 A recursive model

Throughout this study I have reported the use of visual devices to bring clarity to my analysis. Merriam (2009) encourages 'doodling' to enable the tracking of thoughts and to present the theories generated by the analysis of the various strands of data. Similar to the technique of 'diagramming' reported by Charmaz (2006) this process has been pivotal in my approach to the interpretation of the data collected. Ultimately the cognitive model that I have constructed will be offered to my peers as a framework to guide the development and delivery of graduate nursing programmes.

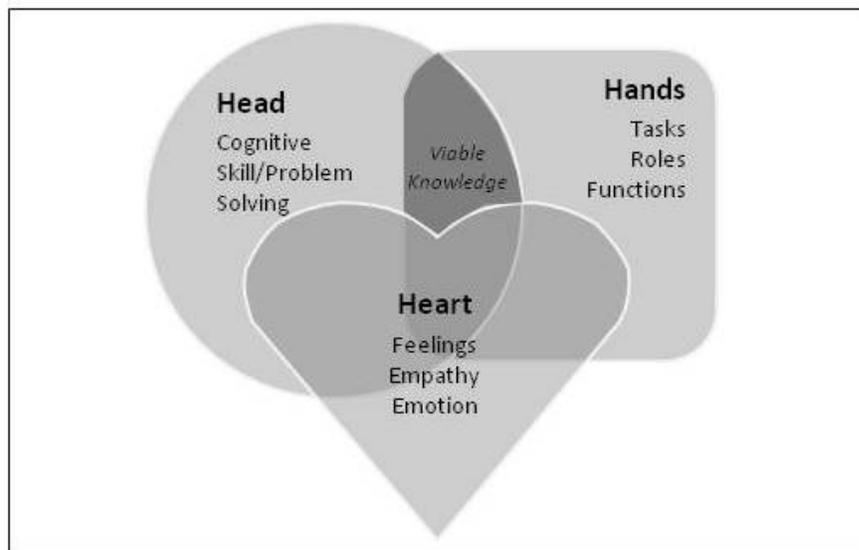
The process by which this model was constructed has been significant within this research. In keeping with qualitative methodology, analysis began as soon as the first data were collected, when a process of reading and re-reading was employed. As the data set evolved the reading and re-reading continued and the individual data sets were revisited many times. Each time the starting point resulted from all the thinking that had happened to date and then the new data or new situation was reflected upon and the adequacy of the emerging model again evaluated. This process of recursion enabled me to fully immerse myself in the data and each time I returned to it my diagrammatic or cognitive representation became more sophisticated. This process was recognised by me to be an example of how viable knowledge (Von Glasersfeld 1989) is, in practice, developed; but in this instance applied to me and the research study as opposed to my students and their experience of practice. I chronicle how the first iteration of the model evolved in Chapter Five.

On completion of the analysis of the blog data I perceived that I had a completed and robust conceptual framework. However after analysis of the transcript of the first interview and further recursion I had to concede that further development was necessary to provide a satisfactory

representation of my emerging theory. I therefore returned to the model found at the end of the last chapter and made further modifications.

In the first instance I replaced the two circles representing the head and the hands with a circle and a square and then added a heart. The position of the heart was considered strategically as compassionate care can be co-terminus with thinking or doing, both, or neither. The concept of viable knowledge remains at the intersection between heads and hands with some, although not total, overlap with compassion.

Diagram 6.2 First iteration of the final recursive model



I then turned my attention to the informational – transformational continuum. In her interview Mrs Kay had articulated that in her opinion both these types of learning could be observed at the same time and after a discussion with my supervision team I had to concede that I also thought this to be so. If the two could co-exist I was challenged with a way of articulating and tabulating such a relationship. I considered a number of

alternatives including multiple horizontal axis and other totally alternative diagrammatic representations but dismissed these as inappropriate.

After considering my quandary in the context of the literature however, I decided that if the two types of learning were not mutually exclusive and therefore not clearly the two ends of a spectrum but may interact although not substitute for each other, the conception of a duality introduced in my reading (see for example: Lave and Wenger, 1991; Bredo, 1994; Wenger, 1998) could be applied. In this way instead of being represented by an axis informational learning and transformational learning become forces exerted upon the central structure generally, but viable knowledge more particularly.

I then turned my attention to what had been the vertical axis. I reflected upon the term 'ways of knowing' at the bottom of this axis and concluded that knowing in practice or practice behaviour was a better articulation of what I meant. Looking at the top of the axis the curricula structure and content was modified to knowledge and then to ways of knowing as articulated in the literature (See for example: Carper, 1978; Chinn and Kramer, 2004). On later returning to this vertical axis I replaced these two labels with curriculum\knowing and practice\acting; taking the knowing-acting from Wenger (1998), who variously describes these terms as either a duality or dichotomy. I labelled this a duality, adding it to my first binary pair (Informational and transformational learning).

Recursion and immersion in my data enable me to identify two further binary relationships that could be represented as dualities. The dualities of reflecting in - reflecting on, and knowing how - knowing that, completed my conception. A diagrammatic representation of the axis can be seen in Diagram 6.3.

Diagram 6.3 therefore shows the modified axis which will be the backdrop for the heads, hearts and hands which are shown in diagram 6.2.

Diagram 6.3 Adding the dimension of duality to the Recursive model

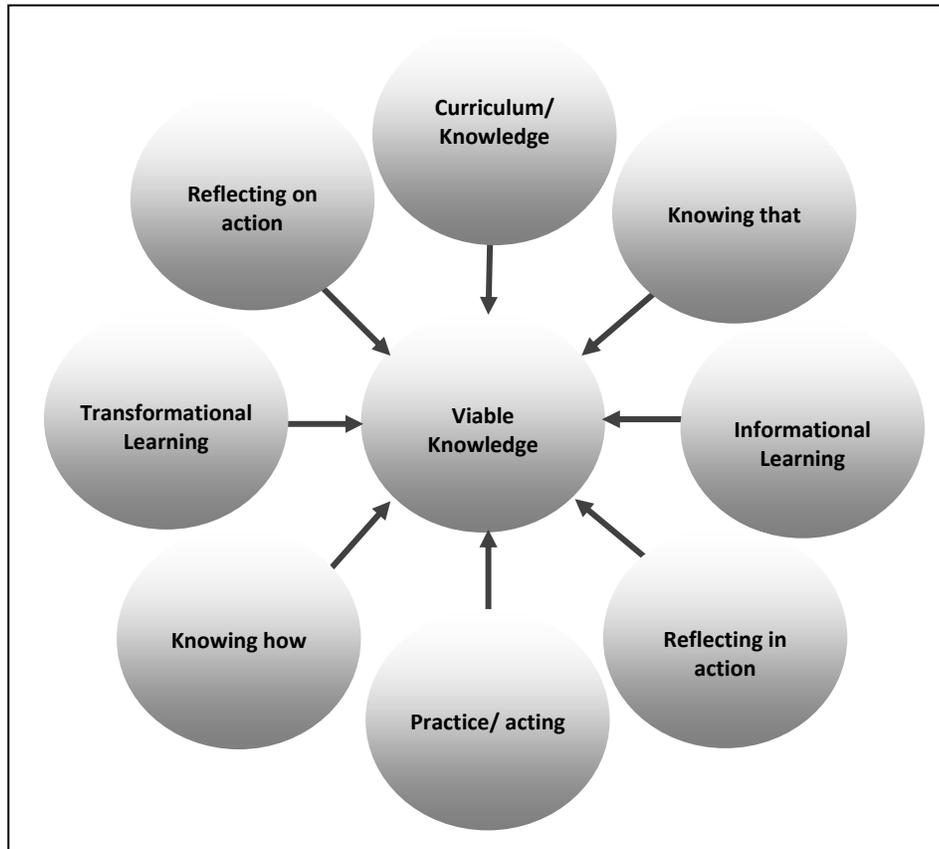
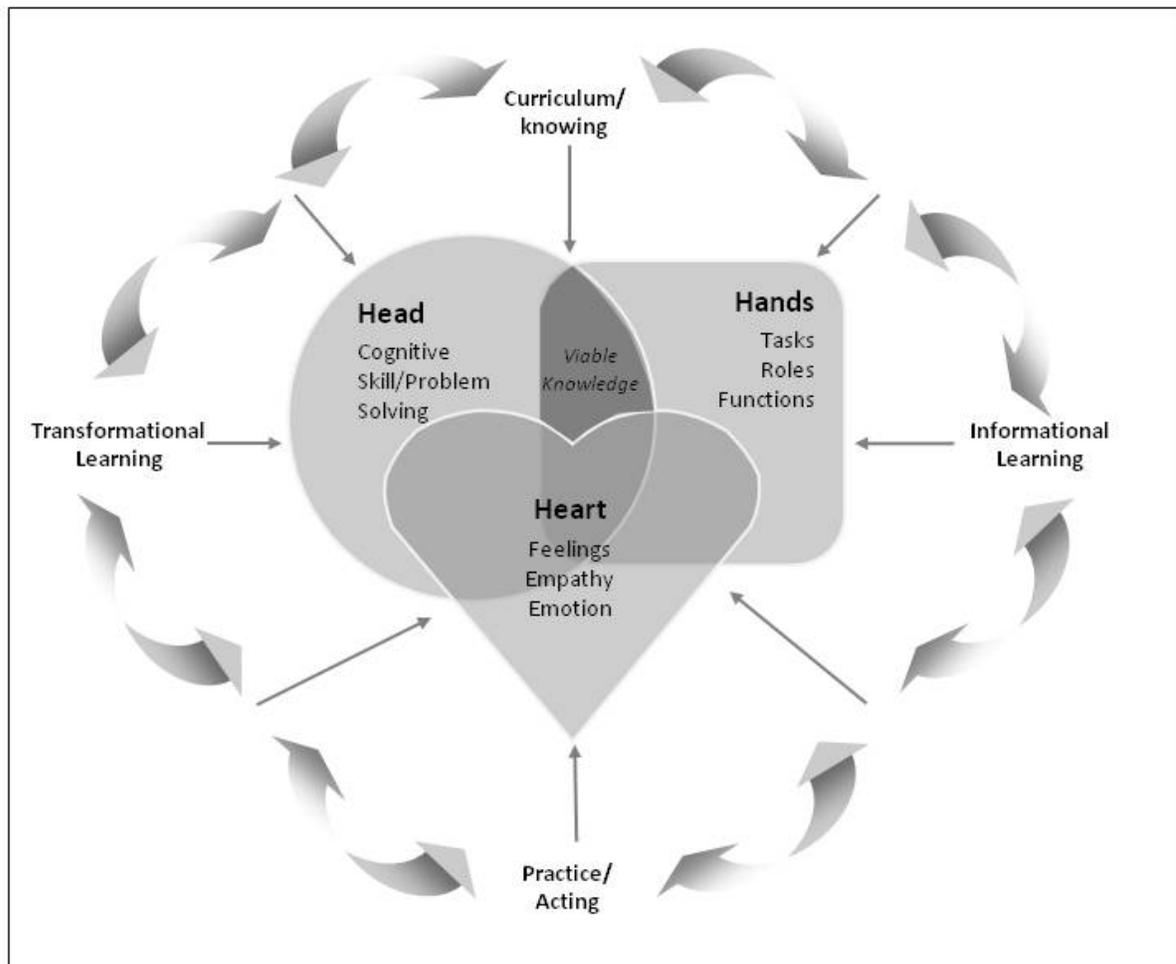


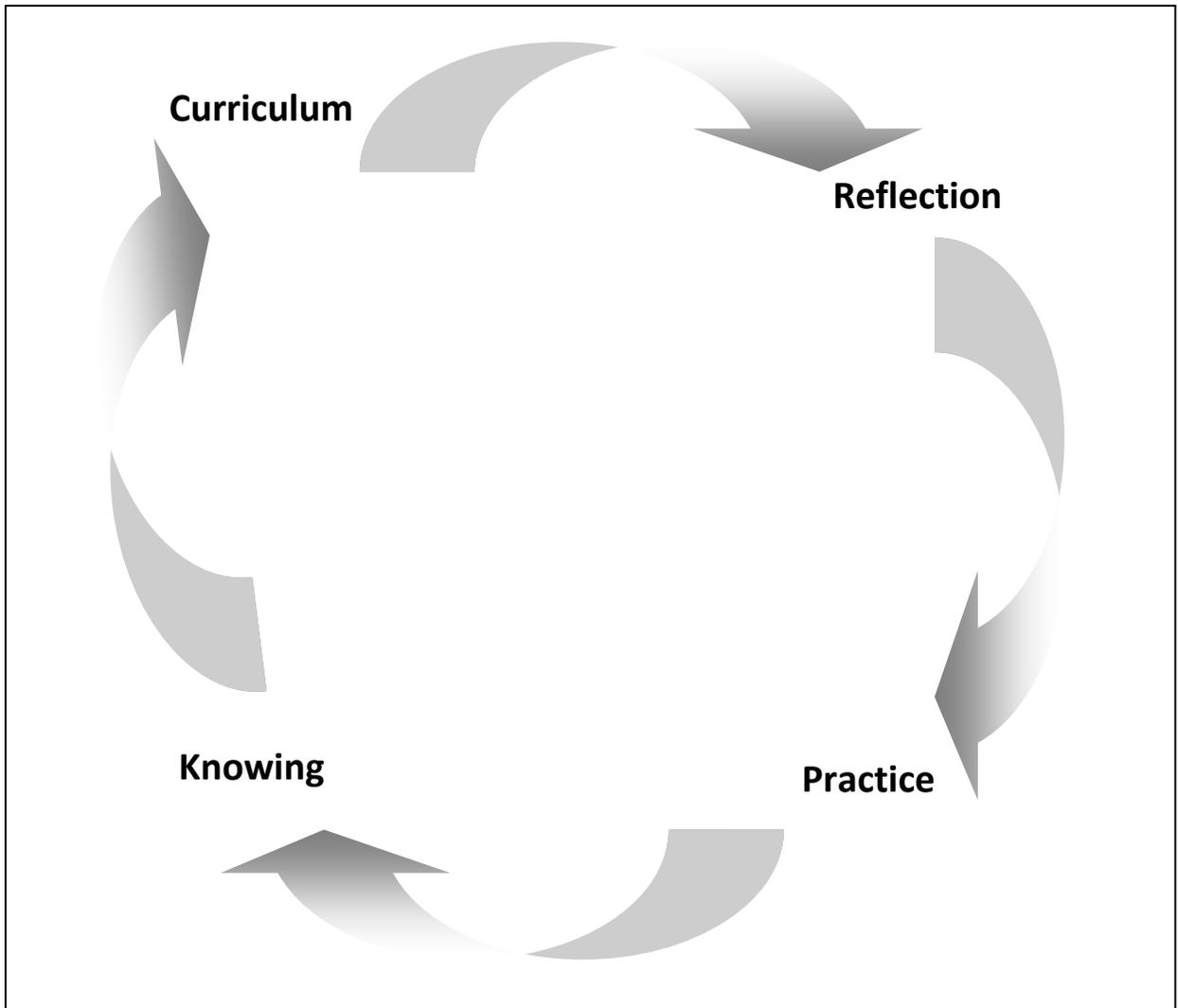
Diagram 6.4 then shows a composite and final version of the recursive model which includes the four axes and the central Venn diagram. The centre of all three diagrams and the point of integration therefore is the concept of viable knowledge which integrates the four dualities relating to knowledge and is the central point of the Venn diagram relating to the student experience.

Diagram 6.4 Final Recursive model illustrating viable knowledge as central to practice



Finally a cyclic representation is presented in diagram 6.4 shows a cyclic and dynamic representation of the four dimensions that are the focus of the axes. These represent the four identified dualities that are here acknowledged to all inter-relate and affect each other.

