Practice learning and nursing education: rethinking theory and design

Submitted for Fulfilment of the Degree of PhD by Publication

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Declaration

I declare that this thesis is entirely my own work and has been submitted only for the degree of PhD by Publication in the University of Stirling.

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Abstract

The significant influence that practice learning plays within undergraduate nurse education cannot be overstated. By practice learning, I mean work-based learning immersed in the activities of nursing practice, typically involving learning undertaken in placements at hospitals and other clinical worksites. Practice learning is intended to achieve standards defined by professional regulatory bodies, and aims to enhance learners' capability and employability. Learning here refers to processes through which student nurses develop capabilities to practice effectively, critically, confidently and professionally in health care settings. Practice is a key concept in this thesis, much contested in debates about professional learning in practice which I will examine in detail in chapter 2.

In terms of current policy regarding practice learning, I would, however, suggest that what we have at the moment is an inherited legacy which to date has not been robustly scrutinised. Based on my experiences as a nursing educator I came to believe that it was timely for a re-examination of policies, practices and philosophies underpinning the duration and structure of the current practice learning model.

Taken together, the above experiences led me to focus this thesis on the following research question:

How might practice learning experiences be better designed to promote nursing capability?

This thesis brings together six published papers reporting studies that I conducted to explore this question, as well as chapters explaining the background literature, theory and methodology guiding these studies. My overarching aim is to contribute to the improved practice learning experiences of undergraduate student nurses, retaining them on programmes and easing their transition into the role of newly qualified practitioners (NQP).

Chapter 1 charts the history of nursing educational developments. The aim is to demonstrate the influence of government and professional policy over nursing's development from an apprentice-style model to the current-day academic model. In charting these developments alongside reviewing the contemporary research literature, what is obvious is that the issues of support, retention, models of practice learning and

curricula to prepare nurses are perennial challenges. However, as a practice-based discipline, the focus of preparation has always remained grounded in practice.

Chapter 2 sets forth the theoretical constructs of this thesis. During the course of conducting the studies reported in the publications of this thesis, I became frustrated with the relative lack of emphasis on contemporary learning theory in nursing education, and the paucity of supporting evidence for the 'reflective' theory that seems to be dominant in nursing. The discussion presented in this chapter aims to provide an overview of the major traditions of constructivism and reflective practice, as well as their historical theoretical foundations, which have been widely adopted in nurse education. I discuss the strengths and limitations of these theories as they apply to undergraduate nurses' practice learning and capability development. These are then contrasted via the means of a critical discussion with more novel alternative models. These include situated learning theory and legitimate peripheral participation, and practice-based learning theory as advocated by contemporary writers such as Schatzki (2002). These theories changed my thinking about practice learning and informed my efforts to develop a more cogent understanding of learning through, for and at work for undergraduate nurse education.

In setting out Chapter 3, I am presenting a brief overview of these publications for a nursing education audience. Firstly, I have included information that is generally considered important to this audience, such as details about the journal's standing and article citations, the databases searched, and the percentage of my own contributions. Secondly, I report the studies from an evidence-based perspective of prediction and control aligned with the contexts of the commissioning process and the conduct of each project. By this I mean that I treat the findings in these papers as valid and credible within the stated limitations

Chapter 4 presents the six publications in their entirety for the reader

Chapter 5 explains the research methodology adopted in the papers presented for this thesis, and offers my critical reflections on these methodologies. I outline the philosophy that underpins the approach taken with the research studies, discussing the interpretive stance that was taken to research and the consequent choice of qualitative approaches. The chapter also discusses the strengths and limitations of the methods employed in each of my papers along with the means used to analyse the data, and the ethical considerations that an interpretive researcher must consider. In retrospect, given where

my theoretical orientation has moved (as explained in chapter 2), I now look rather more critically on the premises of these studies, their categories of definition, multiple causes and uncertainties at play. In my reflections on the research approach, I explain some of these issues.

In concluding this thesis, Chapter 6 details my recommendations and some future implications for policy and practice. It also explains my plans for carrying forward different methodological and theoretical approaches in my future research work examining nurses' practice learning.

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Chapter 1 Setting the Scene

1.1 Researching practice learning: why my interest?

This thesis developed from a gradually increasing awareness of the significant influence that practice learning plays within undergraduate (UG) nurse education. By practice learning, I mean learning which is intended to achieve standards defined by professional regulatory bodies. This includes learning which is work-based, undertaken in placements and which aims to enhance learners' capability and employability. Learning here refers to processes through which student nurses develop capabilities to practice effectively, critically, confidently and professionally in health care settings.

However, through reviewing the contemporary research literature what is obvious is that the issues of support, and how best to model support in practice for UG nurses requires further exploration (Roxburgh 2012, Holland et al. 2010). Linked to support is the issue of retention within our UG programmes and how UG nurses can be retained on programmes through to completion and employment (Cameron et al. 2011). The current model of practice learning may be described as 'a series of placements that have no defined connection between them other than providing exposure to a range of patient groups and services' (Roxburgh et al. 2012 p783). Several limitations of this model have been identified. Holland et al. (2010) noted that the current approach is planned and managed predominately in response to placement availability. Practice allocations are not within the students' control (Campbell 2008) and placements are frequently short and perceived as disconnected from each other rather than as part of a sequential process (Lauder et al.2008). The overall curricula to prepare nurses i.e. practice learning context and the classroom environment are vital elements of any undergraduate program. The challenge is how they can best be designed to complement each other to develop capable practitioners.

This thesis provides a record of a journey that I have undertaken, from the time I became concerned about the gaps and limited theory guiding practice learning in nursing education. I embarked on a series of studies to examine these problems, resulting in the six papers, now all published, that have been submitted to form the core of this thesis.

Nursing, traditionally, has focused on the need to develop competence and skills in practitioners. However, the concept of competence is elusive and somewhat controversial

(Watson et al. 2002). The main distinction between definitions of nursing competence remains between that of a behavioural objective (Eraut and du Boulay 1999, Winskill, 2000),which is also perceived as performance (While,1994) and that of a psychological construct including cognitive and affective skills, the latter being less easy to measure (McAllister 1998, Chapman, 1999).

The question of the competency or perceived competency of NQP has been the single most important driver in FFP curricula (Lauder et al. 2008). However, the competence-based approach to curricula design has been criticised. Ashworth and Morrison (1991) warned that this strategy was flawed and ill-conceived. Furthermore authors such as McAllister (1998) and Chapman (1999), have raised concerns as to whether competency standards are appropriate to nursing practice, as they may have the potential to be reductionist, positivist and focussing on outcome orientated technical procedures. Furthermore, there is acknowledgement that competencies are designed for practice in stable environments with familiar problems (Phelps et al. 2005). I believe that nursing practice requires the application of complex combinations of knowledge, performance, skills, values and attitudes. Hence, my focus on capability rather than competence.

Capability has been identified as a key component of Scotland's nursing, midwifery and allied health professions' action plan, Curam (Scotland Cares) (Scottish Government Health Directorates 2008). Early work by Davis and Hase (1999) demonstrates that capable people have higher levels of self-efficacy, are considerably more innovative and they know how to learn.

Capability, I argue, goes beyond competence to include the ability to apply knowledge, skills and attitudes across a range of complex and changing situations. Capability builds on existing competencies as a continuum that embraces complexity as a mode of practice (Cairns 2000, Phelps et al. 2005). Capability according to Stephenson and Weil (1992) is a continuum moving from the familiar to the unfamiliar. Cairns and Stephenson (2009) suggest that broadly, capability 'is central to people being comfortable and able to cope in facing unfamiliar problems in unfamiliar situations' (pg. 5).
This, I believe, is a necessary prerequisite for nurses when considering the daily challenges faced in practice.

Practice is a key concept in this thesis, much contested in debates about professional learning in practice which I will examine in detail in chapter 2. In summary, I work with a

concept of practice based upon the work of Schatzki (1997). That is, practice is a 'nexus of doings and sayings organised by understandings, rules and teleoaffective structures' (p3). That is, practice does not occur in isolation, rather it consists of interactions and dialogue, all of which takes place in a complex and changing environment.

My first substantive foray into undergraduate nurse education research was as part of the UK-wide team who conducted Scotland's largest evaluation of nursing and midwifery preparation: *Nursing and Midwifery in Scotland: Being Fit for Practice* (Lauder et al. 2008). It was during the focus groups and interviews with students, mentors and managers that I became aware that there was great variation between Scotland's Higher Education Institutions (HEIs) in where and how students were placed, and, more importantly, how students were being supported in practice learning. Recurrent stories by students told me how some placements are perceived to be 'good' and others 'bad'. These accounts made me aware that prior to this study I had given little consideration to this aspect of nurse education, reflecting a view prevalent in UK nurse education that saw this aspect of preparation as ultimately the responsibility of the NHS as placement provider.

Between 2008-2010 I was part of a Scottish team who conducted an *Evaluation of Flying Start NHS™* (Banks et al. 2010). Flying Start NHS™ is a national role transition programme set up by the Scottish Government and NHS Education for Scotland in recognition of the challenges and on-going support needs for Newly Qualified Practitioners (NQP). Paper 4 in this thesis, entitled *Early findings from an evaluation of a post-registration staff development programme: The Flying Start NHS™ initiative in Scotland, UK,* provides further detail of the structure and content of the programme. One objective of the Flying Start NHS™ programme is to reduce attrition rates of NQP within the Health Service. During this study, practice learning environments and support were the two major areas reported by NQP as being problematic for them in easing the transition from student to NQP. In relation to the aim of reducing attrition from the NHS and retaining NQP, this study reported that the vast majority of students were intending to seek employment in their chosen profession. However, a small but important number indicated they were not sure that they would remain in, or that they may leave the NHS (Roxburgh et al. 2010).

In addition, as an academic mentor to under-graduate student nurses, my experience over 10 years is that many students face difficulties and experience stress in progressing their Nursing and Midwifery Council (NMC 2010) standards of proficiency. This may be linked with the perceived disconnected nature of their practice learning experiences, or possibly the students not being sufficiently 'inventive' in their interpretation of practice learning

situations. Students frequently report that the focus of their practice learning is primarily on completion of the practice assessment documentation and in ensuring as many learning outcomes and skills are 'signed off'. The rationale offered for such a focus has been illuminated by students where they have perceived some practice areas as being limited in learning opportunities, for example, operating theatres and Intensive Therapy Units (ITU). I believe the current practice learning model framed by offering 'surgical', 'medical' 'community' or 'management' experience may serve to confine the learning experience, narrowing the students' perceptions of the learning opportunities. It seems to me that alternatives to this framework could be, for example, following the patients' journey from entry to exiting the healthcare system. This could offer a more rounded and informative learning experience for the student.

Further sources of dissatisfaction reported to me by students stem from their perceptions of not having enough time to work directly with their clinical mentor, and that often other members of the clinical team seem reluctant to carry out the practice assessment as they have not built up a clear picture of the students' capabilities. From the students' perspectives, there also appear to be issues with how mentors who support students during practice learning interpret and assess the students against the NMC (2010) standards. Much of this may be related to the relatively short time students have within their practice learning experiences with the current model.

When I took the time to consider and reflect systematically on the matter, I realised that over the years, both as a practicing nurse and later as an academic, that the support of pre-registration students in the practice setting and the facilitation of their learning have been perennial issues for debate at least in the last two decades, for both Scotland and the UK respectively. The ways in which theoretical and practical components are combined, what are the most effective methods of teaching and assessing practical skills, who is best placed to undertake this, and what characterises a positive and supportive practice learning environment are just some of the challenges that I and other nurse educators have witnessed and been involved in addressing.

There is an extensive body of literature on these diverse issues and their impact on practice learning (Kilcullen 2007, Papastavrou et al. 2010, Roxburgh et al. 2012). This is mirrored by a further amount of literature which has explored how academic settings can best prepare students to maximise their learning during practice (Levett-Jones and Lathlean 2007, Levett-Jones et al. 2008, Pryjmachuk 2009, Roxburgh 2014). However, implicit in this literature are two key premises: a) that what constitutes a good practice

learning environment is known, and b) that the current theory/practice split-model works. Unfortunately, as this thesis will discuss, both premises may be untenable.

What I had come to realise through my encounters with students and NQP during these projects was that both the practice learning context and the classroom environment are vital elements of any undergraduate program. The challenge is how they can best be designed to complement each other. I was also aware that although there have been significant developments in practice learning models over the last 20 years, I continually heard concerns from colleagues, mentors and to some extent students about the 'capacity' for placement areas to accommodate students adequately. From the student perspective it appears that the overall perception of the quality of their practice learning experience is related to their time spent with the mentor, the quality of that relationship and the duration and location of the practice learning environment (Roxburgh 2014). In terms of current policy regarding practice learning I would, however, suggest that what we have at the moment is an inherited legacy which to date has not been robustly scrutinised. Based on my experiences I came to believe that it was timely for a re-examination of policies and philosophies underpinning the duration and structure of the current practice learning model.

Taken together, the above experiences led me to focus this thesis on the following research question:

> *How might practice learning experiences be better designed to promote nurses' capability?*

My overall aim is to contribute theory defining practice-based learning in nursing contexts and to foundational knowledge about practice placements to inform policy and pedagogy in nursing education. Through this contribution the intention is to improve practice learning experiences of undergraduate student nurses, retaining them on programmes and easing their transition into the role of NQP.

The remainder of this chapter will chart the history of nursing educational developments. The aim is to demonstrate the influence of government and professional policy over nursing's development from an apprentice-style model to the current day academic model. In charting these developments alongside reviewing the contemporary research literature what is obvious is that the issues of support, retention, models of practice learning and

curricula to prepare nurses are perennial problems. However, as a practice-based discipline, the focus of preparation has always remained grounded in practice.

1.2 A brief overview of nurse education's journey – 1860 to the present

Originally, nursing students were prepared for practice through the apprenticeship system, based on that initially developed by Florence Nightingale in the late 19th Century (Bradshaw 2000).Her model of training nurses was known as vocational training. Vocational training involved trainee nurses being given accommodation and free uniforms in return for providing the service needs of hospitals (Nightingale 1898). Entry to these programmes was by private negotiations and training lasted for two years (Dingwall et al. 1988). Vocational training was predominately carried out in the clinical setting of wards, under the direct supervision of a trained nurse, where the major and most important part of this training was the clinical component: learning by doing and learning by trial and error were key features of these courses (Dingwall et al. 1988). The theory element of the course was limited. When trainees were taught theory, it was when the hospital could accommodate time out or the trainees attended when they were off-duty.

What is notable today is the difference in the language used to describe nurse preparation. Back in 1860, the term 'student' was not used and the talk was of 'training' rather than 'educating'. 'Trained nurse' was the term used to describe a nurse who had completed her course as' at that time' the Nurses Registration Act had not yet been established. The Nurses Registration Act came into force in 1919 and the General Nursing Council (GNC) was established with the responsibility of setting up a register of nurses. The GNC introduced minimum entry qualifications, set a minimum age of entry, and prescribed a minimum length of training (3 years). At the same time, state examinations were introduced. However, trainee nurses remained hospital employees funded by Hospitals. In 1930, due to a nursing shortage, a 'second level' of nurse training was introduced. Enrolled Nurse (EN) training, a two-year training programme, was designed to provide practical bedside care to patients in order to free up the Registered Nurses to provide the more technical aspects of nursing (Lauder and Roxburgh 2006). Similarly, Clinical Teacher roles were developed and implemented. The key purpose of this role was to work alongside, support and assess student nurses in practice. The EN training programme ceased in 1996 with the move of nurse education into HEIs as did the clinical teacher role.

In 1938 the Ministry of Health Board of Education (Athlone Report) called for trainee nurses to have student status similar to their medical student colleagues. This was 'considered' in the response by the College of Nursing (1938) (later to become the RCN). In 1947 the Ministry of Health, Department of Health for Scotland and Ministry of Labour and National Service (Wood Report 1947) stated that trainees should have full student status and be supernumerary to the ward staff during their practical training. However, neither the General Nursing Council (GNC 1948) nor the Royal College of Nursing (RCN 1948) supported these suggestions. Numerous reports followed: the Royal College of Nursing and National Council of Nurses of the United Kingdom (1964) (Platt Report) stated that the reconstruction of the existing training model was essential. Concerns were being raised about recruitment and retention of trainees. Further problems were identified with maintaining sufficient registered nurses within the workforce. The main recommendations were that first, the trainee should be a student and not a hospital employee and second, that the student should be financially independent from the hospital and eligible for grants from the Local Education Authority. In response, the GNC criticised the report for moving nursing away from its vocational ethos.

The Briggs Report (1972) was a review of the role of the nurse in the hospital and community. Briggs recommended that nursing should become a research-based profession, and that all trainees should commence an 18-month foundation course leading to a certificate in nursing. A further 18 months would allow for registration in a particular branch of nursing (Adult, Mental Health, Learning Disability and Children's nursing). In 1979 a number of the recommendations from the Briggs Report (1972) were implemented, shaping the basis for a new Nurse, Midwife and Health Visitors Act (1979). The passing of the Act through the House of Commons laid the foundation for the move away from the vocational tradition of nursing (Bradshaw 2001). With the passing of the new Act, the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) was established which superseded the General Nursing Councils. The UKCC's key functions were to keep a 'live' register of all registered nurses, midwives and health visitors, deal with professional misconduct complaints and provide guidance to registrants. In tandem, each of the four UK countries had National Boards established. Their main functions were to maintain records of students on courses and ensure the quality of education programs.

In 1985, the Judge Report commissioned by the Royal College of Nursing strengthened the argument for nurse education transferring into higher education (Commission on Nurse Education 1985). The commission raised a number of concerns regarding high attrition rates, educational needs being secondary to the needs of the hospital and the numbers of

students trained staff were required to supervise. A key concern was the number of students failing the qualification criteria for entry to the register. However, it was not until the 1986 publication by the UKCC of 'Project 2000: A New Preparation for Practice' that fundamental changes were instigated. The main recommendations were:

- A three-year programme with a common foundation programme of two years and one year in branch. The programme leading to a Diploma in Higher Education. Today this has changed significantly as in 2012 nurse education moved to all degree programmes.
- Branches to include midwifery, adult, children's nursing, mental health nursing and learning disability nursing. Currently in Scotland these branches have changed in that Learning Disability Nursing (LD) and Midwifery have moved to a disseminated model whereby in this model not all HEIs provide these programmes; rather, they are delivered through one or two central points for the theory element of the programme but the practice element is delivered in the local Health Board.
- Enrolled nurse training to cease.
- Full student status with no contribution to rostered service (however, this was amended after a long period of consultation to allow for a 20% student contribution to service due to the high cost of student status and the relative shortage of qualified nurses in clinical areas). With today's current programmes this recommendation is still adhered to.

1.2.1 Project 2000 model of preparation

As can be noted from this brief overview of nurse preparation, nurse education has undergone major changes. This is most notable in the early 1990s, when nurse preparation moved from the vocational model, where student nurses were employees of the National Health Service (NHS), to a university-based model (UKCC 1986).

Alongside the move away from a vocational model of nurse education was the introduction of a curriculum known as Project 2000 (P2K) (UKCC 1986). The UKCC saw the implementation of this programme as a way to intertwine both theory and practice. Student nurses would now be recognised as learners rather than employees and would be supernumerary whilst on clinical placement. P2K curricula aimed to produce 'diplomats' who were 'knowledgeable doers', capable of accepting responsibility, thinking critically and analytically and who were prepared to engage in 'life-long learning'. However, many of the major studies of P2K reported that students on completion of the programme experienced

role stress and lack of preparedness for their new role as qualified nurses, and required high levels of support to make the transition to newly qualified, competent, confident practitioners (Gerrish 2000, May et al. 1997, McLeod-Clark et al. 1996). A narrative began to emerge that suggested P2K nurses were 'too posh to wash' (Hall 2004) and that newly qualified nurses were insufficiently skilled (Lauder et al. 2008). Such perceptions were explained as the consequence of issues related to a change between theory and practice in the 'new' programs. Prior to P2K curriculum, 80% of the programme was allocated to clinical practice learning. This was reduced to between 30 - 50% with the introduction of P2K. Of note, however, is that there was no substantive evidence to show that P2K students were any less competent or confident than those trained in previous programmes' pre-P2K nurses. With the introduction of the P2K curriculum, concerns regarding students' competency on completion of training gained greater prominence (Mallik and Aylott 2005).

1.2.2 Fitness for Practice model of preparation

Irrespective of the validity of the concerns expressed, an examination of P2K by the UKCC (1999) and Department of Health (1999) resulted in the culmination of two reports; 'Making a Difference' (DOH 1999) and 'Fitness for Practice' (UKCC 1999). These guidance documents provided recommendations which aimed to strengthen nurse education in the UK and were complimentary to the original P2K curricula. Sir Leonard Peach was commissioned to review and examine pre-registration nurse education and, based on the recommendations received (UKCC 1999), the then United Kingdom Central Council (UKCC) developed the Fitness for Practice (FFP) curriculum. The underpinning philosophy of FFP was that nurses would be prepared for practice based on contemporary and anticipated healthcare needs. This, it was stated, would be a 'practice-led' curriculum. By this I mean that the NHS would have a greater input into the curriculum content to ensure currency and relevance to healthcare needs.

The key changes associated with the introduction of the FFP Curricula were:

- Common Foundation Programme (CFP) to be reduced to 1 year
- Higher Education Institutions (HEI) and National health Service (NHS) Partners shared equal responsibility for the selection and preparation of student nurses
- Practice placements should achieve agreed outcomes, which benefit student learning and provide experience of the full 24-hour day nature of health care.
- A period of supervised clinical practice of at least 3 months towards the end of the programme

- All newly qualified registrants to receive a supported period of induction and preceptorship when they begin employment
- There should be an expansion of graduate preparation.

Kenny (2004) claims that the Fitness for Practice (FFP) movement was best seen as a lever for Government-led change. FFP became the UK Government's driver for changes in nursing and midwifery education as a response to what Kenny calls the failure of Higher Education Institutions (HEI) to deliver skilled practitioners for the modern healthcare system. One could argue that claims about HEI having failed are overdramatic (Watson and Thompson 2001), but nevertheless, the perceived need to respond to concerns in the profession about clinical-relevancy appears to have been an important driver in the policy development process. FFP directly emerged from concerns about the fitness to practice of the P2K undergraduate curricula and was proposed as the solution, which would introduce students to clinical skills in a more comprehensive fashion with an emphasis on early exposure. Fitness for Practice (FFP) (UKCC 1999) continues to provide the foundation for current nurse education. FFP was introduced in 2002. FFP imposed a requirement of 50% theory and 50% practice learning (NMC 2010, UKCC 1999) and has a clear outcomes-based competency focus, with accreditation for both theory and practice components defined. It is important to note at this point that the UKCC was superseded by the Nursing and Midwifery Council (NMC) in 2002 with the four National Boards disbanded. The NMC took over the responsibilities of the UKCC and the four National Boards.

1.2.3 The present day

Following a UK-wide consultation undertaken by the NMC between 2007 and 2009, it was decided that nursing and midwifery should move to an all-graduate profession by 2013 (NMC 2010a). The rationale for the move to an all-graduate profession included the following assumptions:

- The numbers of degree-educated nurses had been increasing steadily over time, and some countries of the UK already offered degree programmes.
- Some suggestion that nurses who are educated to degree level may be able to demonstrate analytical and problem-solving skills at a higher level.
- Many people believed that raising the minimum level of nursing education to degree level would bring the UK in line with other countries and, importantly, with other health care professions. This could enable more inter-professional learning across pre-registration programmes (NMC 2010a).

Findings from the consultation revealed a significant level of support for retaining four specific fields (previously referred to as branches) of nursing; adult, mental health, learning disabilities and children's nursing. Equally, many people thought that continuing with this approach could narrow the focus, restrict innovation and hamper joined-up care. Furthermore, there was significant recognition of the need to modernise the way nursing students learn. A widely held view was that, while future nurses required having the specialised skills to care for particular patient groups, they must also have the knowledge and skills needed to provide core care to all patient groups (NMC 2010a). This, I argue, has implications for practice learning modelling. The current practice learning model, as discussed earlier, does not lend itself to meeting these aims due to its random nature and, in some cases, practice learning experiences of a short duration: the perception is that students go to a placement for surgical or medical experience. To address these needs, one solution is to design practice learning experiences that follow the patient journey rather than short, sharp exposures. By patient journey I mean a person's health trajectory or the patient's journey through the healthcare system.

In September 2008, the NMC made a number of decisions concerning the future framework for pre-registration nursing education. Some of these decisions were informed by the Tuning Project*. Table 1 details these decisions.

Table 1: The TUNING Project decisions

In future, programmes would have a blend of generic learning and learning which is specific to the nurse's chosen specialism (now known as field) with the proportion of field-specific learning increasing over time. The generic and field-specific aspects of the programme will be combined to allow shared learning between fields. There will also be opportunities for shared learning with other healthcare professions. These will give students a chance to meet the required generic and field competencies in a wide range of practice settings, in all places where nurses deliver care including walk-in clinics, GP surgeries and people's own homes. To meet the competencies, there are specific skills that nursing students should be able to demonstrate. These are included in the Essential Skills Clusters (ESCs) and they form part of existing programmes. For new programmes, ESCs will be used in a similar way and should be met at various points in the programme. New programmes will still be at least three years' long, with half the time spent learning how to give direct care in practice settings. There will be two progression points. Normally, these will separate the programme into three equal parts, and each will have specific criteria that must be met before a student can move from one part to the next. For progression point one, students will have to meet criteria for basic care and safety, as well as demonstrating professional behaviours expected of a nursing student. For progression point two, programme providers must set learning outcomes that allow the student to demonstrate an ability to work more independently, with less supervision, in a safe and increasingly confident manner *(From NMC 2010b)*.

A key premise underpinning these changes is that degree-level nurses will be able to provide an improved standard of care. However, a criticism I have of these decisions is that there is a lack of specificity regarding how practice and capabilities are understood and how these will be developed. Furthermore, there is no reference offered as to what

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**TUNING Educational Structures in Europe started in 2000 as a project to link the political objectives of the Bologna Process and at a later stage the Lisbon Strategy to the higher educational sector*

pedagogies and conditions will constitute the practice learning experience of these nurses' capabilities, and what is the rationale for decisions about the structural design of these practice placements. In essence, as with most NMC curricula decisions, these demonstrate the continuing reliance on individualistic models of learning which still do not acknowledge the complex nature of practice and the distinct dynamics of student participation in practice.

Regulation of nursing and midwifery preparation is very much Anglo-centric, which is, in being regulated by the NMC, London-based. Scotland, however, has a unique system of devolved government. The majority of pre-registration nursing places at Scotland's universities are controlled, funded and commissioned by the Scottish Government Health Directorates (SGHD). The funding for the commissioned nursing provision is directed through the Scottish Funding Council (SFC) via a ring-fenced grant from the Scottish Government's Health budget. The Scottish Government also provides funding to cover fees and a means tested bursary for all eligible students on a nursing or midwifery programme leading to registration. However, Scottish Nurse Education and their curricula must align with the UK model, even where Scotland has different patterns of Health and Social Care needs from the rest of the UK. For example, the direction of health and social care policy in Scotland is firmly rooted in developing services that are primary care-based and focused on health improvement. Yet the study 'Nursing and Midwifery in Scotland: Being Fit for Practice' (Lauder et al. 2008) demonstrated that students' practice placements still tended to reflect a secondary care, illness-orientated focus.

1.3 Summary

As can be noted from this brief historical review of nurse education preparation, many of the challenges faced today are not new. As a practice-based profession, the focus of preparation has been, and still remains, firmly rooted in practice. However, some significant changes for the better have come about. One is the recognition that student nurses, when part of the 'rostered' workforce, are making a significant contribution to meeting the needs of the hospital at the expense of their own educational needs. Student nurses now have supernumerary status and all the benefits which go with this. Arguably, however, the most significant change evident from the implementation of the P2K curricula is that educating the mind has been given an equal standing with producing skilled practitioners. All programmes now have an equal balance of practice and theory: classroom-based delivery of theories related to nursing, such as anatomy, and clinically-based opportunities to practice nursing skills in situ. However, the introduction of P2K was

associated with a resurgence in criticisms that newly qualified practitioners were not being prepared adequately for their roles and required high levels of support to make the transition to competent, confident practitioners (MacLeod-Clark et al. 1996).

Issues around role transition and 'preparedness' are discussed and explored under sections 1.4.7 and 1.4.8 and in paper 4, *Findings from the early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start NHS™'* and paper 2 *'Fitness for Practice in Nursing and Midwifery education in Scotland, UK,* which form part of this thesis.

Throughout time, the issue of high attrition rates have been a long standing concern in the profession. Today student nurse education in Scotland is funded by the Government. In the current economic climate every student lost to a programme is costly, both in economic terms and in reputation. Each student lost to a programme also has implications for future workforce planning. Further explorations of the reasons for such high attrition are discussed later in this chapter and in paper 3, *An integrative literature review of student retention on programmes of nursing and Midwifery Education: Why do students stay?* in this thesis.

Nurse education can be suggested to have come full circle from the Nightingale days. The value placed on practice learning has shifted during the course of history. As noted earlier, Nightingale's training programme was very much a practical hands-on approach with little emphasis placed on the theoretical underpinnings of care. The P2K programme was perhaps the culmination of a shift in the opposite direction with its emphasis on theory and its focus on producing knowledgeable doers. Current programs attempt to square the circle with an overtly increased emphasis on the practical element while still retaining a strong theoretical underpinning. However, practice learning remains to be, as this thesis illustrates, a problematic issue for students today.

The following section will explore in more detail the difficulties and challenges students face whilst on practice learning experiences, as reported in the UK and international literature.