Diagram 6.5 Recursive model dimensions



6.6 Other and naturally occurring data

Silverman's (2001) definition of naturally occurring data is seen to be data that existed independently to the researcher. In this context it was therefore data that was there to be observed and documented in a plethora of places and situations. In some instances the individuals from whom the data was collected were fully aware of how it would be used whilst in others the research was the subject of a chance conversation. In addition there were the individuals who I came into contact with, who unknowingly offered information, being unaware of the existence of the research and the significance of their comments. Information was, in this way, gleaned in cars, on trains, in offices, at get together, conferences, and within scheduled or unscheduled meetings. A small amount of this information was subsequently used explicitly within the study and the rest used more generally to inform my general perspective in reference to it.

On reflection of the origins of this data and Silverman's reference I had to concede that whilst this data was independent of the research much of it was not independent of the researcher (me). Although I collected the data in situations that were not related to the research it was difficult sometimes not to frame a conversation in terms that I had come to understand from the perspective of my research. I was careful to behave ethically in such situations and not to exploit an acquaintance inappropriately. I have therefore called this section 'other and naturally occurring data' as I have often found it difficult to distinguish between the two.

By keeping a diary throughout the course of this study I have been able to chronicle naturally occurring and other data as it became available in the form of chance meetings and conversations. In some ways my diary has served me as a self regulating and ethical tool, as I have used it to reflect

upon my actions ensuring that the ethical principles that I use to guide my clinical practice as a nurse have also been used to guide my data collection endeavours. I have also kept notes of my thoughts and experiences as I collected this data.

I also recorded my research supervisions, in the form of a reflective account which I chronicled as soon as the supervision was over and emailed to the supervision team within twenty-four hours. In addition, as previously disclosed, I write a comment piece for the British Journal of Nursing (BJN) every month, which is, in part, a personal reflection and was the basis of much of Chapter Four. All these data strands have proved significant in the development of my thoughts and the subsequent development of the recursive model.

6.6.1 A recorded conversation with an Australian professor

After the first complete iteration of the recursive model I presented my findings as 'work in progress' at an international conference (see Appendix Seven), after which I discussed the presentation with a number of other nursing academics from around the world. As a result of this, I had an in depth (tape recorded) conversation with an Australian professor, which explored his very different experiences of an under-graduate nursing programme that did not include practice until the taught component of the first year of the programme had been completed and assessed.

By the time this conversation took place the centrality of practice in the early experience of the nursing programme at the University of Hertfordshire had, through the data, already been established. The importance of practice was recognised as a sub theme that ran through the blogs and was confirmed as pivotal during the interviews. The lens through which this Australian professor viewed practice was however very different to my own.

Students in the UK are required to complete 2,300 hours of practice (SI. 2554/2000) in the undergraduate nursing programme, of which in excess of seven hundred and fifty hours occurs in year one. The model constructed to represent the students learning over the initial phase of the programme show a development of skills and of related cognitive ability whilst they are engaged in practice. Within the clinical areas students are therefore confirmed to extend the material presented to them in the classroom in a contextual fashion. Through legitimate peripheral participation (Lave and Wenger, 1991) the students amass information and change their perspective from that of member of the general public to that of professional nurse.

Although nurse educators in the UK are constantly challenged by this requirement for practice experience throughout the programme most recognise that it plays a pivotal role in building the identity of the nurse – a viewpoint corroborated by this study. My conversations with this Australian professor and others involved in the education of nurses widen the lens with reference to this and illuminate the fact that globally there are a number of approaches to nurse education, each having strengths that may be shared or used to illuminate the experiences of the rest. I have treated such conversations as naturally occurring data and a selection of such will now be explored to further illuminate the findings. The overarching question or issue guiding the various interactions with international stakeholders was ‘How do students acquire the perspective of a nurse in the absence of the practice component of the programme?’ and ‘Is the amount of practice required in the UK therefore necessary or even desirable?’

Using the same principles as previously outlined to ensure anonymity I will refer to the Australian professor as Professor Oz. Professor Oz was keen to discuss with me the early results of my study as it had some synergies

with a study that he was conducting in his own professional context. We therefore decided to meet to have a focused information exchange which we both agreed would be recorded with a copy of the audio file retained by each participant. This conversation is now presented here and its significance to contextualising my research in a global fashion is acknowledged. The examination of the transcript of this interview is approached very differently from the preceding interviews as the content of this interview is not analysed line by line but instead used to confirm and contrast the proposed recursive model in the context of Australasia. Following the discussion of the interview other perspectives from Australasia are also noted and discussed

Early in the exchange I established that the programme currently validated in the university where Professor Oz had come from, had been in presentation since 2003 and was validated by the Nursing Council of that particular state of Australia. During the programme, he reported, students complete 20 weeks of practice. These are apportioned as two weeks in year one, six weeks in year two and twelve weeks, split into two discrete time frames, in year three. In addition to this the students also spend time in the clinical practice laboratories, where from semester two they spend three hours a week when they are not in practice. This was noted by me to be a stark contrast to what happens at UH where the students spend approximately three times as long in the clinical area with a practice pattern that is homogenous over the three years. The clinical simulation in UH also begins at the outset and is approximately three hours weekly.

During our conversation I asked Professor Oz whether he recognised the model that I had constructed as applying to the students in his undergraduate programme. His reply recognised that the learning and personal change that the model represented needed exposure to practice, which for his students was not integral to the first year experience, and

occurred only after the theoretical component of the programme had been completed and assessed.

'The sort of change you represent takes experience; the change will take time you ask me do mine think like that in the first year, probably not. We've never really done research to show whether they did or not but I think my course...the people in my course would say that's not really the issue. So it's not so important that they've mastered that type of thinking. The general view would be, I'm sure, that they've mastered that type of thinking by the time they complete the course.' (Prof Oz, conversation)

'So they've made that movement by the end. So you don't have to have them making that movement in the middle because they're still learning to be a nurse but you've certainly got to have made some sort of movement towards that ability to join up, you know, critical thinking from the theory units you've done, the practice experience you've had, some sort of repository in relation to the experience of patients and some degree of reflective critical processes in their decision making.' (Prof Oz, conversation)

He recognised that although such transformational learning is not mandatory by the end of year one it must have occurred by the time the course is complete and the student required to take on the mantle of registered nurse. The conversation then moved easily to what nurses were able to **do** by the end of year one.

'We're looking for a nurse who has some understanding of the nature of nursing. Some fundamental knowledge in relation to diseases and processes and also has had two weeks reasonable experience in being able to show us that they're capable with fundamental basic skills that they can assist with the activities of daily living and care provision.'

(Prof Oz, conversation)

Such learning was obvious in the blogging students by the end of the first semester but they also showed evidence of other learning that did not appear to be desired by my Australian counterpart. I then asked him about his student's expectations and desires. There was no doubt in his mind that the vast majority of students would appreciate a greater number of hours in practice:

'..... students tell us that all the time. I want to do more prac. I want to do more prac. So we tend to think it's actually about I want to do relevant prac. I want to do prac that's well organised, I want to do prac with a mentor or a clinical instructor that's switched on and knows exactly what I need to learn. I want to do prac that seems and feels relevant.'

(Prof Oz, conversation)

I established that the theoretical content of year one in Australia is very similar to at UH and so went on to ask whether Prof Oz felt that the students got enough practical experience both at the beginning and over the whole programme.

'.....academic staff certainly don't have debates in the staff room about whether we've got enough prac in the first year. We have debates whether we've got enough prac over the entire course but it doesn't normally run like that in the first year. Really the first year isn't about prac, it's also about in a sense humanising the person in terms of the understanding.'

(Prof Oz, conversation)

We then discussed the first iteration of the recursive model stopping to explore the different concepts that it contained, I was particularly keen to explore whether, from the perspective of Prof Oz, the recursive model offered any sort of framework that might aid the understanding of the student experience more widely than in the UK.

'I'm sure that there actually isn't much difference because what you're saying you know I do recognise. You know it's the same sort of thing that our students do....'
(Prof Oz, conversation)

'The language of nursing? How do I make that judgment? Having been with them in this same context for so long it's hard for me to know whether other students would be different. I'm hospital trained, I trained in the old hospital system and certainly I think the way in which we thought about nursing then was different not just because it was different but because of the number of hours that we did. I think you were more immersed in the language and the culture of nursing. So I have no doubt that two weeks in prac doesn't immerse you sufficiently in the language and culture of nursing if that's what you're getting at '
(Prof Oz, conversation)

This particular section of the conversation is of particular interest to me, as implicitly Professor Oz implies that here in the UK we have retained some of the features of nurse education that he now regards as historical. The number of hours served by students in the UK results in an element of apprenticeship being retained within the experience of nurse education. Here nursing students are viewed as a part of the multi-disciplinary health care team from their very earliest experiences; a perception that did not appear to be globally shared:

'I don't know about you people we have to pay for our prac.... we do it in partnership but we have to pay for that partnership.... last financial year our clinical practice cost us three Million dollars.... because of the appalling way it's actually administered because we have to barter for...not barter.... we have to haggle.'
(Prof Oz, conversation)

'..... we try really hard that the student goes in and remains a student. Because they're only there for 760/800 hours.... they've got limited time..... limited opportunity and there's a need for maximum focus,,, not on being in the team, part of the team because the team in nursing... I don't

know what it's like in the UK but you know the nurses that have been there for a long time... it's about doing stuff. The team in nursing is often about tasks and about fitting in with the culture of the ward which the students desire more than anything. [inaudible] do that but at the moment you've actually got to learn and try to keep yourself separate to that because that culture of nursing will remain but the opportunity to be a student within that culture will not and so we try really hard and I'm not saying always successfully, we try really hard to try and get students and try and get the staff in the wards to keep them as a student.' (Prof Oz, conversation)

Again Professor Oz refers to his own training and the reported change of perspective that takes place during nurse education. However his view would appear to be at odds to one that would recognise and support any kind of legitimate peripheral participation (Lave and Wenger, 1991):

'You're there as a student, a student nurse.... and years ago when I trained in the hospital student nurse meant something different you know you were sort of the lackey in the team. You're on pans today. You know you've got the pan room. so we sort of.... you know.... we try and move away from you're the first year student ...you know you've got all the blood pressures sort of mentality... through to you're a first year student and some of your learning objectives are this, this and this you know.....'

(Prof Oz, conversation)

He goes on to rationalise this in the context of how he sees the nursing profession, or his ontology, making it clear that in Australia nursing is a graduate profession with registered nurses viewed as the decision makers and those managing nursing care with another occupational grade often carrying out the fundamental tasks that were historically associated with the nurse:

'Yeah... so does it matter therefore that the student nurse hasn't given 1,000 bedpans because actually they're going to be delegating that task to someone else..... I mean I

know there are other elements when you give a bed pan it's when you talk to people.... all that stuff but they have other opportunities.... and after all how many pans do you have to give to be proficient in giving a pan....'
(Prof Oz, conversation)

Toward the end of our conversation Prof Oz returned to the issue of fundamental skills, I think in order to reassure me that Australian nurses had the pre-requisite competency to function in the healthcare environment at the point at which they become registered nurses:

'When we get reports on our students we certainly don't get issues back from employers that our students can't do ADL's (activities of daily living).'
(Prof Oz, conversation)

This again was seen, by me, as a point of comparison. In the UK the practical competence of the nurse at the point of registration is a constant focus of debate.

6.6.2 Other data collected in Australasia

Much of the other naturally occurring data collected within both Australia and New Zealand echoes that seen within the conversation with Professor Oz. The level of partnership enjoyed with the healthcare economy, in both these countries, was noted to be very different to the general experience here in the UK. The fact that the procurement of placements was seen by clinicians and educators alike, as a business interaction changed the way that the 'partnership' was perceived. Conversations with a number of academics across both countries confirmed that students were not viewed as team members but as 'clients for whom an experience was being facilitated'. Several references to 'cheap labour' implied that expecting participation by the student in the day-to-day routine of healthcare was viewed as exploitation rather than education. This will be discussed further in Chapter Eight with reference to the future here in the UK.

Professor Oz and his peers in both Australia and New Zealand were extremely positive with reference to their product, this being the graduating student nurse. They viewed this product as qualitatively different from the nurse of yesteryear who had a less managerial, more hands on role within the healthcare system. Their priority appeared to be a nurse who was technically competent and had some understanding of the culture of the healthcare economy. As my tour of Australasia progressed I had the opportunity to explore this in a number of venues and there was a wide spectrum of opinion. The practical competence of the graduate nurse was variously commented upon as 'good enough' 'appropriate' and 'frankly frightening' with one academic in New Zealand asserting 'Just pray that you don't get sick in February', February being the month that all new nursing graduates take up post.

The existence of the second level, assistant or enrolled nurse was seen in both countries to be essential to the functioning of the healthcare economy. These individuals are educated to diploma level and carry out many of the roles that in the UK would be expected of the registered nurse. This observation comes at a time when the future role and regulation of the associate practitioner is being discussed by the profession and the regulator and again will be revisited in Chapter Seven.

Reflecting upon my diary of the tour I noted with interest that the practical skill of graduate nurses was seen by some to be comparable to other similar professions. Many of my visits to educational institutions were not exclusive to nursing and I visited a number of Further Education establishments as well as HEIs. In one such establishment an engineer told me that his institution was receiving multiple applications for their diploma in engineering from individuals who had already graduated with engineering degrees from reputable universities. In his opinion, he told us,

this was because these individuals had not accrued, in their graduate studies, enough practical experience to be competent and confident in the workplace and they were therefore finding it impossible to secure appropriate employment. This was viewed by me as having direct parallels with what was happening in nursing.

During this same tour I also visited a number of establishments in the Far East. Here I was told that their own model of education mirrored that experienced in the UK and that the practical experience was highly valued. As in the UK, generally speaking the model of practice experience was that student nurses made a contribution to health economy and this was seen as a fair exchange for the provision of a placement. The view of qualified nurses from Australia and New Zealand was however very positive with managers commenting that any deficit at the end of the undergraduate programme being corrected within a short period of orientation or socialisation within the workplace.

6.7 Conclusion

All this discussion is of course very timely as within the UK we move to an all graduate profession. Consultation from the Nursing and Midwifery Council with reference to the educational standards for such preparation (NMC, 2010) has been comprehensive and those standards are expected imminently. In Chapter Seven I will discuss how the findings of this study might be viewed alongside those standards to ensure that the new undergraduate programmes present the required theoretical concepts in a way that they are of maximum relevance and can be easily assimilated by the individual student to support appropriate practice.

7: Viable Knowledge: the role of practice

7.1 Introduction

This chapter presents a summary of the study's contribution to the practice of nurse education. To organise it I return to the work of Bernstein (1975) and his notion that educational knowledge is a major regulator of the structure of experience. This is particularly pertinent here for two reasons. The first is that the discovery of the work of Bernstein was one of the things that inspired my doctoral journey. As chronicled, to begin with, I was particularly interested to discover whether the structure of the curriculum, as described by him was of significance when assessing the competence of the nurse at the point of registration. Over time the focus of my interest changed but my synergy with the work of Bernstein remained and it is therefore appropriate that I return to his work to give structure and meaning to the findings of this study.

The second reason that I consider it to be pertinent is that educational knowledge and the way it is used (or not) to structure the subsequent clinical experience of the student nurse is at the core of this study. It is particularly applicable in this study because in pre-registration nurse education 50% of all educational experience occurs in the clinical area and is considered to be practice based. The way that this experience is perceived by the student in terms of the knowledge presented in the classroom is therefore pivotal. I will use the three media that Bernstein asserts are used to communicate knowledge to structure my discussion. To recap these three media are: curriculum, which defines what is considered valid knowledge; pedagogy, which is concerned with appropriate transmission; and evaluation, which identifies legitimate understanding.

This chapter will therefore consider these three aspects of the educational experience. First I will consider what, within a nursing curriculum, is considered to be valid knowledge. To do this I will consider the findings outlined in Chapter Five concerning how the students in this study perceived and participated in their early practice experience and connected this to the theoretical concepts presented in the classroom. I will then go on to outline how these findings have already been used to modify the curriculum in my university and what else may be done to ensure that the knowledge presented to students in the undergraduate curriculum is suitable, applicable and viable or fit for purpose; using Von Glasersfeld's (1989) concept of 'viable knowledge' to anchor the discussion.

I will then proceed to look at how this study suggests that the knowledge in the curriculum is, or should be, transmitted by considering how the recursive model developed in Chapters Five and Six could be used to structure the curriculum as it is presented to the students. Within this section I will explicate the model exploring its various dimensions. I will then go on to consider evaluation or legitimate understanding in terms of how viable knowledge is demonstrated in practice. The importance of practice and how much is necessary to ensure appropriate outcomes will also be considered. Finally within this chapter I will look at how the wider perception of knowledge with reference to nursing affects how the profession is viewed by prospective students and the general populous.

7.2 Presenting viable knowledge

In the context of the nursing curriculum considered within this study I have deemed 'valid knowledge' to be that which is relevant and facilitative from the perspective of practice. To be considered relevant and facilitative the information relayed must enable a cognitive structure that can support what will be encountered in the clinical area. It must be viable. In order to

fully embrace the term 'viable knowledge' as coined by Von Glasersfeld (1989) within the context of a particular curriculum there must be evidence that conceptual material presented within the classroom has become embedded within the individual student's consciousness and is then used to make sense of the specific practice situations in which individual students then find themselves.

The content of the various modules of study encountered within the first semester of the nursing programme at the University of Hertfordshire are, no doubt, used in different ways by the students and the data produced in Chapter Five showed students using the information contained in the four modules differentially. The 'Fundamental Skills' module was used to guide and inform nursing practice in a pragmatic sense whilst the 'Core Knowledge and Skills' module did the same more philosophically. The 'Diversity, Rights and Equality' module proved to be extremely powerful when considering the perspective of the student and how this changed over the course of the first practice experience, seemingly facilitating a change of perspective or transformational learning as described by Mezirow and Associates (2000).

The findings relating to the 'Bio-scientific Basis of Care' module indicated that the contents were used primarily, not to foster an understanding of the physiological processes that underlie the physical manifestations of illness, but instead, to provide a discourse for practice; thus allowing for effective communication within the multi-disciplinary team and facilitating acceptance into it. When these particular findings were shared with the relevant module team they were immediately interested, and not totally surprised. On considering how a wider application of the taught material could be facilitated in practice, a plan to modify the structure of the module timetable was formulated by the module team. These changes were instigated not only as a reaction to the findings of this study but also in

response to formal student evaluations, which had indicated that, in the opinion of the students, the module did not relate well to the practice of nursing.

The presentation of the module was therefore revisited by the module team with a desire to maximize synergies with the practice of nursing. Previously the anatomy and physiology contained within this module had been presented using the scientific concepts to structure the timetable. In this way students were first introduced to the properties of the cell, followed by the properties of tissues then organs, systems of the body and finally the whole body was addressed. From my perspective the teaching team was delivering a module that was categorized as 'collection' when Bernstein's curriculum typologies are considered. In this type of presentation the curriculum discipline is paramount and boundaries with other disciplines are rigidly maintained. Students are encouraged to learn the science maintaining the status of this highly regarded and universally valued information.

Within the new presentation of anatomy and physiology, the emphasis changed and students were introduced to each session in a contextual fashion. With the starting point now being nursing practice, students were encouraged to approach the material presented as it related to what they were expected to do in the clinical area. This was achieved using a tangible connection to practice which came in the form of a nursing chart. Using Bernstein's typologies, this would be considered to be an example of an integrated curriculum where different subjects have been combined with an overarching theme that promotes contextualization and understanding. The roles and functions of the student nurse in the initial part of their programme are primarily associated with the care and observation of the patient or client. The introduction of the theoretical material, using nursing charts to mediate theory and practice and to embed the new conceptual material within the students' consciousness therefore enabled a

connection to the practice situation. In this way the individual is facilitated to structure the information relayed in order to make sense of the typical situations encountered by student nurses in the first practice placement.

This mode of presentation also facilitates the extension of knowledge once the student is in the clinical placement. Von Glasersfeld (1989) considers viable knowledge to be the knowledge used to guide our practice and purports that it is extended when there fails to be a good fit between conceptual structures and the reality of a situation. When this happens the individual has to extend and adjust their previous knowledge in order that equilibrium can be maintained and the said knowledge still be appropriate to allow the situation to be conceptualized. It was anticipated by the module team that if the students were informed with reference to the objectives of the charting of vital signs, fluid balance, nutritional intake etc. then this could be used as a basis for assimilating other related information at a later date.

The findings of my study suggest that extension of knowledge in the context of clinical practice is not atypical. Students, having appreciated that the theory assimilated in the classroom was not appropriate or sufficient for a particular situation, were noted to glean information from mentors and colleagues and from books and articles to increase their understanding and to allow the modification of viable knowledge to fit a unique client or instance. After the revision in the presentation of the module students will have a strengthened cognitive framework to facilitate the understanding of their experiences and therefore such extension of knowledge will be more readily facilitated. To validate this assumption however, further data would need to be collected and analysed.

This curriculum change is cited as one example of how practice has been changed as a consequence of this doctoral study. The results of my study

were offered to all four module teaching teams although at the moment only the one cited above has implemented change. The other teams are expected to review their modules in due course. At that point the findings of this study will be used along with other evaluation measures to guide the implementation of appropriate changes that facilitate the improved delivery of appropriate theories. This will enable the construction of knowledge that is viable and will support the delivery of up-to-date well informed contemporary nursing practice.

7.3 Transmission of viable knowledge supported by the recursive model

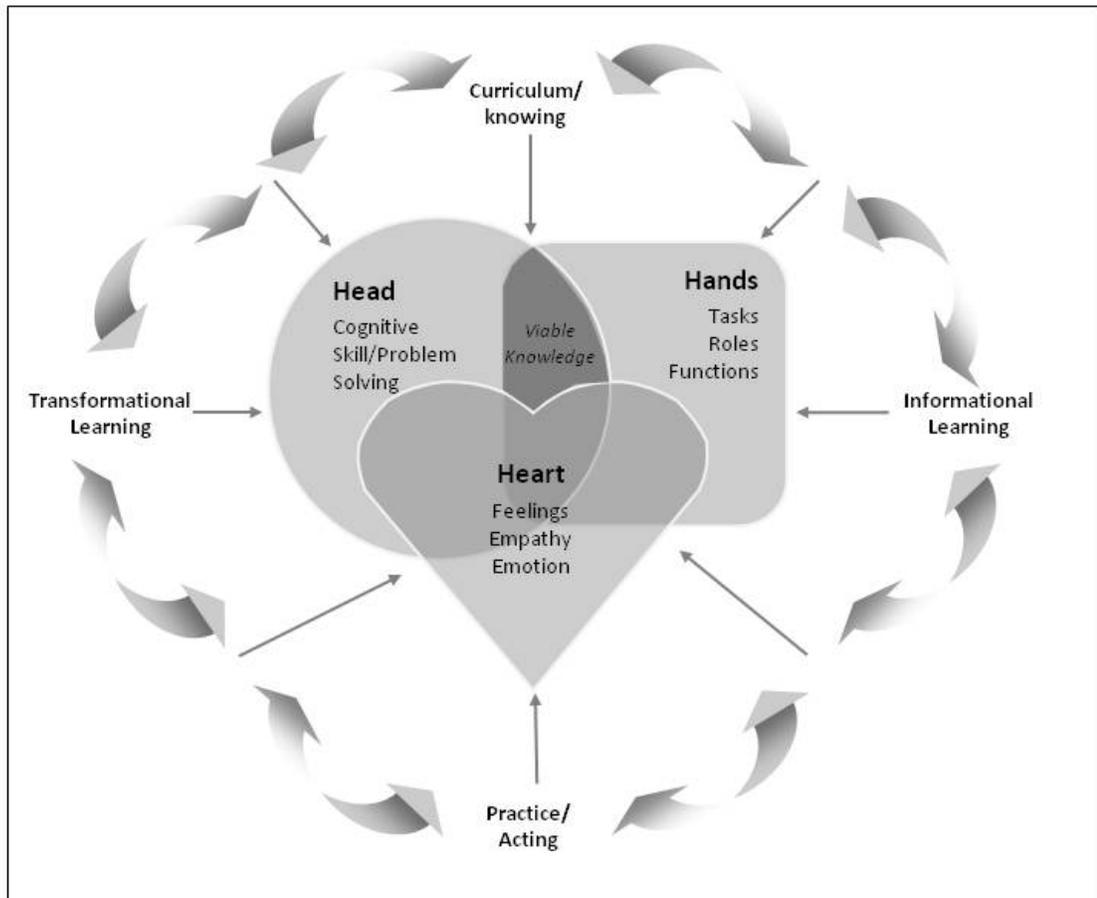
Another contribution of this study to the practice of nurse education more generally, is to offer the recursive model developed as a framework by which a pre-registration nursing curriculum at undergraduate level can be developed or evaluated. Such a framework would need to be used in conjunction with the curriculum guidance and learning outcomes offered by the Nursing and Midwifery Council (NMC, 2010). The recursive model would however guide planners in addressing the various dimensions that make up the student experience and ensure that the practice of nursing remains at the centre of all curriculum activity and that the conceptual structures built by the individual student nurse are appropriate to support nursing practice and associated problem solving.

Currently, at the time of writing, nursing within the UK continues to be the subject of considerable change. In the last twenty years nurse education has successfully negotiated a move from the National Health Service (NHS) to the higher education sector. In this same time frame the education of student nurses has progressed from an apprenticeship model where students were considered to be, and treated as, part of the healthcare workforce to a model where students are affiliated to universities and enjoy a similar experience to scholars of other disciplines. However, similar does not equate to the same and there remain a number

of anomalies when comparisons are made. When nursing programmes relocated to the university sector the vast majority of pre-registration programmes were validated at DipHE level and therefore were equated in academic value to the first two years of an undergraduate programme. These programmes were all delivered over three extended years of study and by decree of the NMC had to represent 2,300 hours of theoretical study and 2,300 hours of practice in the clinical area. This resulted in students having a very different student experience to that of their peers studying other disciplines, because if these requirements were to be met, each student was obliged to study for forty-two weeks of the year.

New legislation has now been passed that will require all students of nursing from September 2013 to undertake an undergraduate programme. Nurses will, therefore be equipped with the same graduate skills as the other professionals within the healthcare team such as physiotherapists, radiographers, occupational therapists, dieticians and pharmacists. At the moment the NMC, who are responsible for setting the standards that govern programmes leading to nurse registration, are uncompromising in their requirement for 2,300 hours of practice over the three year programme, maintaining the principle of equity between the theoretical and practical components of the course. This is out of step with the other healthcare professions within the UK and nursing students in many other parts of the world. Physiotherapists for example complete only 1,000 hours of practice in a three year undergraduate programme and in Australia student nurses have as little practical experience as 750 hours or 20 weeks.

Diagram 7.1 A reminder of the final Recursive model illustrating viable knowledge as central to practice



The recursive model is therefore presented at a time when the academic level of nurse education is being raised and university programmes are therefore all undergoing major modifications with the challenge to increase academic content whilst ensuring that the amount of practice is maintained. The major challenge for those designing the new programmes will be to maintain the centrality of practice and ensure that the theoretical components of these new courses continue to be perceived as underpinning practice rather than being seen as irrelevant or tangential to it. Barnett (2007) talks of epistemic virtues, being a dynamic mixture of an understanding of the world and the human virtues (and behaviours) required to operate in it; the insight being to improve ones knowledge of

the world in order to deepen their virtues rather than at their expense. This is illustrated within the recursive model which centres on the students experience in practice but guides the curriculum developer with reference to what must be delivered in the academy. Application of the model therefore ensures that the students' behaviours in practice are supported by appropriate learning and the development of a sound conceptual framework. Such a framework will provide a good fit with the reality of clinical practice and holistic patient or client care ensuring the facilitation of appropriate problem solving from the outset.

The starting point when building an undergraduate nursing curriculum has to be the duality represented on the vertical axis of the recursive model. This makes explicit the curricula structure and content and the relationship of this to the student experience and behaviour in practice. The content of the curriculum, as already acknowledged, is to a large extent prescribed by the NMC (2003, 2010) who dictate the proficiencies or outcomes that students must achieve during their pre-registration nurse education. The structure of the curriculum and the resulting relationship between theory and practice however, is left to the discretion of the individual Higher Education Institution (HEI) subject to satisfactory conjoint validation between the university and the NMC and a system of annual peer review enacted by a NMC appointed 'visitor'. It is therefore the structure of the curriculum delivery that can be usefully guided by application of the recursive model.

As I established via the national survey included as Appendix One, the University of Hertfordshire is typical when considering HEIs delivering undergraduate nurse education. It is with this in mind that the model is offered to peer HEIs. Emphasis on improving curriculum integration to allow the mediation of theory and practice and a philosophy that has the practice of nursing at the centre of the student experience as an integrating

force are the motivating factors for such sharing, which is a part of the contribution that this doctoral level research will make. This is combined with a personal ontology that values knowledge that supports and facilitates practice with an acceptance that practice remains paramount and knowledge is only worthy if it has a direct or indirect application.

Moving attention to the Venn diagram at the centre of the recursive model which represents the student experience and the development of the nurse with reference to the head, the heart and the hands; I will now explain each of the shapes and their significance in relation to the structuring of the student experience.

The circle represents the head and is associated with thinking, cognition, and an internal representation of the knowledge necessary to support nursing practice. This represents all the information assimilated by the student. It includes what is taught in the classroom and embraces both that designated as art and that designated as science as well as an array of other topics deemed necessary to support nursing practice. It also includes knowledge acquired in other ways, for example from previous experience and individual learning pursuits such as reading. Prior to clinical exposure students will all receive a comprehensive introduction to appropriate theoretical material and each student will amass this, along with any previous and other individually acquired knowledge, into the contextual whole that is required to enable the conceptualisation of practice and associated problem solving.

As programmes become exclusively undergraduate there is a popular expectation that the content of nursing programmes will become more theoretical, and therefore by inference, less applicable to the well established practical orientation of the nurse and the act of nursing. The

recursive model however emphasises the essential connection between the conceptual aspect of nursing and its practical application.

This connection with practice is visualised as the square that is interlinked with the circle and is representative of the hands on practical aspects of the curriculum or the skilled performance that must be honed by the individual nurse. A square is used to represent this sphere of knowledge that relates to doing or practical application. The different shape signifies that this way of knowing or types of knowledge is qualitatively different from the more abstract knowledge represented by the circle. Each student nurse must master a number of skills in the laboratory before being able to undertake their first clinical placement. These include the skills associated with moving and handling patients, emergency procedures like cardiopulmonary resuscitation and personal safety awareness. Such learning ensures that the both the student and the general public are appropriately protected and that a minimum level of safe performance can be expected from the students. The student will leave the university based portion of the programme with a limited repertoire of fundamental nursing skills on which to build. Once out in the practice placement these will be refined and new skills added in the context of holistic practice.

Each student will develop in a unique fashion and this is dependent upon the placement areas that are experienced, their own motivation and the facilitation skills of their mentor. The mentor is particularly important with reference to the individual student's performance in practice. This will not change as the programme moves to being at undergraduate level, as skills will still need to be acquired early in the programme so that the student can become proficient. However there will be greater emphasis on the fact that theoretical concepts will, throughout, be linked to a skilled performance and the theory or knowledge underpinning the act of nursing will be made explicit.