1.4 Practice learning for nursing education in the UK

Graduate nurses are required to have adequate knowledge and skills and to be able to translate competencies into effective performance (NMC 2010a). Practice learning is an essential part of the undergraduate nursing curriculum in attaining effective, competent practice and accounts for 50% of the current nursing programmes in the UK. The nature and quality of the practice learning environment and the student nurses' experience of their practice learning are recognised as being influential in promoting the integration of theory and practice and, ultimately, in developing nursing capability. It is during their practice learning that students are required to develop the relevant knowledge, skills and competence (Chan 2002), to develop their capacity for 'knowing how' as well as for 'knowing that' (Cope et al. 2000, Dunn et al. 2000) and to expand their perceptions of their future role as a registered nurse.

The following sub-sections discuss the nature and purpose of practice learning, examine alternative models, and explore its key aspects. They will also critically explore potential solutions to identified problems that may enhance the students' experience in practice, such as support structures, and how these can positively or negatively influence students' motivation to learn in practice, or even to remain in the programme.

1.4.1 Nature and purpose of practice learning

The nature and purpose of practice learning is in part conveyed through the language that is used to describe it. Clinical placement, clinical practice experience, clinical practicum, and practice learning are some of the terms used to describe the placement of a student within a clinical venue such as a hospital or community care setting in order to support an aspect of experiential learning (Gray at al.2011) . The typical use of the term 'placement' creates an image of a physical location or professional team, which the student goes to and remains within for a period of time. It suggests that student learning is about and within the boundaries of that location or the team; in a sense, this limits the student experience (Roxburgh et al. 2012). This delineation of practice learning reflects much of the literature in nursing education, which focuses on how to structure the placement, and debates the length of placements (Lauder et al. 2008) as opposed to exploring comparative pedagogies for supporting student activities and promoting learning. Contemporary practice learning, particularly in the context of 'supernumerary' status, should be a flexible system within which the student is facilitated to pursue meaningful

learning experiences that are person-centred and that span health and social care services and beyond in conjunction with patients' journeys (Roxburgh et al. 2012).

The length of time students need in practice and the quality of that time is a recurrent theme in the nursing literature and was commented upon in the Fitness for Practice Report (UKCC 1999). Like so many other issues in undergraduate curricula, it is difficult to find robust empirical data to provide guidelines for total hours, length of placement, number and range of placements at particular stages of a programme that should structure a given curriculum model (Roxburgh et al. 2008). As discrete episodes of experiential learning, the timing, duration, venue and setting used for each practice experience is highly variable. However, on each occasion learning opportunities are expected. Most of the major reviews of pre-registration education focus on this issue (May et al. 1997, MacLeod-Clark et al. 1996) but, as with other aspects of the curriculum, definitive research is notably sparse. In the absence of empirical data, curriculum designers make best guesses on placement length through a combination of course evaluations, professional expertise, a little empirical data and 'rules of thumb' heuristics (Roxburgh et al. 2008). Curricula evaluations and a review of these are explored further in paper 1, *A review of curriculum evaluation in United Kingdom nursing education,* in this thesis.

In studies of psychomotor learning, Welford (1987) concluded that, for some type of skills, learning practice effects are proportional to the time taken to learn and for other skills they are not proportional. In a study of pianists, Williamson and Valentine (2000) found that overall quantity of practice was not related to quality of performance. Pianists who spend longer time segments at particular stages (middle segments) produce better outcomes. In a meta-analysis of behaviour modelling training, Taylor et al. (2005) identify longer training times as one predictor of effective skill development. These findings suggests that, when structuring the length of nursing practice learning experiences, curriculum designers may need to have practice experiences of varying lengths, with longer practice experiences at particular stages of the programme and perhaps not in the final stage of the programme as is normally the case in nursing.

1.4.2 Nursing's current practice learning model

Since the introduction of P2K and subsequent FFP curricula, the predominant practice learning approach adopted by nursing is based on a rotational model. A rotational model may be described as 'a series of placements that have no defined connection between them other than providing exposure to a range of patient groups and services' (Roxburgh

et al. 2012 p783). Several limitations of this model have been identified. Holland et al. (2010) noted that the current approach is planned and managed predominately in response to placement availability. For example, an undergraduate semester's academic focus could be on cancer and palliative care theory linked with public health issues, however, the student then has a practice learning experience in a care home or a rehabilitation ward. In addition, rotational models of placement may not necessarily be integrated into the academic learning experience and only tenuously linked to the students' learning needs or curiosities. Practice allocations are not within the students' control (Campbell 2008) and placements are frequently short and perceived as disconnected from each other rather than as part of a sequential process. Lauder et al. (2008) identified that student nurses in their various field programmes (Adult, Mental Health, Learning Disability, Paediatric) and student midwives are prepared for their practice learning experience through the same theoretical curriculum in each university. It is not the same situation with regards to their clinical curriculum. An example of this is that no two students, even if they are working on the same ward and same shift, will experience and learn the same things because they will have different patient contacts with different needs. Although there are prescribed NMC standards (NMC 2008, 2010a) and outcomes to be achieved, the pathway to achieving these does differ for each student.

Within the 'rotational' practice learning model, students can have up to six different placements in any one year of the programme (Lauder et al. 2008). This continual moving from placement to placement can result in learning time being compromised as students engage in the constant process of orientating themselves to new environments and the teams (Roxburgh 2014). As a result, many students today report feeling like 'visitors' to their clinical placement and that they do not 'belong'. Being 'accepted' and feeling 'part of the team' are key dynamics in students gaining the greatest benefit from their clinical learning experience (Levett-Jones and Lathlean 2007, Roxburgh et al. 2011, Roxburgh et al. 2012). In addition, there is considerable evidence that a one-to-one relationship is of prime importance to the students' learning and professional development in clinical practice (Allan et al. 2008, Myall et al. 2008). A number of factors compound the difficulty of achieving this one-to-one relationship, including an increase in intensity and complexity of patient care, which has increased the demand for nursing practice over the past decade (Chang et al. 2005). Higher patient acuity, an ageing patient population, shorter hospital stays, hospital closures, advances in medical practice, expanding technology and expanded roles for nurses have created a greater demand on the specialist skills of registered nurses (Alspach 2000, RCN 2004). Faced with such demands, registered nurses have found it harder to balance their duty to meet patient needs with the desire to

promote positive learning experiences for students (Holland et al. 2010). I would argue, however, that learning in practice should be integral to healthcare delivery. When learning and care delivery occur simultaneously, this helps to develop a skilled professional. Reflecting on the past, students learnt from more senior students, staff nurses and clinical teachers who worked with students on each placement. Clinical Teachers were the linchpin between the theoretical and practical skills and were able to assess students' competence. Furthermore, they were in a position to address any attitudes or behaviours which might need adjustment (Smith and Gray 2001). Unfortunately, this role was abandoned by the UKCC when nurse education moved into Higher Education.

A further pressure is that of increasing student nurse numbers, all of whom require completing the prescribed practice hours for the programme. Lauder et al. (2008) reported many HEIs compete with each other for availability of practice placements. This resultant competition can pose risks, in particular, the student not gaining the wide range of learning experiences as advocated by the Quality Assurance Agency (2002) and other professional bodies. This constant demand for shrinking placement availability means that the 'fit' of placements with student need may not always be optimal.

1.4.3 What makes for a good practice learning experience?

Various studies have explored the prerequisites of a successful learning experience in the clinical setting (Andrews et al. 2005, Löfmark and Wikblad 2001, Saarikoski 2002). According to these findings, the core elements of positive experiences are related to students' own motivation to learn, students being accepted into the environment, a positive atmosphere among the nurses and a supportive attitude as well as distinctive characteristics of the interaction between clinical instructors and student. Lauder et al. (2008) concur with the latter point in suggesting that the nature and quality of the experience that students gain in practice placements is mainly dependent on their allocated mentors and other practitioners, and how they undertake that role in facilitating learning and supporting the students to achieve their practice competencies (NMC 2010) and learning outcomes as prescribed by the individual University (Roxburgh et al. 2011).

1.4.4 Motivation to learn

Within the nursing education literature the importance of student motivation cannot be underestimated. Biesta (2004) argues that education begins when a student wants to acquire knowledge and skills. In professional education it is fundamental that students

must know how to use their knowledge in order to take action in different contexts (Bengtsson and Ohlsson 2010). Studies have shown that, in the practice setting, the most significant factor to students acquiring knowledge and skills are the students' interest and motivation (Biesta 2004, Dolmans et al. 2008). To be motivated means *to be moved* to do something (Ryan and Deci 2000). Ryan and Deci (2000) state that a person who has no drive or inspiration to act is thus characterised as unmotivated, whereas someone who is enthusiastic or stimulated toward an end is considered motivated. Schunk et al. (2008) recall psychological theories of motivation linking it with extrinsic and intrinsic stimulators. Extrinsic motivation can be described as coming from outside the student (Biggs 2003), such as gaining fame or recognition, financial reward or in the case of students, earning a degree. These rewards are what drive a student to achieve their goal even if they are not fully committed or interested. An example of this in nursing would be when a student is not interested/enjoying their practice learning experience but knows that they have to get certain competencies or essential skills 'signed off' by the mentor so this will be enough to keep the student motivated in order for him/her to put the effort in to achieve this. In contrast, intrinsic motivation is said to come from within the student (Biggs 2003). In other words, a student who is said to be intrinsically motivated learns for pleasure or a sense of satisfaction rather than for any kind of reward. McKeachie (2002) states that intrinsically motivated students choose tasks that enhance their learning and work hard at them. Knoop (1995) also highlights that intrinsic motivation is positively correlated to job satisfaction while extrinsic motivation is negatively correlated to job satisfaction.

1.4.5 Acceptance into the environment

Numerous authors state that for nursing students to develop knowledge and skills and be successful in practice learning they have to feel part of that community and valued within it (Bradbury-Jones et al. 2007, Levett-Jones et al. 2009). Reports identify that staff attitudes and behaviours can determine whether the environment is friendly or hostile (Papp 2003). Simple gestures such as the ward expecting the student and welcoming the student on arrival can ease the anxiety students feel when going to new learning environments (Roxburgh et al. 2011). As reported by Bradbury-Jones et al. (2010), such simple gestures can make the student feel part of the team and have an impact on the students' self-esteem.

Warne et al. (2010) emphasise the importance of students being provided with adequate time to 'settle in'. A settling in period allows the students to become familiar with the team, culture and practices of each unit or ward to which they are assigned. However, as

Roxburgh et al. (2012) report, many student practice learning experiences are of a short duration which do not afford the student a 'settling in' period and thus students feel lost and unsure of themselves. The literature is replete, unfortunately, with examples of students reporting feelings of being ignored (Bradbury-Jones et al. 2010, Cope et al. 2000), not being offered encouragement (Levett-Jones et al. 2009) and not being given responsibilities appropriate to their stage of learning (Roxburgh 2014). Such experiences are reported as having a negative effect on students developing competence and confidence which impacts on their engagement with learning opportunities (Levett-Jones and Lathlean 2007).

The seminal work of Fretwell (1982) and Orton (1981) demonstrated that the most significant influencing factor on the ward climate and culture was the ward charge nurse. It was reported that if the charge nurse valued and embraced students to the ward then the rest of the team did also. However, if the charge nurse saw students as a nuisance or inconvenience, likewise, the team did, too. Not much appears to have changed today with Lauder et al. (2008), Holland et al. (2010) and Roxburgh (2014) reporting that the Senior Charge Nurse (formerly known as ward sister) hold primary responsibility for promoting a particular ward climate that affects the supervision of students' learning.

The need by students to feel part of the team, or to 'belong' to the team, as Levett-Jones and Lathlean (2007) put it, appears to be fundamental in order for them to learn (Roxburgh et al. 2012). Some authors (Roxburgh 2014, Walker et al. 2011) have referred to the length of practice learning time as a key element in developing a sense of belonging. Tinto's (1975) seminal work with college students describes how belonging is believed to be fundamental to how people make sense of their lives. A person's sense of identity is based on social interactions that show our belonging to particular communities through shared beliefs, values, or practices (Tinto 1975). Tinto argues that high levels of retention are linked with high levels of student integration and congruence with the course and culture of the institution (Tinto 1975, 1993). Findings from my hub and spoke phase 2 study identified what is known as a 'sophomore slump'. The observation of this slump is first recorded by Freedman (1956), who relates the difficulties of an academic and personal nature experienced by second year students in US Universities. One major reason sophomores experience a slump results from diminution of attention and time being dedicated to them in year 1 studies. They can feel cut loose from support networks and disconnected from a larger purpose of their work (Valdosta State University 2008).

More recently, Roxburgh (2014), Roxburgh et al. (2012) and Bradbury-Jones et al. (2010) have reported the importance of students having at least one registered nurse who takes responsibility to support and induct the student into the practice environment and team. Fundamental to this action is that students are eager to make meaningful contributions to patient care as part of the team (Bradbury-Jones et al. 2010, Roxburgh 2014).

1.4.6 Student support and mentorship

The literature clearly identifies specific student needs during practice learning. First, students need to be effectively assimilated and develop a relationship with the registered nurse and the team in order that they are encouraged to actively observe, and participate through asking questions about practice (Egan and Jayne 2009, Eraut 2003, Levett-Jones and FitzGerald 2005). Second, registered nurses must be effective role models who can guide and supervise students in performing skills, and assist students to make sense of their knowledge through asking questions of the students (Henderson et al. 2010). The literature refers to the significance of this 'being in practice' as part of the socialisation process of becoming a nurse (Levett-Jones and Lathlean 2007). Students acknowledge the importance of 'fitting in' to the environment in which they are allocated as significant to their actual experience and, ultimately, their success in becoming a qualified nurse (Myall et al. 2008, Roxburgh 2014). Further impediments include a perception by clinical staff that teaching is a burden (Holland et al. 2010) and inadequate understanding and preparation of the registered nurse for the teaching role (Eaton et al. 2007, Holland et al. 2010).

The importance of student supervision and mentorship was identified in the implementation of P2K curricula in Scotland (Cerinus and Ferguson 1994). Mentorship in clinical practice is a key element in ensuring Fitness for Practice (Field 2004, Holland et al. 2010, Hughes 2003, Spouse 2001). However, there is little consensus in the literature as to what represents appropriate support and which support methods best facilitate deep learning (Andrews and Roberts 2003). The terms 'mentor' and 'preceptor' seem commonly interchangeable, although mentor more commonly refers to qualified nurses specifically prepared to work (where possible) with students and support them during practice allocations. The notion of preceptor (Burke 1994, Fowler 1996, Pembrey 1980) has been used to denote the role of a more senior and experienced qualified member of staff with a special remit to induct qualified nurses into positions of greater responsibility. Watson (2000, 2004) undertook two useful studies including a study of the preparation of mentors through the National Board for England Teaching and Assessing in Practice courses

reporting that many nurses, especially senior staff nurses, saw involvement in mentorship as a stepping stone to promotion, but a number were not wholeheartedly committed to the role. More recently, similar findings were reported by Holland et al. (2010) and Roxburgh et al. (2012) with these authors further suggesting that not all registered nurses should be mentors due to their poor preparation for the role but also because some appear to not have the desire or knowledge to fulfil the role.

Holland et al. (2010) reported that students were often unable to work alongside their allocated mentors as per the NMC guidelines for supervision in practice. Long et al. (2003), in their evaluation of the preparation of specialist paediatric oncology nurses, found that students and mentors reported a lack of opportunities to work together and greatly varying practises in supervision and assessment. An early study by Watson (1999) reports a focused qualitative investigation of students' views of mentoring in a pre-registration common foundation programme. Students on the programme had a very clear view of the role of mentor, which (as distinct from mentors' views) included planning their learning experiences during the allocation. A more recent study by Roxburgh (2014) supports this early finding with students reporting that they did not expect the mentor to be a constant presence, but that arrangements (learning opportunities) made by the mentor should persist in their absence. Equally, Murray and Williamson (2009) draw to our attention that the student, too, has a responsibility in this relationship, namely to demonstrate motivation and enthusiasm to learn.

Of note, however, is an important shift in the role of the mentor from that of facilitator/ supporter/supervisor of practice to one of assessor. Nettleton and Bray (2008) identify this change as arising from the development of Fitness for Practice and later from NMC (2008) documentation who defined a mentor as someone who 'facilitates learning and supervises and assesses students in practice' (p45). With this definition the term 'mentor' has been adopted for the role formally known as 'assessor' or 'supervisor'. Professional regulations have identified the need to be 'fit for practice' at the point of registration and research carried out by Duffy (2003) and Duffy and Hardicre (2007, 2007a) regarding 'failing to fail', identifies that a lack of a clear definition of the role of mentor exacerbates the situation. Practitioners may be unclear regarding their precise primary responsibility with potential conflicts of interest between their roles as student supporter, facilitator and counsellor, but also as their assessor.

Scotland, in recognising the above opportunities and challenges, has developed and implemented a new role of Practice Education Facilitator tasked with supporting mentors in

practice (McArthur and Burns 2008). NHS Education for Scotland (NES) have developed a National Approach to Mentor Preparation for Nurses and Midwives (NES 2007), incorporating the NMC (2006) Standards to Support Learning and Assessment in Practice. This is a benchmark to assist with the appropriate preparation of mentors and assessors. All of these initiatives are key components of a concerted strategy to support students and mentors.

1.4.7 Challenges for HEI and NHS partners: role transitions

Transition has become a key concept in the professional education literature, with particular concern focused on the school-to-work or classroom-to-practice transitions. Fenwick (2013) compares diverse discourses of transition, arguing that universal, linear models of transition are unsuited to understand the complex transitional experiences of different individuals in different professional settings. Kilminster et al. (2010) present the notion of reframing the novice's transition (from classroom to wards) as critically intense learning periods.

Fitness for Practice (UKCC 1999) raised concerns about the final year of the programme not adequately preparing students for the real world of the newly qualified practitioner (NQP). The UKCC (1999) recommended a three-month period of supervised clinical practice towards the end of the third year, the intention being that this three-month period of supervision would provide an aid for student nurses in making the transition to NQP. The three-month 'transitional period' is best regarded as a notional length of time, rather than being based on a significant body of evidence around role transition. For example, when reviewing the influential work of Kramer (1974) on role transition, the term 'reality shock' was coined, which described the specific shock-like reactions of NQP when they found themselves in work situations for which they were far less prepared than they had believed. Gallagher (2012) determines that transition is an individualised process which is not a singular event but one which occurs over an undetermined period of time. Therefore, if we review both these arguments, the UKCC (1999) recommendation would appear to be a 'one size fits all' approach which does not take cognisance of individual needs in making the transition and the UKCC recommendation is enacted whilst the nurse is still a student and thus to some extent still protected by their mentor and not an actual NQP. The transition from student nurse to practitioner is seen as a:

> *… period of learning and adjustment when the graduate (diplomate) applies and increases knowledge and competence and is socialised into the workplace.* (Victoria Department of Human Services, 2002, p12)

In contrast, Bridges (1980) defines transition as ‘starting with an ending, followed by a period of confusion and distress, and leading to a new beginning’ (p9). In other words, at the point of becoming an NQP, the student has satisfactorily attained the NMC Standards for Fitness for Practice. This then leads to them taking up post, which results in, as Kramer (1974) describes, ‘shock-like’ experiences of bewilderment and fear and a realisation of the enormity of being an NQP, followed in time by becoming, as Benner (1984) details, ‘advanced beginners’ who begin their professional journey.

The challenges experienced by newly qualified practitioners have been known for some time and are widely reported worldwide, for example, in Australia (Lauder 1993), Canada (Ellerton and Gregor 2003), Israel (Greenberger et al. 2005), South Africa (Moeti et al. 2004) and the UK (Holland 1999, Andrews et al. 2005, Banks et al. 2011). Common challenges reported internationally include limited decision-making skills, lack of communication skills, lack of clinical skills and drug calculation/administration skills, lack of managerial skills, role stress, role boundaries, higher levels of accountability, fitting into the clinical environment, and working as a member of the multidisciplinary team. It appears that for nurses to manage the transition from education to professional practice they require knowledge, skills and proficiency in many areas (Banks et al. 2011, Gerrish 2000, Holland 1999). Duchscher and Myrick (2008) reported that NQP experience ‘transition shock’ which encompasses feelings of anxiety, insecurity, instability and inadequacy. The transition period is the time when practitioners learn to manage and control many aspects of their practice. This involves a balance between demands and control. Practitioners who report less job control report higher stress levels (Chang et al. 2005). It is the adverse effect of participation without control, rather than participation per se, which affects job stress (Israel et al. 1989). Lack of control over one’s work has been identified both as a source of stress and as a critical health risk for some workers. The demand-control theory of work is also linked to learning and professional development (Parker and Sprigg 1999, Taris et al. 2003). Employees who are unable to exert control over their work are more likely to experience work stress, which, in turn, impairs learning amongst new staff (Taris and Feij 2004).

In Australia, McKenna and Newton (2008) report that graduates do perceive gaps between their knowledge and the skills required in the workplace. An American study involving newly registered nurses indicated they found being on the ward stressful, citing organisational, managerial, and clinical skill deficits. While studies reveal that new graduates are aware that they need a high level of support to successfully make the transition from graduate to competent and confident practitioner (Andrew et al. 2008,

Fulbrook et al. 2000), others report that the real world experience of the new graduate is often unsupportive and extremely traumatic (Banks et al. 2011). For many, the transition experience is characterised by fear of failure, fear of responsibility and fear of making mistakes (Banks et al. 2011).

A number of studies highlight issues of competence amongst NQP (Amos 2001, Hickie et al. 2007, Runciman et al. 2002). In a study involving in-depth interviews with 12 Irish nurses who were within one year of qualification, Mooney (2007) reported that NQP have specific needs, many of which are unrealised. The vast and increased workload, which involves less patient-contact and more non-nursing duties, came as a surprise to participants, as did the expectation of in-depth knowledge, coupled with feelings of increased responsibility, compounded by a perceived inadequate experience. In a Swedish study, Kapborg and Fischbei (1998) investigated the transition from a three-year nursing programme to a professional role as registered nurse: eight participant nurses kept diaries over a period of two months. Again, participants reported that 'non-nursing' tasks, including the management of paperwork and administrative work, left them with less time to spend on patient-oriented activities. Participants felt uncertain about how best to care for patients with complex presentations. All the nurses experienced a high workload and reported difficulties in feeling relaxed during their off-duty time.

In a small-scale cross-sectional survey comparing interview data of newly qualified nurses in 1985 and 1998, Gerrish (2000) reported that the latter felt less stressed about transition than newly qualified nurses in 1985. O'Conner et al. (2001) compared perceptions of the competence of newly qualified nurses as judged by 139 senior nurses and the actual observed competence of 36 newly qualified nurses. They found that newly qualified nurses consistently performed at a higher level than that expected by senior nurses. In contrast, Fraser et al. (2000) report that the transition from student midwife to midwife was associated with a drop in confidence. This was improved if support was provided, and by the end of the first year, midwives were described by managers as competent and confident. Lauder et al. (2008) propose that it is not lack of competence, nor lack of confidence which characterise the NQP, but recognition of the considerable legal and professional accountability for care, combined with limited understanding of the discipline of the workplace and the requirements of being an employee.

1.4.8 Easing the transition

Unlike nursing, medicine has long recognised the need for a longer period of training with qualified medical staff undertaking training posts on qualifying. Whilst subject to less empirical research there are some data which suggests that during the transitional period, Allied Health Professionals have similar experiences in terms of stress, feelings of inadequacy and being unsure about their professional identity (Mandy 2000, Rugg 1999). Although a number of researchers during the 1990s suggested that formal transition programmes 'smoothed' the transition process (Crow 1994, King and Cohen 1997, Madjar et al. 1997), there was minimal evidence to support efficacy, particularly in terms of improved retention. Successful transition programmes, Heath et al. (2002) suggest, encourage new practitioners to remain in the workforce and maximise the communities' investment in the education and training of practitioners. In Australia, transition programmes provide the initial sustained exposure to clinical contexts and an opportunity for the application of the theory learnt in the undergraduate degree (Levett-Jones and FitzGerald 2005). Furthermore the first three to six months is considered the crucial length of time for professional adjustment and for creating a commitment to a career in nursing (Roxburgh et al. 2010).

Evaluation of a residency programme for graduate nurses in America (Altier and Kresk 2006) found that satisfaction scores remained consistent throughout the first years with the authors suggesting that graduate nurse programmes of this nature could prevent attrition in the first year post qualifying. Halfer (2007), researching an internship for graduate nurses in America, concluded that a well-designed programme could reduce recruitment and retention costs through increased job satisfaction.

For NQP in Scotland, the Scottish Executive Health Department (now the Scottish Government Health Department) commissioned NHS Education for Scotland in 2004 to develop a web-based educational resource to support the transition from student to NQP for all nurses, midwives and AHP. In January 2006, 'Flying Start NHS^{TM}' was launched to NHS Scotland and Higher Education Institutions. Since its introduction there have been 3 major evaluations and it has subsequently been purchased from NHS Scotland by the Department of Health in England and the State of Queensland Australia. Paper 4, *Findings from the early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start NHS^{TM},* in this thesis, explores the early implementation of this programme with specific reference to retention of NQP nurses and midwives.

1.4.9 Attrition/Retention

Attrition from programmes of nursing and midwifery is a major issue for health services. High attrition figures can be found in programmes of nursing and midwifery in England (Last and Fulbrook 2003), Australia (Gaynor et al. 2006), USA (Wells 2003) and Canada (Day et al. 2005). The debate around attrition rates and wider access in nursing is somewhat different to those in the higher education (HE) sector as a whole, in which wider access (associated with low entry qualification, students with parents who have not had university education and lower socio-economic status) is strongly correlated with high attrition (HEFCE 2012). It is worth noting that by focusing heavily on attrition, one of the great successes of nurse education may have unintentionally been obscured. A large proportion of entrants in many HEIs do not have the entry qualifications required by other degree programs in the same HEI. The fact that schools of nursing and midwifery take students with relatively poor entry qualifications, many of whom are from under-represented groups in the university sector and within three years prepare them for the profession, is a major achievement in educational terms, social mobility and social inclusion.

Changes in the UK economic climate and lack of employment have led to an increase in applications to HEIs for all courses. The number of nursing students admitted each year is decided at Scottish Government Health Directorate (SGHD) level; demand does not increase supply in terms of places. Attempts to increase the supply of nurses and midwives have been made by increasing recruitment and attempting to reduce student and workforce attrition (Department of Health 2006, SGHD 2007). However, SGHD report that this mass recruitment and less competition for places have drawn into the system students who are less likely to progress/complete (SGHD 2007). It is also believed that high numbers of students in the system are causing increasing pressure on both the HEIs and practice placements which may, in turn, have a detrimental effect on students' overall learning experience and consequently impacts upon retention.

Preliminary work supported by SGHD suggests a statistical association between an increased number of students and the increasing attrition rate in Scotland, proposing that for every increase of 100 students into the system since 1999, there has been a deterioration of 0.95% in retention rates (Tilley 2011 - Unpublished). Student attrition, in particular, has attracted increased political attention. As the funding of nursing and midwifery education comes from central government, student attrition is seen as a political problem as well as a healthcare issue (Cameron et al. 2011). Politically, attrition can be

framed in terms of value-for-money. Reducing wastage from nursing and midwifery programmes has become a key political goal in ensuring that the 'supply side' of providing nurses and midwives meets demand and that public money is seen to be used effectively in funding programmes (David Mason Consultancy 2004, DOH 2006, Gaynor et al. 2006, SGHD 2007). The Howat Report (SGHD 2007) suggested that by focusing on reducing attrition rates (down to 15%), significant savings could be achieved for NHS Scotland.

In an attempt to reduce attrition and improve retention, the Scottish Government Health Department in 2008 set aside £5 million (released from a reduction in student numbers) '*To support further improvement in the student learning experience and the recruitment process'* (SGHD 2007 p24) and to reduce the relatively high attrition in pre-registration nursing and midwifery programmes in Scotland. The Recruitment and Retention Delivery Group (RRDG) was formed to deliver this brief by developing an enhanced understanding and model of student support. To support the achievement of the RRDG objectives, five short-life working groups (SLWG) were established:

- Data Enhancement
- Practice Learning
- Careers/Image
- Recruitment, Selection
- Retention

Other drivers behind the formation of the RRDG included: the high financial cost of attrition, the fact that the health department, rather than the education department, funds the education, and the requirement that the numbers of student nurses and midwives align with labour market need. As of September 2012, data demonstrate recent reductions in the Scottish nursing 'attrition' rate to around 26% (ISD 2012). These data are generated from the NHS Education for Scotland (NES) database using Scottish HEI data returns from all institutions and the data refer to 'cohorts' from each academic year, that is, 2005/6. It is important to note that, as a result of the Recruitment and Retention Delivery Group work, shifts are afoot away from reporting 'attrition' towards reporting five-year completion rates because this is believed to be a much more reliable and accurate measure of performance than 'attrition', which, some argue, is a poorly defined term (Sabin et al. 2012).

1.5 How these challenges might be addressed

In setting out this section I have drawn from the literature reviewed and my own studies. Whilst considering all of the above issues and challenges, I have come to realise that, from my perspectives as a practicing nurse, manager, educator and academic, workload modelling has a key role to play in the challenges identified in practice learning. For example, as a clinical nurse manager, I was never asked to consider the increasing impact of students on workload when setting the ward establishment levels. In the current climate of financial constraint, higher levels of temporary staff and greater patient acuity, NHS workload modelling must acknowledge the effect that greater numbers of students can have on the workload of clinical areas. Failure to provide a high-quality learning experience for nursing students can, however, also potentially lead to negative effects. I discuss this in paper 6, *Undergraduate student nurses' perceptions of two practice learning models: a focus group study*, included in this thesis.

Providing protected time for those registered nurses who want to mentor students could be a solution to this perennial problem. Providing protected time could also potentially mean that he/she could mentor more students. Looking back under the old pay and conditions scheme for nursing, known as the grading system (Whitley scale), registered nurses who supported students in practice learning were compensated by being awarded a higher pay grade. With the introduction of the Agenda for Change pay scale in 2004 (DOH 2004), this reward system was removed. Possibly, this change requires re-examination. A further solution is to accept that not all registered nurses should be mentors to our undergraduate student nurses due to some practitioners' unwillingness to mentor. This may go some way to eradicate some of the perceived issues of good and bad mentoring. A further potential solution is that maybe now the time is right to consider a modern-day version of the clinical teacher in tandem with rethinking the current mentoring model.