This is depicted in the recursive model at the point that the square intersects with the circle, which represents the notion of skills development or practice overlapping with conceptualisation and the overt use of theoretical material. If nurse education is to keep practice at its centre and not become overly theoretical then the overlap between the circle and the square must be as large as possible. The intersection is a good fit with the previously discussed concept of viable knowledge, which has formerly been defined as the knowledge that is used to enable or support practice (Von Glasersfeld, 1989). When theory and practice or knowledge and skills are brought together in this way the resulting activity is generally referred to in the nursing community as problem solving.

Junior student nurses will only be able to solve simple problems but this ability will grow as the student attains more knowledge and a greater repertoire of skills. I remind curriculum developers, by emphasising this overlap, that nursing is a problem solving activity and that the curriculum needs to be presented in a way that allows problem solving skills to be fostered and students to be prepared for the world of clinical practice. Barnett (2007, p105) refers to nursing as a 'more practical pursuit' with reference to the previously introduced epistemic virtues, which as we have seen refer to a particular way of understanding the world on one hand and an array of human virtues on the other.

The virtues required to be a competent nurse are generally accepted to include compassion and hence the third shape within the Venn diagram. According to my study this virtue often remains implicit and the heart shape in the recursive model serves to remind curriculum developers and deliverers that this dimension which is synonymous with caring and compassion is important and must not be overlooked. The heart, within the model, is seen to intersect with both the circle and the square, in this

way having synergies with the conceptualisation of nursing practices as well as the delivery of nursing skills. Where all three shapes intersect a representation of compassionate skilled and thoughtful nursing care is portrayed with a nurse who has an appropriate repertoire of compassionate nursing skills and a developing problem solving approach.

If all three aspects of nursing are important the overlap must be considered to be the benchmark of appropriate and high quality practice. Those developing and delivering the curriculum must again strive to make this overlap as large as possible. A commitment to do this is best communicated by developing an assessment schedule that relates to all three facets of care. This will enable the curriculum developer to locate assessments at differing points in the Venn diagram with at least one assessment that is perceived by all to be important, located at the point where all three shapes overlap. Although assessment of viable knowledge is outside the boundaries of my study by applying my own professional knowledge to the findings and resulting conclusions inductive thought would indicate that assessment of this type would ensure that compassionate practice remain at the centre of the curriculum and that viable knowledge would be valued by all.

The macro view of the recursive model shows that there are four dualities and that each represents an important aspect of the student experience. The duality represented on the vertical axis portrays the relationship between the curriculum structure and the behaviour of the student in practice. The other three dualities each represent a continuum and will now be discussed in turn with reference to curriculum delivery.

The duality represented on the horizontal axis represents the continuum that spans the divide between informational and transformational learning as articulated by Kegan (2000). Both types of learning are required by the

student nurse and both relate to the development of compassionate skilled and thoughtful nursing. The positioning of the shapes within the Venn diagram are however significant with the cognitive delivery relating more closely to transformational learning and the skills acquisition to informational learning with the compassion related shape being at the epicentre and therefore depicted as relating equally to both or neither.

I have portrayed the recursive model throughout as dynamic and even in its completed form it remains so. This horizontal duality serves to remind me that knowledge is constructed and not discovered (Von Glasersfeld, 1989). Within the model, the Venn diagram can be positioned toward informational or transformational learning. However, in most instances for the majority of curricula there is an expectation that it will remain in the centre because the knowledge required to practise nursing is distributed between the informational and transformational (Kegan, 2000) extremes, in that a body of knowledge that is highly organised and infinitely expandable is required. This is informational learning which complements the deeper modifications or re-organisation of the body of knowledge that is associated with transformational learning. The concepts of informational and transformational learning are based on the work of Piaget (1954) and his concepts of assimilation and accommodation respectively. These Piagetian concepts are also the foundation of Von Glasersfeld's (1989) notion of viable knowledge which is at the centre of the Venn diagram. This reinforces the idea that viable knowledge is a dynamic mix of assimilation and accommodation and therefore reflects both informational and transformational learning. Curriculum planners therefore need to ensure that both forms of learning are present.

The two diagonal dualities represent the continuum between knowing how and knowing that and the continuum between reflecting in and reflecting on action. It can be seen from the model that knowing how and reflecting on

action are both associated primarily with cognitive abilities whilst knowing that and reflecting in action are dimensions that are more closely aligned to practice or doing. In an integrated curriculum at undergraduate level it would be expected that the range of assessments would span the whole territory from the purely theoretical through to the wholly practical with each assessment being placed in a unique and appropriate spot within the recursive model.

Finally and to recap, when considering how the recursive model can be used to guide curriculum planning and delivery, I return to the concept represented in its very centre: viable knowledge. Earlier I summarised this concept with the explanation coined by Von Glasersfeld (1989) who professed that such knowledge is used to navigate the world, being a viable way to deal with experience. This fits well with the notion of the student journey plotting a course to registration as a nurse.

Throughout an undergraduate pre-registration nursing programme in the UK a student will experience more than sixty weeks of clinical placement. Throughout that time, and beyond it, viable knowledge will be constructed and with every placement slight modifications will be made and the body of knowledge will grow. Every time a novel situation is encountered this knowledge which is available to underpin practice will be enlarged and the repertoire of associated actions increased.

Viable knowledge within the recursive model is represented in the centre at the point where all four dualities meet. This representation is very pertinent as viable knowledge is the product of all the learning that takes place within the curriculum, both in the classroom and in the placement area. Informational and transformational learning (Kegan, 2000) both generate knowledge for practice and neither one is sufficient on its own. Over the course of the pre-registration programme the individual nurse will

assimilate a great deal of information to which reference will be made on a daily basis to inform decisions and facilitate information giving, and terms of reference will be constantly modified and updated in the light of previous experience and exposure to unique and challenging situations.

Similarly, knowing how and knowing that are both necessary when viable knowledge is considered and as each individual navigates the journey of a nursing career; neither is enough on its own. A professional nurse must always know in any given situation, not only what to do but also why that action has been chosen in preference to other possible actions. Von Glaserfeld (1989) uses this sentiment as the basis of his definition of competence, a term that is often used when discussing the performance of the nurse at the point of registration.

In order to make the types of decision that confirm that an individual is competent reflection (Schön, 1987, 1988) is employed either overtly or in a more intuitive way; hence the inclusion of the reflective continuum which embraces reflecting on and reflecting in action. Nurses, during their education, must be prepared to compute information and make appropriate decisions. Sometimes this must be done in an intense situation and immediacy is prerequisite to a successful outcome for the patient. An example of this would be an emergency like a cardiac arrest, in this type of instance reflection in action must appear intuitive with a rapid succession of decisions often required. In other situations the nurse must take time to consider what the best action for a particular client is. This may require appraisal of a number of factors to facilitate a considered and informed decision which would portray the skill of reflection on action. All reflective activity calls upon and contributes to viable knowledge becoming a part of the students' repertoire of appropriate or viable behaviours.

Returning to the vertical duality and in summary, the undergraduate pre-registration nursing curriculum itself must be considered to be fit for purpose or viable and to guide the development of the student throughout the programme which will culminate in successful registration as a nurse. At any point therefore an appropriate curriculum will integrate or bring together all the facets of the recursive model to facilitate the acquisition of viable knowledge and the necessary skills to function as a nurse. At a time in history when nursing is to become an all graduate profession the function of the nurse and the preparation for that function must remain practically orientated. The recursive model presented as a product of this doctorate is offered as a vector to facilitate that.

7.4 Viable Knowledge in Practice

In this section I will consider the value of the nursing curriculum in terms of how viable knowledge is demonstrated in practice. This was, of course, the crux of the study under consideration here, and Chapters Five and Six contain numerous examples of how students use the knowledge acquired in the initial part of the programme to underpin and facilitate their early practice. The reality at the University of Hertfordshire is that in the nursing programme, theoretical knowledge is presented in the university and then there is a period of practice. The programme whole and the composite student experience is a combination of both the theoretical and the practical experiences which should be perceived by the student as one integrated whole. As the University of Hertfordshire was confirmed, by the survey data analysed in Appendix One, to be typical it is reasonable to assume that this is so in the vast majority of nursing programmes.

A developing viable knowledge is demonstrated in practice in numerous ways. All those working in a healthcare context need to develop a viable knowledge of types in order that the patient or client can remain safe. Information must be assimilated and guide action. For ancillary workers

the body of that knowledge is only required to be small and functional whereas those with professional roles build their knowledge to be specific and appropriate to their particular role within the healthcare team. In this context it can be seen that that of a student nurse is a work in progress that is guided by the programme being undertaken and by the structure and learning outcomes that direct and govern the specific curriculum. Individuals enacting certain roles within the healthcare organisation may therefore appear to have a similar mission whilst each plays a different role. For the student nurse therefore all actions are considered in the context of the curriculum or guided learning experience. Each individual will use that which is taught to guide their learning. Although knowledge is individually constructed by each student and developed within the clinical culture experienced and the relationships fostered by the multi-disciplinary team, this being in addition to the prescribed objectives and learning outcomes of the curriculum.

Viable knowledge is demonstrated within the clinical area in a number of ways that range from simple to sophisticated. For example the new student may exhibit signs of having engaged with the programme material through the efforts that they show to display suitable behaviours. Approaching a patient or client and connecting with them in appropriate conversation is a learned activity and must have a viable knowledge to underpin it. The observer may argue that such behaviour for some is intuitive and individuals may have a natural aptitude, but ultimately this is a learned activity.

A progression from this is the ability to understand instructions and respond correctly, to participate using appropriate clinical discourse or to be able to evaluate a (maybe very simple) situation and make a clinical decision. All these examples show the application of viable knowledge and are an important part of the student nurses trajectory. Learning is in

this way viewed as a situated activity and has as its defining characteristic legitimate peripheral participation (Lave and Wenger, 1991), which is concerned with newcomers becoming an integral part of a community of practice, with the meaning of learning configured through the process of becoming a full participant in a specific socio-cultural practice.

Looking at the progression of a particular student is helpful in identifying how such viable knowledge is developed and exhibited in the early part of the programme. Looking back to Anna (Chapter Five), in the beginning she was relatively reticent and her involvement, for the most part, played an associate role as in the first couple of days she watched the actions of others. As the placement progressed she became more involved in nursing care showing evidence that she was using the knowledge acquired in the university and developed over the course of the placement to guide what she did. The acquisition of appropriate language was evident from the beginning and the foundations for that were again acquired in the classroom and later cemented as the result of authentic experience in the clinical area. As time progressed there was evidence that concepts were manipulated and ethics and values reflected upon as a nursing perspective began to be appreciated. This progression is evidenced within the blog data and the subsequent analysis included in Chapter Five. This summary is offered here as an illustration of the role of practice for the students within this study. It is also used here as a catalyst to pose questions related to whether the amount of practice experienced by students in this study, and students more generally in the UK, is necessary or even desirable.

In Chapter Six the interview with Professor Oz presented a different context with differing customs and practice in relation to practice in the nursing curriculum. In Australia and New Zealand students experience considerably less practice but still achieve registration as a nurse. This

position has developed over more than two decades in which time the attitude of the nurse educators and students would appear to have changed and is now suggested to be very different to their peer groups in the UK. This can be seen in the analysis of the interviews in Chapter Six.

As the UK is poised on the brink of a new era when all pre-registration nurse education will be delivered at undergraduate level it is time to reconsider the amount of practice that should be packaged within the pre-registration nursing programme. Reflecting throughout this thesis on what has gone before it is difficult to imagine a change. It is necessary therefore to revisit the historical context surrounding the practice hour requirement in order to inform the contemporary relevance of this study.

In 1977 the European Union (EU) directives for pre-registration nursing programmes were published. At this time nursing courses were hosted within the NHS and students spent in excess of 85% of their time in clinical practice where they were employees. The remaining time was spent within a 'School of Nursing' which was an integral part of the hospital. Within this EU directive the length of the programme undertaken by all nursing students was prescribed to be three years or 4,600 hours.

Over more than thirty years nurse education has undergone huge change to a position where it is now hosted within the university sector and learners are considered to be students rather than employees. No longer do students spend the majority of their time in clinical practice, as now the distribution between the theoretical and practical aspects of the programme is prescribed at the ratio of 50:50. However, as each successive iteration of this modernisation has occurred the hours stated in the original directive have been maintained.

Consequently in 1979 when the Nurses, Midwives and Health Visitors Act was passed and subsequently amended in 1992 and 1997, the same requirement for 4,600 hours of content was adopted. Over this time the ratio of theory and practice changed meaning that the 4,600 hours was differently constituted and the new requirement for 50% of the programme or 2,300 hours to be in practice was thus calculated.

This requirement was therefore set when the context of nurse education was different with the student nurse an employee or apprentice, and hence its continuing validity has to be questioned in the context of present day practice. The figure of 2,300 hours is merely a 50% proportion of the prescribed 4,600 hours rather than a being a measure in its own right and the number of hours is therefore meaningless. There is no hard evidence about how many clinical hours are needed to actually produce a competent practitioner (Hale, 2003) and further research would be needed to establish this. In contrast, the 50% of the programme considered to be theoretical is not measured hour by hour but is considered to be a calculation of the total student effort, with classroom contact being only a small part of the whole.

The overarching conclusion stemming from this thesis is that practice is absolutely pivotal in relation to nurse education and that for knowledge to be considered valid it must be seen to support practice and be viable. The question that remains therefore is how much practice is necessary? That is a question which will continue to be debated and a great deal more research will be necessary before a definitive answer can be given. However there are some indications that can be made based on the data generated within this thesis.

My study found that students do use the material presented in the classroom to underpin their initial practice. The material imparted in this

early phase of the student journey is used principally to allow the students to change their frame of reference from that of member of the general public to that of healthcare worker or more specifically to that of nurse, and also to facilitate a discourse of practice. Without this early clinical placement students would not have the same opportunity to focus their learning and early development of viable knowledge could not be constructed to underpin the rest of their studies.

However, having established that practical experience is necessary for such learning, the amount and type of practice must now be established by others. My study focuses upon the first four weeks of practice within the undergraduate nursing curriculum and the development of ten student nurses during that time. This development was from my perspective very valuable and the transition seen within the student could not have been achieved without the exposure to practice, experienced by each individual. However, more work is necessary to establish the optimum amount of practice to be contained within a contemporary pre-registration nursing curriculum.

My interpretation of the findings of this study would appear to suggest that students require experiences that are relevant to the theoretical material that has been presented in the classroom and time and facilitation to allow them to grow that information into a body of viable knowledge. Although this study is limited as it only looks at the first semester, there is no reason to believe that the development of viable knowledge would not continue in a similar manner throughout the programme, and hence the match between the theoretical component of the course and the practical placements must be appropriate. It is therefore the quality, and not the quantity, of the clinical experience that may be of paramount importance.

In Australia Professor Oz describes a system where students had a very short practice experience at the end of the first year of academic study. This experience takes place after the year has been completed and is therefore in no way integrated with the theoretical component of the programme or able to act as an integrating force. He reported that one consequence of such a short placement was that students were not encouraged to become a part of the healthcare team, as such social interactions could have, in his opinion, distracted them from their learning outcomes. Socialisation of the student, as described by Lave and Wenger (1991) would not be so efficient and further work is needed to evaluate whether such a short placement can achieve a satisfactory outcome.

My research demonstrates that the value of an early practice experience is the opportunity to link the theoretical component of the programme with the practice of nursing enabling the individual student to make a firm link between the two. If the curriculum is truly evidence based then all knowledge should be related to clinical practice and be viable. Viable knowledge in this way is seen as specific to the profession of nursing and presented in the undergraduate curriculum validates the decision for all nursing courses to be delivered at undergraduate level.

7.5 Conclusion

In this chapter I have explored some of the ways that my study might make a contribution to the practice of nurse education using the concept of viable knowledge and the three media identified by Bernstein (1975) required to communicate any type of knowledge to provide structure. Using the same three media I would now like to conclude by looking at nursing knowledge and its role in defining the profession of nursing as a worthwhile and attractive career.

Nursing has for many years been difficult to recruit to and viewed by many to be less attractive than other professions. Some perceive nursing not to be a profession at all and this is due partially to the fact that the educational preparation has not been at graduate level and therefore could not be equitably compared to other similar occupations. One defining attribute of a profession is that it has its own unique body of knowledge (Halliday, 1987) to underpin it and this is important when considering the valid knowledge that makes up the curriculum. Nursing uses an eclectic mix of theory to guide practice although much of this is perceived to be borrowed (McKenna, 1997). Such knowledge is seen within the profession to be legitimate and has been referred to using terms like adopted or adapted (ibid). The notion of a viable knowledge, as described in this study, being knowledge that guides practice and is unique to each practitioner, is a very attractive one. Such knowledge has immediate validity as it is used to guide nursing decisions and practice and could be used as a vehicle to make nursing more attractive. An advertising campaign recruiting new nurses and viewing the profession through this type of lens could be very successful.

Equally a pedagogy and curriculum that emphasises the development of viable knowledge would strengthen the image of nursing and again move perceptions of the preparation of nurses away from a training model toward one that emphasises education. This might help shift perceptions toward one on a par with medicine which has a culture of educating practitioners within a clinical as well as educational context as opposed to trades like hairdressing and plumbing where training is done on the job and related theory is seen as secondary.

In summary, in the future nursing, like medicine, could be viewed as a practice based profession with practitioners being appreciated for making a huge contribution to society and a significant difference to the lives of

individuals. The most important part of the preparation of the nurse is to build a viable knowledge and this will ensure that nursing remains a practice based profession rather than an administrative act. In such a scenario a viable knowledge that ensures the centrality of practice could become the defining attribute of tomorrow's nurse.

8. Looking to the future

8.1 Conclusion of the thesis

Having considered my contribution to the practice of nurse education in the last chapter, in this chapter I will draw together the findings of the study and the resulting implications for the future. I will also articulate my own more personal conclusions. This introduction to the conclusions of the thesis therefore feels very significant as I perceive myself to be positioned at the beginning of the end or the end of the beginning. I feel it appropriate here to return to the original research purpose and to ask that 'So what?' question one last time in order that I can clearly see the future and make recommendations with reference to what I and others might achieve in areas related to this study and the findings generated.

I will therefore summarise here how individual student nurses use curricula content to construct a body of knowledge appropriate and able to support or underpin the practical experiences within the early part of their pre-registration undergraduate programme. I will then discuss this and consider the implications in relation to power and control, to curricula content and structure, and to the practical experience contained within the undergraduate pre-registration curriculum. I view this as a natural conclusion to this doctoral process or the end of the beginning.

The end of the beginning in some ways acknowledges that this is still a work in progress. After analysing the student blogs I constructed a cognitive representation or recursive model to represent how the concepts were seen, by me, at that time, to fit together; now found at the end of Chapter Five. I presented this as 'a work in progress' at an international conference and my theorising was well received and recognised by this authoritative and international audience. At the time I was comfortable with the iteration presented and did not imagine that the model would

change significantly in the future. However as was seen in Chapter Six this was not so and the model iterated on, to be more comprehensive and complex. Looking to the future, I, of course, must acknowledge that this may well happen again. As with Von Glasersfeld's (1989) viable knowledge my model will continue to be moulded to fit my experience and interpretations of findings in order to offer a viable representation of the world in which I think, act, and research.

Finally then, I will look to the future. I will conclude with some recommendations for the practice of nurse educators and personally reflect upon my own future within this context considering how I might extend and build upon what I have already done, in the months and years to come. I will in this way visualise what I might contribute during the rest of my career and this therefore must be perceived as the beginning of something new, or the beginning of the end.

8.2 How do nurses use the knowledge/information presented to them in the classroom to underpin their early practice?

This question has been comprehensively addressed in the preceding chapters and the important concepts identified, used to construct a recursive model. In summary, my study showed that individual students in the context of their first practice experience each use and extend the knowledge/information presented in the classroom to construct a viable knowledge (Von Glasersfeld, 1989) which they ultimately use to guide their practice. They use it to guide the way that they think and act the two coming together to create a knowledge that is viable in the context in which they experience their first placement. In this early part of their undergraduate pre-registration programme they use the information specifically to provide a discourse for practice and to change their perspective or frame of reference (Mezirow et al, 2000) from that of member of the general public to that of a nurse. These findings are

powerful when considering how the curriculum might best facilitate this process, as it was observed within my study.

8.3 Does curriculum need to be perceived and presented differently?

Early in this thesis I considered the concept of power and control within the curriculum, looking particularly at the work of Bernstein (1975), and at this point I think it is useful to return to this concept in relation to curriculum content and structure. When reviewing the literature I considered the concept of nursing science and discussed the way that other branches of science were adapted and adopted to formulate this unique body of knowledge. Throughout the dissertation I have returned repeatedly to this issue, the dialogue culminating in the last chapter with a discussion relating to how the curriculum had already been modified at UH to present information in a way that student nurses could synthesise during their early practice. Through the vehicle of clinical observation charts the knowledge presented to students was perceived as applicable to the nursing actions that they would be responsible for and therefore evaluated as valid by both lecturers and students.

As all nursing programmes become undergraduate there may be a temptation to include ever more complex and sophisticated knowledge therein. In the context of the findings of this study, I would however caution against this, reminding the reader that a nursing curriculum should always be taught from a nursing perspective and the context be directly applicable to nursing practice. The functioning of the student within the community of practice should, in this way, always be considered. Therefore in the early part of the programme when the student's contribution could be described as legitimate peripheral participation (Lave and Wenger, 1991) the theory presented should be compatible with that participation and not theorised to such an extent that it has no application to the students' functioning within the learning community.

Later in the programme the theoretical perspective will of necessity become more complex and sophisticated as the students' practice becomes more complicated and difficult. After qualification the registered nurse may then go onto a specialist level of practice and at this point the science required may be similar to that synthesised by a medical practitioner. This level of science, as applied to any nursing speciality, will however be necessary for only a minority of nursing practitioners. The important principle is that the science should underpin practice and be taught from the perspective of the practitioner. The power and control is in this way retained within nursing, and nurses are seen to make the decisions as to what they need to know.

Thus nursing is substantiated to be a particular kind of interpersonal interaction which has specific goals determined by the nurse and uses clinical judgement based on specific nursing knowledge (Clarke, 1991). This perspective confirms nurses to be different to other healthcare professionals and their practice to be of equal worth. The alternative conception is of course a world where nurses are ancillary to medicine, learning what doctors' think is appropriate and working to the doctors' instruction; a scenario that nurse education should neither support or propagate. To ensure that nursing reflect the former qualities and fits with paradigm two as first articulated by me in my regular BJN comment piece and outlined in Chapter Five (Karstadt, 2008c) a number of recommendations need to be made.

8.3.1 Recommendations of this study

The main recommendations of this study can therefore be summarised as:

- The contents of the nursing curriculum are the responsibility of the nursing community, and the NMC should always therefore express the

- The contents of the nursing curriculum should **all** have direct relevance to, and guide the practice of, the registered nurse.
- Curricula content should be presented in a way that clearly mediates theory and the practice that the student will be participating at that time, being therefore accessible to the individual student for the construction of an appropriate viable knowledge.
- Nursing should always be taught by nurses and information/knowledge always presented from a nursing perspective.
- Practice should remain a central facet of the pre-registration nursing curriculum.
- The amount of practice within the pre-registration curriculum should however be further evaluated to allow evidence based recommendations to be made.

8.3.2 Possible future research

Future research may usefully consider how knowledge/science is used by nurses at different points in their pre-registration programme and after qualification in order that the mediation between that knowledge/science and nursing practice is maximised and made explicit. I am particularly interested in the nursing science that supports expert practice in areas such as tissue viability and intensive care and would welcome the opportunity to explore how this can be presented in a viable fashion to nurses and explicate the similarities and differences to the way in which similar material is presented to other members of the multi-disciplinary healthcare team.

The centrality of practice within the nursing curriculum must remain at the centre of nurse education with the efficiency with which this is achieved

investigated alongside exploration into how much practice is necessary for students to be fit for purpose at the point of registration as a nurse. This thesis has presented different models that have been adopted globally and research can now usefully be done as to the length of practice that is desirable and appropriate within pre-registration education. Such research should set aside the historical expectations that have no basis in evidence, and consider the issue objectively and with fresh eyes.

Practice research must remain a priority in nurse education and research evaluating the education process must be seen as equally valid to research that evaluates other spheres of nursing. I therefore end this thesis with a personal desire and commitment to stay involved in this research process.

8.4 A final sign off

As I have explored the relationship between theory and practice in the early part of the nursing undergraduate curriculum I have discovered a great deal, not only in relation to contextual or situated learning and the lived experience of the student nurse, but also in relation to myself as a teacher, curriculum manager and now researcher.

It has been interesting during the compilation of this thesis to track my own change of perspective alongside that of my subjects. Kegan's (2000) explanation of informational and transformational learning has applied equally to me. The subjects of this study were on a journey to become nurses and I equally have been on a journey, mine being toward an acknowledged status as practitioner researcher. They progressively modified their view of the world and their vocabulary in response to what was presented to them in their programme of study. I did the same. They interpreted what they saw in relation to patients and clients and their approach became progressively more inductive as they iteratively took

responsibility for intelligible interpretation of the situations they encountered. It isn't sufficient for a nurse to 'merely be a conduit' for the voice of the patient; they must also 'add an interpretive dimension'. As for a researcher - Gough (2003, p31) uses these same words and phrases in relation to how the successful researcher interprets and conveys the voice of a participant. Parallel trajectories are therefore confirmed.

When I embarked upon this doctoral process and during the majority of the trajectory my role was that of The Head of School, Nursing and Midwifery and as such my practice was confined to those two professions. Initially my research question was considered by me to be very specific to nursing practice. However over the last year my role has changed and I am now the Deputy Dean within a Faculty of Health and Human Sciences. As such my sphere of influence and my day to day practice have changed. I now am involved with the education of a number of health professionals ranging from physiotherapist and pharmacists to foundation year doctors. As my new role develops I have come to realise that the education of all these practitioners concur more than they differ and that the findings of this research therefore have a greater application than I initially expected. Although I have a strong identity as a nurse and acknowledge that I see the world from that perspective I also now realise that in the future I could influence healthcare education more widely. As a result of being involved in this doctoral level research I now see the world with a greater clarity and am more able to articulate and commentate on what I see. I am therefore now committed to a wider context and am actively seeking opportunities to develop shared frameworks and research opportunities.

This thesis offers a specific perspective or way to approach nurse education that views practice at the centre of all that we do. It is founded on an understanding of how nurses develop a viable knowledge appropriate for an undergraduate trajectory. Recent personal experience

would suggest that this is common to all practitioners, and as I move into the next phase in my career I am committed to investigating that, in order to ensure that healthcare education is recognised as unique and special within the higher education context.

The completion of the doctoral process may be viewed as arrival at the desired destination. However my journey has been eventful and enjoyable and as with all seasoned travellers I have now discovered an appetite for exploration and adventure, something I now wish to share with others within healthcare education. Staying with the analogy of travel; having had my trip of a lifetime I am now keen to share my experiences with others and help them to engineer similarly life changing excursions.

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Statutory Instruments:

Statutory Instrument 2000 No 2554: The Nurses, Midwives and Health Visitors (Training) Amendment Rules Approval Order 2000

APPENDICES

Appendix One

A1 Establishing the University of Hertfordshire as typical

A1.1 Introduction

Initially when considering this case study I set out to establish that the BSc (Hons) Nursing curriculum at the University of Hertfordshire, and the way that the theoretical material was presented, was typical within England at the time. The case study centres upon the experience of ten student nurses undertaking the first semester of this programme. The initial measure was therefore to look at the curriculum and see how it compared to others written at this time to the same professional blueprint. This was done via a survey which is outlined in section A1.2. The data contained within the survey seeks to establish that the nursing curriculum at the University of Hertfordshire is indeed typical, if such a thing as typical exists. If so, then there is good reason to surmise the knowledge gleaned from the interpretation of the case study focusing on the BSc (Hons) Nursing within this institution may be applicable to other similar institutions and hence generalisable across the UK

A1.2 The quantitative survey – seeking the typical curriculum

The motivation for designing and circulating this questionnaire was somewhat different to the eventual way that it has been used. Originally, as previously chronicled, I had viewed myself as a predominantly quantitative researcher who was to utilise a mixed methodology to establish ‘a prescribed structure for a nursing curriculum in order to facilitate a practitioner who was fit for practice on the day of qualification’. However this did not progress quite as I had predicted. Ely et al (1991) document this type of experience lucidly telling us that on occasion results are surprising and what is discovered, results in a change of direction for the study in question.

This was my experience. My starting point was clear, I set out with a hypothesis that if the most efficient curriculum structure in terms of preparing students for their problem solving role as qualified nurses could be identified then nurses would achieve maximum competence and be fit for purpose at the point of registration. From my perspective at this point, my trajectory was expected to be linear. I would author and administer a questionnaire that would categorise the curriculum of each participating HEI in England. Following this, I would choose two institutions, one with a curriculum that was predominantly integrated and another with a curriculum that had a collection or subject specific mentality (Bernstein, 1975). These two HEIs would then participate in a two case, multiple-case study as outlined by Yin (2003), where evidence would be collected from multiple stakeholders, the analysis of which would enable the best type of curriculum to be identified and ultimately prescribed to all.

However, the reality of the experience of administering the questionnaire was somewhat different. Analysis of this survey appeared to show that the institution in which I was based had a typical or average curriculum with reference to Bernstein's (1975) typologies, being similar to the majority of others in England at that time. Serendipitously, during this time I was also involved in an accident and became a hospital inpatient, an experience that caused me to realise that some of my plans for observation and data collection within the multiple case-study in the clinical areas were unrealistic and probably not achievable. This caused the subjective reframing (Taylor, K., 2000 p298) which was discussed in the previous chapter.

The result was a change of focus replacing the curriculum type, hitherto at the centre of the study, with the student experience now dominating the modified research design. The original survey was at this point put to one side only to be returned to at a later date with a differing motivation. Re-inspection of the data collected suggested that the School of Nursing and

Midwifery at the University of Hertfordshire and the undergraduate programme in nursing were typical. With this in mind the analysis was reengineered and the subsequent results recorded. Because, in the final analysis, this data was utilised in a way that was not originally intended, as the data was collected for another purpose, the questionnaire can be considered to be a source of secondary data.

The questionnaire was divided into five sections and each section was interrogated as secondary data to look for relevancy with reference to the typicality of the curriculum at the case study university. A copy of the original questionnaire can be found in the Appendix Four.

A1.2.1 Institutional information

Using the sampling frame provided by the Council of Deans of Health the fifty-three questionnaires were distributed within England to all the named Higher Education Institutions (HEIs) providing education for nurses. Of the questionnaires sent out, 28 were returned within 28 days and after a reminder this was increased to 38 (72%). With the initial questionnaire and again at the time of the follow up, I sent a personal letter to the Dean or Head of the academic unit where the pre-registration nursing programmes were hosted (Appendix Two and Appendix Three). I had the advantage of knowing many of these colleagues personally in my capacity as the elected England representative on the Council of Deans. My position possibly enhanced the return rate of the questionnaire as I was known to these colleagues and represented their interests on an ongoing basis.