Another solution is to offer students longer periods of time in practice learning in order for them to have a settling-in period and to provide a sense of team membership rather than the notion of being visitors to the practice learning environment. Re-visiting the placement modelling as part of future curricula designs and re-validations might address many of the problems identified in this chapter. Included in this thesis, Paper 5, *Evaluating Hub and Spoke Models of Practice Learning in Scotland, UK: A Multiple Case Study Approa*ch, demonstrates how a new model of practice learning addressed many of the challenges previously identified in this chapter.

1.6 Conclusions

The goals of practice learning are consistent in seeking to aid students to integrate theory with practice, apply problem-solving skills, develop clinical skills, develop interpersonal skills and become socialised into the nursing profession and the health care system (Mannix et al. 2006). However, this process is itself notably complex, embracing epistemological goals that include authenticating and assimilating knowledge and developing problem-solving and critical thinking skills.

The challenge of supporting learning in the practice setting and the many mechanisms proposed to facilitate this is one of the oldest and most written about aspects of undergraduate nurse education over the last half century. However, as noted throughout this chapter, problems continue to beset the practice learning experience for today's students. Of particular note is the lack of rigorous conceptualisation of both practice and learning in the related literature.

Curriculum modelling poses challenges for students in making connections. That is, as evident throughout the findings reviewed in this chapter, the majority of students appear to find it difficult to make the links between what they have been taught whilst in university and the complexities of participating in a practice learning experience that do not appear to connect immediately with the academic experience. Paper 6 in this thesis, *Undergraduate student nurses' perceptions of two practice learning models: a focus group study,* illuminates this matter further.

A perennial challenge faced by curriculum designers is the competition for practice learning environments with sufficient numbers of registered nurses who can mentor undergraduate students. It takes time to effectively support and mentor students throughout a practice learning experience. From my own research and that of others, the reality is that many students experience minimal one-to-one learning from their clinical mentors. A theme which arises consistently in the literature is the challenge for registered nurses who act as mentors and who are charged with teaching students clinical skills finding enough time to act as role models and teachers. The registered nurses' first priority must be to deliver care to the patient. Paper 2 in this thesis, *Fitness for practice in nursing and midwifery education in Scotland, UK,* provides further discussion of these points.

Linked to the above observations is the emerging narrative of how students may feel like 'visitors' to their practice learning experience. This is, in part, attributable to the short

duration of placements and the constant need to orientate themselves to these new surroundings and the practice environments' routines of working. However a more worrying narrative is the sense of not 'belonging' which, in turn, can, in many students, decrease their motivation to learn and increase the risk of them leaving programmes. Paper 5, *Evaluating Hub and Spoke Models of Practice Learning in Scotland, UK: A Multiple Case Study Approach*, and Paper 3, *An integrative literature review of student retention in programmes of nursing and midwifery education: why do students stay?,* illustrate these points further.

The fundamental goal of nurse education programmes is to prepare the student to become the newly qualified practitioner. However, no other profession is expected to 'hit the ground running' in the way that newly qualified nurses are expected to. For example, midwives have a required period of supervised practice, immediately following registration, and doctors have very structured learning and supervision over their early careers. Although the NMC (2010b) advise on a period of supervision (preceptorship) for NQP, there is no requirement by employers to put this in place. As my own research has reported (Roxburgh et al. 2010), most NQP get approximately a week or two of supernumerary practice before being expected to take on a caseload of patients, often with little or no supervision. Paper 4 in this thesis, *Findings from the early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start NHS™,* highlights how a national role transition programme has been implemented in response to recognising some of the above challenges NQP face.

The factors affecting the perceived quality of practice learning are complex and unpredictable and constantly changing in response to factors as diverse as demographics, medical technology, gender roles, academic inflation and EU legislation and changing clinical priorities. Hence, uncertainty and complexity can be suggested to characterise the debate over practice learning environments for undergraduate nursing students (Holland et al. 2010, Roxburgh et al. 2012).

The next chapter explores in depth and detail the theoretical constructs of learning and knowing in practice. In discussing these theories, I will offer some insights into how these theoretical constructs can be better applied to practice learning environments to address some of the perennial problems identified in this chapter.

Chapter 2 Learning through, for and at work: some theoretical constructs

This chapter sets forth the theoretical constructs of this thesis. During the course of conducting the studies reported in the publications of this thesis, I became frustrated with the relative lack of emphasis on contemporary learning theory in nursing education, and the paucity of supporting evidence for the 'reflective' theory that seems to be dominant in nursing. So, after the studies were completed, and as part of my overall thesis study, I spent time further extending this theoretical examination to explore where my own future research into practice learning might go. The discussion presented here aims to provide an overview of the major traditions of constructivism and reflective practice, as well as their historical theoretical foundations, which have been widely adopted in nurse education. I will discuss the strengths and limitations of these theories as they apply to undergraduate nurses' practice learning and capability development. I then present my new learnings in situated learning theory and legitimate peripheral participation, and practice-based learning theory as advocated by contemporary writers such as Schatzki (2002), all of which are useful in my ongoing thinking about practice learning.

As will be explored within this chapter, these theories represent conflicting perspectives on learning underpinned by different assumptions about the nature of knowledge, learning and being. Whilst writing this thesis I also encountered complexity theory, and I became excited about how its use in nursing education could help students move from simple competence (technical skill, knowledge and attitudes) to capability (ability to adapt to change, generate knowledge and continue to improve). While I did not use this perspective in the six publications included in this thesis, complexity theory has really helped to challenge and reorganise my thinking around the central questions driving these publications. Therefore, I have included a brief discussion of my understandings of complexity theory for learning. I follow this up by proposing the adoption of a combination of practice based learning theory and complexity theory as a possible forward direction for me in addressing the array of practice learning issues previously identified in this thesis. My intention is to illuminate a framework to understand and better support learning through, for and at work for undergraduate nurse education.

2.1 Introduction

All practice-based disciplines involve the synthesis of at least two different perspectives on learning; the academic and the practice-based or, as Raelin (2000) differentiates them, explicit and tacit knowledge. Explicit knowledge was historically conveyed didactically, such as by a lecture, while tacit knowledge is deeply rooted in action. The result of explicit knowledge is thought to be the learner's conceptual understanding of a concept, whereas tacit knowledge is manifested in the learner's skill in doing something. Central to learning, I believe, is participation. By this I mean learning is not something that takes place in isolation but rather, learning is produced and reproduced in the social interactions of individuals when they participate in a culture or organisation. This idea of learning is situated within the term 'legitimate peripheral participation in practice' (Lave and Wenger 1991) whereby participation is not separated from the context in which it takes place, and learners can learn by acting as a legitimate part of a real community without the responsibility of mastery or central roles in that community.

The notion of communities of practice as critical sites of learning and development in organisations has been developed by Lave and Wenger (1991) and, more extensively, by Wenger et al. (2002). Essentially, these authors note that people have learned informally and effectively in groups since time immemorial and that the formalisation of management structures often ignore and indeed disrupts this type of learning. Wenger et al. (2002) report on the successful cultivation of communities of practice in organisations as diverse as manufacturing industry, social workers, and researchers. It is my contention that nursing and health care would be an ideal profession to benefit from the advantages demonstrated in these other areas. All members of such a community are learners because they share a common interest and indeed passion for a particular domain so that sharing knowledge is a natural part of their interaction (Wenger et al. 2002). Learning therefore includes the development of the identity of the learner as an accepted member of the community who is trusted and respected by the other members.

Such developments are difficult, if not impossible, to ensure formally, but there are a number of processes which have been commonly observed to be central to the success and health of the community. These include legitimate peripheral participation in which less experienced members of the community are inducted into its practices by modelling, prompting, and by the gradual transfer of increased responsibility (Lave and Wenger 1991). This process is not dissimilar to mentoring within nursing. Established and experienced members of the community maintain and exchange state-of-the-art

knowledge with regard to the domain by dialogue. Perhaps one way in which registered practitioners might cultivate the community would be to encourage the extent to which discourse took place within the community, perhaps concerning specific areas of knowledge or perhaps concerning a general interest in enhancing the effectiveness of the operation of the community

2.1.1 A review of the learning styles of students

Differences between students include interests, schooling, attitudes, motivations, achievements, values, skills and abilities (Knowles 1990). These factors, together with personality and intelligence, affect how one learns (Knowles 1990). Early work by Knowles (1990) identified four basic characteristics common to adult learners: self-directedness, prior life experiences, a readiness to learn and a problem-centred orientation. Andragogical practice suggests that the best way to teach adult learners is to encourage an active role for the learner, place the emphasis on self-directed learning, role model, take a problem-solving approach, and apply concepts to prior experiences. However, this is an individualist view of learning; empirical research does not support the notion that all or even most adults are self-directed learners or that they all take a problem-solving approach in their learning (Fenwick 2004, Schatzki 2012).

As students differ in their conceptions of learning as well as their maturity, students approach tasks in different ways and thus achieve different learning outcomes (Biggs 2003). Biggs (2003) discusses how students may take either a ‘deep’, ‘surface’ or ‘achieving’ approach to realise learning. Those students who are extrinsically motivated may learn the bare essentials in order to pass the assessment and thus learn at a surface level. Alternatively, those who are motivated to develop their intrinsic potential may learn at a deep level and pursue learning for its own sake. Those who learn at an achieving level are learners who focus on learning to achieve objectives in the best way. The process of quality learning aims to encourage students to take a deep and achieving approach to learning (Nicholls 2002).

Learning styles of students, it is reported, must be taken into account when planning how they can benefit most from the learning experience both as individuals and as a group (Fry et al. 2003). Kolb (1984) defines learning style as the way in which individuals organise information and experience. His theory of experiential learning suggests that there are four main learning styles to consider. His model consists of a cycle, which portrays a sequence of learning, where the learner is first involved in an experience followed by reflection about

the experience. This is followed by the formulation of generalised concepts about the experience, from which the student forms and tests a hypothesis. After testing the hypothesis, new experiences are produced and the cycle commences again. Kolb (1984) suggests that individual differences (past experiences, needs) cause individuals to emphasise some abilities over others. Whilst there are two dimensions of learning in this model (abstract-concrete and active-reflective), students supposedly tend to prefer one part of each dimension over the other. Kolb (1984) labels these styles as convergers, accommodators and assimilators. An early study by Laschinger and Boss (1989) demonstrated that whilst the majority of nursing students were represented in all four of these categories, the majority were found to prefer and utilise a concrete learning style in their approach. Laschinger and Boss (1989) suggest that for concrete learners, personal relationships and experiences may influence them more than the subject matter. This assumption suggests that a consideration of learning styles should influence how educators plan their approach towards teaching and learning experiences. Jacques (2000) proposes that student-learning styles can indeed be influenced as they are not permanently fixed and, as such, can be affected by the educator's style. Knapper and Cropley (2000) found that most students do adapt their learning styles to meet the perceived demands of different educators. Whilst Jaques (2000) suggests learning styles are not permanently fixed, earlier work by Dux (1989) goes further and suggests that learning styles may vary from subject to subject. Thus whilst an individual may prefer one style of learning for say, 'concrete' subjects like anatomy, they may prefer a different style for other more 'fluid' subjects like sociology or psychology.

What can be noted when reviewing these early writings on learning styles is, I would argue, a view of a series of isolated learners each with their inherent learning style. Again, empirical research has demonstrated that people draw from a range of learning approaches depending on the situation they are in and that their learning process depends very much on the situation including the purpose and socio-cultural relations of the activity (Fenwick 2004, Hager et al. 2012, Schatzki 2012). We need, therefore, a more collectivist and practice-based model of learning.

2.2 Constructivism

Constructivism, another theory of learning, provides an explanation of how learning occurs and knowledge is acquired through meaning-making during problem-solving in everyday situations. The metaphor of 'construction' offers a suitable synopsis of the epistemological view that knowledge is built by individuals (Peters 2001). Within education, constructivist

theory suggests ‘that one has to experience the world to know it’ (Peters 2001, p167). Two variants of constructivism have been proposed; cognitive constructivism and social constructivism.

2.2.1 Cognitive constructivism

Cognitive constructivism is attributed to the work of Piaget (1973) and his work on the psychological development of children. Within Piaget’s theory, learning is said to be discovered (Liu and Mathews 2005). Piaget identified that children construct understanding of the world around them, and then experience discrepancies between what they already know and what they discover in their environment. Understanding is therefore a phased process involving active participation and involvement. Piaget viewed intellectual growth as a process of adaptation to the world. He identified a number of important components to his cognitive development theory, namely:

- Assimilation is the process of taking in new information into our previously existing schemas
- Accommodation occurs when the existing schema does not work, and needs to be changed to deal with a situation.
- Equilibration occurs when a child's (person’s) schemas can deal with most new information through assimilation. However, disequilibrium occurs when new information cannot be fitted into existing schemas (assimilation).

Adapted from Byrnes 2001

Piaget believed that disequilibrium drives the learning process as people dislike being frustrated and will seek to restore balance by conquering the new challenge (accommodation). When the new information is acquired the process of assimilation with the new schema will continue until the next time it needs to make an accommodation.

Piaget did not explicitly relate his theory to education, although researchers like Case (1985) and Peters (2001) have explained how features of Piaget’s theory have been adapted to education. A limitation of cognitive constructivism reported by other theorists such as Vygotsky (1978), Kuhn (1970) and Lave and Wenger (1991) is the lack of emphasis on how the environment and social interactions influence learning.

2.2.2 Social constructivism

Theorists such as Vygotsky (1978) have placed more emphasis on the part played by language and other people in supporting learning. Vygotsky (1978) referred to his work as 'social' constructivism. Vygotsky's theory is distinctive, in that unlike Piaget, he believed that learning *could not* be separated from the social context. He argued that all cognitive function begins as a product of social interactions achieved through 'interaction with more knowledgeable members of the culture' (Rummel 2008, p. 80).

Likewise, Dewey (1933) postulated that knowledge emerges only from situations in which learners have to draw them out of meaningful experiences. In other words the foundations for the construction of new knowledge are drawn from the learner's previous knowledge about the world, or cognitive models (Askell-Williams and Lawson 2006). Further, these situations have to be embedded in a social context, such as a ward, where students can participate and, thus, form a community of learners who construct their knowledge together (Taber 2011). Learning activities in constructivist settings are characterised by active engagement, reasoning, problem solving, and collaboration with others (Lutz and Huitt 2004, Christie 2005). The responsibility is on the learner rather than the teacher. It is the learner who interacts with his or her environment and thus gains an understanding of its features and characteristics (Christie 2005). The role of the teacher is one of a facilitator who encourages the learner to question, challenge, and formulate their own ideas, opinions, and conclusions (Christie 2005). Through this facilitation it is said that learning, therefore, is the process of adjusting individual 'mental' models to accommodate new experiences rather than by internalising mere facts to be recited later on (Christie 2005). However, to get to this stage, Dewey (1933) suggests there are a 'set of readiness' requirements. The most vital of these is curiosity or interest in what is to be learned. In tandem there is a need to understand the practical applications of the knowledge or skill (Dewey 1933). When these constituents are in place, the student is ready to learn and to have some understanding about its usefulness. Constructivist approaches to education emphasise the action-based nature of knowledge. The act of doing is referred to as praxis, and Rolfe (1993) contends that praxis is necessary due to the inability of nursing theory to adequately account for the complexities and uncertainties of real situations.

Transferring theoretical knowledge acquired in a programme of education to a practice setting can be problematic due to differences in context, culture, values and modes of learning (Eraut 2003). Rolfe (1993) maintains, however, that praxis can effectively dissolve the theory–practice gap, 'making theory and practice mutually dependent on one another'

(p. 176). However, the importance of the integration of theory and practice, according to Seagraves et al. (1996) and Rounce and Workman (2005), is central to professional education, and necessitates a combination of learning for work with learning through work and in work. Both Benner (1984) and Schön (1998) proposed that theoretical knowledge is viewed as 'knowing that', which is learnt by intellectual and cognitive activities. Practical knowledge is seen as 'knowing how', which is gained by experience from practical training and doing things. To give an example, a student may learn the theory of how to give an intra-muscular injection through explicit knowledge without experiencing the tacit knowledge of handling the syringe, pulling back the plunger, inserting the syringe into the medicine vial and drawing up the correct dose. Without hands-on experience, the learner can be left with the idea that problems are placed into neat little boxes. Furthermore, Boud et al. (1985) explain that the key strength of practice-based learning is to create idiosyncratic knowledge, which is in contrast to theory-based learning's primary strength of applying generic knowledge.

The work of Raelin (2000) identified a number of significant ways in which practice-based professional learning (PBPL) may be considered. Firstly, PBPL includes thinking and reflecting on work practices; it is not just a question of gaining a set of technical skills, it also involves revising and learning from experience. Secondly, PBPL sees learning as taking place from action and problem solving within a working environment, and therefore it emerges in live projects and challenges to individuals and organisations. PBPL also takes the construction of knowledge to be a shared and cooperative activity, in which people discuss ideas, share problems and solutions. Finally, PBPL requires not only the acquisition of new knowledge but the acquisition of meta-competence – learning to learn. The crucial feature here is that PBPL is a learning process which encourages learners to take responsibility for their own learning and to develop attitudes and skills towards lifelong learning (Chapman and Howkins, 2003).

A core concept related to practice learning championed by the majority of practice based professions over the past two decades is that of reflection. Constructivist assumptions are implicit in the notion of learning through reflection in professional practice, in that reflections on our actions and experiences that help shape our knowledge are always situated within a social context including interactions with others.

2.2.3 Reflective practice

A number of professions have championed the central premises of reflective practice with particular reference to the seminal work of Schön (1983, 1998). Schön (1983) suggests that one of the defining characteristics of professional practice is 'the capacity to reflect on action so as to engage in a process of continuous learning' (p102). The degree to which the nursing profession has seized on the idea of reflective practice cannot be overstated. The idea of reflective practice was, for example, written into UK-wide documents supporting the development of diploma-level Project 2000 pre-registration nursing education (UKCC 1986) as a means of developing nurses as 'knowledgeable doers'. The subsequent Fitness for Practice report on the initial education of nurses reasserted support for the idea of the reflective practitioner, declaring that students should be able to 'demonstrate critical awareness and reflective practice' (UKCC 1999, p38) and, more recently, the NMC (2010) has included this requirement. The incorporation of reflective practice is considered to have the potential to assist nurses to draw on experiences and to link theory to practice (Duke and Appleton 2000).

In defining reflection, Boud et al. (1985) state it is 'an important human activity in which people recapture their experience, think about it, mull it over and evaluate it' (p19). They also suggest that reflection in the context of learning is a 'generic term for those intellectual and affective activities that individuals engage in to explore their experience, which leads to new understandings and appreciations'. According to Johns (1998), the purpose of reflective practice is to 'enable the practitioner to access, understand and learn through his/her lived experiences' (p 226). Reflection is argued to be a crucial part of the learning process and it is especially valuable in the professional context because of its potential to augment learning in the clinical environment (Braine 2009). Blackwell et al. (2001) suggested that the quality of the student's reflection is therefore fundamental to the quality of learning.

Nursing academics maintain that reflection is central to professional development and critical for advancing professional practice (Braine 2009, Benner 1984, Rolfe 1993). Schön (1983) proposed two types of reflective practice: reflection-in-action and reflection-on action. Reflection-in-action signifies reflective thinking while still engaged in the situation. Reflection-on-action represents reflective thinking about an experience in a post hoc manner. Knowledge acquired in both types is framed by the practitioner as an active agent with prior experience interacting with the situation through her/his role (Tversky and Kahneman 1991).

Schön (1983) established his theories and their application based on the earlier work of Dewey (1916, 1933) and along with Argyris (Argyris and Schön 1978, 1996) has been a major influence on the development of a body of conceptual and empirical work around the nature of practice learning. Dewey (1933) recognised the social nature of learning and the importance of the continuity of experience. Concrete experiences in the practice setting can be reflected upon, leading to new insights and application of new learning (Kolb 1984). However, learners need to engage with the experience, deconstructing and reconstructing it in order to learn from it and build their own unique body of knowledge. Within constructivist theory this would be known as scaffolded learning (Spouse 2001). In scaffolded learning, a body of knowledge is held by the learner, depicted as knowledge-in-waiting, but in order to progress to the next stage, knowledge-in-action, the learner needs guidance and support from a more experienced colleague (Spouse 2001).

Schön's philosophies on reflective practice include the need for time and space to be available for the practitioner and the learner to appraise and realise the interconnections between theory, intuition and practice. The practitioner working alongside a learner needs to have good coaching skills in order to make the implicit, often tacit, knowledge embedded in skilled practice, explicit for the learner (Schön 1983). I would further suggest that what also needs to be considered is that students learn through work at an individual level: their actual experiences provide knowledge from challenges, making mistakes, problem solving, and taking action based on a decision made by the learners.

Many models of reflection have been inspired by Schön's work. However, much criticism of his work has also been reported. Boud and Walker (1998) report that Schön's analysis overlooks critical features of the context of reflection. Whilst Usher et al. (1997) find Schön's account and methodology unreflexive. Smyth (1989) criticises the atheoretical and apolitical quality of his conceptions and Greenwood (1993) targets Schön for downplaying the importance of reflection-before-action. Drawing on phenomenological philosophy, Ekebergh (2006) argues that it is not possible to distance oneself from the lived situation to reflect in the moment. She emphasises that, to achieve real self-reflection, one must step out of the situation and reflect retrospectively (van Manen 1990).

In reviewing these critiques, once again it can be noted that that conceptions of reflective practice are overly focused on the individual rather than the collective activity of practice. This focus, argues Fenwick (2003), is inclined to separate mentalist thinking from doing, and drifts into a therapeutic approach to learning which again targets the individual as the one in need of change. As a result it brackets out the conditions of work and the systems

of regulations that directly influence the nature of practice and the learning that can be accomplished in practice (Fenwick 2003).

2.3 Practice learning theory

Practices are, according to Schatzki (2002, p2), 'embodied, materially mediated arrays of human activity centrally organised round shared practical understanding'. Further, practice can be understood as a 'nexus of doings and sayings organised by understandings, rules, and teleoaffective structures' (Schatzki, 1997, p. 3). Here Schatzki is referring to the 'linking of ends, means, and moods appropriate to a particular practice or set of practices and that governs what it makes sense to do beyond what is specified by particular understandings and rules'. That is, it is purposeful (teleo), people are invested in it (affective) and it generates meanings of its own (understandings and actions) (Hager et al. 2012).

Hager et al. (2012) progress a number of key principles for thinking about the relationship between learning and practice. Firstly, practice is not merely the application of knowledge; it is not a simple consequence of learning. Gherardi (2009) expands on this by stating that knowledge is an activity (a knowing) and an activity that itself constitutes the practice (knowing in practice). In a developmental sense, for an individual, theoretical knowledge can produce a novice practitioner, one who is ready to embark on learning a practice through practice. This process inevitably involves change. It involves a notion of becoming (e.g. in the webs of action that are practice). Fenwick (2012) expands this point stating that people frequently influence and adjust to each other's emerging actions, ideas and intentions.

Practices involve a range of elements that are entangled in activity: human actors as well as materials and technologies (Fenwick 2004). Knowing, as well as identities and actions, emerge in practice. These practices are not stable or homogeneous (Hager et al. 2012). Practices exist and evolve in particular historical and social contexts – times, places and circumstances. Similarly, Fenwick (2014) describes how practices involve a variety of elements that are entangled in activity: human actors as well as materials and technologies. Knowing, as well as identities and actions, emerge in practice. Gherardi (2012) further observes that practices change by being practised, therefore change is integral to practice. This leads to a third principle: that practices are emergent in the sense that the ways that they change cannot be known in advance (Hager et al. 2012). This emergent character of practices means that there is a close link between learning and

becoming a proficient practitioner. Some aspects of practices are tacit, that is to say their precise specification is somewhat elusive. This important tacit dimension of practice represents a fourth principle for thinking about the relation between learning and practice. Practice exists in the relations among things, not in the things themselves, and usually embeds a moral dimension: a notion of what is 'good' practice, and what is not (Fenwick 2012).

To overcome such shortfalls and to potentially address the many issues highlighted in previous chapters of this thesis, nurse educators should consider adopting principles and elements of complexity theory when designing practice learning experiences which might go some way to developing nursing capability as a possible solution. Through designing practice learning experiences underpinned by complexity theory, the intention would be to illuminate a framework to understanding and better supporting learning through, for and at work for undergraduate nurse education.

2.4 The possibilities afforded by complexity theory

As can be noted in my previous chapter, the nature of the relationship between theory and practice has been subject to debate for many years, often circling around familiar principles. However, one perspective which adopts very different premises has emerged in complexity theory. There is a growing body of literature which relates complexity theory to educational contexts, and in recent years this material has attracted interest in the healthcare professions. Whilst I have not incorporated this theory into my work to date, my studies themselves have pointed me increasingly to these complexity-oriented theoretical tools that I am becoming persuaded can better explain the emergent properties of practice, and the processes of learning in practice.

Complexity theory serves as an umbrella term for a number of theories, ideas and research programmes that are derived from different disciplines in the natural sciences (Stacey 2003).

Complexity theory focuses on the nature of change and the way in which new situations and patterns emerge from complex systems. Mason (2008) suggests that such insights could be of considerable interest in the dynamic and evolving world of educational institutions and proposed in areas such as practice learning.

Complexity theory is described as a theory of change, evolution, adaptation and development for survival (Mason 2008). Complexity theory integrates concepts arising from chaos theory, cognitive psychology, computer science, biology and other related fields to deal with the natural and artificial systems as they are, and not by simplifying them (breaking them down into their constituent parts) (Mason 2008). According to Morrison (2008), education in a complex and changing world should be viewed as being 'dynamic, emergent, relational, autocatalytic, self-organised, open existentially realised by the participants, connected and recursive' (p25). What this does is moves away from simple cause-and-effect models, linear predictability, and a reductionist approach to understanding phenomena, replacing them with organic, non-linear and holistic approaches (Morrison 2008). Furthermore, complexity theory acknowledges that complex behaviour emerges from a few simple rules, and that all complex systems are networks of many interdependent parts which interact according to those rules (Morrison 2008).

Complexity theory regards knowledge as an emerging phenomenon, enacted by participants (Fenwick 2012a). Knowledge is not static and centrally held, but is instead 'dispersed, shared and circulated throughout the system' (Morrison 2008, p21). This view acknowledges that learning is a collaborative enterprise revealing the complex interactions within different groups (Jess et al. 2011), for example, students, lecturers, healthcare practitioners and managers, who make up the health and education systems and also across the different 'nested' levels of this system. Fenwick (2014), in discussing medical practice, shows how a nested system in surgery includes the interactions between, for example, operating theatres, surgical wards and clinics. That is, learning emerges through the relationships that develop between these elements (Fenwick 2012), which are themselves considered shifting, dynamic and diverse (Morrison 2008). This view suggests that learning is a non-linear process of emergence (Fenwick 2014), therefore, this complex learning perspective has some similarities with the social constructivist notion of active learners (Jess et al. 2011).

A complexity-informed perspective suggests that 'greater degrees of complexity, change and adaptability in changing environments' (Morrison 2008, p21) requires that practitioners approach learning in terms of 'self-organisation, towards the 'edge of chaos' (Morrison 2008, p22). Self-organisation embodies an emergent functional and natural order that illuminates the dynamic way that elements of complex systems interact more or less successfully (Bain et al. 2011). Merry (1995) informs that self-organising systems operate from a bottom-up approach as a result of the interdependent actions of the multiple agents in the systems. In other words, self-organising is the process by which people mutually

adjust their behaviours in ways needed to cope with changing internal and external environmental demands (Cilliers 1998). An example of this, which I recently witnessed in the health care setting, is where the introduction of mobile personal communication devices to nurses in A&E can result in nurses self-organizing into ad hoc teams that can respond rapidly to emergencies. Self-organising systems possess simple rules that guide the activity of individual agents and the system as a whole (Seel 1999).

'Edge of chaos' has been defined as 'where the components of a system never quite lock into place, and yet never quite dissolve into turbulence, either' (Waldrop 1994 p12). However, Tosey (2002) adds to this by informing that the dynamics are still chaotic but they also possess characteristics of order. Networks are tight enough to co-ordinate activity and share resources but loose enough to enable creativity and change. Kuhn et al. (2008) add that '…while certain phenomena appear to be chaotic or random, they are actually part of a larger coherent process' (p178). Feedback loops nested within a system often generate chaotic behaviour. An example of this from healthcare would be when the variation in surgical delays in the operating theatre schedule may appear unrelated but actually can represent a hidden chaotic pattern. For example, surgeons underestimating how long it takes them to carry out a procedure and overbooking the number of patients on their list.

Wright (2004) argues that pedagogical practices and curricular designs ought to support students to understand and 'deal with the uncertainty of conflicting and changing knowledge' (p6). Furthermore, Tosey (2002) explains that, as educators, we cannot control or determine what our students will learn as our students are broadly self-organising and their learning is emergent and constructed. Tosey (2002) also notes that learning that is engineered limits any educational experience. As educators we do not stand outside their learning but rather our connection to students is highly influential. This essentially means working at the edge of chaos. Linked to this is the notion of disturbance. Used as a metaphor, disturbance can be seen in the hospital environment by variability in the number of professionals with whom patient care must be coordinated, and the amount of patient movement on and off a ward and so forth.

What is notable in a complexity approach is a shift from behaviourist and outcome-driven approaches to education and progress's a more collaborative and constructivist learning model that pays attention to diverse and shifting knowledges (Light 2008). Fenwick (2014), writing about the practice of doctors, demonstrates how illness and health are produced through complex, dynamic interactions and how this can affect clinical judgement and the

effectiveness of interventions as a result of uncertainty. Fenwick et al. (2012) further suggests that learning from a complexity theory perspective is conceived as expanding the conditions for novel possibilities and a repertoire of capacities to attune and act upon the most productive possibilities.

As with most theoretical frameworks there are recognised advantages and disadvantages. As noted throughout this discussion of complexity theory, a strength of this theory is that it focuses on relationships rather than simple cause and effect models (Morrison 2008). In addition, the Health Foundation (2010) states that complexity can provide a framework for categorising and analysing knowledge and agents and, in addition, provides a more complete picture of influences affecting change. Stacey (2003) emphasises that complexity needs to be used authentically, not as a loose metaphor. Similarly, the Health Foundation (2010) highlight how complexity theory has been defined in a number of different ways and there is not necessarily a consensus about the most appropriate definition for use in healthcare. Tosey (2002) highlights that practitioner's comment on complexity theory being conceptually interesting, but that it seems difficult to apply in practice. Furthermore, the Health Foundation (2010) reports a lack of empirical testing and use within healthcare settings and that there is a paucity of comparison with other theories. Morrison (2010) also notes that a distinct drawback of complexity theory is that it advocates for self-organisation and, as such, risks absolving leaders and managers from accountability and responsibility.

Bearing in mind these caveats, I am tempted in my future work to continue to explore the affordances of complexity theory for designing and evaluating practice learning experiences for student nurses.

In considering the concept of self-organisation, complex adaptive systems do not have a hierarchy of command. They constantly reorganise themselves to find the best fit with the environment (Morrison 2010). One means in which self-organisation could be incorporated into both the hub and spoke practice learning model and the more traditional practice learning model would be to provide students with a choice of where they wish to experience their practice learning opportunities. This could be done by setting out on a matrix all available practice learning opportunities for each semester and getting students to select their first three choices. By doing so would give students greater ownership of their practice learning experience as opposed to this being decided by someone in an administrative role. This could also afford the student with taking greater responsibility for planning their future learning depending on their own curiosities. This would also loosen up the existing system. However, this would require a shift of authority towards practitioners'

situated judgements and away from predetermined outcomes, both in respect of programme planning and policy.

Linked to this is the concept of nested systems. As noted earlier most systems in healthcare are embedded with other systems. By designing the students practice learning experience which follows the patients' journey would allow the students to gain a greater understanding of how one service can influence or impact on another but, more importantly, the challenges and complexities which some patients can experience in getting through the system.

How agents in a system connect and relate to one another is critical to the system's survival and so the relationships between the agents are usually seen as more important than the agents themselves in complex adaptive systems thinking. In reconsidering the current mentoring model the concept of connectivity might usefully be applied.

Complexity theory merges together several threads relevant to innovation and evaluation: 'non-linearity, emergence, dynamic systems, adaptiveness, uncertainty; and co-evolutionary processes' (Patton 2011, p104). One approach that is just beginning to circulate, for example, is something called Developmental Evaluation based on the principles of complexity. It centres on situational sensitivity, responsiveness, and adaptation, and treats the evaluation as an instrument helping to understand the dynamic of the system, interdependence and emerging interconnections (Patton 2011). This and other possible approaches suggest to me a positive direction for rethinking practice learning in ways that step beyond notions of a theory-practice gap and that work with the actual conditions of the emergent systems in which nurses must practice.

2.5 Conclusions

In concluding this chapter, it is my opinion that the missing dynamic when designing practice learning experiences to promote nursing capability is a more robust, critical and nuanced theoretical framework that can address the difficult, multi-faceted and emergent dynamics of practice. Much has been given over to the inclusion of reflective practice by nursing's governing body and curriculum designers; however, the evidence base for such inclusion is weak. As noted earlier in this chapter, the early theories of learning proposed by such authors as Knowles (1990), Kolb (1994) and Biggs (1999), only serve to demonstrate learning as being an individualist view. The works of Lave and Wenger (1991) and Wenger et al. (2002) have moved this way of thinking on somewhat by recognising

that learning is a collective commodity, encouraging the sharing of discourse between experienced and less experienced members of the learning community. More contemporary theorists, such as Schatzki (2012), Hager et al. (2012), Fenwick (2012b, 2014) and Gherardi (2012), demonstrate that learners draw from a range of learning approaches which are socially, culturally and context sensitive. Furthermore these authors recognise that the realities of practice are messy and entangled webs.

As educators we must ensure that students need to learn to expect unpredictability, and be flexible in responding to emerging patterns and opportunities. Assessing and managing complexity in the health care environment involves understanding why practice is a complex system and how to work within such a system to achieve the best outcomes.

Chapter 3 Overview of Publications

3.1 Introduction

In setting out this chapter I am presenting these overviews for a nursing education audience, to reflect the style and audience of the original publications. I am presenting a brief overview of the studies, the associated project phases and research methods employed as a means for readers to better understand the context of the publications within this thesis. A more critical review of the research design and methods employed are discussed in greater detail within Chapter 5. I have included information that is generally considered important to this audience, such as details about the journal's standing and article citations, and the percentage of my own contributions. I provide detail of ethical approval processes associated specifically with each paper. Fuller ethical considerations associated with the studies and papers are provided within Chapter 5. I report the studies from an evidence-based perspective of prediction and control aligned with the contexts of the commissioning process and the conduct of each project. By this I mean that I treat the findings in these descriptions as valid and credible within the stated limitations.

This PhD thesis includes six published journal articles, five of which were produced from two research projects, separate but linked, examining undergraduate nurse education conducted in Scotland (See Table 2 for list of papers).

Table 2: List of full references for publications

Study one

Paper one: *A review of curriculum evaluation in United Kingdom nursing education* (2008). Nurse Education Today. 28 (7) 881-889. Authors: **Roxburgh M**, Watson R, Holland K, Johnson M, Lauder W, Topping K.

Study one

Paper two: *Fitness for Practice in Nursing and Midwifery education in Scotland, United Kingdom* (2010). Journal of Clinical Nursing. 19, 461-469. Authors: K Holland, **Roxburgh M**, Johnson M, Topping K, Lauder W, Watson R, Porter M.

Paper three: *An integrative literature review of student retention in programmes of nursing and midwifery education: why do students stay?* (2011). Journal of Clinical Nursing. 20 (9-10) pp 1372-1387. Authors: Cameron J, **Roxburgh M**, Taylor J, Lauder W.

Study one

Paper four: *Findings from the early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start* NHS' (2010). Nurse Education in Practice. 10 (2) pp 76-81. Authors**: Roxburgh M**, Lauder W, Holland K, Johnson M, Watson R, Topping K.

Study two (phase one)

Paper five: *Evaluating Hub and Spoke Models of Practice Learning in Scotland, UK: A Multiple Case Study Approach* (2012). Nurse Education Today. 32 (7) pp782-789 Authors: **Roxburgh M**, Conlon M, Banks D.

Study two (phase two)

Paper six: *Undergraduate student nurses perceptions of two practice learning models: a focus group study* (2014). Nurse Education Today. 34 (1) 40-46. Author: **Roxburgh M**.

Journals differ widely in their scope, topic and perspective, usually with different emphasis on methodological, theoretical or topical aspects within a given field of research.

When deciding on the journals in which to publish my study findings a number of key factors influenced my decisions. My first consideration is who most would benefit from reading these pieces of work? In tandem I also considered the standing of the journal in terms of the likely impact my findings may have on practice. My final considerations included how quickly is the process of acceptance to publication and a great consideration, given my aim was to include the publications in the thesis, was whether the publishers would retain the copyrights.

The first study (papers one, two and four), *Nursing and Midwifery in Scotland: Being Fit for Practice: The Report of the Evaluation of Fitness for Practice Pre-Registration Nursing and Midwifery Curricula Project*, aimed to explore how Scottish student nurses are prepared to be 'fit for practice' and 'fit for purpose' in a dynamic and ever-changing healthcare landscape, along with the numerous challenges associated in becoming 'fit for practice'.

The research design for this study was multi-phase (1-3) and multi-method using a combination of qualitative and quantitative methods. Table 3 details the methods used in each phase:

Table 3: FFP study design

Project Phase	**Method of data collection**
Phase one	• A literature review • Postal survey of pre-registration students • OSCEs and paper-and-pencil test with students
Phase two	• In-depth face-to-face interviews with practitioners and educators • Telephone interviews with practitioners • Focus groups with practitioners, educators and students • Four stakeholder events with practitioners, students, carer and service-users and educators • Written feedback from carer and service-user organisations
Phase three	• Postal survey of Flying Start NHS newly qualified nurses

The significance of this study was commented on in the Willis Commission Report (2012), *Quality with Compassion: the future of nursing education*. This study was regarded as 'arguably the most comprehensive and methodologically complex nursing curriculum evaluation yet undertaken in the UK' (p26). Further recognition of the significance of this study was cited by the Facing the Future – Recruitment & Retention report (SGHD 2007) as 'being key to informing nurse education developments over the next decade' (p13). NHS Education for Scotland published their response and proposals for addressing the recommendations of this National study in November 2008.

The second study (papers five and six), *Contemporising Practice placements for Undergraduate student nurses: Are 'Hub and Spoke' models the future?* Was a quasi-experimental design, which involved designing and testing a new practice learning model across three geographically diverse locations (urban, rural and remote) in Scotland. The aim was to determine whether this new model provided greater support and learning opportunities whilst on practice learning for first year student nurses and if it improved retention within a programme of nursing, in contrast to the existing practice model. It should be noted at this point that a self-selecting group of students from the Sept 2009 class acted as a control group to provide a comparison between the two models.

This study, when completed, was given further monies to conduct further research; *A follow up to new approaches to providing practice placements in the pre-registration nursing programmes: A comparison study of the year one pilot students and their year 2 experience,* (Phase two) which aimed to compare and contrast from the (intervention) student perspective their experiences of the traditional rotational model versus the Hub and Spoke model.

The research design for this study was quasi-experimental and multi-phase (1-2) and multi-method using a combination of qualitative and quantitative methods. Table 4 details the methods used in each phase:

Table 4: Hub and spoke study design

Project phase	**Method of data collection**
Phase one	• Pre and post survey with mentors, personal tutors, senior charge nurses • Administration of the Clinical Learning Environment Inventory (Chan 2002) at 3 time points with control and intervention groups • Administration of the Short Support Questionnaire (Lauder et al. 2008) at 3 time points with control and intervention groups • Focus groups with intervention group students, mentors, academics, personal tutor and practice education facilitators • Completion of reflective diaries by intervention group twice per week for the duration of year 1

Phase two	• Focus groups with intervention students • Administration of the Clinical Learning Environment Inventory (Chan 2002) at 3 time points with intervention students • Administration of the Short Support Questionnaire (Lauder et al. 2008) at 3 time points with intervention students

3.2 Standing of journals

The journals in which these articles are published are international peer-reviewed journals. *Nurse Education Today* (two articles) is the most highly ranked nurse education journal worldwide with an ISI impact factor of: 1.218. *Nurse Education in Practice* is a relatively new journal in comparison and not yet in receipt of a Thomson Impact factor but has a SCOPUS SJR of 0.589. *The Journal of Clinical Nursing* has an Impact Factor of 1.316. These Impact Factors are within the field of nursing.

In relation to the wider scholarly community of education, for example in the SCImago Journal and Country Rank-Subject Category *Education, Nurse Education Today* is ranked 27th out of a possible 476 Education journals worldwide. *Nurse Education in Practice* is already ranked 41/476, and the *Journal of Clinical Nursing* is ranked 30/95 in Nursing (Social Science) and 34/97 in Nursing (Science).

The impact factor of a journal is a measure of the frequency with which the "average article" published in a particular scholarly journal has been cited in a particular year or period. It is often used to measure or describe the importance of a particular journal to its field.

(Copies of all three identified journals' aims and scope and author guidelines, together with links to their Journal and Publisher websites can be found in Appendix 1. I have also appended the copyright permissions from the publishers to include the papers within this thesis in Appendix 2 to 7).

3.3 The studies and the candidate's contribution

The two studies reported in these six papers were conducted over a six-year period (2006 – 2012).

Nursing and Midwifery in Scotland: Being Fit for Practice: The Report of the Evaluation of Fitness for Practice Pre-Registration Nursing and Midwifery Curricula Project (Lauder, Roxburgh, Holland, Johnson, Watson, Porter & Topping 2008).

Papers one, two and four report on this study which was commissioned by NHS Education for Scotland. The study itself was conducted collaboratively with colleagues from other Academic Institutions across the UK: Professor Roger Watson (University of Hull, formerly University of Sheffield), Professor Martin Johnson and Professorial Fellow, Karen Holland (University of Salford), Professor Keith Topping (University of Dundee) and Professor William Lauder (University of Stirling, formerly University of Dundee).

Within this team, I contributed to these studies through developing data collection tools, recruiting, data collecting, analysing data and writing up reports and leading on two of the three papers and as second author on one paper. Overall, I contributed in excess of 70% of the work associated with these papers. For example, in paper one, I led on all stages within this review paper.

Contemporising Practice placements for Undergraduate student nurses: Are 'Hub and Spoke' models the future? (Roxburgh et al. 2010) (Phase one). This was a collaboration with colleagues within my School.

Paper five reports on this study, which was commissioned by NHS Education for Scotland. Within this team I designed the study. I also designed the Hub and Spoke model, developed data collection tools, recruiting, data collecting, analysing data and writing up reports. Overall, I contributed in excess of 80% of the work associated with this study.

Paper five came about as two other Institutions were funded to conduct similar testing of new practice learning models. The funders were keen that findings from across all three teams (M Conlon, Edinburgh Napier University and D Banks, Robert Gordon University) were shared and regular meetings with the three teams and funders were held. After presenting at the Nurse Education Today Conference in Cambridge in 2011, the Editorial team formally approached me and asked if I would write an article based on the work for the special NET Conference issue. In this paper my contribution was 50% along with M Conlon contributing 40% and D Banks 10%.

A follow up to new approaches to providing practice placements in the pre-registration nursing programmes: A comparison study of the year one pilot students and their year 2 experience (Bradley et al. 2012) (Phase two).

Paper six reports on this study, which was commissioned by NHS Education for Scotland. Within this team I designed the study, developed data collection tools, recruiting, data collecting, analysing data and writing up reports. Overall, I contributed in excess of 80% of the work associated with this study. Paper six presents the qualitative data from the Hub and Spoke study whereby the student nurses relived their experiences both on a Hub and Spoke model and rotational model of practice learning. In this paper my contribution was 100%.

Paper three was as a result of collaboration between myself, Dr Joan Cameron, and Professor Julie Taylor (University of Dundee) and Professor William Lauder (University of Stirling). In this paper I contributed 40% with Dr Joan Cameron contributing 40% and our other colleagues 5%, respectively. Although this was an unfunded piece of work it assisted me in designing the Hub and Spoke model.

Further details of my contribution to each study are provided in the individual papers. With the exception of papers one and four, these papers were produced whilst I was employed as a Lecturer at the University of Stirling.

3.4 Summary of article content and reception

Below I will provide an overview of each of the studies reported in the papers including their aims and objectives. I also provide information on citation rates associated with the publications and offer examples of journals where the papers have been cited. The significance of citations cannot be underestimated. Citations are increasingly used for the purpose of evaluating research. Citations are regarded as a relatively objective measure to determine the influence and importance of ones work. I also provide an overview of the ethical approval processes associate with each study.

Full copies of all the papers are presented in Chapter 4.

3.4.1. Paper one:

A review of curriculum evaluation in United Kingdom nursing education (2008). *Nurse Education Today* 28 (7) 881-889.

This paper has been cited 12 times in a range of journals including; *International Journal of Nursing Education Scholarship, Journal of Clinical Nursing,* and *Issues in Mental Health*, all of which are International peer-reviewed journals.

Overview and aims

This article presents a review of the literature tracking the history of curriculum changes in the UK from the 1970s-style 'apprenticeship' model to the current day model of producing practitioners who are fit for practice and purpose. This review offered a background context to the analysis of the curricula documents from the HEIs in Scotland (the Phase one element curriculum evaluation of programme organisation and structures in study one Nursing and Midwifery in Scotland: Being Fit for Practice: The Report of the Evaluation of Fitness for Practice Pre-Registration Nursing and Midwifery Curricula Project) and supported the inclusion of this element of the project. The specific aim was to review methods and outcomes of curriculum evaluation related to Project 2000 and 'Making a Difference' in nursing education across the UK. The research question guiding this review was:

Is it possible to identify systematic approaches to curriculum evaluation in nursing?

3.4.2 Paper two:

Fitness for Practice in Nursing and Midwifery education in Scotland, United Kingdom (2010). *Journal of Clinical Nursing*. 19, 461-469

This paper has been cited 11 times in a range of journals including; *Training and Education in Professional Psychology*, *Journal of Nursing Management*, and *Midwifery*, all of which are International peer-reviewed journals.

Overview and aims

This paper reports the qualitative findings from phase two of the first study, *Nursing and Midwifery in Scotland: Being Fit for Practice: The Report of the Evaluation of Fitness for Practice Pre-Registration Nursing and Midwifery Curricula Project*, which aimed to capture

the major stakeholders' (HEIs, National Health Service (NHS) academics, clinicians and managers, students and carers/users) constructions of what constituted success in FFP, the extent to which they perceived success had been achieved, and the contribution of working partnerships to this. The specific aims were to 1) identify and evaluate changes to the way partnership working has developed between HEIs and service providers, and 2) to evaluate the impact of the programmes in NHS Scotland in terms of perceptions of FFP. The research question guiding this study was:

> *How does partnership working between the HEI and NHS contribute to newly qualified practitioners being fit for practice?*

3.4.3 Paper three:

An integrative literature review of student retention in programmes of nursing and midwifery education: why do students stay? (2011) *Journal of Clinical Nursing* 20 (9-10) pp 1372-1387

This paper has been cited 14 times in a range of journals including; *Advances in Health Sciences Education*, *Journal of Transcultural Nursing* and *International Journal of Nursing Studies*, all of which are International peer-reviewed journals.

Paper three was an unfunded piece of work undertaken from an interest to understand student reasons for staying on programmes of nursing. However, this paper assisted me in developing and securing funding for the study reported in papers five and six.

Overview and aims

The *'Recruitment & Retention' Report of the 'Facing the Future' SubGroup & Working Groups* (SGHD, 2007) identified a number of issues that may impact on student retention and attrition. Issues are multifactorial but a number of key areas have been highlighted, including the quality of support and learning experiences in practice settings. The specific aim of this review was to identify student characteristics and strategies in research studies investigating retention (why students stay) as opposed to attrition (why students leave) in nursing and midwifery pre-registration programmes. The research question guiding this study was:

> *What factors contribute to student nurses completing their programme of study?*

3.4.4 Paper four:

Findings from the early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start NHS (2010). *Nurse Education in Practice* 10 (2) pp76-81.

This paper has been cited six times in a range of journals including; *International Journal of Nursing Studies* and *Journal of Clinical Nursing*, both of which are International peer-reviewed journals.

Overview and aims

This paper reports phase three of study one on the levels of self-reported competency, self-efficacy, job demands and career intentions in newly qualified nurses undertaking the Flying Start NHS™ programme in Scotland. The specific aim was to explore the future aspirations and intentions of the newly qualified practitioner. The research question guiding this study was:

What are the future career intentions of newly qualified practitioners?

3.4.5 Paper five:

Evaluating Hub and Spoke models of practice learning in Scotland, UK: A multiple case study approach. (2012) *Nurse Education Today*. 32 (7) pp 782-789.

As a relatively new publication, to date this has been cited two times in a range of journals including; *Nurse Education Today* and *Nurse Education in Practice*, both of which are International peer-reviewed journals.

Overview and aims

This paper was written following the development and evaluation of new models of practice learning for undergraduate student nurses (Study two), commissioned by the Scottish Government Health Departments, Recruitment and Delivery Group and NHS Education for Scotland, NMAHP Directorate. Central to the commissioning of this study was Lauder et al.'s (2008) recommendation from the National Evaluation of Fitness for Practice in Scotland study that there was 'a need to evaluate current clinical learning experiences in terms of balance, length and quality' (p179). Each of the case studies

reported were independently commissioned by the funders and independently designed by the HEI and respective NHS partners. Through the support of the funders the opportunity was afforded for collaboration, sharing of ideas, discussions and debates of the merits and limitations of the models between the three HEIs. The specific aim was to develop, implement and evaluate the impact of Hub and Spoke models of practice learning across geographically diverse locations, with a particular focus on enhancing the student learning experience. The research question guiding this study was:

Can a Hub and Spoke practice learning model enhance the student experience?

3.4.7 Paper six:

Undergraduate student nurses' perceptions of two practice learning models: A focus group study (2014). *Nurse Education Today* 34 (1) p40-46

As a recent publication, to date this paper has not been cited.

Overview and aims

Phase one of this study examined student, mentor and clinical manager's perceptions of a 'Hub and Spoke' practice learning model in year one of an undergraduate nursing programme. Findings from phase one (paper five) suggested that the model had significant educational merit in orientating students to clinical learning and emphasising the primacy of the mentor relationship in developing and supporting students. Following the students through year two of their programme, wherein they experienced a 'rotational' practice learning model, provided an opportunity to explore student perceptions of both models (phase two). The specific aim was to explore undergraduate nurses' perceptions of two experienced practice learning models: the Hub and Spoke model, and the classical rotational model. The research question guiding this study was:

What are the strengths and weaknesses of each practice learning model as experienced by the student?

3.5 Learning from the publication process

In considering the publication process and key lessons which I have learned the most significant way to achieve professional recognition, is that my publications must be in reputable high-impact journals, well-written and aligned to the journal scope and target

readership. I draw this conclusion as I am continually amazed at the time, effort, and thought that many reviewers put into the review process. The level of detail with which reviewers have provided me with feedback so that a manuscript can be improved through revision is something I greatly appreciate. Through these reviews and feedback many of my first draft papers have been amended significantly. For example paper six in this thesis was strengthened considerably by a reviewer suggesting I lay out the discussion section in a similar way that I had laid out paper five.

However, a further lesson I have learned is that there can be a great deal of variability across reviewers in the issues addressed, and the feedback is occasionally contradictory. This has posed challenges to me when trying to ensure I address all the reviewers' feedback. With one of my very early papers I submitted, I ended up seeking advice directly from the journal editor as to how best to reconcile these contradictions. At that stage in my publication career I was extremely anxious about the whole peer review process and how much of the feedback I was required to address. Guidance from the editor to this day I have found invaluable. However, now, with more publication experience I have the confidence, if I strongly disagree with a reviewers suggested point, to offer a rebuttal supported by evidence.

Another fact that is sometimes overlooked is that while individual reviewers often miss specific issues in a manuscript, another reviewer often catches the problem. For example, in paper 1, the number of articles selected in the abstract did not correspond with the information in the results section.

Over the last eight years of submitting my articles for publication, I have come to understand that publication is highly selective, and rejection is a possibility, which is part of the process of becoming a researcher. To date I have been fortunate that none of my papers have been out rightly rejected. However, 50% of my papers have required major revisions. Crucial to amending my papers is meeting the journals very tight timelines. This is where I feel my time-management skills are crucial.

3.6 Ethical approval

Papers two, four, five and six all required ethical approval.

For papers two and four, ethics approval was received from the non-clinical human subjects research committee of the University of Dundee. The Central Office for Research

Ethics Committees (COREC) (now the National Research Ethics Service) judged the project to be a service evaluation and advised that there was no requirement for full COREC approval. However, following good practice guidelines on research governance, all participants were provided with written information about the study, and, where appropriate, written consent was obtained. Confidentiality and anonymity were guaranteed. This was assured particularly in relation to the 11 HEIs and their partner organisations, given that this study involved potentially identifiable contexts.

In relation to paper five, advice and guidance was sought from the National Research Ethics Service (NRES). NRES judged the projects as service evaluation and therefore advised there was no requirement for NRES approval. However, this was obtained in Case Study three as was NHS Research and Development Management Approval. All three project teams applied for SREC (School) ethical approval which was granted. The projects adhered to the principles of Research Governance.

For paper six students from the September 2009 cohort who participated in phase one were written to and provided with information and the rationale behind continuing to follow their practice learning journey through year two. Participant consent was maintained in phase two from the original declarations made by participants in phase one of the project following approval by the Chair of the University Research Ethics Committee. Participants were assured of anonymity and confidentiality both during and after their involvement in the study. Participation remained voluntary.

3.7 Conclusion

In concluding this chapter my aim was to provide the reader with a broad overview of the two studies, the methods adopted and the associated published papers. In doing so I have also detailed the standing of the journals and provided details of the reception of the papers to date. For each study and paper I have detailed my contribution, alongside the personal learning I gained through the publishing process. Broader methodological and ethical considerations are reported separately in Chapter 5.

The following chapter presents all six papers in their entirety.

Chapter 4 Publications of Study Findings

Paper 1: A review of curriculum evaluation in United Kingdom nursing education (2008)

Nurse Education Today (2008) 28, 881–889

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REVIEW

A review of curriculum evaluation in United Kingdom nursing education

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KEYWORDS
Nurse education;
Evaluation;
Curriculum;
Education;
Nurses;
Nursing

Summary Recently we have witnessed several significant changes to the nursing curriculum in the United Kingdom (UK). This review forms part of a larger study evaluating the 'fitness for practice' elements of the nursing curriculum in Scotland. Systematic review methods were used including the following databases: CINAHL and BNI. Twenty six papers were retrieved and 14 remained after applying the review criteria, the main rationale being the empirical focus. It appears that there is a paucity of research in this area in the UK and papers dealt exclusively with either content, process or outcome evaluation of the nursing curriculum. National, well funded, multi-centre studies tended to be more rigorous. Results, where they were positive about curricular changes, tended to be limited. There is clearly a need for rigorous research into curriculum evaluation, both at the micro and macro level, which investigates content, process and outcome. Without such research, curriculum change will be uninformed.

Introduction

Regular change seems to be constant in nursing curricula in the UK. Since the mid 1980s there have been at least five major curriculum changes in Scotland.

Many of these changes have been driven by new ideas on teaching and learning in addition to developments in health care delivery. Developments include the Knowledge and Skills Framework (DOH, 2003), NHS24 (SEHD, 2000), out-of-hours care (SEHD, 2002), nurse prescribing (SEHD, 2006a, b, c, d), agenda for change (DOH, 2002), NMC task and finishing group on strengthening standards in pre-registration education (Moore, 2005), the Scottish review of mental health nursing (SEHD, 2006a, b, c, d), the one-year development programme for all newly qualified nurses and midwives (SEHD, 2006a, b, c, d) and the pilot

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project to support new staff nurses into primary care (SEHD, 2006a, b, c, d). The building a health service fit for the future report (SEHD, 2005) signifies a period of potentially dramatic change in the delivery of health services in Scotland. This requires nursing and midwifery education to play its fullest part by preparing a practitioner whose portfolio of skills and attributes enables them to be both flexible and responsive to a changing clinical environment (SEHD, 2005). Many of these changes are not just a result of professional imperatives but have been driven by political imperatives (DOH, 1999; Scottish Executive Health Department, 2001, 2002).

A brief overview of changes in the history of nurse education and the curriculum

Prior to the introduction of what is known as Project 2000 in England and its counterparts elsewhere in the UK, nurse education in the early 1970's and 1980s was delivered, mainly, in schools of nursing which were situated either in or close to National Health Service (NHS) hospitals. This co-location of schools and hospitals emphasised the apprentice style approach to nurse training which can trace its roots to the Nightingale reforms (1859, 1980). There were some University based degree programmes at this time but even these generally adhered to the national expectations on nurse training. These requirements were overseen by the General Nursing Council. Most nursing students undertook state final examinations for the part of the register for which they were undertaking training. Apart from a category of experimental programmes such as some of the degree courses, these examinations were universal and undertaken by all nurses on the same day.

The Briggs report in 1972 proposed major changes to nurse education and the nurses' statutory bodies, resulting in the establishment of the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) and the four National Boards for Scotland, England, Wales and Northern Ireland. The eventual outcome was a series of projects and working papers leading to the recommendations for Project 2000 (UKCC, 1987). One of these recommendations was that the number and organisation of nursing and midwifery schools should be reduced and linked with establishments of further and higher education' (Department of Health Nursing Division, 1989).

There was a period of transition where both the old training type curriculum, with their focus on clinical skills and nursing care of patients mainly in hospitals, and the new curriculum with its focus on social and biological sciences and a more rounded view of patient care which included community nursing being run in parallel (Hart, 2004).

Project 2000 was designed to change the philosophy of nurse education from apprenticeship style training to an education-led approach leading to the knowledgeable doer (UKCC, 1987). Project 2000 introduced a common foundation programme of 18 months which aimed to give all nurses a common introduction to the basic sciences, such as biology, psychology and sociology, as well as nursing care and to the skills which would equip them to undertake specialist study for their branch of nursing. This was then followed by an 18 month branch programme. The aim of this was to register in a particular area of nursing such as adult nursing, learning disability, children's or mental health nursing.

Project 2000 was so named because, by the year 2000, all nurses entering the register would have undertaken this type of preparation and would thus be prepared for the next century. However, despite the radical changes brought about by Project 2000 curricula, there was significant concern from NHS managers particularly that this curriculum was not preparing students to work effectively as registered nurses (DOH, 1999). This was especially pertinent in relation to their apparent lack of clinical skills, which was claimed to be a consequence of changes to their practice allocation and time spent in the clinical areas (Farrand et al., 2006).

The late 1990's brought significant changes in the NHS, in particular the publication of the proposals for Making a Difference — Strengthening the Nursing, Midwifery and Health Visiting Contribution to Health and Healthcare (DOH, 1999). This period also saw the publication of the Peach Commission Report (UKCC, 1999). Emerging from this report was the Project 2000 notion of the 'knowledgeable doer'. The Peach report recommendations included:

- Recruitment and selection should be a joint responsibility between health care providers and Higher Education Institutions (HEIs).
- The initial 18 month Common Foundation Programme (CFP) should be reduced to one year and should enable the achievement of a common level of competence. It should be taught in the context of, and enable integration with, the branch programmes and should introduce clinical skills and practice placements early in the programme.