My explanation as to the purpose of the original study centred around the structure of the curricula with particular reference as to whether particular curriculums were science based or integrated. Comments placed on the returned questionnaires were encouraging wishing me well and commenting upon the perceived usefulness of the study.

The first two items in section one of the questionnaires concerned the identity and address of the institution in question. Institutions were reassured that this nominal data would be kept confidential and be securely stored to ensure confidentiality. The third item profiled the courses on offer in order to identify the target population which was those institutions delivering an undergraduate programme with a Registered Nurse qualification. Seven options were offered and respondents asked to indicate all that applied (Table A1.1). Of the 38 respondents only 30 met the criteria for inclusion in the study and the remaining 8 were therefore not included in the detailed analysis of the rest of the questionnaire.

Responses in this first section for item 1.3 of the questionnaire are summarised in Table A1.1. These were, for the most part, very much as expected. The most popular response was the Diploma in Higher Education (DipHE) with 32 institutions (84%) offering this. This would appear to reflect the perceived situation at the time. In 2006 there was no agreed intent on the part of the government to move nursing toward an all graduate career by 2013. The position of the University of Hertfordshire is offered alongside the questionnaire data to demonstrate the typicality of the institution.

Table A1.1. Courses offered by HEIs surveyed

Qualification offered	DipHE	Foundation Degree	BSc	BA	MSc	MA	Other
HEIs	32	0	28	2	1	2	10
UH	✓		✓				

A large number of institutions did already offer an undergraduate option of the nursing programme with 30 out of the 38 (79%) offering a BA or BSc. In the final option category 'Other' 10 respondents offered an answer.

Most of these detailed an honours degree or an enhanced diploma, 3 institutions however, reported that they offered a Bachelor of Nursing degree. One of these institutions also offered a BSc and was therefore included in the research population, the other 2 however had to be excluded as this qualification had not been considered and the instructions for section 2 requested information relating to BA and BSc courses only. This identified a flaw in the questionnaire that had not been recognised during the pilot phase and resulted in the exclusion of two institutions that should have met the inclusion criteria. This is only worthy of note here because it indicated that the same number of institutions were offering undergraduate nursing programmes as were delivering the widely accepted diploma programme.

Additionally three institutions were offering a Masters programme as the academic qualification alongside pre-registration nurse education meaning that students upon registration as a nurse would also have achieved a higher degree. Within the survey population therefore it was noted that there was evidence of 35 programmes offered at either undergraduate or postgraduate level and 32 offered at Diploma level; a finding that would appear to be unexpected with regard to the situation at the time. Prior to the announcement that nursing would become a graduate profession with the cessation of entrance to diploma programmes in 2013, there was a general perception only a minority of nurses were, prior to this time, educated to degree level.

The University of Hertfordshire was confirmed as typical in this section as it was seen to be offering to nursing students the Diploma in Higher Education alongside 31 other HEIs as well as the BSc, which was offered by 27 others. As the sample size was only 38 it is clear that the vast majority of HEIs were, like Hertfordshire, offering both options

A1.2.2 Course information

Section Two of the questionnaire asked for information relating to the BA/BSc course under consideration. Item 2.1 ascertained that of the 30 respondents only one had a course that was not modularised. The remaining 29 confirmed modules of varying values. Although this variation in the value of the modules is not significant in this subsequent analysis, evidence of modularisation is. Students at the University of Hertfordshire experienced a programme that was presented as eight discrete modules per year. This would appear to have been a majority experience despite the caution offered by Phillips et al (2000), and Eraut et al (1995), that the contents of the programme could be viewed as disjointed and that holism could be hindered, the vast majority (97%) of institutions had chosen the modular mode.

The number of modules and the amount of student effort relating to both bioscience and psycho-social sciences were then assessed in items 2.3 through to 2.6. Courses and hours of student effort associated with bioscience and psycho-social science were interrogated and the results are presented in Tables 5.2 and 5.3.

Table A1.2 Modules containing bioscience/psychosocial science content

Number of modules	1	2	3	4	>4
Bioscience content	6	8	1	3	0
UH		✓			
Psycho-social science content	9	7	0	2	0
UH		✓			

Table A1.3 Hours of student effort relating to bioscience/psychosocial

Hours of student effort	<100	100-199	200-299	≥300
Biosciences	4	16	4	3
UH		✓		
Psycho-social science	5	15	6	2
UH		✓		

The question relating to the number of modules containing an aspect of bioscience or psychosocial science was poorly answered with only 60% of respondents offering an answer. Hours of student effort, however, seemed to be a more comfortable concept with 93% responding. This may have been because some courses contained only a small amount of science and respondents were therefore unsure as to whether or not to include them in the modular count, whilst totalling the hours was more straightforward.

The poor response to the item relating to the number of modules with science content was disappointing, as considered together with the total student effort relating to science, it is an indication of how the sciences were spread across or integrated within the curriculum. The findings (table A1.2) indicate that more courses are associated with bioscience content than with psychosocial science generally, although at the University of Hertfordshire the two would appear to be the same. The number of hours of student effort however, would appear to be consistent between these two types of science, with Hertfordshire fitting the mode for both variants.

On reflection the term total student effort may have caused some confusion as it was not tightly defined. Within my own institution 10 hours

of student effort are associated with each academic credit. These hours can be variously described as contact, non contact, guided, self directed etc. However it would seem that some respondents only counted contact time. If there is a mismatch here between the question asked and the question understood the result for that particular item must be considered to be unreliable. However, if this is so, then the overall indication would appear to be a greater, not lesser amount of effort relating to the science component of the curriculum.

Previous studies have articulated a concern over the amount of bioscience included in pre-registration nursing courses. Wynne et al (1997) were so concerned about the amount of bioscience that they questioned holism suggesting that if this aspect of the individual were neglected holistic care could not be achieved. Wharrad et al (1994) reported a move away from biology to social science in order to underpin a philosophy of care as opposed to cure. The survey results presented here showed that students were exposed to varying amounts of science and table A1.3 provides evidence to suggest that 50% or more students receive between 100 and 199 hours each of biology and psycho-social science with 13-17% receiving less than that and 23-27% receiving more.

Evidence would therefore suggest that according to this study bioscience is no longer neglected, at the University of Hertfordshire or within the total surveyed population, when compared to psychosocial science. One explanation for this is that the recommendations of previous studies have been implemented particularly at degree level. Wharrad et al (1994) purports that when deciding how much biology to include the educational background of the student population must be considered and that the widening of the entry gate to the profession first advocated by the Briggs Report (1972) and reiterated by the previous government (Department of Health, 1999) may be detrimental. The positive results reported here may,

in part then, be due to the fact that the courses under consideration are developed for and delivered at undergraduate level to the academically able. Whatever the explanation, the University of Hertfordshire can again be viewed as typical.

Table A1.4 Number of students within each cohort by HEI

Number of student in cohort	<50	50-99	100-150	>150
Number of HEIs	6	8	4	12
UH				✓

Table A1.5 Number of teachers delivering the CFP by HEI

Number of teachers	<10	11-20	21-30	31-40	>40
Number of HEIs	1	8	8	8	9
UH					✓

Numbers of both students and teachers associated with each cohort were established in items 2.7 and 2.8 and these are presented in Table A1.4 and Table A1.5. Again the University of Hertfordshire is seen to be embraced within the mode category confirming a not untypical student experience when compared with other HEIs.

Items 2.9 to 2.11 examined the amount of curriculum sharing with other professional groups. Respondents were allowed to choose all options that applied and this is the basis of Table A1.6. There was evidence of sharing with other professional groups in 68% of responses and as the table below confirms again the University of Hertfordshire fits with the majority.

In addition, when invited to include other groups with whom sharing occurred, 26 of the respondents (including the University of Hertfordshire) confirmed sharing with student nurses undertaking the DipHE qualification. Again this was not established in the pilot phase and this response

resulted in the answer to the next question being less useful. The original response indicated that only 19 of the 30 institutions had experience of shared curricula with Table 6 detailing the professional allegiances. Again the University of Hertfordshire is confirmed to be in the majority group as along with 50% of the rest, curriculum content was shared with other healthcare students. Also alongside 68% of all respondents sharing was also experienced with other nursing students doing a lower level qualification. This is pertinent within the current analysis as students completing blogs refer to this shared learning which is confirmed to be typical.

Table A1.6 Shared teaching in the Common Foundation Programme:

Discipline shared with	Number of institutions	UH
Midwives	13	✓
None	11	
Physiotherapists	7	✓
Social workers	7	
Doctors	6	
Radiographers	3	✓
Paramedics	1	✓
Other	6	✓

The inclusion of DipHE nursing students within the sharing resulted in the details inferred from item 2.11 being considered to be more unreliable than was hoped. As 68% reported sharing that included sharing with other nurses the foci of sharing was seen to be a less significant indicator. More than 60% of respondents reported sharing in each subject area but as some of this may have been the common teaching of diploma level and degree level nurses this measure was disregarded.

Finally, within Section two, respondents were asked to categorise the curricula within their own institutions. The University of Hertfordshire again fitted into the majority group (57%) who evaluated their provision as integrated. Of the rest 10% described their provision as discipline specific (science based) 23% as problem based and the final 10% made an invalid response indicating that their provision fitted into more than one category. No definition of the terms used had been offered and during the analysis it was strongly suspected that the conception of Bernstein (1975) was not a common one. This was reiterated with the subsequent analysis of section 3. These self assessments were ultimately, in the reanalysis, disregarded and the detail in section 3 used instead to confirm typicality with reference to the curriculum.

A1.2.3 Curriculum information

Section three was seen to be useful as operational detail with regard to how the curriculum is delivered across institutions is made available. This section is set out in tabular form and contains a number of statements that are typical of integrated and collection (or science based) curricula as described by Bernstein (1975). Using a Likert scale individuals were asked to evaluate the curricula within their own institution. Table A1.9 (to be found on the next page) summarises the responses of all respondents. In the actual questionnaire, which can be found in the Appendix Four, statements were mixed to avoid individuals merely ticking down one column, although for reporting purposes the statements relating to integrated curricula appear on the left and to collection curricula on the right.

Items 5.1 and 5.2 enquire as to how the sciences are dealt with within the institutions concerned. Respondents were offered two alternatives one that fit with a typical collection curricula and the other a typical integrated curricular. Via the Likert scale respondents were able to choose the

statement suggesting integration, report a tendency toward that, remain neutral or report the statement or a tendency toward collection or a science base. Although the correlation between the self-reported curriculum type and the categorisation with reference to individual items is not considered with in this new analysis, the individual responses do give insight into a typical experience. The undergraduate programme tutor at the University of Hertfordshire, for this item, chose the neutral response, which may have indicated that both options applied in different modules within the programme delivery.

Items 5.3, 5.4, 5.5, 5.6 and 5.7 interrogate characteristics associated with teachers of bioscience. For the most part Hertfordshire can be noted to be in the mode response. The notable exception is item 5.6 which investigates whether skills and associated biosciences are taught together or are completely separate. Other evidence collected over the course of this study again would suggest that both alternatives apply to different modules within the programme leaving the Hertfordshire respondent with no choice other than to choose the neutral option. Previous reports had emphasised the need for expertise in bioscience and mentioned the contextualisation of taught material (Eraut et al, 1995; Wharrad et al ,1994); a tendency reported by 100% of this sample population. However, the necessity to be a qualified nurse had not been mentioned in the previous reports cited and the general response in this survey was not nearly so emphatic, although Hertfordshire was confirmed to have a teaching group that were all appropriately registered as nurses.

Similar questions relating to psychosocial science formed the basis of items 5.8, 5.9, 5.10 and 5.11 and these yielded similar responses. Again the responses offered by the University of Hertfordshire and illustrated in table A1.7 did not appear untypical

Table A1.7 Rating Scale Assessing Degree of Integration within the Curriculum

Statement X (Integrated)	Score	5	4	3	2	1	Statement Y (Collection)
3.1 Bioscience is taught in the context of nursing and is integrated with a number of other topics as appropriate	14	8			2	6	Bioscience is taught as a discrete (identifiable) subject.
3.2 Psychosocial science is taught in the context of nursing and is integrated with a number of other topics as appropriate.	14	9			2	5	Psychosocial science is taught as a discrete (identifiable) subject
3.3 Teachers deliver biosciences as the need arises.	1				11	17	Teachers delivering biosciences are clearly identified.
3.4 Teachers delivering biosciences do not always have appropriate further education in biology or a related discipline.		2	2		11	15	Teachers delivering biosciences always have appropriate further education in biology or a related discipline.
3.5 Teachers delivering biosciences are always trained as nurses.	12	6	1		5	6	Teachers delivering biosciences are not always trained as nurses.
3.6 Biosciences and associated skills (e.g. BP measurement) are taught within the same course/ module.	17	6	2		2	3	Biosciences and associated skills (e.g. BP measurement) are taught within different courses/modules
3.7 Teachers of bio sciences do not illuminate their teaching by presenting their own contemporary research.	5	7	7		9	2	Teachers of bio sciences illuminate their teaching by presenting their own contemporary research.
3.8 Bioscience teachers always relate content to a nursing context and nursing practice.	16	14					Bioscience teachers never relate content to a nursing context and nursing practice.
3.9 Teachers deliver psycho-social sciences as the need arises	1				10	18	Teachers delivering psychosocial sciences are clearly identified.
3.10 Teachers delivering psycho-social sciences do not always have appropriate further education in sociology psychology or a related discipline.	2				11	16	Teachers delivering psychosocial sciences always have appropriate further education in sociology psychology or a related discipline..
3.11 Teachers delivering psycho-social sciences are always trained as nurses.	8	12	2		4	4	Teachers delivering psychosocial sciences are not always trained as nurses.
3.12 Psychosocial sciences and associated nursing skills (e.g. communication skills) are taught within the same course/module.	12	10	2		3	2	Psychosocial sciences and associated nursing skills (e.g. communication skills) are taught within different courses/modules
3.13 Subjects are integrated as demanded by themes of the curriculum	10	11			2	1	Boundaries between disciplines (e.g. biosciences, psycho-social sciences) are maintained.
3.14 There is an element of choice within the course content.	2	2			5	20	All students must study all courses there is no choice.
3.15 Theory and practice are generally integrated within each course/module	19	4			1	4	There are courses/modules designated as theory and courses/modules designated as practice

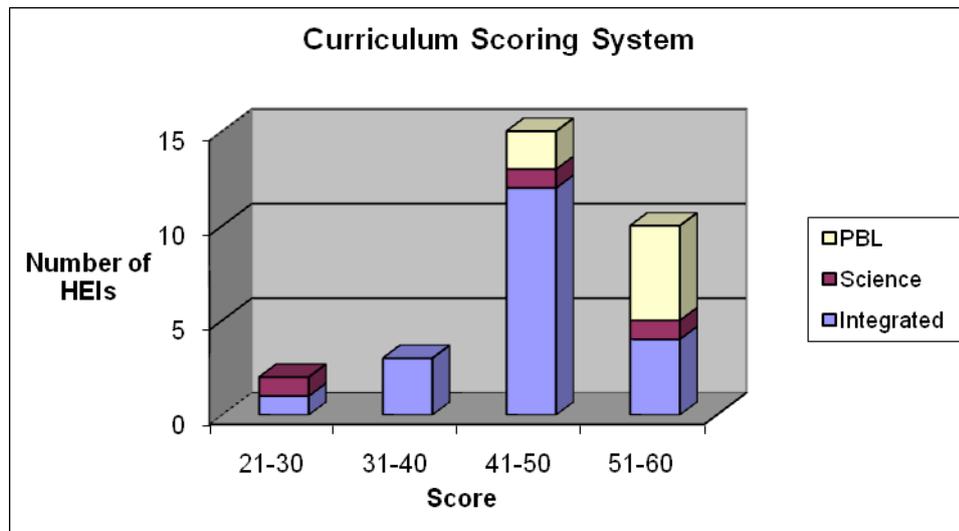
Item 5.12 showed that boundaries between topics, as advocated by Bernstein (1975) for collection curricula, and investigated in a nursing context by Cooke (1993) were rare. Only 3 institutions reported such boundaries and for our purposes again the University of Hertfordshire was with the majority. When quizzed with regard to the integration of theory and practice (item 5.14) within particular modules, Hertfordshire tended toward such integration, with the majority reporting that such integration was the norm.