- Students, assessors and mentors should know what is expected of them through specified outcomes and competencies which form part of a formal learning contract, give direction to clinical placements and are jointly negotiated between the health care providers and HEI's.
- Practice placements should achieve agreed outcomes which benefit student learning and provide experience of the full 24 h per day and 7 days per week nature of health care.
- There should be a period of supervised clinical practice of at least three months towards the end of the pre-registration programme.

Evidence from research evaluations of the Project 2000 curricula such as that by Fulbrook et al. (2000) supported these suggestions, especially in relation to clinical skills and competencies. It can also be seen that there was a strong bias towards bringing nurse education back to a closer relationship with the NHS and its workforce. Subsequently, in England, several pilot sites were commissioned to implement most of the recommendations of the Peach Commission Report (UKCC, 1999), which were then formally evaluated (Scholes et al., 2004). This pilot site initiative was named making a difference (MaD) and was imposed on English universities. Wales and Scotland, however, did not adopt all of the MaD recommendations but they were obliged to revise the delivery of nursing education in their countries (Scottish Executive, 2001; National Assembly for Wales, 1999). Northern Ireland followed the English model closely (Watson et al., 2004). This was a result of a report by the UKCC, then in its final days of office and which applied across all four countries of the UK, which made very similar recommendations to MaD (UKCC, 1999). Therefore, while there is variation across the UK in the delivery of nurse education, there is similarity in terms of the objectives with the balance shifting towards competency and skills-based education and training as opposed to the previous focus on a more rounded educational experience and a wider knowledge base for nursing. It is now the responsibility of the Nursing and Midwifery Council (NMC) to ensure that the standards for practice are central to the nursing curriculum. The role of the quality assurance agency for higher education has also become relevant with its focus on ensuring benchmarking of outcomes. Scotland has its own nursing benchmark statements (QAA/Scottish Executive, 2002). The NMC oversees all aspects of nurse education in England but devolves certain functions to bodies in the other UK countries (Watson et al., 2004). Across the UK, therefore, it makes little sense to talk about a common nursing curriculum other than in the broadest sense as the prescription by the NMC of what should be contained in any programme with regards to practice is very broad. Universities have relative autonomy to design programmes according to these guidelines and the similarly broad QAA benchmarks. Fitness to practice therefore becomes a much looser guiding concept relative to the earlier General Nursing Council requirements which stipulated certain skills to be achieved by all, prior to becoming a registered nurse.

It is of interest to us all, but especially those who fund nursing education in the UK, to know how well that education prepares nurses for practice. This can be approached through quality assurance (Watson et al., 2004), taking the outcomes of monitoring bodies into account, or examining the outcomes of nursing education – i.e., registered nurses – when they are in practice.

The evaluation of curricula

Curriculum evaluation can be undertaken from a variety of perspectives and using a range of methods, and under the influence of their statutory bodies nurses and midwives in the UK have focused more than comparable disciplines (such as medicine and social work) on measuring and justifying their learning and teaching activity through regular local evaluation and quality assurance procedures. Until the move into higher education they have not, however, always published the work with the same enthusiasm. An early focus could be said to have been on outcomes, driven by the then General Nursing Council's fascination with 'behavioural objectives' drawn from Bloom et al.'s taxonomy of knowledge domains (Krathwohl et al., 1964; Tomlinson and Birchenhall, 1981). In the 1990s the increase in acceptability of qualitative approaches led to some studies adopting Parlett and Hamilton's (1977) 'illuminative evaluation' (Attree et al., 1994). This trend continues with semi-structured interviews of course members being predominant as a method of choice, with approaches like observation (Long and Johnson, 2005) and video recording much less common. Focus on structure is similarly less strong, particularly social structure, with power relations and the views of relevant stakeholders other than students being less prominent than they probably should be in the future. Robson (2006) notes also that a key aspect of sensible evaluation is cost effectiveness, but economic aspects have been but rarely considered in nursing education evaluation to date.

The aim of this paper is to review methods and outcomes of curriculum evaluation related to Project 2000 and 'making a difference' in nursing education in the United Kingdom. Systematic review methods were applied and the review was guided by the research question: is it possible to identify systematic approaches to curriculum evaluation in nursing?

Methods

A literature search was undertaken guided by a protocol restricting the publication dates to 1997–2006; search terms used included the use of Boolean operators to link key words (student nursing or nurse education) and (evaluation or curriculum evaluation) post-97 from CINAHL to Nursing education and (evaluation or course evaluation) post-97 from BNI. These two databases contain the majority of nursing papers and it was considered that little would be gained by searching elsewhere. Papers retrieved were read and filtered by three of the authors (RW, MR, MJ) to decide, by consensus, which were relevant to the present review.

Inclusion criteria:

- Relate to UK nursing curricula.
- Concerned with evaluation of UK nursing curricula.
- Used systematic methods to evaluate UK nursing curricula.

Exclusion criteria:

- Papers focusing on educational policy.
- Curricular design (without evaluation).
- Reviews and did not use systematic methods (e.g. were merely the opinion of the author).
- Non-UK papers were excluded both to provide manageable numbers of papers and to restrict the focus to specific recent changes in UK nurse education.

The wider study of which this review formed a part was funded by NHS Education Scotland (NES) and was granted ethics approval by both the University of Dundee and National Research Ethics Service.

Results

Twenty six papers were identified from BNI and thirty from CINAHL; these were not mutually exclusive nor were all relevant to the review. Studies identified during the search were retrieved based on the article title or abstract resulting in 26 articles for review. Following filtering of the papers according to the criteria described above, 14 papers remained for review. We have subsequently included the unpublished report by Scholes et al. (2004) in view of its rigour and relevance. The papers are shown in Table 1. Studies all came from the UK. Seven studies were based on national surveys funded by national bodies in England (Carlisle et al., 1999; Davies et al., 2000; Morrison–Griffiths et al., 2002; Scholes et al., 2004), Scotland (May and Veitch, 1998; Runciman et al., 2002) and Northern Ireland (Parahoo, 1999). Five studies were based on single universities (Farrand et al., 2006; Fear, 2004; Fulbrook et al., 2000; Ousey, 2003; Wakefield et al., 2003). Two studies were based in NHS Trusts or hospitals (Pfeil, 2003; Philpin, 1999) and one study was based on nurses but did not specify where they were based (Gerrish, 2000). Seven papers were concerned specifically with the Project 2000 curriculum (Carlisle et al., 1999; Davies et al., 2000; Fulbrook et al., 2000; May and Veitch, 1998; Parahoo, 1999; Philpin, 1999; Runciman et al., 2002); one paper and one report were concerned specifically with MaD (Farrand et al., 2006; Scholes et al., 2004) and the remainder were not specific to any curriculum. The papers and reports are classified on the basis of being concerned with the content of the curriculum ($n = 2$), the process of the curriculum ($n = 6$) or the outcome of the curriculum ($n = 6$). Generally speaking the papers reported positively on Project 2000 and MaD. However, results were generally mixed and effects were small.

Discussion

Whilst there is a paucity of papers fulfilling the criteria of the present review, it is clear the effectiveness of the nursing curriculum is important given that 43% of the papers retrieved were based on national surveys in the UK which were funded by the bodies which fund or regulate nursing education. In addition, and again emphasising the importance of the curriculum, there was evidence of individual universities in the UK evaluating and/or researching their own curricula. The majority of papers 57% were concerned with investigating curricular change as brought about, and described in the introduction, by significant changes in the nursing curriculum caused by changes in UK government policy; specifically, Project 2000 and making a difference (MaD). Otherwise, investigations were concerned with the content of the curriculum or with experience related to specific

Table 1 Details of review papers

Reference	Sample	Aim	Findings	Classification
Carlisle et al. (1999)	National survey (England); 132 managers; 3447 nurses	To examine 'fitness for purpose of Project 2000 reforms	There is a need to identify core skills for the preparation of registered nurses	Product analysis
Davies et al. (2000)	National survey (England); first questionnaire 2742 pre Project 2000 2000 nurses & Project 2000; second questionnaire 2635 nurses	To examine whether Project 2000 attracted more academically qualified nurses and led to more rapid career progression	Project 2000 did not attract more academically qualified nurses or lead to more rapid career progression	Product analysis
Farrand et al. (2006)	one university; 139 students	To examine whether Making a Difference recommendations have led to improvement in student nurses' confidence in clinical skills	Students studying the Making a Difference curriculum have more confidence with clinical skills than Project 2000 students	Process analysis
Fear (2004)	one university one cohort of students; number of participants not provided	To describe outcome of evaluation of cohort of students undertaking community placement	Student and mentor perspectives emerged	Process analysis
Fulbrook et al. (2000)	one university; 94 students	To compare pre-Project 2000 & PSK students' views on how curriculum prepared them for clinical practice	Small difference in favour of Project 2000 students	Process analysis
Gerrish (2000)	10 nurses (1985); 25 nurses (1998)	Secondary analysis of data from newly qualified nurses comparing data from 1985 & 1998 comparing preparation for being a staff nurse	Newly qualified nurses still feel inadequately prepared but more recently qualified find transition to staff nurse less stressful	Product analysis
May and Veitch (1998)	National survey (Scotland); six universities; 228 tutors; 498 students; 210 RNs	To examine educational experiences of Project 2000 students	Variation across universities and evidence that not all expectations were being met	Process analysis
Morrison-Griffiths et al. (2002)	National survey (England); 33 universities	To examine adequacy of pharmacology education for nurses	Variation in pharmacology teaching	Content analysis
Ousey (2003)	one university; no of participants not provided	To present evaluation of first 12 months of new curriculum using PBL	The new curriculum is preparing nurses fit for practice	Content analysis
Parahoo (1999)	National survey (Northern Ireland); 1368 nurses	Compare pre-Project 2000 and Project 2000 nurses' research training and research use	Project 2000 nurses better prepared but not using more research	Product analysis
Pfeil (2003)	NHS Trusts (number not provided); 145 students; 16 lecturers; 40 RNs	To present development of assessment criteria for problem based learning curriculum	Issues related to confidence, being able to explain actions and safety were raised	Process analysis
Philpin (1999)	Three hospitals (Wales); 18 nurses	To explore occupational socialisation of Project 2000 nurses	No firm conclusions, location experience may be a determining factor	Product analysis
Runciman et al. (2002)	National survey (Scotland); nine nursing homes; 30 nurses	To examine educational issues for Project 2000 nurses working in nursing homes	Mixed but generally favourable impressions	Product analysis
Wakefield et al. (2003)	one university; 34 students (22 nursing; 12 medical)	To examine the use of simulated patients and mixed groups for breaking bad news	Simulated patients and mixed groups viewed favourably	Process analysis

aspects of the curriculum. One large study by Scholes et al. (2004) focused on partnership in the context of the 16 MaD pilot sites. However, by surveying and interviewing relevant stakeholders the study investigated curriculum content, processes and outcomes in some depth. Papers were classified according to whether or not they were concerned with the content, the process or the outcome of the curricula being investigated.

Content evaluations

There were very few papers investigating course content. This could be expected given that curricula influenced by the NMC and QAA requirements, leading to entry to the same UK register, have similarities across the UK. Morrison–Griffiths et al. (2002) undertook a national survey of the pharmacology content of nursing programmes across England. Of 52 institutions mailed, 36 replied giving a 69% response, with many interesting comments made by informants. For example, at that time, the lecture predominated by far as the most common mode of teaching and at least one fifth of departments did not formally assess pharmacology knowledge. The authors were clearly concerned that wide differences exist in the teaching and assessment of pharmacology and therefore, probably, the competence of registered nurses in this respect.

It is reasonable to hypothesise that, despite a 'prescribed curriculum', albeit in very broad terms, the outcomes of the curriculum, the registered nurse, will differ according to the university that has produced him or her. It has to be noted however, that given the unpredictability of the nurse–patient encounters and illnesses, that students cannot be exposed to and learn the same knowledge base, but there would seem to be an argument for an agreed minimum core knowledge. The national 'partnership' evaluation by Scholes et al. (2004) concurred (in message 15) the amount of time dedicated to the delivery of applied physiology and pharmacology and the way this was tested in practice remained one of the weakest aspects in the new curriculum. They went on to argue that the minimum amount, delivery, timing and progression of applied physiology and pharmacology pedagogy and how that is assessed should be reviewed.

Process evaluations

If the curricular content is important to the outcome then the process whereby it is delivered and experienced by students, teachers and clinical supervisors, is also a legitimate and important area of study. The aspects of process that were studied varied but the key question, surely, is how a change from one curriculum to another affects nursing students? Two studies compared experiences under different curricula. Using a questionnaire constructed from the then UKCC (later NMC) competency statements Farrand et al. (2006) compared the more recent MaD curriculum with Project 2000 in the University of Plymouth. They found that the sample of 74 MaD students self-reported they had more confidence with clinical skills than 65 Project 2000 students. However, it should be noted that differences between the two groups of students was only, approximately, one point on a nine point scale.

Using a five point Likert Scale format Fulbrook et al. (2000) compared questionnaire results from 39 Project 2000 students with 55 pre-Project 2000 students from the University of Portsmouth and found that Project 2000 students were marginally better prepared for clinical practice in terms of their expectations of clinical practice, their acquisition of practical; nursing skills and 'feeling like a nurse'. The 'old' cohort scored an average of 2.22 on this aspect, with the 'new' students scoring 2.48, a difference of 0.26 ($p < 0.05$). Given the size of most university school of nursing student intakes (many are over 200) and the particular advantage of questionnaires, that they may be easily given to many people, it is surprising that in studies such as these greater numbers are not used. Nevertheless, the findings are of interest.

Other studies of curricular process (Fear, 2004; May and Veitch, 1998; Pfeil, 2003; Wakefield et al., 2003) did not compare one curriculum with another. However, May and Veitch's (1998) study, which was part of a national examination of Project 2000 in Scotland, compared curricular process with expectations based on Project 2000. The investigation used 6 of the 12 providers as case studies, collecting data through 'illuminative' methods such as semi-structured individual and group interviews with students and mentors. Their overall conclusions centred on student centred pedagogy, relationship between theory, practice and reflection, sufficiency and appropriateness of placements, pedagogy and the transfer of nursing and midwifery education to HEI's and FEI's, length of the CFP and assessment in the new programme. There were both positive and negative findings to each of these themes and as a consequence the report offered recommendations for the future which focused on 'curriculum, student learning, student support, assessment and the influence of context and the outcomes for students'. Two findings related to mentors, the first of which was that in most of the instances mentor preparation was inadequate and

the 'the majority of mentors learned how to fulfil their roles by performing them'. The second issue was the limited capacity to support students due to increased service pressures reducing available time to provide adequate support. There was a clear view, however, that there had been 'the birth of a new culture of nurse and midwife education' but that this needed continual nurturing for the future. However, the study did not come to any clear conclusions about the benefit – or the disadvantages – of Project 2000. From these studies of curricular process it appears that curricular changes have only modest effects, with some limited evidence of improvements, for example, in preparing nursing students for clinical practice.

Studies of curricular outcome represented some of the most rigorous studies retrieved in the review in the sense of being multi-centre and/or national and often including large numbers of participants. Carlisle et al.'s (1999) large Department of Health funded study drew on survey data from over 5000 qualified nurses prepared by both Project 2000 and 'traditional' approaches and on interviews with 132 nurse managers. Carlisle et al. concluded that a set of core skills needed to be identified. Drawing on other aspects of data from the same study Davies et al. (2000) found that Project 2000 did not attract more academically qualified nurses nor lead to more rapid career progression. Gerrish (2000) replicated a qualitative study along the lines of work she had published 10 years earlier to examine any differences. In the earlier study her interviews with ten newly qualified nurses led to her describing their early efforts to adjust to qualified responsibility as 'fumbling along'. In the later study she claimed that in 1998 (after Project 2000 was implemented), newly qualified nurses felt inadequately prepared ('still fumbing along') but were less stressed by the experience; however, no formal measurement of stress was made. Drawing on a very large sample of 1368 qualified nurse respondents in Northern Ireland, Parahoo (1999) investigated research training in Project 2000 nurses compared with pre-Project 2000 nurses: the only study of curricular process that made a direct comparison between the two groups. He found better education but no more implementation of research by Project 2000 nurses. Philpin (1999) interviewed 18 qualified nurses working in various departments in three Welsh hospitals in order to explore the occupational socialisation of Project 2000 nurses. Although she suggests that acute placements seemed to provide a 'harsher' experience – with the use of negative sanctions to ensure compliance to ward culture (p 1326), she was unable to make any true comparisons across types of curriculum. Runciman et al. (2002) interviewed managers in nursing homes in order to explore educational issues for working in this area of care. They found mixed but generally positive results with regard to Project 2000 nurses.

Conclusion

The aim of this review was to examine whether or not it was possible to identify systematic approaches to curriculum evaluation, and in particular making a difference and fitness for practice curricula in the United Kingdom. The answer to this question is surely 'yes'. There is one Scottish evaluation at the macro level. Evaluations of teaching and learning strategies at the micro level are in abundance. However, for the purpose of this study the focus was on macro level studies.

Systematic approaches to curriculum evaluation were evident to the extent that national studies were undertaken, comparisons were made with previous curricula and in research methods applied. However, in some cases, the methods were little more than localised and not very rigorous case studies and these cannot be viewed as particularly useful. The extent to which the present review is useful is represented by the papers where methods were applied that could be repeated in subsequent studies. For example, it was the intention of Project 2000 to produce a better educated and more enquiring nurse and research was seen as being key to this. In that light, Parahoo's (1999) study could be viewed as useful – provided the objectives of the curriculum remain the same, which they have not. National data from other studies on how well prepared nurses and nursing students feel for clinical practice could also inform future studies and methods could be directly applied.

However, there are two fundamental problems that have a direct impact on the feasibility of any research which takes forward the knowledge base to date. The first problem is extrinsic to this review and the second problem is intrinsic. First, as described in the introduction, the nursing curriculum is under almost continual evolution and its purpose has changed. This is often due to the major changes taking place in the NHS and therefore the evolving expectations of the newly qualified nurse. However, we can be certain that, despite a paradigm shift every 30 years or so, such as the incorporation of communication skills or problem based learning, the medical student curriculum does not respond so immediately, or bureaucratically, to policy and structural changes in the NHS.

For example, the MaD curriculum, and its subsequent derivatives, is directed at increasing clinical skills as early as possible in nursing students and does not emphasise the knowledgeable doer that was the focus of Project 2000. This probably renders the approach taken by Parahoo (1999) null and void; at least, expectations regarding, for example, research education and implementation in practice, would be very different. The second problem, arising directly from the review, is the fact that none of the studies presented here examined the curriculum from content, through process, to outcome. Also, they were concerned with only limited aspects of the curriculum such as pharmacology or research. This is not to say that the parent studies from which some of these papers were taken do not address wider issues.

The question arises as to why there are such frequent changes to the nursing curriculum? Project 2000 was widely researched and evaluated and the results, at very least, showed that it was broadly meeting its objectives. Where it was failing to produce nurses ready to 'hit the ground running' especially in terms of clinical competence, this was rapidly compensated for in a short space of time (McLeod–Clark et al., 1996).

Therefore, the present review indicates two things. There remains a need for a rigorous evaluation of the nursing curriculum which encompasses all aspects from content to outcome, including process. In addition there is a pressing need to provide rigorous research which will inform funders and purchasers of nursing education in order that they can make informed decisions about future directions in the nursing curriculum.

The significance of this need for rigorous evidence based research in the context of the current NMC consultation on the future of pre registration education in the UK cannot be underestimated. To make major changes such as this should not just rely on people's opinions but hard evidence of what is happening.

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Paper 2: Fitness for Practice in Nursing and Midwifery education in Scotland, United Kingdom (2010)

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ISSUES FOR THE NURSING WORKFORCE

Fitness for practice in nursing and midwifery education in Scotland, United Kingdom

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Aim. The aim of this paper is to report findings from a major study that evaluated the *Fitness for Practice* nursing and midwifery curriculum in Scotland, UK.

Background. The competence of student nurses and midwives at the point of registration has been the focus of debate and research. However, no major study, on such a large scale, had specifically evaluated pre-registration programmes to determine whether they enabled students to achieve 'fitness to practice'.

Design. The study had a broad evaluation design conducted in three phases using a mixed methodology.

Method. Phase 1 involved questionnaires, Objective Structured Clinical Examination's (OSCE) and curriculum evaluation. Phase 2 involved semi-structured interviews (some telephone) and focus groups across main stakeholders: students (n = 78), mentors (n = 78), practice-education facilitators (n = 24), academics (n = 59), senior clinical (n = 46) and education managers (n = 16), service users and carers (n = 10).

Results. The findings suggest that the *Fitness for Practice* curriculum model in Scotland has on the whole been successful. The key finding is the predominant opinion of stakeholders that newly qualified nurses and midwives are perceived as being fit for practice at the point of registration. A perceived lack of confidence is, as with all transitions to new roles, an understandable outcome.

Conclusions. Previous concern that student nurses and midwives are not 'fit for practice' has focused on the perceived lack of clinical skills at the point of registration, not on competence to practice in general. This study demonstrates that this is an important distinction and recognises that registration is only the beginning of a life long learning experience.

Relevance to clinical practice. Students need to be supported to develop their confidence following registration as well as additional skills in their chosen field of practice. Appropriate mentorship and a period of preceptorship should be in place to accommodate this.

Key words: curriculum, evaluation, fitness for practice, mentorship, pre-registration education, student nurses and midwives

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Introduction

The debate about the competence and (by implication) the 'fitness for practice'(FFP) of newly qualified nurses and midwives has a long and contentious history, much of it based on the premise that higher education institutions (HEIs) in the UK were failing to deliver skilled practitioners for the modern healthcare system (Kenny 2004). More recently, Clark and Holmes (2007) reported findings in England that ward managers had low expectations of newly qualified nurses, who themselves reported feeling poorly prepared for their new role. The current Royal College of Nursing of the United Kingdom (RCN) General Secretary also added to this debate, questioning the competence of newly qualified nurses (Snow & Harrison 2008). This paper sets out the context, design and findings of a national evaluation study in Scotland UK, which explored the issues involved in determining competence and FFP of student nurses and midwives. The paper focuses in particular on Phase 2 of the project, with Phase 1 findings already published elsewhere (Lauder *et al.* 2008a,b, Roxburgh *et al.* 2008).

Background to the study

Pre-registration nursing and midwifery education is often blamed for all the 'ills' in nursing and midwifery and the healthcare system in general (Watson & Thompson 2001). In turn it can be the solution to those 'ills'. The implementation of what has become known as the 'Project 2000' (P2K) curriculum in the UK was an attempt at such a solution, where the focus was on the 'doing' skills and on the need to acquire a different, more appropriate knowledge base for future practice. The phrase 'knowledgeable doer' became a byword in the prevailing literature. However, the major outcome was the removal of nursing and midwifery education from the NHS into higher education.

Unfortunately, the introduction of this change resulted in evaluation studies which led to further concerns that newly qualified nurses and midwives lacked the skills for competent practice (Runciman *et al.* 1998). Despite the changes that took place, many of the initial developments of P2K remained, in particular the common foundation programme (reduced from 18–12 months) and branch programmes in four fields of practice: mental health nursing, adult nursing, children's nursing and learning disability nursing. Midwifery also initiated changes to its pre-registration curricula that resulted in an all-graduate profession. This was unlike nursing that, until the decision of the Nursing & Midwifery Council (NMC 2008), had been a mixture of diploma and degree qualifications.

The further impact of negative evaluations of skill competency of student nurses and midwives led to the implementation of FFP (UKCC1999) curriculum across the UK. This strengthened the partnership between practice services and the HEI's, ensuring that the emphasis returned to skill development and practice competencies.

However, developments in health care generally, and in particular the introduction of new roles into professional practice, have meant that the future of the nursing and midwifery professions has again come under scrutiny. This resulted in the NMC Consultation on the future of the midwifery (NMC 2007a) and nursing professions (NMC 2007b). This evaluation study has major implications for the NMC nursing outcomes.

Research design

The main objectives of the study were

1 To evaluate the influence of FFP educational processes and flexibility within programmes.
2 To describe the relationship between FFP curriculum, flexibility and FFP outcomes.
3 To identify and evaluate changes to the way partnership working has developed between HEIs and service providers.
4 To evaluate the impact of the programmes in NHS Scotland in terms of perceptions of FFP.
5 To evaluate the impact of the one year development programme for newly registered nurses and midwives.

The overall study had a broad evaluation design conducted in three phases using mixed methodologies. Phase 1 involved a curriculum evaluation of programme organisation and structures; a postal survey of pre-registration students on self-efficacy and competence; a series of OSCE's; and a paper and pencil test of numeracy skills to determine student competence. Phase 2 involved evaluation of key stakeholder perspectives and experience of the students' FFP and the NHS-HEI partnerships that ensure this. Phase 3 focused on evaluating the pilot programme for newly qualified nurses and midwives, known as *Flying Start NHS*.

Ethics approval

Ethics approval was received from the non-clinical human subjects research committee of the University of Dundee. The Central Office for Research Ethics Committees (COREC) (now National Research Ethics Service) judged the project to be service evaluation and advised that there was no requirement for full COREC approval. All participants were

provided with written information about the study, and, where appropriate, written consent was obtained. Confidentiality and anonymity were guaranteed. This was assured particularly in relation to the 11 HEIs and their partner organisations, given that this study involved potentially identifiable contexts.

Phase 2 design

The phase of the study reported here aimed to capture the major stakeholders' (HEIs, National Health Service (NHS) academics, clinicians and managers, students and carers/users) constructions of what constituted success in FFP, the extent to which they perceived success had been achieved, and the contribution of working partnerships to this. All interviews and focus groups were audio-taped and field notes made. A narrative analysis approach involved three members of the project team independently completing first analysis (initial impression and recording emergent ideas), followed by a thematic content analysis (for this they met for two days to agree the broad themes collaboratively), followed by a detailed analysis with illustrative quotes. Four overarching themes were identified: FFP; Preparation for Practice; Being in Practice and Partnerships in Practice. Several significant sub-themes were also noted. (However, it is beyond the scope of this paper to illustrate all of these in detail. The full report is available at the NES web site http://www.nes.scot.nhs.uk/practise_education/work/evaluation). 'Snapshots' of specific data are offered here to illustrate some of the complexities of ensuring the FFP of student nurses and midwives.

Results and discussion

The findings will be discussed in the context of the four major themes.

Theme 1: FFP

This theme focused on meaning of FFP, skills and knowledge and attitudes essential for FFP (sub-themes: clinical skills, 'other clinical skills', more advanced clinical skills knowledge; attitudes and values), unfitness for practice; competence and fitness to practice.

It was clear from the literature that there has been much debate regarding the concept of FFP. As noted by Meerabeau (2001), unless there is a universally understood benchmark that students must reach on qualification, then opinions will vary on whether or not the expectations of the various stakeholders are met. Moore (2005) in his analysis of international policy on FFP summarised the confusion around this term and the various ways in which different countries articulated it:

> Two related formulations are evident in the policies and literature reviewed: FFP and fitness to practise. The policies reviewed tend not to define or explain how these terms are used. It seems reasonable to assume that someone who is not fit for practice is not fit to practise. On the other hand, someone (who) is not fit to practise may nevertheless still be fit for practice. This is because the term FFP appears to be used to refer to professional competence, that is having sufficient knowledge and skills to be able to practise safely, and the term fitness *to* practice is more frequently associated with health and conduct. However, as more regulators are empowered to deal with a lack of competence after registration as a disciplinary matter, the distinction is becoming blurred. (p5)

It was clear from the interviewees in this study that FFP related to being competent and being safe:

> That you've been taught enough that you can go into your job even though you still have to learn, learn more about the job when you first start, that you've been taught enough that you are going to be safe and competent to carry out what you can and ask if you don't know. (Student)

> FFP to me means safe to deliver the normal care that a midwife would be expected to deliver at the point of registration but also the emphasis of safety and the NMC outcomes for the actual midwifery programme itself. So it's safety of the student participating in the clients care within the bounds that they are allowed to professionally. (Midwife academic)

Given the increased responsibility for assessment faced by today's mentors, their view is crucial in relation to the student's competency to practice as a qualified nurse and for determining 'unfitness to practice'. In the following example, a mentor highlights the potential for subjectivity in the assessment process, and also the potential (which was also illustrated in other themes) for the decision to be made on the confidence level of the student and not their competence:

> If you fail somebody and a colleague was to come to you and say' why have you failed that student?' and you couldn't say outcomes, why have you failed them – it is only your opinion? We have had incidents where different members of staff have had different opinions about students and where a student failed where other members of staff wouldn't have failed her – she just lacked confidence which is a big thing for a student. Some people have very high expectations for the students whereas I feel that I have less high expectations because I know they lack confidence but I think a lot of qualified nurses expect too much – far too much. (Mentor)

The issue of student confidence or lack of it appeared to be an expected outcome on becoming a qualified nurse. For example a Director of Nursing commented on confidence levels when student nurses commenced professional practice:

> There is actually nothing wrong with most of their skills, what they lack is confidence in their ability. I have seen excellent students crumble on their first days as a staff nurse because all of a sudden it is almost like someone flicks a switch and they become this scared little person again, like it's their first job ever. Actually the good thing is that give them six months and then they have really developed and their core knowledge is far, far better that ours ever was, the theoretical knowledge they have is much better.

Students offered varied views:

> It is scary going and thinking I will have to do this on my own. Like right now we are thinking we are going to have to go to places and actually do the work. We are not going to have somebody to say is that right or is that what normally happens? That's why I think it is important when you first qualify there is some kind of support mechanism within NHS, within your wards.

> Well as I say I don't personally think I'm great and massively confident but all my placements have been quite pleasantly surprised so obviously they see things that I can't. I've got friends who qualified last year and they are saying don't worry about it, we were all like that.

A reluctance to confront students' failure to make progress was noted, but the introduction of the practice-education facilitators (PEF's) (in many ways as a 'broker' between service and education) was having some impact:

> They don't like to fail the students. However, I must stress that mentors have failed students more since we (PEFs) have come to the post. They realised that it is their responsibility not only for themselves but also for the patient and for the student. You know it is unfair to let them carry on if they are not achieving – it is also unfair to other students. (PEF)

All the HEI's had FFP panels that dealt with the issues of students who had failed their practice assessments.

Theme 2: preparation for practice

Pre-registration nursing and midwifery students' preparation for practice is governed by the requirements of the NMC Standards of proficiency for pre-registration nursing and midwifery education (NMC 2004a,b). The nursing standards encompass the domains of professional and ethical practice, care delivery, care management and personal and professional development and those of midwifery are effective midwifery practice professional and ethical practice, developing the individual midwife and others and achieving quality care through evaluation and research.

These standards, along with specific outcomes to achieve them, are the foundation on which HEIs develop and deliver their individualised academic programmes in partnership with the NHS and other organisations across the UK. Following a consultation and report regarding 'fitness to practice at the point of registration' (Ball 2006), stemming from concerns regarding the 'perceived variation in competencies or fitness to practice at the point of registration' (NMC 2005), the NMC also agreed to establish essential skills clusters to complement those already in place for both nursing and midwifery (these were published in 2007). It was proposed that these were mandatory for all new students commencing programmes from September 2008 (NMC 2007c,d).

The findings of this theme focused on the preparation of students for practice, including clinical skills; working in a diverse and multi-cultural community; working with other professionals; service-user/carer involvement in the curriculum. It was clear that there were examples of good practice in all these areas across Scotland, but that no national strategic direction or policies were in place as yet, especially in relation to simulated clinical learning, inter-professional education and caring for a multi-cultural community.

Given the NMC (2007e) recommendations regarding simulated practice learning, it was fortuitous that responses had been sought as to the student experience of this in Scotland. It was clear from the case study data that there was variation in the provision for simulated practice learning provided in all HEIs – and in the facilities to deliver this. This ranged from access to skills equipment to fully managed and resourced simulated learning laboratories. It was also evident that great emphasis and preparation were placed on the development of skills by the universities prior to the students undertaking clinical practice experience. Although, overall, this emphasis was mainly in the first year, there was also clear indication that other skills such as management were focused on in Years 3 and 4. Skills involving moving and handling, hand washing and resuscitation were to be found throughout the programmes. It was noted in the focus group discussion at two case study sites that clinical skills were either part of a module that included communication skills and professional terminology, or was a module in its own right and given academic credits. When asked about the importance of this, (especially relevant given the new NMC guidance on simulated learning – NMC 2007e), a midwifery academic responded:

I think we certainly try and keep them safe and try and make it as less a shock when they go out in clinical practice because we still get a lot of students who don't have any health care experience at all and its quite difficult when you've got nothing to build on sometimes to prepare them for the real world of nursing and I think we do that to the best of our ability but I think there will still be some students that do have this practice shock going out there and feel unprepared but I don't know how we'll get over that.

Mainly, the skills learnt were what the nursing and midwifery students called 'the basic skills':

I think they have done quite a bit, you know, before our first placement in our first year, we were taught the basic skills, blood pressure, temperature, the basic things and we have done quite a bit about communication, non verbal, verbal … although it was only a few weeks into the course, we were given the basics. (Student Nurse)

Preparation for practice was, therefore, not just about learning clinical skills to help them manage their placement experience, but also about how theoretical knowledge supported this. If this was taught before going out to placement then it appeared to be a bonus, but as the following student explains the theory eventually links up with practice:

When you actually go out on practice and see like the signs and symptoms of bipolar or schizophrenia or whatever, you think oh right, that's what that means, it all clicks into place when you actually see it …..well in first year we didn't have any of the mental health stuff, so going on my first year placements it was still good though it was good experience. But then I'd come into second year and we'd get classes and it was interesting because then you could actually say: oh right, that makes sense now; things you didn't quite understand at the time, you could look back and think, oh right, so that's what was happening there so that was interesting and then you go into your second year placements with your second year knowledge and its different … (Student Nurse).

One particular clinical skill that arose in the focus group discussions (in terms of preparation and actual experience in clinical practice) was drug administration. Times when students were allowed to practice this skill varied, as did student confidence with the task. Students who were not allowed to practice, but merely observe, until year 2 had varied responses to the issue of whether they should or should not be doing so earlier. This student indicated that her confidence had not been built up prior to an immediate expectation when she became a year 2 student:

But then come second year I was petrified of doing drug administration because I went through a whole year of 'you can't do drug administration', you can't look, you're even scared to look at the drug let alone pick it up and give it to someone. And then all of a sudden, oh this is my first day of second year, drug administrations let's go and I know I felt I was absolutely scared. It feels like this massive big step from first year to second year.

The academics' viewpoint in the universities where drug administration was taught in year 1 but not practiced until year 2 in clinical areas was related to qualified nurses' drug errors:

I think we can justify it completely because of the amount of drug errors that take place in clinical practice from qualified staff in the health board areas and the amount of drug errors that involve students who are theoretically supervised by a registered staff nurse – that's why we feel that year 2 is time enough.

Linked to the issue of drug administration were numeracy skills and drug calculations. Low numeracy skills had been identified in Phase 1 of the study (Lauder *et al.* 2008b). In the Scottish HEIs studied significant work was being undertaken, however, supported by national organisations and strategies (NHS Education Scotland 2007a), to make sure that student nurses and midwives were numerate (Sabin 2001).

These national organisations had also recognised the need for nursing and midwifery to embrace the needs of a changing diverse population (NHS Education Scotland 2007b). Given that the NMC standards for both nursing and midwifery education (NMC 2004a,b) include proficiency in 'providing care that demonstrates sensitivity to the diversity of patients and clients' (nursing) and 'practice in a way that respects, promotes and supports individual's rights, interest, preferences, beliefs and cultures' (midwifery), it was evident that students were given exposure to the issues rather than any competency development. Their actual practice experience of meeting people from different cultural backgrounds appeared to be influenced by where they were placed. Again, this varied across the two professions. There were, however, indications that preparation for meeting the needs of diverse communities appeared to be focused on broad principles only and that it may well be integrated throughout curriculum delivery, in situations such as problem-based learning rather than specific modular content, as the following comments indicate:

In one class last year, communication, we learnt about, we were broken up into small groups, we had to do different religions, and do the presentation on those and we have had lectures telling us about transcultural things like that …. The translator services …. We had a health visitor who works with ethnic minorities – Bangladeshi …and she was saying, you know, from her point of view, she gives them some of her experience when she walks in the house and the man does all the speaking but she is talking abut this pregnant lady, you know does everything you say goes through the husband actually… (Student Nurse)

They have a module on social and ethical implications of child bearing but in its widest context and the assessment for that requires them to go out and look at a specific area and look at statistics from that area and interpret it with relation to child bearing women, so, you know, they are going out and looking at age difference, cultural difference, religious difference and all those sorts of things and looking at services that are provided for them in areas and ask, as part of the assessment, 'well how does this impact on the provision of midwifery care and is there a way in which this could be enhanced?'. (Academic)

In clinical practice, however, the students commented on the nature of the communities in which they were based or that information was available to them should they need it if caring for patients from different cultures:

Well up here I think it is different, because although there is a variety, it is not as varied as say the mainland... everybody knows everybody.... (when asked further if they had any training) ..... We've had lectures on it. When you're on placement, like if there's a patient, your mentor will explain to you, like washing and things like that, and different beliefs ....If you're not open to things like that, then your shouldn't be doing nursing, if you're not non judgemental then you're in the wrong job. (Student)

Theme 3: being in practice

Students spend 50% of their programme in the NHS – in both hospital and community, other health and social care organisations such as nursing homes, or non-health care organisations such prisons. This experience is planned and managed in a variety of different ways according to both programme specification and placement allocation.

The literature refers to the significance of this 'being in practice' as part of the socialisation process of becoming a nurse or midwife (Melia 1987). Students acknowledge the importance of 'fitting in' to the environment they are allocated to as significant to their actual experience and their success in becoming a qualified nurse (Melia 1987, May & Veitch 1998, Papp *et al.* 2003, Levett-Jones & Lathlean 2007, 2009).

Whilst it is apparent that student nurses in their various branch programmes and student midwives will be prepared for their placement practice experience through the same theoretical curriculum in each university, it is not the same situation regarding their clinical curriculum. Although there are prescribed NMC standards and outcomes to be achieved, the pathway to achieving them will differ for each student and every day. Each student will experience clinical practice individually. This will involve varied and unique interactions with a range of patients, clients, service users, families, health and social care professionals, (and in the case of midwifery students) mothers, fathers, partners and their babies as well. This uniqueness of experience in clinical practice is often not accounted for in determining both theoretical and clinical skill preparation and acquisition. From a research perspective, this uniqueness is illustrated in the responses the students gave to the focus group questions.

This theme focused on the actual student learning experience in practice, and most importantly on the role of mentors in shaping that experience. There were significant findings in relation to all aspects of this. Sub-themes that emerged were the student experience of mentors in practice, 'good mentors and bad mentors', undertaking the mentor role and preparation for the mentorship role. Other sub-themes were clinical placements and student support; being supernumerary; university lecturers' support for learning in practice and competence to 'do the job' and 'being fit for purpose'. The issue of 'Good mentors and bad mentors' was very significant, as it appeared to impact on their learning:

My first year was absolutely fantastic; I've got to say I had fantastic mentors. Last year I hardly worked with my mentors actually.... (Then regarding what is a 'fantastic mentor')... because they have a lot of time for you, to explain things to you, and ask you questions, test your knowledge and things like that, to see what you have learned – and it was really, really good. (Student Nurse)

Out in practice, if you are with a good mentor willing to teach you what they know you'll be finding.... You'll enjoy it; you'll have a great time. If you're with a mentor who doesn't want a student or just doesn't have the interpersonal skills then you'll hate it. It's a hit or a miss. (Student Nurse)

The mentors interviewed had undertaken varied preparation for the role, and there did not appear to be a uniform approach across Scotland. However, during the progress of the project a national mentor preparation programme was introduced (http://www.nes.scot.nhs.uk/practice_education/work/mentorpreparation/, retrieved 25 November 2008).

There was evidence of a commitment to practice learning from the key stakeholders. There was also no longer the expectation from the majority of those service managers spoken to that a student will be able to 'do everything and know everything' on qualifying. Central to the student experience was the key role of mentor and also the provision of high quality placements.

Theme 4: partnerships in practice

A central theme in UK government policy concerning healthcare delivery is the need for partnership working

(DoH 1999, Scottish Executive Health Department 2006, Scottish Government Health Department 2007). This derives from the recognition that professionals and services do not function independently of each other. The need for partnership working is further evident in the number of government reports recommending this within the context of health and social care services and professional education for healthcare practitioners (Department of Health 1999, Scottish Executive Health Department 2001, 2005, 2006). One of the main reasons for this has been the increasing demand for and pace of change in care delivery, in particular, the shift from hospital-based services to that of community. Furthermore, partnership working has been embraced by nursing and midwifery's regulatory body (NMC 2006), Quality Assurance Agency (2002) and NHS Education for Scotland (2005). The two professions at the core of this study, nursing and midwifery, are central to taking forward many of the policies.

This theme focused on the partnership arrangements between HEI's and the NHS. A number of sub-themes emerged operationalising partnerships, HEI–NHS partnerships delivering the curricula, service-user/carer involvement in delivering the curricula, cross-disciplinary partnerships to deliver curricula, partnerships in recruitment, partnerships in developing and managing clinical placements, joint posts across HEI–NHS services and mentorship and partnership working. The following quote from one HEI–NHS partnership activity summarises the high level of engagement and commitment across all the HEI's/NHS partnerships in Scotland:

> Education Partnerships… it is a committee which has senior staff from NHS and senior staff from the school…four sub groups that work and feed into education partnerships. One which is around the learning environment which includes PEF's. One which is around recruitment and retention, that one is really ahead at the moment. One on planning educational provisions which is looking at predicting health needs, what we need to put into the curriculum and one which I head up which is a joint posts steering group which oversees our associate lecturer scheme. (Senior Academic)

This commitment was evident across the sub-themes. One of the most innovative developments was in relation to the management of student placements, where one group of Universities and their associated NHS stakeholders had set up a Practice Placement Committee to oversee the process of ensuring sufficient and suitable placements for students:

> In fact (University X) and ourselves have realigned our courses somewhat so that all our students aren't all going out into the community at the same time. We have done that sort of negotiation to try and make it better for the service side because ……have come back and said 'you know we cannot support this 'or 'we cannot offer you placements because of staffing'. (Senior academic)

McKenna and Wellard (2004) advocated that this reduces competition among academic institutions for access to healthcare facilities, which then provides a more welcoming and supportive learning environment for the student. Joint posts between the HEI and the NHS were also evident, in particular in relation to clinical skills facilitation. One example in midwifery was very highly valued, as she not only provided an excellent link between the University and the clinical practice but also, as with other examples, facilitated the closure of a perceived 'theory-practice' gap. The overarching observation was that there appeared to be a national commitment to partnership working and that although there were, in some instances, local differences and tensions, there was a high level of engagement in ensuring that educational policy recommendations were in line with NHS Scotland's modernisation agenda.

Conclusions

The study outcomes are highly relevant to policy and practice and should help to reassure professional bodies and HEIs in the UK in the context of the evolution of the nursing and midwifery professions. The combined findings of the first two phases suggested that the FFP curriculum in Scotland has, on the whole, been a successful curriculum model and has met many of the key recommendations in the FFP report (UKCC 1999). The key finding of this detailed and comprehensive national evaluation is the predominant opinion of stakeholders that newly qualified nurses and midwives are perceived as being fit for practice at the point of registration. This is a fundamental shift from the findings of previous studies. Their perceived lack of confidence, however, is, as with all transitions to new roles, an understandable outcome.

The debate that student nurses and midwives are not 'fit for practice' has mainly focused on the perceived lack of clinical skills at the point of registration and not on competence to practice in general. This study demonstrates that this is an important distinction. The context in which care is delivered and the student experience of how that care is delivered and managed is no longer a given situation. This has meant that the student is no longer exposed to the same kinds of skills and knowledge required for 21st century practice and therefore has no guarantee of being able to develop these for any chosen area of practice on qualification. For the student, the point of registration is only the beginning of a lifelong learning experience and the development of expertise in the role of a registered nurse.

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Contributions

Study design: KH, MR, WL, MJ, RW, KT, MP; data collection & Analysis: KH, MR, MJ, WL, RW, KT; manuscript preparation: KH, MR, MJ, KT, RW, WL.

Conflict of interest

The authors wish to acknowledge no conflict of interest in the publication or conduct of this study.

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Paper 3: An integrative literature review of student retention in programmes of nursing and midwifery education: why do students stay? (2011)

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REVIEW

An integrative literature review of student retention in programmes of nursing and midwifery education: why do students stay?

Joan Cameron, Michelle Roxburgh, Julie Taylor and William Lauder

Aims and objectives. The purpose of the review was to identify student characteristics and strategies in research studies investigating retention (why students stay) as opposed to attrition (why students leave) nursing and midwifery preregistration programmes.

Background. Retention in nursing and midwifery programmes is a serious international problem. Many governments are committed to diversifying both the student population and the health care workforce. This has led to higher education institutes in some countries offering places on nursing and midwifery programmes to students with non-traditional entry qualifications. There are suggestions that the policy of widening access has contributed to the challenges of retention in nursing and midwifery programmes.

Design. Integrative literature review.

Method. Undertaken using electronic databases and specific search terms, 15 articles were identified and reviewed. The critical appraisal tools produced by CASP (2009) were used to evaluate the quality of the data. Findings from the identified research literature were analysed using qualitative content analysis.

Results. Two broad themes emerged from the analysis: Programme and Personal. Subthemes were identified in these that give clues as to why students stay: profession, support, student characteristics and family.

Conclusions. Personal commitment and good support seem to be essential for students to remain on undergraduate programmes of nursing and midwifery. The term 'support' is rarely explicit and requires to be more clearly defined. Furthermore, studies reviewed fail to indicate clearly how to identify when students are most vulnerable and which interventions are most appropriate in different situations in supporting retaining students on programmes.

Relevance to clinical practice. Nursing and midwifery student retention is a political and professional problem. Collaboration between clinical placement providers, academic institutions, students and their families is required to address the issue. Illumination of factors that help students stay may help us devise interventions that prevent future students leaving.

Key words: midwifery, nurses, nursing, preregistration, retention, student

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Introduction

Providing high-quality health care is a key aspect of governmental policies (Department of Education Science Training 2002, Needleman *et al.* 2002, Department of Health 2006, Scottish Government Health Directorates 2007). Nurses and midwives comprise a significant element of the professional health care workforce thus governments need to ensure that

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sufficient numbers of students are educated to guarantee a continuing supply of recruits to the profession.

As well as undertaking to educate health care professionals, government policies are committed to diversifying both the student population and the health care workforce (Baldwin *et al.* 2006, Brennan *et al.* 2009). This has led to higher education institutes (HEIs) in the UK offering places on nursing and midwifery programmes to students with non-traditional entry qualifications. Although this has enabled students who might not otherwise have been able to undertake programmes of academic study and gain entry to a professional register (Lauder *et al.* 2008), there are suggestions that the policy of widening access has contributed to increasing attrition rates from nursing and midwifery programmes (Pryjmachuk *et al.* 2009). This situation is reflected in the international literature. Australia (Gaynor *et al.* 2006), USA (Wells 2003, Rudel 2006, Jeffreys 2007), South Africa (Mashaba & Mhlongo 1995), Taiwan (Lai *et al.* 2008) and Canada (Day *et al.* 2005) have all reported a relationship between students with non-traditional entry qualifications and increased attrition in preregistration programmes of nursing.

Attrition from nursing and midwifery programmes is costly (Department of Health 2006). In many countries, governments provide assistance with funding for professional education and are rightly concerned about the financial and organisational implications of losses of students and potential nurses and midwives to the future workforce. HEIs lose out financially when students leave programmes and their reputation may also suffer if they are perceived to have a higher than average student attrition rate (David Mason Consultancy 2004). In Scotland the cost to the HEI is in the region of £7000 per student per year. The cost to the individual student may be financial in relation to debts accumulated during the course, but there may also be loss of self-esteem as the individual comes to terms with failure to complete the programme (Robshaw & Smith 2004, Docherty 2008).

Why students leave

High attrition in the higher education (HE) sector is associated with lower entry qualifications, students with parents who have not had university education and lower socio-economic status (Higher Education Funding Council England 2000, McMillan 2005, Jeffreys 2007). Attrition and retention rates differ by educational level, age of the student, level of course, course subject, socio-economic group and institution (Yorke 1999, Johnes & McNabb 2004). In nursing and midwifery, the debate around attrition focuses mainly on student reported reasons for attrition. This is important as students are likely to focus on personal reasons rather than social factors which may impact on their ability to remain on a programme. These are not mutually exclusive, but represent very different assumptions and methodologies. To illustrate, it is unlikely that students would report the reason for leaving the programme as being the socio-economic status of their parents (Cuthbertson *et al.* 2004); however, this may be important in understanding the socio-cultural milieu that students experience (Rabb 1998, Higher Education Funding Council England 2000).

Methodological issues in attrition studies

Methodological problems make research in this area problematic. Hall (2001) acknowledges that data on student retention and attrition in the HE sector are often of poor quality and may be inaccurate or even misleading. Definitions of attrition vary and national figures on acceptable attrition are arbitrary (Glossop 2001). Comparison of attrition rates between institutions is difficult (David Mason Consultancy 2004). Some institutions may include all students who leave for part of a programme, even when the student later returns. Other institutions will use the convention of temporary withdrawal to cover periods away from the programme for up to a year (David Mason Consultancy 2004). The publication of attrition figures may be delayed for up to two years and this can add to the complexity of investigating and addressing retention issues in nursing and midwifery programmes (Department of Health 2006).

Research studies on attrition in nursing and midwifery are largely descriptive and atheoretical and as a result have failed to provide a clear understanding of why students leave and consequently, what can be performed to reduce attrition (Andres & Carpenter 1997). Whilst there is a wide range of issues offered for why students leave, there is acceptance that it is rarely for just one reason. Glossop (2002) has shown that almost 50% of students cite at least two problems for leaving, creating challenges when trying to create associations between reasons for leaving and possible explanations for the findings.

Defining and investigating attrition are also complicated (David Mason Consultancy 2004). Students may elect to leave the programme or they may be required to leave the programme by the HEI. The most common reason for requiring students to leave is academic failure. A smaller number of students will leave because of disciplinary issues. Attrition figures do not differentiate between students who leave voluntarily and those who are required to leave. The stage of the programme at which students leave may not

always be recorded accurately. For example, a student may fail an assignment in Year 1 of the programme but, because of academic processes remain on the programme until Year 2, before being discontinued. This can further complicate the analysis and reporting of attrition.

Yorke (1999) refers to much of the research into attrition as 'autopsy studies' because they are only concerned with students who have left. Many HEIs undertake exit interviews with students who elect to leave the programme. It is likely that some students offer what they perceive to be acceptable reasons for leaving the programme, rather than the real reason (Last & Fulbrook 2003). This can result in skewing of the data with institutions focusing their resources on dubious reasons for attrition.

The Department of Health (DH) in England and the Scottish Government Health Directorates (2007) identified several risk factors which they suggested had been implicated in attrition from programmes of nursing and midwifery. These included the following: mass recruitment leading to the selection of students who are unlikely to complete; age less than 25; being male; and having vocational qualifications as opposed to academic qualifications. The report from the Department of Health (2006) recognised that many of the risk factors overlapped. They termed the situation a 'wicked problem' and remarked on the inability of traditional research methodologies to address the situation.

One potential solution to this problem is to reverse the question and focus on why students stay on programmes of nursing and midwifery education. It is likely that students who remain on programme may experience similar problems to those who leave. By focusing on the larger group of students who remain on programme, the problems of dealing with a small and potentially unrepresentative group of students who leave programmes can be overcome.

It is easier to define 'retention' than attrition which is complicated by voluntary and non-voluntary discontinuation from programmes of nursing. Retention studies have the advantage of dealing with 'live' data which can be collected prospectively, unlike attrition studies which can only ever consider retrospective data. Student responses in 'retention' studies are more likely to demonstrate concerns about the programme (White *et al.* 1999).

Method

Integrative literature reviews offer a means for researchers to search for and assess what is known about a particular topic with a view to finding a solution to a particular problem or suggesting directions for future research (Russell 2005). Whittemore and Knafl (2005) have proposed a five stage approach to the integrative review to enhance rigour. This process was adopted and is outlined in Table 1.

Problem identification

In this review, retention was defined as successful completion of a programme of nursing and midwifery leading to eligibility to register as a nurse or midwife. The purpose of the review was to identify student characteristics and strategies in research studies investigating retention (why students stay) as opposed to attrition (why students leave) nursing and midwifery preregistration programmes.

Literature search

In an integrative review, sampling the literature is essential in enhancing rigour (Whittemore & Knafl 2005). In this review, 'retention' was used as a keyword, combined with 'student', 'nurse or 'midwife' where databases allowed. The following

Table 1 Integrative review process

Stage	Application
Problem identification	Retention on programmes of nursing and midwifery education: why students stay, as opposed to attrition (why students leave). Sample group: students undertaking programmes of nursing and midwifery education preparing them for professional registration.
Literature search	Electronic databases searched: Education Resources and Information Centre (ERIC), CINAHL, British Nursing Index, INTUTE, MEDLINE, Science Direct and MIDIRS midwifery database.
Data evaluation	Relevant CASP critical appraisal tool applied. Quality evaluation by two researchers
Data analysis	Qualitative content analysis to develop themes and categories
Presentation	Programme: Profession & Support Personal: Student and Family Limitations: Stringent inclusion and exclusion criteria, including exclusion of papers focusing on progression. Data quality of included papers: small numbers; incomplete data sets.

electronic databases were searched: Education Resources and Information Centre (ERIC), CINAHL, British Nursing Index, INTUTE, MEDLINE, Science Direct and MIDIRS midwifery database.

As well as using keywords, the review used inclusion and exclusion criteria to focus on the problem. To be included in the review, papers had to report on primary research relating to preregistration nursing and midwifery education, published in peer-reviewed journals from 1995–2009. Papers published prior to 1995, opinion papers, policy documents and best practice reports were excluded.

The titles and abstracts of the papers were scrutinised by two reviewers. Papers which met the criteria for review were read and checked against the inclusion and exclusion criteria. Following this process, a total of 15 papers was included in the review (Table 2).

Data evaluation

When carrying out an integrative review, the quality of the data is central to the process. Whittemore and Knafl (2005) have suggested that, where papers use similar research designs, a scoring system should be used to allow comparisons between studies. This review included papers with a range of research designs thus precluding the use of a simple scoring system. Instead, it was decided to use the critical appraisal tools produced by CASP (2009) to evaluate the quality of the data. These tools contain a series of questions that enable the rigour and applicability of the research to be assessed. The CASP tools do not give a numerical score, but they do provide a comprehensive checklist to enable the reviewer to assess the methodological quality of a paper and make a judgment about its suitability for inclusion in the review.

Glossop (2001) highlighted the methodological problems associated with studies into student retention and attrition. Forewarned, two people undertook the quality evaluation of the selected papers independently to assess how the research design might affect the data and the results. All the papers had some limitations, but in each case it was felt that the strengths of the papers outweighed the limitations and they were included in the review.

Data analysis

Whittemore and Knafl (2005) have suggested that strategies for data analysis in integrative reviews are poorly developed. Innovatively in this review, qualitative content analysis was used (Sandelowski 2000). This involved reading and re-reading the papers and preparing a short descriptive summary (Table 2). Codes were also generated to enable the findings to be compared within and between the papers. Each paper was analysed by two reviewers and the codes agreed through review and negotiation.

Results

Two broad themes emerged from the analysis: Programme and Personal. These are shown in Table 3.

Programme

This theme identified issues specific to preregistration programmes of nursing and midwifery. The theme comprised two subthemes: Profession and Support.

Profession

Students who stayed on nursing programmes had knowledge of the role and personal experience of being cared for by a nurse (Sadler 2003, Lai *et al.* 2008). Their experiences had led them to internalise the concept of 'being' a nurse, rather than 'doing' nursing. In the study by Kotecha (2002), students who remained on programme had conceptualised the role of the nurse as a 'knowledgeable doer' who had a degree of professional autonomy. In the study by Green and Baird (2009) of student midwives, they found that students who remained on the programme were attracted by the autonomy of the role of the midwife.

Support

Academic support was important in enabling students to continue on the programme. Personal tutors were cited as being helpful in providing pastoral support and academic support in the study by Bowden (2008). Students in her study reported feeling overwhelmed by the demands of academia, particularly knowing how to produce academic assignments. Students with non-traditional qualifications were more likely to express concern over this aspect of the programme and found support from their personal tutor invaluable in enabling them to cope with the demands.

In the study by Colalillo (2007), students who attended academic mentoring sessions directed by members of academic staff were more likely to remain on programme and register as nurses. Similar findings emerged from the study by Sutherland *et al.* (2007) who found that students from minority groups who were provided with specialist academic support were more likely to complete their programme than those without such support.

Midwifery students in the study by Green and Baird (2009) cited the passion of lecturers for midwifery as an incentive

Table 2 Papers included in review

Reference	Country	Sample	Methods	Findings
Bowden 2008	UK	Phase 1 $n = 93$ students who had completed programme. Phase 2 $n = 8$ students who had completed programme	Questionnaires Interviews	Half the sample had considered leaving during the programme. Academic, placement, finance and personal issues were cited by students as factors that made them think about leaving. Personal tutors and clinical link tutors were seen as being most influential in facilitating students to stay on programme. Peer support was very important to students, as were family and friends, particularly mothers and family members who were also nurses.
Colalillo 2007	USA	Convenience sample of first semester nursing students $n = 216$	Questionnaire Student data	Attendance in mentoring programme directed by a faculty member to was strongly associated with continuing on the programme.
Deary *et al.* 2003	Scotland	Adult and mental health nursing students $n = 382$	Longitudinal cohort survey: questionnaires, student data and psychometric tests.	Students who scored highly for the personality traits of agreeableness and conscientiousness at the start of the programme were more likely to complete the programme.
Green & Baird 2009	England	9 midwifery students who discontinued. 16 midwifery students continuing on preregistration programme	Questionnaire Focus groups	Peer support and being part of a small group were important factors enabling students to remain on the programme.4'Passionate' lecturers and mentors were also strong positive influences. 3-year students- most important support was family and friends; 78-week students – personal tutor most important.
Hilgendorf 1997	USA	$n = 731$ preregistration nursing students; environmental resource students; athletics students $n = 23$ control students	Survey	Having identifiable goals, being encouraged to wards graduation; having collaborative working practices; rigorous standards and shared values were associated with higher levels of retention.
Houltram 1996	UK	$n = 258$ preregistration nursing students	Audit of entry data	Mature students and younger students with conventional entry qualifications were more likely to complete the programme.
Kevern *et al.* 1999	UK	$n = 355$ preregistration nursing students	Audit of student data	Characteristics of students most likely to complete programme: aged 35 or over; minimum of 2 A levels.
Kotecha 2002	England	Questionnaires Staff $n = 22$ Preregistration nursing students $n = 8$ Interviews 1 Staff $n = 2$ Preregistration nursing students $n = 10$	Questionnaires and interviewers. Students = 5 leavers and 5 stayers	Students who completed the programme were more likely to have integrated into the institution and were comfortable with the autonomous discourse – knowledgeable doer/independent learner/ independent/confident.
Lai *et al.* 2008	Taiwan	$n = 231$ preregistration nursing students	Survey	Students who intended to stay on the programme reported support from staff nurses; past experience of being ill; positive perceived value of nurses.
McLaughlin *et al.* 2008	UK	$n = 384$ preregistration nursing students	Questionnaires administered at the beginning of Year 1 and end of Year 3. Student data	Students with higher self-efficacy beliefs were more likely to complete the programme. Students who were 'introverted' were more likely to achieve higher marks in assessments.
Mulholland *et al.* 2008	UK	1808 sets of student data	Cohort study	Women, mature students and students from overseas English-speaking countries were more likely to complete the programme.