During the original analysis of this questionnaire Section 3 did not offer the clear categorisation, with reference to integrated or collection curricula, expected and a number of reasons including a requirement to integrate theory and practice temporally within pre-registration nurse education (UKCC, 2001) were offered to explain this.

It was therefore decided that the profiles resulting from a completed Section 3, should be used to assess the extent to which any curriculum was integrated. All institutions could therefore be placed upon a continuum with integrated curricula at one pole and collection curricula at the opposite pole. In order to make this explicit a scoring system was devised. Using the Likert scale as a basis, the variable associated with a science-based curriculum (Statement Y) was allocated a score of 1, whilst the variable associated with an integrated curriculum (Statement X) was allocated a score of 5. Tendency to Y or X attracted a score of 2 and 4 respectively with a score of 3 being allocated to the middle column. Fifteen pairs of variables gave a possible range of 15-75 with 15 being the score associated with a curriculum that employed all Bernstein's (1975) features of a science based curriculum and 75 the perfect integrated curriculum.

The analysis of the data recorded, according to this Likert scale, gave a range of scores between 29 and 58 with a mean score of 47. The graphic representation below shows a tendency toward integration, and with a score of 43 the University of Hertfordshire is again seen to be in the typical category Graph A1.1 summarises these findings.

Graph A1.1 HEIs and their scores with reference to degree of integration



This graph was a part of the original analysis and the colour shaded bands show the scores with reference to how each HEI had evaluated its own curriculum with reference to curriculum type. I have left in this colour banding as it validates the decision not to include analysis relating to the self categorisation in this re-engineering of the analysis.

This section is however of particular interest with reference to the secondary analysis now being reported, as it considered how the theory packaged within the course was related to associated nursing practice, which was the focus of the subsequent qualitative study. Within the questionnaire there is an implied assumption that such mediation would be best demonstrated in a curriculum that was integrated and used the experience of nursing the patient/client as an integrating force. Specific questioning elicited attitudes toward psychosocial and biosciences by focused questioning asking whether teachers were academically qualified with reference to the sciences under scrutiny and whether the same academic staff were professionally qualified and experienced as nurses. This is objective data and offers no measure as to the efficiency of academics in either category. However the University of Hertfordshire was confirmed as typical with a score of 43 that placed it into the mode category and confirmed that the type of curriculum required to foster mediation was in evidence.

In conclusion therefore, the findings of this section seem to confirm that the experience of the student nurse within the University of Hertfordshire is indeed typical and although not identical to all other HEIs shares enough characteristics for the conclusions of any enquiry conducted at the university to be transferrable within this population.

A1.2.4 Assessment of practice

Section four considers the forms that assessment of practice takes in the various HEIs. Five options (including Other) were offered for item 5.1 and responses are summarised in Table A1.8.

Table 1.8 Assessment types used in practice

Assessment type	Practice Portfolio	Skills Booklet	OSCE	Reflective Essay	Other
Number of HEIs	27	25	14	20	10
UH	✓	✓		✓	

Respondents were asked to identify all that applied and all identified more than one mode of practice assessment. Of the 30 respondents therefore 90% used a practice portfolio, 83% a skills booklet, 47% an OSCE, 67% a reflective essay and 33% some other type of assessment. Looking at the number using each type of assessment it is clear that the majority of HEIs used two or three modes of assessment. Yet again the University of Hertfordshire was not untypical, using the three most popular assessment types.

When asked in item 5.2 how practice assessment related to the courses taught in the CFP 50% related to discrete assessment for each module of study and 50% to assessments that related to more than one module. The latter would indicate integration whilst the former does not preclude it, and Hertfordshire fitted within the former category.

A1.2.5 Further contact

The final section of the questionnaire was not significant in this secondary analysis.

A1.3 Conclusions

This chapter set out to confirm that the nursing curriculum associated with the undergraduate programme within the School of Nursing and Midwifery at the University of Hertfordshire was typical within England at the time of the survey. Via a battery of questions interrogating various features of the programme this was shown to be so.

Given the typicality of the curriculum, some generalisation with reference to the findings of the study is assumed. The student experience of this typical curriculum will now be explored in Chapters Six and Seven via a number of different data sources. In Chapter Eight conclusions will be drawn and finally in Chapter Nine a number of recommendations will be made with reference to curriculum structure within nurse education with a specific focus upon how theoretical concepts might be presented in the classroom to enable students to understand and perform with reference to nursing practice.

Appendix Two

Date

Dear Colleague,

As part of my own studies I am presently undertaking a doctorate in Education. The focus of my research is the structure of curriculum within degree level programmes leading to RN. I am interested to build a national picture with reference to whether curricula are science based or integrated.

In order to build such a national picture it is necessary to have information from all HEIs involved in Nurse Education. I would therefore kindly ask that you hand the enclosed questionnaire to the programme leader of your pre-registration degree. I hope the questionnaire is straightforward and should only take about ten minutes for such a person to complete.

The final question asks if your institution would be happy to be further involved. In the next phase of the research I hope to identify two case study institutions and interview a range of stakeholders in order to illuminate the educational experience further. At all stages of the research, institutions will remain anonymous and the raw data contained within this questionnaire will be stored securely and viewed only by me.

Thank you for your time and interest. I would be grateful if the questionnaire could be returned in the enclosed envelope by November 25th. I would of course be happy to answer any questions that you may have and am available on the telephone or e-mail (details above).

Yours sincerely

Lyn Karstadt
Head of Department
Midwifery and Child
University of Hertfordshire

Appendix Three

Date

Dear Colleague,

First of all, if you have responded to my previous request to fill in the enclosed questionnaire, I thank you and apologise for bothering you again. I wrote to you last month asking for your co-operation in completing a questionnaire seeking information with regard to the structure of the curriculum within your institution's degree level programme leading to RN. I am at present undertaking doctoral level study and in the initial phase of the research am interested to build a national picture with reference to whether curricula are science based or integrated.

As I explained in my earlier communication, in order to build such a national picture it is necessary to have information from **all** HEIs involved in Nurse Education. I have had a good initial response with a return rate of approximately 50%. Could I kindly request that if you have not yet responded you hand the enclosed questionnaire to the programme leader of your pre-registration degree. I hope the questionnaire is straightforward and should only take about ten minutes for such a person to complete.

Thank you for your time and interest. I would be grateful if the questionnaire could be returned in the enclosed envelope by Christmas. I would of course be happy to answer any questions that you may have and am available on the telephone or e-mail (details above).

Yours sincerely

Lyn Karstadt
Head of Department
Midwifery and Child
University of Hertfordshire

Appendix Four

Institutional (HEI) Survey

Thank you for taking the time to answer this survey. It has been sent/forwarded to you because you have managerial responsibility for the Common Foundation Programme within a course of study leading to an undergraduate degree with a Registered Nurse qualification.

The form is divided into sections and questions are set out using a variety of formats. General information is required with regard to your institution and more specific questions relate to the programme you manage. The form is completely confidential and will be stored securely. Please answer questions as accurately and honestly as you can.

Section 1 Institutional Information

1.1 Full name of faculty, school or department in which nursing programme is hosted
.....

1.2 Full name and address of Institution
.....
.....
.....
.....
.....

1.3 Please indicated which academic qualifications are offered with RN at your institution (tick all that apply)

- Dip.H.E.
- Foundation Degree
- BSc
- BA
- MSc
- MA
- Other

Please specify.....

Section 2 Course Information

This section applies to BSc/BA courses only.

- 2.1 Is the course modularised?
 Yes No

If no move to question 2.5

If yes

- 2.2 How many CATs points are associated with each module/course within the CFP?

- 10
 15
 20
 Variable please specify.....
 Other please specify.....

- 2.3 How many courses/modules have content relating to bioscience?

- 1
 2
 3
 4
 More than 4

- 2.4.1 How many courses/modules have content relating to social science?

- 1
 2
 3
 4
 More than 4

- 2.5 How many hours of student effort relate to studies addressing bioscience within the CFP? (this includes both contact and non-contact where norm is 70-100hrs per 100 credits)

- Fewer than 100
 100-200
 200-300
 More than 300

- 2.6 How many hours of student effort relate to studies addressing social science within the CFP? (this includes both contact and non-contact where norm is 70-100hrs per 100 credits)

- Fewer than 100
 100-200
 200-300
 More than 300

- 2.7 How many students are there in each cohort?
- Fewer than 50
 - 50-100
 - 100-150
 - More than 150 Please specify.....
- 2.8 How many teachers deliver the CFP in your institution?
- Fewer than 10
 - 10-20
 - 20-30
 - 30-40
 - More than 40
- 2.9 Which other professional groups do nursing students share curriculum structures with? (Tick all that apply)
- None at the moment
 - Midwives
 - Paramedics
 - Physiotherapists
 - Radiographers
 - Doctors
 - Social workers
 - Other please specify.....
- 2.10 Are there plans to continue/begin shared learning with other disciplines within your institution?
- Yes No
- 2.11 What types of learning are shared? (Tick all that apply)
- Biosciences
 - Social Sciences
 - Professional and ethical
 - Other please specify.....
- 2.12 If asked to describe the course within you institution which of the following labels best applies? (Please choose one)
- Discipline specific (Science based)
 - Integrated (holistic)
 - Problem/Enquiry base

Section 3 Curriculum Information

Please indicate which statement best describes the practices employed within your institution. If unsure which statement applies please feel free to indicate why either on the form or on an appended sheet.

Statement X	X applies	Tendency to X	Unsure/neither applies	Tendency to Y	Y applies	Statement Y
3.1 Bioscience is taught as a discrete (identifiable) subject						Bioscience is taught in the context of nursing and is integrated with a number of other topics as appropriate.
3.2 Social science is taught as a discrete (identifiable) subject						Social science is taught in the context of nursing and is integrated with a number of other topics as appropriate.
3.3 Teacher delivering biosciences are clearly identified.						Teachers deliver biosciences as the need arises
3.4 Teachers delivering biosciences always have appropriate further education in biology or a related discipline.						Teachers delivering biosciences do not always hold appropriate further education or experience
3.5 Teachers delivering biosciences are always trained as nurses.						Teachers delivering biosciences are not always trained as nurses.
3.6 Biosciences and associated skills(e.g. BP measurement) are taught within the same module.						Biosciences and associated skills (e.g. BP measurement) are taught within different modules

Statement X	X applies	Tendency to X	Unsure/neither applies	Tendency to Y	Y applies	Statement Y
3.7 Teachers of bio sciences illuminate their teaching by presenting their own contemporary research.						Teachers of bio sciences do not illuminate their teaching by presenting their own contemporary research.
3.8 Bioscience teachers always relate content to a nursing context and nursing practice.						Bioscience teachers never relate content to a nursing context and nursing practice.
3.8 Teacher delivering social sciences are clearly identified						Teachers deliver social sciences as the need arises.
3.9 Teachers delivering social sciences always have appropriate further education in sociology psychology or a related discipline						Teachers delivering social sciences do not always have appropriate further education in sociology psychology or a related discipline..
3.10 Teachers delivering social sciences are always trained as nurses.						Teachers delivering social sciences are not always trained as nurses.
3.11 Social sciences and associated nursing skills(e.g. communication skills) are taught within the same module.						Social sciences and associated nursing skills (e.g. communication skills) are taught within different modules
3.12 Boundaries between disciplines (e.g. biosciences, social sciences) are maintained						Subjects are integrated as demanded by the themes of the curriculum.
3.13 There is an element of choice within the course content.						All students must study all courses there is no choice.
3.14 Theory and practice are generally integrated within each course						There are courses designated as theory and courses designated as practice

Section 4 Assessment of Practice

4.1 How is practice assessed? (Please tick all that apply)

- Practice portfolio
- Skills booklet
- OSCE
- Reflective Essay
- Other please specify.....

.....

.....

.....

.....

.....

.....

.....

4.2 How does this assessment relate to courses taught in the CFP?

- one assessment for each module/course
- one assessment contributing to more than one module/course
- unrelated to any particular module

Further information may be added if desired.....

.....

.....

.....

.....

.....

.....

Section 5 Further Contact.

5.1 One of the aims of this questionnaire is to identify case study institutions.

Please indicate below if you would be happy to collaborate further

- I would be happy to be contacted further
- I would not be happy to be contacted further

Appendix Five

Date

Dear Student,

Welcome to the University of Hertfordshire's Nursing Programme. I am writing to ask whether you would be interested in taking part in some research which I am carrying out as part of my doctoral studies.

The research will take place during the forthcoming academic year. I would like to work with nursing students at the University of Hertfordshire and am particularly interested in how what is taught in the classroom is applied in the ward situation. I would very much appreciate it if you would agree to be part of this study.

If you are agreeable I would like to interview you in a group interview situation at the University during the early part of the programme when you will be asked to complete an initial questionnaire. The purpose of the interview at this stage would be to profile you in relation to age, gender, ethnic background and educational attainment. Although this information is not important in relation to individual students it is important that I can demonstrate that the students taking part in the research study are representative of the cohort as a whole. I would also like to interview you individually during the year on two other occasions after you have completed your first and third clinical placements. Each interview would last about an hour and would be tape-recorded with your agreement for transcription at a later date.

I would also like to have access to the diary/blog that you will be asked to keep in relation to the modules addressing nursing science that are delivered as part of your first year studies. With your permission I can access this remotely with no inconvenience to yourself. This material together with the interviews recorded on tape will of course be treated confidentially via the use of pseudonyms for the institution and individuals. I am aware of the amount of work demanded by the nursing course and agreement to be part of this research study will not involve any more time other than I have outlined above.

If you would be willing to be part of this research study would you kindly complete the detachable slip below and return it to me by the end of this week. In the event that there are too many volunteers, students will be selected randomly for participation.

In the meantime I wish you well with your studies and look forward to tracking your progress over the next three years.

Yours sincerely

Lyn Karstadt
Head
School of Nursing and Midwifery
L.Karstadt@herts.ac.uk

Edd Research Study Consent Form

(* Please delete which ever is inapplicable.)

* I am willing / am not willing to be part of this research study relating to nursing students.

* I would / would not be willing to be interviewed as part of a group interview.

* I would / would not agree to complete a questionnaire.

* I would / would not be willing to be interviewed individually on completion of placements one and three

* I give / I do not give my permission for my diary/blog to be accessed by Lyn Karstadt and for entries to be used for this research study.

I understand that the above material will be treated confidentially and will be stored in a locked filing cabinet.

I have the right to indicate when material should not be used for research purposes.

I understand that the material used in this research project will be treated separately and will not affect the assessment of my work during the nursing programme.

I understand that I will be able to put questions to the researcher at any point during the research process.

Your signature:

Date:

Your name:

Your address:

Telephone number:

Email address:

Please complete this consent form and hand in (in the envelope provided).

Many thanks.

Lyn Karstadt

Appendix Six

Welcome instructions to the blogging process that were provided as the blog was accessed:

Hi Anna

Here are just a few instructions to get you going.....