Table 2 (Continued)

Reference	Country	Sample	Methods	Findings
Pryjmachuk *et al.* 2009	England	Data from 4 cohorts of nursing students (1259). Completion data for 1173 students	Retrospective cohort study	Mature students were more likely to complete than younger students. Students with higher entry qualifications were more likely to complete than those with minimum educational qualifications. The host placement provider also had an effect (NS) on completion rates.
Rudel 2006	USA	*n* = 12 'non-traditional' female preregistration students Faculty members	Phenomenological study – interviews × 3 for each participant Journal entries	Social support from spouse or significant other was most important factor influencing the ability to continue with the programme. Peer support from classmates was a secondary factor in retention and related to working together to solve problems; outside systems such as church and wider family were also important in assisting in retention.
Sadler 2003	USA	193 completers 43 non-completers	Audit of admission essays	Completers essays demonstrated personal commitment to role and described the influence of nurses, as well as internalisation of the role of the nurse ('to be' a nurse).
Sutherland *et al.* 2007	USA	ARMS (affirming at risk minorities for success) students *n* = 64 Non-ARMS students *n* = 265	Survey Student data	Access to specialised tutoring and support led to increased retention for students from minority ethnic groups.

Table 3 Themes and categories

Theme	Sub theme
Programme	Profession
	Support
Personal	Student characteristics
	Family

to remain on programme. In their study, registered nurses undertaking the shortened programme leading to midwifery registration said that the personal tutor was the most important source of support in enabling them to remain on the programme.

Peer support was cited as another key factor by students who stayed on programme. The fact that other students were having similar experiences was an important element in peer support (Rudel 2006, Bowden 2008, Green & Baird 2009). Students expressed a view that peer support was valuable because other students understood what they were going through and there was also an expectation that the support would be reciprocated (Bowden 2008).

Creating an atmosphere of mutual support for students through shared learning experiences was a feature in the success of the programme described by Hilgendorf (1997). Smaller groups and focused shared learning were also cited as helpful in maintaining group cohesion in the study by Green and Baird (2009). Midwifery students stated that having supportive and enthusiastic mentors in the clinical area was important in helping them remain focused and enthusiastic (Green & Baird 2009).

Personal

This theme identified personal factors that were important in keeping students on the programme. Subthemes included student characteristics and family.

Student characteristics

The personal characteristics of students who were successful on programmes of nursing and midwifery education have been identified by several researchers. Some personality traits have been isolated as being associated with an increased completion rate. Deary *et al.* (2003) found that students who scored highly for agreeableness and conscientiousness were more likely to complete the programme. This was attributed to the fact that they were more likely to invest in the programme than students who demonstrated characteristics of irritability, ruthlessness and selfishness. McLaughlin *et al.* (2008) demonstrated that students who were introverted were more likely to achieve high marks in assessment. The researchers suggested that the introverted students were less likely to be distracted from their programme than introverted students. McLaughlin *et al.* (2008) established that students with higher self-efficacy beliefs were likely to complete the

programme. They proposed that students with higher self-efficacy beliefs had a strong belief in their ability to succeed and are more likely to be motivated and committed to the programme.

Higher academic entry qualifications were also associated with increased completion rates (Houltram 1996, Kevern *et al.* 1999, Pryjmachuk *et al.* 2009). Being female was strongly associated with higher completion rates in studies by Mulholland *et al.* (2008) and Pryjmachuk *et al.* (2009). In the study by Pryjmachuk *et al.* (2009) female students had much lower levels of non-voluntary removal from the programme than male students. In the study by Mulholland *et al.* (2008) the reason for the higher completion rates of female students is unclear.

Mature students were also more likely to complete nursing and midwifery programmes (Houltram 1996, Kevern *et al.* 1999, Mulholland *et al.* 2008, Pryjmachuk *et al.* 2009). It has been suggested that mature students have more life skills and have given more thought to their choice of programme than younger students.

In a study by Mulholland *et al.* (2008) students from English-speaking overseas countries were more likely to complete the programme than indigenous students. Mulholland *et al.* reported that this finding conflicted with the view of academic staff who reported the view that overseas students were less likely to complete.

Family

Family was cited as an important factor in enabling students to remain on the programme. Students in the study by Bowden (2008) stated that family members who were also nurses were particularly helpful in enabling them to cope with the demands of the programme because they understood what they were going through. Female students in that study also cited mothers as being encouraging and supportive throughout the programme. This may reflect the key role that mothers had in shaping their daughters' futures as they played an important role in influencing their choice of career and supporting them through the application process. Rudel (2006) found that students in her study cited spouses and family members as the most important factor influencing their ability to continue on programme. The students in her study reported that family members offered encouragement and practical support with chores and childcare and this decreased the demands on students outside of the programme.

Discussion

Student support is frequently cited as an important element in retaining students (Poorman *et al.* 2002, Robshaw & Smith 2004, Levett-Jones *et al.* 2009). However, what is meant by 'support' is rarely explicit. The studies by Colalillo (2007) and Sutherland *et al.* (2007) focused on students from 'at risk' groups and provided additional input from faculty to develop skills to enable them to cope with the institutional environment and the academic demands of the programme to enhance retention.

Brown and Marshall (2008) describe the 'BESTRN' programme and its effect on student retention. The programme has increased retention through the use of frequent testing and remediation programmes for students who do not meet the required standard for progression. Academic staff participate in prescribed sessions for students who do not pass class tests and provide additional academic support sessions to students experiencing difficulty with the course content. High-achieving students are paid to act as peer tutors for students struggling with the programme. Along with these strategies, regular student satisfaction surveys are carried out and acted on to ensure that the programme meets the needs of students.

Poorman *et al.* (2002) found that students were often reluctant to ask for help because they saw this as an admission of failure. However, the students in their study said that they appreciated it when lecturers approached them to offer help and advice when they were struggling. Students in higher education are conceptualised as adult learners and it may be assumed that they are able to ask for help. However, the fact that they are adults and used to coping may actually deter them from seeking appropriate support. The diversity of students undertaking nursing and midwifery programmes means that HEIs need to be prepared to offer a range of support mechanisms for students with different needs. Students also need to be reassured that academic support is integral to the programme to facilitate personal development, rather than being seen as an admission of failure.

Academics have many demands made on their time. Student support may be seen as an additional burden (Poorman *et al.* 2002, Rhodes & Jinks 2005). The more successful programmes in the USA enable academics to gain remission from other aspects of student support if they participate in mentoring students and also target on focused groups of students known to be at risk. The resource implications of accepting students with a need for additional academic support need to be considered by HEIs. The additional resources required to implement support systems could be offset by better retention rates. However, the impact on the workload of individual lecturers must be taken into account.

In the UK, there is now a considerable body of evidence to demonstrate students who are at increased risk of attrition from nursing programmes. This includes being young, male

and having limited academic qualifications on entry to the programme (Kevern *et al.* 1999, Mulholland *et al.* 2008, Pryjmachuk *et al.* 2009). Some authors have suggested that entry to programmes of nursing and midwifery education should be restricted to students who are less likely to fail (Pryjmachuk *et al.* 2009). However, this conflicts with the government's agenda to widen the entry gates to higher education and, as stated earlier in this paper, it also flies in the face of demographic reality because the number of candidates who fulfil the criteria for the ideal student profile is dwindling. A potential solution could be to target resources on 'at risk' students rather than adopting a scattergun approach. Action research is a possible method for investigating the effect of different approaches to increasing student retention.

The role of peers in encouraging students to remain on the programme has also been largely unrecognised. Lauder *et al.* (2008) suggest that peer support should be a stronger feature of preregistration curricula as their study demonstrated that students appeared to value this most. The move into higher education has resulted in larger class sizes. The diverse population of nursing and midwifery students means that students may find themselves in a group where they feel isolated (Stott 2004, 2007). Formalised peer mentoring is a possible mechanism for students to help and support each other that could be explored further.

The role of clinical staff in supporting students was highlighted by Green and Baird (2009). Pryjmachuk *et al.* (2009) demonstrated that different clinical providers were associated with a wide range of retention rates. Although 50% of the time element of nursing and midwifery programmes are situated in clinical practice, surprisingly little research has been carried out into the effect of clinical placements on student retention. Lauder *et al.* (2008) reported that more support for preregistration students was required from mentors in clinical practice. The place of senior clinical staff in supporting staff to mentor students should be reviewed in the light of earlier research that demonstrated the key role the ward sister played in enhancing the clinical learning environment (Orton 1981, Fretwell 1983a,b, Ogier 1986).

Family pressures are cited frequently as reasons for student attrition (White *et al.* 1999, Glossop 2002, Andrew *et al.* 2008). However, the students in the studies by Bowden (2008), Green and Baird (2009) and Rudel (2006) all cited families as being an important source of support. In particular, family members with a background in nursing were seen as being able to empathise with the student. Mothers of daughters undertaking nursing were also seen as being strong influences in enhancing student retention (Bowden 2008).

Families tend to be seen as 'time thieves' in nursing and midwifery education by making demands on the student to the detriment of their programme. Family-centred programmes do exist in some institutions but these tend to offer students flexible attendance patterns rather than involving the family in the programme. Given the complexity of nursing and midwifery programmes and the invisibility of much of the work to the non-student, perhaps consideration should be given to ways of enhancing the involvement of the families of students in the programme so that they can fully understand the commitment required to register as a nurse or midwife. This could include 'open events' where students are able to share experiences with their families.

Limitations

The review was limited by several factors. The inclusion and exclusion criteria excluded some papers which focused on increasing student retention because they focused on progression rather than completion. Although progression is important, we would argue that completion is key in student retention and by including papers which did not have this as an outcome would produce results that were less meaningful.

Data quality was acknowledged by the authors of studies in the review to be problematic. Small numbers and incomplete data meant that conclusions could not be generalised to the wider population of students, despite studies from different continents having similar findings.

Conclusion

Only one of the studies reviewed asked students why they stayed on a programme of nursing or midwifery education (Bowden 2008). One of the most important findings was that at least 50% of those who completed a nursing programme had considered leaving at some stage but had changed their minds. This is important because it demonstrates that a significant number of potential leavers can be persuaded to remain on programme.

The evidence appears to demonstrate that personal commitment and good support seem to be essential for students to remain on programmes. Green and Baird (2009) use the term 'resilience' to describe the way midwifery students approached their complex personal and educational challenges to stay on programme. The ability to develop strong support systems and to remain focused on the long term benefits of registering as a midwife were key to increasing retention in their study. However, the studies reviewed fail to indicate clearly how to identify when students are most vulnerable and which interventions are most appropriate in different situations. Equally defining what is meant by 'support' is rarely explicit and requires to be more clearly articulated.

Future research in relation to student retention should focus on students who remain on programme. Sample sizes should be larger. Data can be collected prospectively and is less likely to be affected by student recollection. Interventions which have been shown to be 'promising' include developing self-efficacy (McLaughlin *et al.* 2008); focused academic support (Colalillo 2007, Brown & Marshall 2008); peer support (Rudel 2006, Bowden 2008); incorporating family involvement in the delivery of the curriculum (Rudel 2006, Bowden 2008) and enhancing the clinical learning environment (Pryjmachuk *et al.* 2009). Action research is a methodology that lends itself to the investigation of the dynamic curriculum and could facilitate both the introduction and the evaluation of interventions. Ultimately, however, the future direction of research into student retention will be decided by policy makers and funding bodies. They need to have the courage and insight into break with traditional attrition studies and focus on why students choose to stay.

Relevance to clinical practice

Nursing and midwifery student retention is a political and professional problem which impacts directly on clinical care. Clinical care providers need to have a supply of educated nurses and midwives to ensure that they can continue to provide high-quality care. Politically, governments need to have value for money when allocating resources for professional education. They also need to be reassured that education providers are ensuring that they are addressing the issue of student retention to satisfy the demand for health care practitioners. Future research should focus on identifying when students are likely to leave the programme and factors that can enable them to remain on programme. Understandings of terms such as 'support' need to be explored and defined so that appropriate assistance can be offered to students.

Contributions

Study design: JC, MR, JT, WL; data collection and analysis: JC, MR and manuscript preparation: JC, MR, JT, WL.

Conflict of interest

The authors did not have a conflict of interest in the preparation of this paper.

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Paper 4: Early findings from an evaluation of a post-registration staff development programme: The Flying Start NHS initiative in Scotland, UK (2010)

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Early findings from an evaluation of a post-registration staff development programme: The Flying Start NHS initiative in Scotland, UK

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ABSTRACT

The first year post-qualifying as a nurse or midwife is often seen as a key transitional period. Flying Start NHS is the national development programme for all newly qualified nurses, midwives and allied health professionals in NHS Scotland. It is designed to support the transition from student to newly qualified health professional through supporting learning in everyday practice. It is a web-based or CD-ROM programme which seeks to increase the confidence and competence of newly qualified nurses and midwives during their first year of employment following registration. The aims of this study were to establish levels of self-report competency, self-efficacy, job demands and career intentions in newly qualified nurses undertaking Flying Start NHS programme in Scotland. The aims were met by conducting a cross-sectional survey of Flying Start NHS students. Newly qualified nurse participants (n = 97) comprised a convenience sample of newly qualified nurses who were registered as undertaking the Flying Start NHS on-line programme during Autumn–Winter 2007. Most newly qualified nurses intend to remain in the NHS although a small but important number may leave.

Introduction

The first year post-qualifying as a nurse or midwife is often seen as a key transitional period. Concerns about the difficulties that may occur during this period are reflected in the 'Caring for Scotland' Nursing Strategy which identified the provision of structured support for newly qualified nurses as an action point (Scottish Executive Health Department, 2001). The major suggestion in this report eventually made its appearance in the guise of Flying Start NHS.

Flying Start NHS is the national development programme for all newly qualified nurses, midwives and allied health professionals in NHS Scotland. It is designed to support the transition from student to newly qualified health professional through supporting learning in everyday practice. It is a web-based or CD-ROM programme which seeks to increase the confidence and competence of newly qualified nurses and midwives during their first year of employment following registration.

The programme consists of 10 units, each containing a number of sub-units with clear Aims and Outcomes attached to each unit. Fig. 1 details the content.

Flying Start NHS has also been designed to afford practitioners' to map their progress against the Knowledge and Skills Framework (KSF). This is a competence framework to support personal development and career progression within the National Health Service across the United Kingdom (DOH, 2003). Each NHS post has a KSF outline (much like a job description) – this describes the knowledge and skills that need to be applied in a post and against the KSF outline. It is designed to ensure that staffs are supported to be effective in their jobs. It also provides opportunities to progress and develop through their time working in the NHS. Linked to this framework is Agenda for Change (AfC). This is the current National salary scale for all NHS staff salary progression (DOH, 2004). Currently there are nine bands (1–9) within AfC. Salary progression at specified points in each pay band depends on how the individual matches the KSF outline for their post.

Hickie et al. (2007) suggest that Flying Start NHS will create a positive learning environment and this will in turn result in improvements in long-term recruitment and retention within the NHS.

Background

The issue of the competence of newly qualified nurses and midwives has a long history. Recently Clark and Holmes (2007) report

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Programme Content	Sub-units
Communication	Interpersonal skills
	Team Skills
	Documentation
	Assertiveness
	Conflict Resolution
	Managing Stress
	Delegation
Clinical Skills	Clinical Skills Development
	Assessment and Planning
	Providing Treatments
	Improving Health
	Enabling Others
	Reviewing Care
Team work	Team working
	What kind of team player are you?
	Multi-professional Teams
	Roles and contributions
	Networking
	Collaboration
	Regulation
Safe Practice	Clinical Governance
	Managing Risk
	Audit
	Complaints
	Clinical Supervision
	Accountability
Research for Practice	Why Research?
	Evidence
	Research Literacy
	Critical Appraisal
	Judgements
	Overcoming Barriers
Equity and Diversity	Diversity
	Patient Autonomy
	Legislation
	Cultural Competence
Policy	Context
	Understanding Policy
	Consultation
	Influencing Policy
	Resources
Reflective Practice	Reflection
	Self Awareness
	Confidence Building
	Reflective Frameworks
	Ten Do of Reflection
	Top Tips for Reflection
	Engaging in Reflection
Professional Development	Life Long Learning
	CPD
	Portfolio
	Developing Others
	Feedback
Career Pathways	Research
	Exploring Options
	Frameworks
	CVs and Interviews
	Goals

Fig. 1. Flying Start NHS Programme Content.

that in England ward mangers have low expectations of newly qualified nurses who themselves feel ill prepared for their new role. Whether this reflects an accurate picture of real competence is open to question. The wider political debate shows little of sign of disappearing with the RCN General Secretary questioning the competence of newly qualified nurses (Snow and Harrison, 2008). Expectations about nurse competence are also the product of a wider professional and political discourse. Social judgment theory suggests that strongly held views, such as 'newly qualified nurses are not competent', leads individuals to seek evidence to support this judgment and exclude evidence to the contrary (Sherif et al., 1965).

Moving from student to qualified nurse can be conceptualised within a transition framework. The transition year is a period of learning and adjustment when newly qualified nurses develop their knowledge and competence and are socialised into the workplace (Victoria Department of Human Services, 2002). Understanding and supporting students in the transition period is a priority in the university sector and especially in relation to students from the non-middle class backgrounds (Marland, 2003).

Problems in the transition from student to registered nurse are widely reported in Australia (Greenwood, 2000), Canada (Ellerton and Gregor, 2003), Israel (Greenberger et al., 2005), South Africa (Moeti et al., 2004) and the UK (Holland, 1999; Andrews et al., 2005). This phenomenon has been reconceptualised as work readiness. Medicine has long recognised the need for a longer period of training with qualified medical staff undertaking training posts on qualifying. Nevertheless the measurement of the problems faced by the new practitioner has proved more challenging than recognising that this problem exists. O'Conner et al. (2001) compared the perceptions of competence of newly qualified nurses provided by 139 senior nurses and the actual competence of 36 newly qualified nurses. They found that newly qualified nurses consistently performed at a higher level that that expected by senior nurses. Whilst the evidence-base has marginally improved since 2001 O'Connor et al.'s observation cautions us to the limitations in research relying on perceptions. The unremarkable but often overlooked point that perceptions are different from actual behaviour is one that should always be at forefront of evaluation research. An Australian review (Victoria Department of Human Services, 2002) also concluded that on publication of the review there was no strong evidence to support the benefits of costly and complex graduate programmes.

One of the least well known and certainly one of the least implemented Project 2000 recommendations was the need to see the newly qualified nurse as 'a work-in-progress'. What was recommended was a period of mentored on-the-job training which should last around three to four months. Macleod-Clark et al. (1996) in their descriptive account of Project 2000 in England report concerns from stakeholders about initial skill deficits in newly qualified nurses. These deficits quickly disappeared with greater exposure to practice and learning-on-the-job. Mallik and Aylott (2005) provide a useful comparison of the problems of Fitness for Practice (FFP) and – more specifically – the quality, cost and provision of practice placements in both UK and Australia. Many Australian healthcare agencies have developed a 1 year graduate programme for newly qualified nurses as a consequence of limited exposure to clinical practice settings in pre-registration programmes and the perceived limit in competency of this group.

Perceptions of skill adequacy in newly qualified diplomates in their first staff nurse post, within a nursing homes context, vary but are on the whole favourable (Runciman et al., 2002). Fraser et al. (2000) report that the transition from student to midwife is associated with a drop in confidence. This was improved if support was provided and by the end of the first year midwives were described by managers as competent and confident. In her small scale cross-sectional survey comparing interview data of newly qualified nurses in 1985 and 1998 Gerrish (2000) reports the latter cohort felt less stressed about transition than newly qualified nurses in 1985. This design is too weak to make any generalisations and should be seen as exploratory.

In a small scale evaluation of a course on community nursing with mostly newly qualified nurses Wright (2005) reports that students felt the course had improved their key community nursing skills. Runciman et al. (2002) report that nurses were perceived to be less competent in clinical skills. Similarly, Amos (2001) identified that newly qualified nurses perceive they do not have the necessary skills (Amos, 2001). Newly qualified child health nurses who obtain their first post in the community were also not thought to have the necessary skills (Hickey 2000). Barriers to learning in this period may share many similarities to those experienced by student nurses. Moeti et al. (2004) identify the many organisation factors which impede newly qualified nurses' development.

Rotational programmes may be a partial solution (Evans, 2002) and are one element in the proposed plans for structured programmes in Scotland. Wong (2000) in a small scale study suggests that Learning Groups for newly qualified nurses facilitate quicker adaptation and a smoother transition to working in intensive care. Brasler (1993) in a study of 63 new graduates found that the strongest predictors of clinical performance were support provided by peers, preceptor skills, and emotional support provided by preceptors. Participation in formal support groups was not found to be a predictor. This study highlights what appears to be the centrality of peer and workplace support in the transition phase.

Proposed curricula in support of the graduate year are not well described in UK, relative to Australia and USA. The revised graduate programme in Victoria (Victoria Department of Human Services, 2002) focused on clinical risk management, harm minimisation, management skills, clinical competencies and ethical dimensions of practice. They also suggest a framework for evaluation which measures recruitment and retention, anxiety reduction and integration, clinical competencies and growth and development of the professional. Cooney (1992) describes a three stage programme in Texas which started with an orientation and socialization period, followed by the development of advanced skills, and finally leading to assignments of complex cases after completing tailored educational courses. Cooney reports that the in-house evaluation indicated nurses reported greater autonomy, increased job satisfaction and improved retention rates.

The transition period is the time when nurses learn to manage and exercise greater control many aspects of their practice. This involves a balance between demands and control. Nurses who report less job control report higher stress levels (Chang et al., 2005). It is the adverse effect of participation in the workforce without control, rather than participation *per se*, which affects job stress (Israel et al., 1989). Lack of control over one's work has been identified both as source of stress and as a critical health risk for some workers. Demand-control theory of work stress is also linked to learning and professional development (Parker and Sprigg, 1999; Taris et al., 2003). In a study of 876 Dutch teachers Taris et al. found that the transition to high demand/low control posts (such as we see in the newly qualified nurse) is associated with a strong deterioration in learning and self-efficacy. Employees who are unable to exert control over their work are more likely to experience work stress, which in turn impairs learning (Taris and Feij, 2004). Self-efficacy moderates the relationship between on-the-job training and levels of anxiety and stress (Saks, 1994). High self-efficacy is associated with learning in nursing and midwifery (Colquitt et al., 2000).

Methods

It is suggested that the development of newly qualified nurses needs to be understood within a framework of self-efficacy, competency, career aspirations and job demands. Consequently aims of this study were to establish levels of self-report competency, self-efficacy, job demands and career intentions in newly qualified nurses undertaking Flying Start NHS programme in Scotland. The aims were met by conducting a cross-sectional survey of Flying Start NHS students.

Sample

Newly qualified nurse participants ($n = 97$) comprised a convenience sample of newly qualified nurses who were registered as undertaking the Flying Start NHS on-line programme during Autumn–Winter 2007. The sample included 81 females and nine males (missing gender data for 7 participants) with ages ranging from 21–49 years and a mean age of 31.78 years (SD 8.83). Most participants ($n = 58$; 64.4%) were married or living with a partner. Participants were currently practising in 14 Health Boards with the largest number working in ward-based settings ($n = 53$) and only five practising in the community. Most participants were adult nurses ($n = 73$; 81%). A majority had exited with a Degree ($n = 50$; 56%) with 40 (44%) exiting with a Diploma.

Data collection

The cross-sectional survey involved a questionnaire being administered to participants through the link nurse for Flying Start NHS employed in each Health Board in Scotland. The questionnaire package included demographics, personal and career aspiration items, job demands, self-report competence and self-efficacy instruments. Demographic data included intake year, marital status, pre-registration exit point and age. Career choice included items relating to Knowledge and Skills Framework (KSF) core dimension levels, Agenda for Change (AFC) Band aspirations, at 5 years and 20 years post qualifying and the quality of career advice to date. Retention was measured by 2 items asking if participants would remain working in the NHS on completion of the course and remain in the NHS 1 year after completing the course.

Self-report competence was operationalised by the Short Nursing Competencies Questionnaire (SNCQ). This is an 18-item scale developed by Watson et al. (2002) and derived from the 78 item Nursing Competencies Questionnaire (Bartlett et al., 1998). Sample questions included: (1) *I make accurate clinical judgements based on assessment data.* (2) *I provide a rationale for thoughts and behaviour when questioned.*

Self-efficacy (confidence) was operationalised by the General Perceived Self-Efficacy Scale (GPSE). The GPSE (Schwarzer, 1995) is a 10-item scale. It has been shown to have good convergent and discriminatory validity (Schwarzer and Born, 1997). Sample questions included: (1) *I am confident that I could deal efficiently with unexpected events.* (2) *It is easy for me to stick to my aims and accomplish my goals.*

Job demand was operationalised by the Job Content Questionnaire (Karasek et al., 1988). Managing the safety demands and challenges of being a newly qualified nurse and the support provided during this period were measured by Karasek's demand/control/support scale. The scale has items measuring psychological job demands (five items), skill discretion (six items), decision authority (three items), co-worker social support (four items) and supervisor support (four items). The items on hostile supervisors and co-workers were omitted. Items are scored on a four-point Likert scale. Good reliability has been demonstrated (Malinauskiene et al., 2004). We did not conflate subscales in this analysis as the sub-scales provided data which had a better fit to the research objectives.

Data analysis

Data were initially subjected to descriptive analysis based on counts, percentages and proportions. Differences in self-efficacy

and self-report competency between Degree and Diploma pre-registration exit point students were examined by Student's *t*-Test. Correlations between job demand sub-scales, self-efficacy and self-report competency were explored by Spearman's test. Regression analyses were performed using Categorical Regression with Optimal Scaling (CATREG) procedure in SPSS Version 15. CATREG was selected as variables were nominal and numeric levels of measurement and did not meet other assumptions of multiple regressions such as normality and homoscedasticity.

The regression analysis was conducted with self-report competency as the dependent variables and skills discretion, supervisor support, co-worker support, psychological job demands, decision authority, self-efficacy and pre-registration exit point as predictor variables. An initial CATREG analysis was performed. All variables were considered numeric with the exception of pre-registration exit point which was treated as a nominal variable. A random initial configuration was selected as recommended when at least one predictor variable is treated nominal. A second CATREG with skill discretion and self-efficacy was performed. Pratt's measure of importance is also reported. This provides estimates of the relative importance of significant predictor variables in a more readily interpretable form that beta values normally reported in multiple regression analysis.

Findings

Future intentions

Participants were asked which AFC Band they aspired to in 5 years. The two most common Bands were Band 5 ($n = 19$; 20.9%) and Band 6 ($n = 25$; 27.5%). When asked which AFC Band they aspired to in 20 years the mode was Band 7 ($n = 23$; 25.3%). The next most popular responses were Band 6 ($n = 11$; 12.1%), Band 9 ($n = 7$; 7.7%) and Band 8 ($n = 6$; 6.6%).

Participants were asked if they intended to remain in the NHS on completion of the Flying Start NHS programme. A large number ($n = 80$; 89.9%) stated they did intend to remain with a small number not intending/did not know ($n = 9$; 10.1%). Participants were also asked if they intended to remain in the NHS for at least 1 year after completing Flying Start NHS. A large number ($n = 78$; 88.6%) stated they did intend to remain and a small number did not intend/did not know ($n = 10$; 11.3%).

Knowledge skills framework

Participants were asked at which level in four KSF core dimensions they were currently working towards at this point in their career. Within each dimension there were responses across all four levels with level three the most cited level in all dimensions with the exception of service improvement (Table 1).

Participants were asked to rate the quality of career advice they had received to date. The response format went from 1 (very poor) to 10 (excellent). Scores ranged from 1 to 10 with a mean of 5.30 (2.65), with a mode of 5.00 and median of 5.00. There were 48 (55.8%) participants who rated the quality advice on or below the median.

Table 1
KSF core dimension aspirations for newly qualified practitioners.

Dimension	Level 1 *N*	Level 2 *N*	Level 3 *N*	Level 4 *N*
Health and safety	9	12	36	25
Service improvement	11	35	20	15
Quality	7	28	31	16
Equality diversity	7	20	34	18
Total	34	95	121	74

Self-report competency

Self-report competency scores had a mean sample score of 62.39 (SD 7.45). There was no significant difference between participants exiting their pre-registration programme with a Diploma or Degree ($t = -0.412$, $df = 82$, $p = 0.678$).

Self-efficacy

General Perceived Self-Efficacy mean scores for the sample had a mean score of 30.60 (SD 3.72). There was no significant difference in self-efficacy between those participants who exited their pre-registration programme with a Diploma or Degree ($t = 1.152$, $df = 87$, $p = 0.252$). There was a moderate positive correlation between self-report competency and self-efficacy ($r = 0.406$, $p = 0.001$).

Job demands

Correlations between job demand sub-scales, self-report competency and self-efficacy were explored using Spearman's test (Table 2). Psychological job demand was positively associated with support from supervisors ($r = 0.284$). These supervisors were likely to be the ward charge nurse or their equivalent in the community. Self-report competency was associated with skill discretion ($r = 0.290$), supervisor support ($r = 0.227$) and self-efficacy ($r = 0.414$). With the exceptions of self-efficacy and self-report competency significant correlations were low.

There was a significant difference between Degree and Diploma exit-point participants in the skill discretion sub-scale ($t = 2.150$, $df = 83$, $p = 0.034$).

Predicting self-report competency in newly qualified nurses

The self-report competency model with skills discretion, supervisor support, co-worker support, psychological job demands, decision authority, self-efficacy and pre-registration exit point as predictor variables was significant ($f = 3.777$ $df = 7$, $p = 0.002$) and accounted for 23.9% of the variance in self-reported competency (adj $r^2 = 0.239$). Self-efficacy and skill discretion were significant predictors. A second CATREG was performed with self-efficacy and skill discretion as predictors. The second model was significant ($f = 12.657$ $df = 2$, $p = 0.001$) and accounted for 22.8% of the variance in self-reported competency (adj $r^2 = 0.228$). Pratt's test of importance indicates that self-efficacy (0.669) was twice as important a predictor than skill discretion (0.331).