In order to illustrate how students use the information presented within the classroom within the context of nursing practice you are asked, throughout this semester, to keep a journal/blog. The journal/blog should be recorded on a daily basis on StudyNet and this activity should take about fifteen to twenty minutes.

Process of blog keeping:

As close to the end of the day as possible please find a quiet moment to reflect upon your experiences. Your day will have included many different activities and incidents – some of which will have been routine and others of which may have been unexpected emotional or stimulating.

You are asked to select one episode of care that you have been involved in. This may have been alone or in collaboration with a colleague or mentor. As you tell this story think about your role as student nurse in what you were doing. How did you implement (or not) what you were taught in the classroom? Where you used newly acquired knowledge did you recognise this as it was happening or only retrospectively? After the episode of care did you have questions and if you did how did you or how will you find the answers to those questions?

The blog can be as long or as short as you like and can be structured informally to suit you. The most important thing is that you structure it round an episode of care and give some consideration to the knowledge presented in the classroom. I expect that some days you will spend more time talking about the incident itself and other times you may give more consideration to underpinning theory. Do not be afraid to be at the extreme – there is no right or wrong way of doing this. We are all learning together!!

You may use any episode of care. This includes episodes where your primary objective is communication as well as episodes where you approach the client with a particular physical task to complete. It may be an emergency situation or something that happens routinely, like observations. Sometimes you may approach an episode of care knowing that you are going to record it later and others you will not consider your blog or your learning until you look back. You may find it useful to include, in your blog entry, which category you feel a particular experience fits into. If you have a particularly busy or stressful day you may wish to record more than one episode of care. This is fine and as far as I am concerned the more the merrier!!!

If you are unable to attend practice due to, for example, sickness, just put a few words in your blog so that I know what is going on. I will be accessing your blogs regularly – although not necessarily every day and an absence of activity may cause me some concern – so a few words of explanation when you are not blogging would be much appreciated.

Your blog should be recorded on StudyNet. You may find it easier to draft a copy on paper first or you may be happy to write directly onto StudyNet. Whichever you choose, get yourself into a routine and do it every day, it will then become a part of your regular schedule.

Thank you once again.

Remember if you have any questions you can add them to the end of your blog.

To access the blog double click on the group name and then click blog on the red/brown menu bar at the top of the page (directly underneath our names). Then go to new entry on your right hand side

Enjoy your placement!!

Lyn K

mobile 07778 675 473

Illustrative blog entry

Welcome

Thursday by Lyn

Hi Anna

Welcome to your blog. We both have access to it, but I will only make an entry if I need to pass on information or if you ask me to.

I would like you to make entries every day whilst you are on your first placement. It would be useful for me if before you start you could confirm a few details about yourself and your placement - so that I can look at the stories you tell in some kind of context. You can, of course, decline to give me the information if it makes you feel uncomfortable - remember, whatever I ask you to do you can always say no!!

It would however be useful for me to know :

Your age

Your educational qualifications and grades

What you were doing prior to starting the Nursing Programme

Type of ward /clinical area that you have been assigned to

Any other information that you think may be useful to me

Remember, only I have access to this information and I will not share it with your lecturers and whatever you write here will in no way contribute to the assessment of your competence as a student. I would like you to share thoughts and feelings without worrying about what I think. Remember I too am just a student doing a programme.

Can you please acknowledge that you have seen my entry by making your own and if possible giving me the information that I have asked for

Cheers

Lyn K

Day 1

Monday by Anna

I am based in a school for children age 2-19 with severe physical and / or neurological disabilities. Children can board here during the week and receive respite care. 24 hour nursing is provided by paediatric nurses. I was shown around and given information about the placement and then I shadowed a nurse for the day. I watched her administer many different medications mainly orally and watched her feed children through gastrointestinal tubes and feeding pumps.

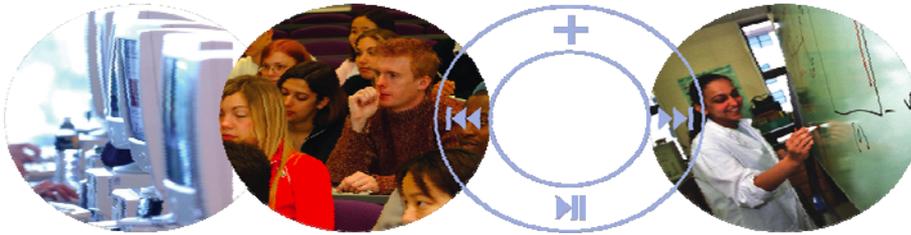
At lunch time I watched her attend an emergency call in the dining room where a girl was choking due to difficulty swallowing. Today this only lasted 3 minutes whereas I was told on Friday this occurred for 40 mins so today the nurses referred her to the school paediatrician with whom she will attend an appointment at the school clinic tomorrow.

I took a urine sample from a child together with a more experienced student nurse and used a dipstick to check levels and it was noted that this was slightly outside the acidic range. However we learnt in bioscience that ranges for urine pH vary depending on factors such as medication and age so when we looked up the normal range for her age it was noted that this was within the range.

We then checked resus equipment as we had learnt in Foundation Skills module. I really enjoyed my first day and it wasn't anywhere near as scary as I expected!

Appendix Seven: Conference presentation: A work in progress

Global perspectives on how nurses use knowledge to underpin early practice



Lyn Karstadt

School of Nursing and Midwifery,
University of Hertfordshire



Sabah Nurses Association
Conference July 2009

The University of Hertfordshire Setting the Context

- UK university
- 20 miles north of London
- 25,000 FTE students
- 2,000 FTE Nurses & Midwives
- Pre-reg & Post-qual
- Campus based and on-line u/g and p/g programmes
- University wide MLE since 2001 (StudyNet) with personal portals for all staff and students



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Pre-registration Nursing Programmes in the UK

- Diploma/Degree level study
- 4,600 hours of student effort
- 2,300 hours theory & practice
- 750+hours of practice in year 1
First practice within 3 months of commencement
- Legitimate peripheral participation
- Students not a part of the workforce
- Student as a part of the healthcare team



Locating this study in the literature

- Towards a Theory of Educational Transmission, Bernstein(1971)
Collection v Integrated Curriculum
- Learning as a Constructive Activity, Glaserfeld (1990)
Knowledge is constructed rather than discovered
- Integrated Knowledge Development in Nursing,
Chinn& Kramer (2004)
The Science of Nursing or Empirics
- From Novice to Expert, Benner (1984)
The application of Nursing Science in Practice
- Learning as Transformation, Mezirow & Associates (2000)
Transformation v Information
- Becoming Critical, Carr & Kemis (2002)
Dialectic process of reflection, enlightenment and political struggle

How nurses use knowledge to underpin early practice

Aim of the Study:

The Blogging Study phase of this research aims to:

- Review and investigate how learners perceive and participate in early practice experiences and connect this to the theoretical concepts presented in the classroom
- Help teachers to design and evaluate the impact of sessions that support a wide range of practical situations, meeting different learner needs and enabling positive learning experiences



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The Sample

- Students undertaking first practice experience within the pre-reg programme
- 16 students –agreed to keep a blog
 - Daily entries
 - ? Follow up interview
- 10 students participated
 - Two cohorts – differing interactions
 - their personal reflections
- Blogs commented on:
 - One episode of nursing care each day
 - Recognition by student of use of theory presented in the classroom



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Methodology

- Student volunteers reflect on their learning
 - Daily blog entry,
 - Centring on one episode of care each day
- Blogs visible to individual student and to the researcher
- Student interviews
 - Field notes
 - Transcription
- Early analysis identified two main themes



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The Process

- Student log into StudyNet (MLE)
- Selects Module that takes them to blog link
- Review previous bogs or create a new one
- Makes blog entry
- Entry submitted and visible to student and researcher



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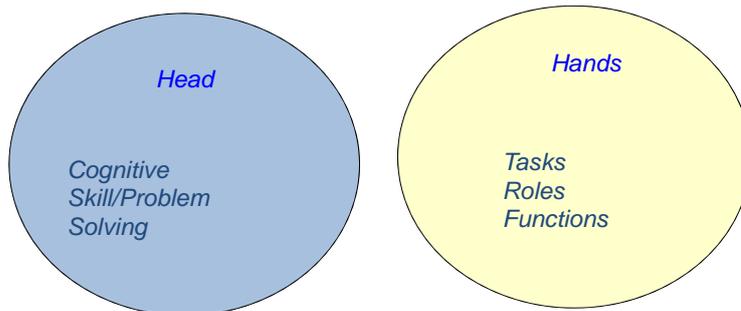
University of Hertfordshire

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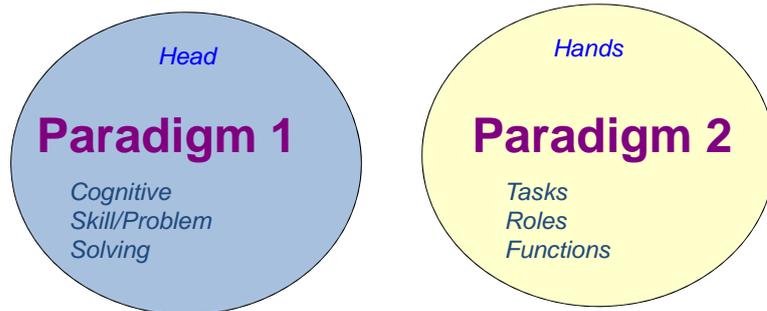
What the students blogged...

- Diverse choices of episode of care dependent upon personal choice and availability of experience
- Blog length varied from one paragraph to more than a page, varying from student to student and from day to day
- A blurring of informal and academic uses of language
- Most students did not blog every day
average number of blogs 12 over 20 days
- I interacted from time to time to reassure student that I was receiving content & encourage students to continue

Early analysis



Were these really two separate views of the world?



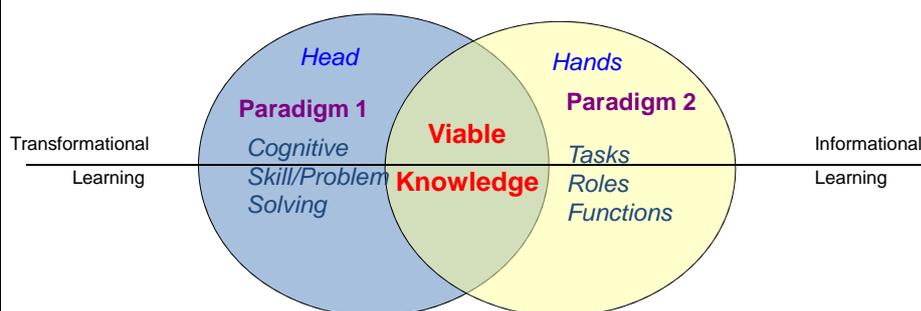
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Nurses need both cognitive ability and skills –
Viable Knowledge

(Glaserfelt 1990)

In order to support both sets of outcomes two
types of learning are required

(Mezirow 2000)



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Blog entries indicating a change of perspective

.....hiding a little boys feet in the sand pit. Although he was only 2, & did not speak much his body language and his facial expression said it all,.....To relate to lectures it is true that children have the right to give consent..... His body language said it all, he was happy for me to bury his feet in the sand.

.....she seems to be 'labeled' already.....
.. taught me, that something so simple can be so rewarding... reflects on lecture that we have had in university core knowledge and DRE.

.... As I was not experienced working with special needs children it was good for me to observe how they interacted.

. ...I explained to her what I am going to do and how i am going to do it.....

I realized that I had not really considered this part of Bert's life at all and had not thought about what made him tick before he was here. This made me feel quite guilty.

Blog entries indicating other use of information

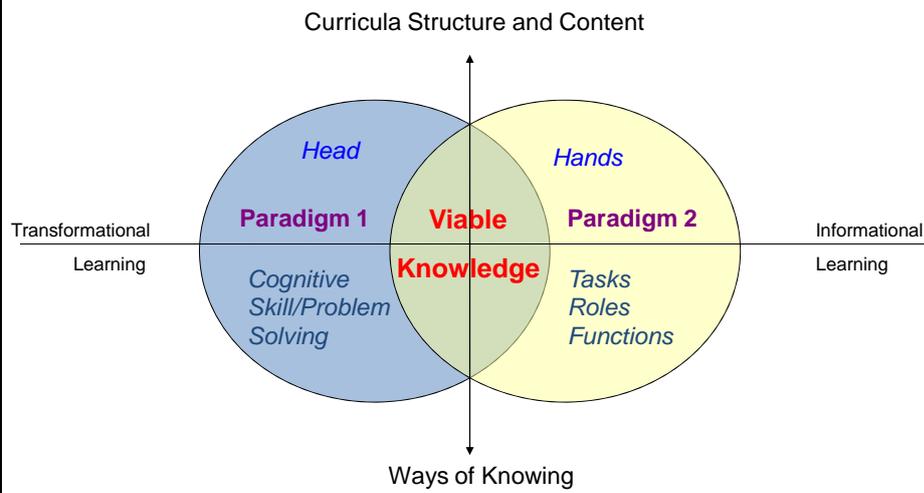
One of the patients had recently been diagnosed with pernicious anaemia so the district nurse was administering vitamin B12 injections.

.... watched a diabetes video .. was helpful that we had already studied this in biological basis of nursing practice module so understood terms....

This was useful and I could relate it to what we did in the bio lectures where we talked about stoma meaning mouth and the different bits of intestine that might feed into a bag.

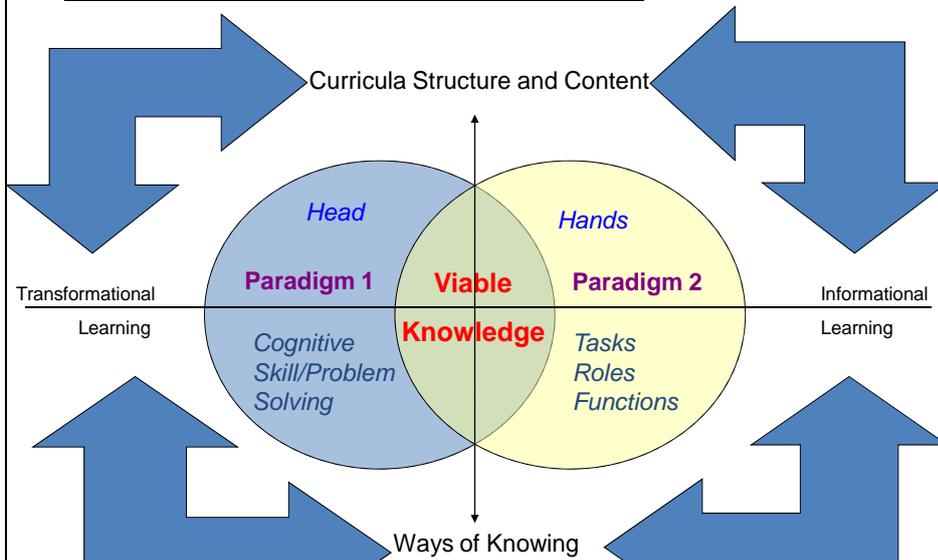
..... I learn about Nissens Fundoplication as quite a few of the children have had this what it was, but mostly I can do this using what I have learnt in Bioscience sessions.

Implied importance of curriculum structure



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Model constructed to represent findings of blogging study



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Reflections on global perspectives:

- Window into the students world
- Straight from the 'horse's mouth'
- Allowed the construction of the recursive model presented
- A model recognised by educators in UK
- Model reliant on the students exposure to practice

Where to next:

- UK on the brink of all graduate nurse education
- What will this mean for programmes
- ?maintenance of 2,300 hrs of practice
- What if the practice were reduced
Would the model still apply
Look at the experience of others
- Recommendations for future policy based on evidence, on real life experience