Discussion

The majority of participants indicated they would remain within the NHS on completing the course and for a further 1 year. Although less than one in ten stated, they 'were not sure/would leave' this is still a potentially significant loss of qualified nurses if this translated to actual leaving. Consequently one of the stated aims of Flying Start NHS to maximise retention seems appropriate.

Given the current focus on modernising nursing careers and the greater emphasis on learning and competency development over the course of a nurse's career it was disappointing to find that many nurses had received relatively poor quality career advice to date. Career advice at an early stage needs to be more formal and linked to aspiration, ability and career patterns. Aspirations around KSF showed considerable differences between participants on the

Table 2
Association between job demands, self-efficacy and competency.

	Skills discretion	Decision authority	Psychological job demand	Supervisor support	Co-worker support	Self-efficacy	Self-report competency
Skills discretion	1						
Decision authority	.385[b]	1					
Psychological job demand	.068	−.003	1				
Supervisor support	.161	.151	.284[a]	1			
Co-worker support	.283[a]	.391[b]	−.145	.302[a]	1		
Self-efficacy	.134	.213[a]	−.072	.283[b]	.291[b]	1	
Self-report competency	.260[b]	.154	−.104	.227[a]	.118	.414[b]	1

[a] $p \leq .05$.
[b] $p \leq .01$.

same core dimension and within participants across the range of core dimensions. There must be questions raised around the utility of the KSF if participants simply don't understand these core dimensions. The KSF does not appear to be a theoretically informed educational framework but rather a Human Resource initiative which has little basis in how nurses actually progress through more sophisticated levels of performance. There is neither theoretical nor empirical rationale to propose that core skills have four levels. The whole KSF framework may be no more than an overly-simplistic product of the growing Human Resource mentality in the NHS which gives an illusion of order. The wide spread of scores on KSF core dimensions may be surprise given the relatively simplicity of the measure and the four point range of responses.

Self-report competency scores were higher than those reported for second and third year student nurses (Lauder et al., 2008) and provides some support for the utility of the SNCQ to track progression in self-report competency into the post-qualifying stage. Although the increases were relatively small this may be more important than at first would appear to be the case. The SNCQ has a ceiling effect and even small changes may indicate a more substantial increase in competence.

Self-efficacy and skill discretion were the only significant predictors of self-report competency. The association between self-efficacy and self-report competency has been previously reported in a study of pre-registration students and is consistent with social cognitive theory (Lauder et al., 2008). Skill discretion items have close similarities to notions of the good ward learning climate described over 25 years ago by Fretwell (1980). The creation of a ward learning climate remains one of the key roles of the ward charge nurse with the ward itself being embedded in a learning organisation (Scottish Executive Health Department, 2007). Surprisingly given the long believed importance of the ward sister in creating good learning climates (Orton, 1981) supervisor support was not a significant predictor. Nevertheless the importance of the workplace as a learning environment-community allied to fostering a sense of efficacy in the newly qualified nurse are core elements which need to be considered when promoting learning in the post-qualifying period.

Conclusions

Most newly qualified nurses intend to remain in the NHS although a small but important number may leave. Future longitudinal study is needed to see how many actually leave.

Career advice needs to be addressed throughout pre-registration programmes. Consideration should be that this is a joint initiative between HEI.NHS demonstrating the wealth of and diversity of the roles nurses can undertake. The KSF requires to be subjected to rigorous psychometric testing to examine its validity and reliability for nursing practice Self report competency showed no difference between graduates or diplomats.

The study limitations include the use of self-report measures and a relatively small convenience sample. Future well funded studies with larger representative samples and which employ direct observations of competence are needed.

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Evaluating Hub and Spoke models of practice learning in Scotland, UK: A multiple case study approach

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SUMMARY

Background: Most of UK students' practice learning experience is based on a rotational placement model which often leads to students lacking confidence and feeling anxious about the complexities of the care environment.
Objectives: To evaluate the impact of Hub and Spoke model(s) of clinical practice placement across geographically diverse locations, with a particular focus on enhancing the student practice learning experience.
Design: Multiple case study design.
Setting & Participants: Comprised undergraduate student nurses from Adult, Learning Disability and Mental Health programmes from 3 Scottish Schools of Nursing.
Methods: A mixed methods approach which included quantitative and qualitative data tools.
Results: All three Hub and Spoke models shared two broad findings:

1) In the three Hub and Spoke models detailed in this paper, there is a continuum of student led learning which supports the process with opportunities for individual students to be positively innovative and creative in their learning approaches. Depth of learning was achieved in two ways; a) the method in which Hub placements are organised, managed and structured and, b) the depth of empathy and sensitivity to the individual at the centre of the care.
2) Placement capacity is increased: The classification of placements is reviewed to produce broader categories, Engagement of mentors/enhanced student/mentor relationship.

Conclusions: Practice Learning must be seen as an academic endeavour that promotes deep, meaningful, person-centred learning rather than superficial, compartmentalised placement-centred learning.

Introduction

Much speculation has been given to the quantity and quality of the theoretical content required to achieve degree standard in relation to nursing practice. A contention highlighted by Henderson et al (2007) and Levett-Jones (2007) is that insufficient focus is given to the quality of the student learning in practice, and that current organisation and structuring of placements gives students messages and learning experiences that are not congruent with current health and social care policy and ideology.

The nature and purpose of practice learning is in part conveyed through the language that is used to describe it. The typical use of the term 'placement' creates an image of a physical location or professional team which the student goes to and remains for a period of time. It suggests student learning is about and within the boundaries of that location or team. Contemporary practice learning should be an open and flexible system within which the student pursues meaningful learning experiences that are person-centred and span health and social care services and beyond in ways that reflect the service-users' experience. It is suggested, that the term 'practice learning experience' reflects a different perspective and ultimately a different type of learning experience for the student than the term 'placement'.

This paper will explore an alternative approach to the traditional rotational organisation of practice learning. Three case studies of Hub and Spoke models will be discussed each formed as projects by separate Scottish Universities and their respective NHS partners. The findings of the projects will be explored with particular focus on placement philosophy and organisation, and the impact of the approach on scope and depth of student learning.

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Limitations of Rotational Practice Placement Models

The predominant method of organising practice placements for nursing students is based on a rotational model. A rotational model may be described as a series of placements that have no defined connection between them other than providing exposure to a range of patient groups and services. There is evidence that such an approach often leads to students lacking confidence and feeling anxious about the complexities of the care environment (Campbell, 2008). Several reasons have been identified for the limitations of the rotational model. Holland et al (2010) noted that this approach is planned and managed in a variety of different ways according to programme specification and placement availability, rather than being driven by the learning needs of the student. In addition, rotational models of placement may not necessarily be integrated into the academic learning experience and are only tenuously linked to the students' learning needs or curiosities. The choice of placement allocation is not within the control of the student and placements are frequently short and disconnected from each other (Campbell, 2008).

Despite these limits in the organisation of practice learning, Andrews et al (2005) study on placement experiences concluded that 'the absence or presence of a supportive and positive learning environment, are seminal for many students in shaping their first destination employment decisions' (p 151). Students are therefore not only making this decision on limited experience but also, more importantly, on experiences where the developmental opportunities to be future focused practitioners have been constrained.

An additional difficulty with the rotational model was highlighted by Lauder et al (2008) as over reliance on acute care settings for student placements can result in conflicting messages, as emphasis is around 'benevolent care approaches' that focus on 'illness' and the 'patient'. Although medical approaches to health services remain valid in all fields of practice, the social model of health, which embraces person-centred and values-based care approaches, increasingly underpins health and social care policy and practice guidelines (Scottish Government Health Department, 2010). Thus, placement experiences that are confined largely to acute care environments can provide restrictive learning opportunities that do not conflate well with current health policy drivers.

Potential Opportunities of the Hub and Spoke Approach to Practice Learning

The review of practice learning completed by Campbell (2008) suggests several benefits from adopting a Hub and Spoke model, including an increased consistency of experience for student, mentors, patients/service users and carers. The model may support the concept of students' belonging to learning communities which is an approach to teaching and learning that is gathering momentum within higher education. Meaningful learning is rooted in the culture and the social experience created within an educational experience and is achieved when students perceive ownership of the curriculum and authenticity in their educational experiences (Lawrence, 2005). Anderson and Burgess (2007) assert that learning communities have value as a mechanism for combating isolation and enhancing collaborative and interactional approaches to learning. The literature refers to the significance of 'being in practice' as part of the socialisation process of becoming a nurse or midwife (Melia, 1987; Levett-Jones and Lathlean, 2007) and that students acknowledge the importance of 'fitting in' to the environment in which they are allocated as significant to their actual experience and their success in becoming a qualified nurse (May and Veitch, 1998).

The work of Henderson et al. (2007) suggests that there is a strong relationship between the concept of belongingness and students' having a positive placement experience. Belongingness is understood to be the sense of connectedness to the student experiences within the learning environment. Belongingness can be felt within the staff, within the system and within the client group and demonstrates cohesive and secure care settings (Henderson et al, 2007). Its quality is dependent on a range of factors including the level of student involvement in care and the availability of support during the learning experience. It is in this sense of connection that enables the student to be open and receptive to the demands of the care environment and more deeply engaged in learning. A sense of belongingness emerges through cooperation; connectedness and collegiality in relationships (Levett-Jones and Lathlean, 2008).

Thus, in facilitating the process of establishing meaningful relationships in practice, Hub and Spoke models hold the potential to deepen and extend student learning by reflecting the values espoused in contemporary health. A student nurse is more able to demonstrate the values of person centred care (respect; individuality; empathy), if they receive that same ethos in their learning experiences.

Overview of the Three Case Studies

- Case Study 1 – a service centred approach which enables students to 'follow' the client journey,
- Case Study 2 – a first year placement, in which the student stays with the same hub and the same mentor
- Case Study 3 – a whole programme approach in which students belonging to three core learning communities.

The case studies were developed independently of one another in response to local educational and clinical agendas. However, the Scottish Government's Recruitment and Retention Delivery Group for Nursing, has played a key role in supporting the initiatives by providing funding for implementation and evaluation. This has promoted collaboration between the three Higher Education Institutions that has enabled the sharing of ideas and perspectives, discussion and debate around the findings emerging from the evaluations and exploration of the similarities and differences between the models.

Despite developing independently, the three Hub and Spoke case studies also share characteristics. For each, Hubs and Spokes are contrasting but complementary learning experiences (Roxburgh et al, 2011) and a Hub is defined as the main base for practice learning and student attainment of Nursing and Midwifery Council competencies (NMC, 2004).

The system in which the Spokes are organised, facilitated and labelled is seen as the connecting screws that hold the Hub and Spoke model together. Each project identified, organised and described the Spokes in slightly different ways, reflecting both the spectrum of student led learning alongside person centred care. The differences perhaps produce a variance in emphasis and in synchrony with the philosophy of the model more generally. The variations in Spoke systems are described below: (Table 1).

Thus, a Spoke is a planned secondary learning experience that would not be otherwise available in the Hub placement and is accessed to enrich the depth and breadth of student learning. Spokes are connected to the Hub placement through commonality of client population, referral pathways, joint working or shared care provision. Spoke placements can be located in health or social care, third sector or wider community settings depending on the Hub and Spoke model, student learning needs and the service user journey. As a result of this, Spokes have the capacity to increase access to interprofessional learning and create placement capacity.

Methods

Research Aim

To develop, implement and evaluate the impact of Hub and Spoke models of practice learning across geographically diverse locations, with a particular focus on enhancing the student learning experience.

Table 1
Spoke organisation.

Defined as a hierarchy of learning (Case Study 1)	Defined by method of organisation and facilitation (Case Study 2)	Defined by length of experience and service users' journeys (Case Study 3)
□ 1st level: Spoke relates to and 'follows' individual client journey and is likely to be located in third sector; education or social care setting	□ Internal SPOKE Model – Responsibility for planning & arranging SPOKEs & reporting on student progress accepted and managed by HUB mentor.	□ Insight SPOKEs – short visits (½–3 days) to services or organisations service user is accessing for a particular reason, e.g. a health improvement clinic
□ 2nd level: Spoke relates more generally to client population and is likely to be located in third sector; education or social care setting	□ Facilitated SPOKE Model – Responsibility for planning & arranging SPOKEs and reporting on student progress was led by PEFs for the HUB in liaison with HUB and SPOKE mentors and the student.	□ Regular Attachments – ongoing experiences to services accessed by service users, ½ day or full day per week for duration of a Hub e.g. psychotherapy department or an annual return, e.g. to an inland community the ward based Hub receives service users for care and treatment.
□ 3rd level: Spoke directly relates to hub: so, hub = spoke and spoke = hub and is located in primary or secondary care health setting	□ Fixed SPOKE Model – Responsibility for planning & arranging SPOKEs was accepted & discharged by the University campus placement coordinator.	□ Block Spoke Experiences – up to 4 weeks, e.g. Spokes where significant travel is required or there is a reciprocal Hub exchange in place for the duration of the course, e.g. eating disorders in-patient unit & acute admission ward.

Research Design

A multiple case study design (Yin, 2003) was chosen, as this approach allows a deep exploration of behaviour and culture through a process of building and comparing with units of analysis (within and between the case studies). Case studies do not have set elements that need to be included; the elements of each will vary depending on the case, the data collected, and the purpose. However, case studies typically describe a programme or intervention put in place to address a particular problem.

Each case study involved three Higher Education Institutions and three variations of a Hub and Spoke model for practice learning. A range of undergraduate student nurses from 1st year to 3rd year studying Adult Nursing, Mental Health Nursing and Learning Disability Nursing and their mentors, were the case sample and data collection was based on surveys, reflective diaries and focus group interviews.

Ethical Considerations

Advice and guidance were sought from National Research Ethics Service (NRES). NRES judged the projects as service evaluation and therefore advised there was no requirement for NRES approval. However, this was obtained in Case Study 3 as was NHS Research and Development Management Approval. All three project teams applied for SREC (School) ethical approval was granted.

The projects adhered to the principles of Research Governance. All participants were provided with written information about the study and were offered the opportunity to discuss the study with a member of the research teams before deciding to participate. Written consent was obtained from each participant. It was also emphasised that participants were free to withdraw at any point from the study without detriment.

Case Study 1 One: The Service Centred Model

The Child and Adolescent Mental Health Services (CAMHs) Service Centred model involved ten third year mental health nursing students (Fig. 1). Each had student with two Hub experiences that were contrasting (in either age of the client or setting of the placement), but complimentary (both in CAMHs). The project aimed to enhance and deepen student learning of contemporary mental health practice by 'following' the journey of the individual and their family in, during, and out of, secondary care settings.

Spoke learning experiences were typically in third sector, education or social care settings as these arenas more accurately reflect the care experience of the children, young people and families at the centre of the mental health service. Accessing Spokes in schools and voluntary organisations also enabled students to 'follow' the health journey of the individual as well as increase learning opportunities to interprofessional settings.

Child and Adolescent Mental Health Services were the focus of the placements for three specific reasons. Firstly, it is anticipated that the CAMHS workforce will have to significantly increase in numbers if it is to meet the targets set in a range of policies. Secondly, as CAMHS is understood to be an area of specialist care, placements are underutilised and this directly impacts on future recruitment and retention. Thirdly, CAMHS provides a rich environment of inter-professional multi-agency working, providing student nurses with an opportunity

Fig. 1. Service Centred Model: Two consecutive but complimentary Hub Placements in CAMHs setting.

to gain insight into the client journey through the health and social care spectrum, thus reflecting the aims of the Hub and Spoke model of practice learning.

The student experience was evaluated through a mixed method of data collection tools including a thematic analysis of six focus groups, three in each of the two placements. The aim of the evaluation was to measure the nature and quality of the learning experience as the student progressed through the placement. Quantitative analysis took the form of completion of the Belongingness Questionnaire (Levett-Jones and Lathlean, 2008) containing 34 statements. A control group were also asked to complete the questionnaire for comparative analysis. Each student was asked to complete the questionnaire in the sixth week of the first twelve placements, and in the first and last week of their second placement. The evaluation tools were presented at intervals through the placements to be sensitive to the changing nature of the student experience.

Findings

From the thematic analysis of the focus groups, three core themes emerged that each influenced the quality of the learning experience during the placement. Detailed discussion on each of these themes is out with the scope of this paper. However, the presence of Spokes in the voluntary and education sector in particular, appeared to elucidate the way in which services relate to one another:

> *You can understand how everything interacts and connects.You see what's available beyond the NHS.*

Spokes also drew student attention to the way in which the culture of other organisations was different from the dominant model they were used to:

> *There were Spokes I thought I could work in which was a real surprise!Some are so political and so much to do with what's going on in the world – we talked and talked.*

The Spoke opportunities also served to open up the world of the child or young person:

> *I met a lad my age. He was experiencing psychotic episodes. I met his family and his school teachers. Had I looked after him in the acute wards he would just have become John who has schizophrenia – no different to many others.*

And they offered the opportunity to 'follow' the client journey:

> *I've been to a wee lad's school and met his parents- it helps to know where he has come from and where he is going to.*

Also striking, was that analysis of the Belongingness Questionnaire revealed a 47% increase in the students' sense of belongingness compared to the control group. Seven of the thirty four statements presented with a 15% or more increase to the control group including (Table 2).

In conclusion, the service centred approach to Hub and Spoke learning provided students with a deeper learning experience that enabled them to see beyond an 'illness perspective of children and young people's mental health'. In addition, two consecutive, same service placements, enabled breath and continuity in the learning experience as confidence and competence increased in tandem with the extended learning experience across the parameters of the clinical area.

Case Study Two: The First Year Approach Model

The 1st Year Approach model involved 46 students from across the nursing programmes of Adult, Mental Health and Learning Disability (Fig. 2). Three variations of the model were enacted to accommodate the wide geographical remit covered by this University which spanned urban, rural and remote areas. The aim of this 1st year approach was that students throughout the first year returned to the same hub placement in subsequent periods of clinical learning to, facilitate a higher level of learning and development, deepen assessment validity and increase independent supervised practice. The return to the hub area allowed guaranteed access to the same mentor and mentor team.

Table 2
Belongingness questionnaire.

Question	Pilot group	Control group
	n/%	n/%
I feel I fit in with others during my placement	18/90%	11/68%
I like the people I work with on placements	19/95%	11/69%
There are people that I work with who share my values	18/90%	12/75%
I feel understood by my colleagues	16/80%	10/63%
When I walk up to a group on placement I feel welcomed	17/85%	9/56%
I let my colleagues know that I appreciate them	18/90%	11/69%
I feel free to share my disappointments with at least one of my colleagues	16/80%	7/44%

Findings

Data was collected through a mixed methods approach, utilising reflective diaries (students), and administration of the Clinical Learning Environment Inventory (Chan, 2002) (Students), Focus groups (Students and Mentors), pre and post survey questionnaires (Mentors).

For the purpose of this paper the findings from the student reflective diaries and pre and post survey of mentors, analysed using both a content analysis (qualitative) and frequency analysis (quantitative) will be reported to evidence the aims of this exemplar in supporting or not factors which relate to a sense of belongingness.

As identified earlier Levett-Jones and Lathlean (2007) proposed that belongingness develops as a result of feeling secure and valued within a particular context. In this study the majority of students (range 92–100%) reported positive feelings of belonging (Table 3).

Commonly used terms to describe students' experience of belonging included 'the team' and 'welcome'. Students expressed this sense of belonging in a number of diary excerpts and focus group responses:

> *Made to feel welcome within multidisciplinary teams – as I'm on the hub for a year you get to know the staff you are working with. I felt part of the team because of all the information given to me.Really enjoying being back, feel a sense of belonging and attachment – the way you get from a job you enjoy. What I have found interesting about the hub and spoke is the way it can give you a real sense of belonging on return to ward.I felt very included; I was always brought into conversations and my advice seemed as valid as my mentor's. It was like being with family the team are so helpful and kind.*

Findings from the pre-surveys anticipated that the model would provide a sense of belongingness. Mentor respondents n = 4 (25%) reported that they saw the project as potentially promoting feelings of belongingness to team/clinical area in the learners. Mentors similarly foresaw a strengthened mentor/student relationship accruing.

From the post survey mentor respondents N = 4 (25%) reported that the project had promoted feelings of belongingness to team/clinical area in students, and three respondents (18.75%) reported that their student had attained increased levels of confidence in their clinical performance.

Fig. 2. 1st Year approach.

However negative experiences were predominately expressed by students in relation to the 'spoke' aspect of the model. The predominant negative relates to 'communication':

> *I feel that that personally there has been minimum contact between the hub and the spoke and there could be more structure and there could be more paperwork that could help them structure it so, there is verbal connection between the spoke and hub but it has been minimal and not structured.*

Similarly N = 3 (18.75%) mentors reported that spoke communication had been a problematic issue in their mentoring role. Also identified were the variations in the length of time students experienced in 'spoke' placement. This 'time limited' element of 'spoking' affected the students' perception of 'belongingness'.

> *I do feel as we got sent out to the spokes that it wasn't long enough because I only had 3 days in the hospital that the person I worked with felt like she had to, she needed time to build trust so we could develop and I felt it put me back a bit.*

Evidence from the evaluation of this project demonstrated that, for the student and mentors Hub and Spoke is a model that works for them. It has real educational merit in orientating students to clinical learning and restates the primacy of the mentor relationship in producing competent and confident nurses. After analysing the diverse data collated in the fieldwork it is clear that mentors are again a crucial link in achieving a sense of belongingness and instilling confidence in their students' abilities. Students on Hub and Spokes did in fact seem to feel a sense of belongingness to their clinical hub and mentor. This sense did not extend to spokes and this is not unexpected due to their relative short duration.

Table 3
Belongingness.

Model	Theme	Total diaries	N (%)
Internal spoke model	Belongingness	50	46(92%)
Facilitated spoke model		25	23(92%)
Hood spoke model		12	12(100%)

Case Study Three: The Whole Programme Approach Model

The whole programme Hub and Spoke model arose from a new curriculum that embedded a learning community strategy within university-based theoretical learning (Fig. 3). The learning community is used as a mechanism for facilitating socialisation, combating isolation, enhancing collaboration between students and ultimately improving retention by promoting feelings of belonging. (Anderson and Burgess, 2007; McKegg, 2005).

The learning communities are the students' personal tutor group within which students undertake personal professional development modules that span each year, facilitated by their personal tutors. Drawing from Campbell's literature review (2008) and a review of local mental health placement provision (Addo, 2008), this strategy was extended into practice learning for mental health nursing students creating the whole course Hub and Spoke model. Thus, mental health nursing students belong to three learning communities for the duration of their programme.

The evaluation focuses on identifying: key developmental and preparatory processes involved for the HEI and its NHS partners; stakeholders' experiences of implementation of the model; key

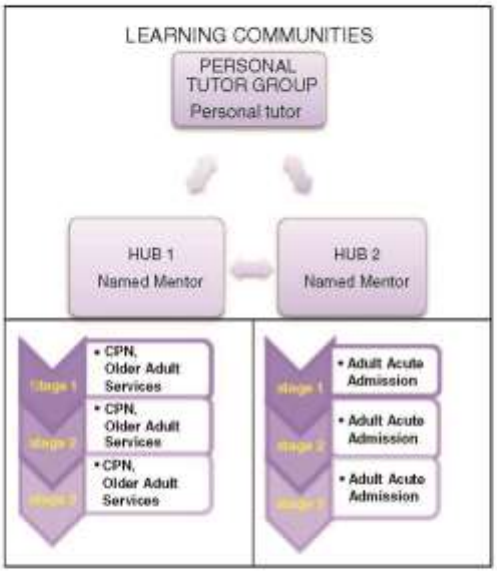

Fig. 3. Whole Programme Approach.

factors that appear to influence success of the implementation; and any implications for possible wider application of the model. The study methods were qualitative in nature with a view to understanding the initiative in context. Questionnaires, individual interviews and focus groups elicited experiences from: (Table 4).

Findings

A predominantly positive picture of the early impact of the initiative emerged from the stakeholder groups. While some tensions were evident in regard to breadth versus depth of learning provided, the new Hub and Spoke model was seen to be embedding well into practice, with early operational issues being clarified.

A recurring theme within the student data was the tension between breadth and depth of learning:

> *I think I spoked more in the community than when I was in the acute ward … you do utilise your time however, that time could be better utilised on a spoke. … I think I probably won't spoke as much when I go back … purely because I think I can get all the benefits from the ward. Whereas, in the community, it's fine to spoke about a bit more.The thing is though, it's OK saying that but… I had to fight for that spoke. I had arranged three spokes and … one of them, I wasn't even allowed to go to. …. It was the manager who was saying that, not the other members of staff. I think the hub and spoke is a good idea in theory but in practice, it doesn't work.*

Table 4
Sample.

Two student cohorts	n = 22 Sept. 2008 & Sept. 2009 cohorts
Mentors	n = 36
Mentors clinical colleagues	n = 19
Key NHS managers and HEI staff	n = 8
Representatives of local service user groups	n = 2

The findings yield new insights on student strategies and good evidence from a number of stakeholders that students are able to follow service user and family journeys through care services.

Discussion

Previous studies have cited the importance of students perceiving that learning needs are valued, recognised and understood by mentors in order to feel empowered to learn (Bradbury-Jones et al, 2007; Levett-Jones et al., 2009). In the three Hub and Spoke models detailed in this paper, there is a continuum of student led learning which supports the process with opportunities for individual students to be positively innovative and creative in their learning approaches. Depth of learning was achieved in two ways; a) the method in which Hub placements are organised, managed and structured and, b) the depth of empathy and sensitivity to the individual at the centre of the care.

In the three case studies the same mentor was attached to the student either over two placements or throughout the programme. Gray and Smith (2000) highlighted the importance of students place on mentor involvement in the learning process. A close proximity supported students to take greater control and direct their learning in alignment to their specific learning needs. This was demonstrated through the Spoke attachments that enabled students to 'follow' the patient/client journey.

The configuration of consecutive hub placements supported the student to settle in and take ownership of the learning process. Developing relationships over time provides the mentors with an incentive to invest in the students' learning more creatively than in the rotational model even though this may be perceived as requiring more time and effort. Mentors acknowledged the need to invest more time in student learning, the incentive being the quality and depth of learning achieved overtime. Mentors also described having to use their knowledge and experience differently to support student learning.

The inclusion of Spokes is crucial to the learning experience of the students. Spokes enable students to broaden understanding through observing the continuum of the client/patient journey either through care services and/or through illness and health. This enables students to develop knowledge about the way in which services are organised and relate to one another as well as supporting the student to realise the very human experience of being unwell or vulnerable in some way. Developing understanding of the roles, perspectives and responsibilities of interprofessional working is increasingly seen as a key skill in collaborative and person centred care delivery (Atea et al, 2011) and Spokes in particular, provide opportunities as wide and as flexible as the individual model permits. In addition, to interprofessional learning, Spokes enable students to see the world of the client or patient beyond the 'illness' experience. Whether it be the world of the school; a visit to the health visitor or the community health clinic, or a community education facility, Spoke experiences enable the students to engage with the whole person.

The flexibility of the spoke arrangements promotes ownership, by mentors and students, of the actual practice learning experience the student has. The spokes can be responsive to what is happening at a given time as well as being planned. As a result, the quality of the learning experience is enhanced as the student is able to go where learning will be maximised.

Practice Experience rather than 'Placement' Experience

Within the three case studies, the placements are less likely to be seen as being 'within' a physical building, location or team, but as something more open. New student strategies have emerged as part of the process of negotiating Spokes from Hubs, for example 'managing' mentors where resistance is anticipated, being assertive in order

to enhance learning experiences, controlling and managing own learning, engaging in 'path-making' and 'path-finding' and 'strategic spoking' to achieve certain learning outcomes or to avoid an aspect of Hub experience. Such skills reflect the core graduate attributes (Nicol, 2010) that have more emphasis in pre-registration nurse education for the future (NMC, 2010).

Within the models, students reported that Spoke experiences gave greater context, connection and continuity to learning, allowing them to follow patient journeys and help their families more. Students also feel they have greater autonomy and choice but question the relevance of some spokes undertaken. The evaluations identified that Spokes need to be clear about what they can offer and how they wish to offer it to students and students highlighted their need to be prepared if they are to maximise learning through spokes.

Placement Organisation are Reviewed and Recategorised

A key driver to reorganisation of placement allocation is the increasing contraction of appropriate and available placements. Continuous change in the culture and organisation of health delivery has led to fewer available placements, particularly to first year students. Furthermore, there are considerable challenges in accessing placements that reflect the shift in policy and culture from an orientation towards illness perspective to a psychosocial view of health and well-being. An additional issue is in challenging traditional classification systems that define placements according to either population group ('older people') or setting ('community' 'in patient') or nature of the intervention ('medical' 'surgical') as these confine and narrow the learning experience.

Widening the classification of placements in a manner that is sympathetic to the wider notions of the client journey changes the emphasis and need for placements to be concentrated around secondary care areas. In addition, the reduced classification enables previously 'hard to reach areas' and areas that would not otherwise seem in tandem with their stage or level of learning, thus allowing students to access learning environments at an earlier stage. Where mentors may be anxious of uncertain about the suitability of a placement for student learning, they can be employed on a trial basis as a Spoke experience, before then becoming a Hub if this is considered appropriate. During the course of the three projects, several new placements were identified in this way.

Potential Constraints of Hub and Spoke Model

Through the implementation process, there were core challenges to the Hub and Spoke models. In particular, each of the case studies emphasised the logistical difficulties involved in preparing for implementation, particularly around placement preparation and categorisation, and mentor preparation. A long lead in time was recommended in each of the evaluations and mentor preparation is fundamental to the effectiveness of the project.

The quality of the learning process is also dependent on many factors. Bradbury-Jones et al (2007) refer to the 'spheres of influence' lying with the mentor as well as in the political and sociological arenas. Structural and organisational concerns are key to the quality of the Hub and Spoke model and must adequately mirror shifting ideologies of healthcare. This means that structural changes to placement organisation for example, has to be driven not by the needs of the educational institution (for example, in placement capacity), but rather through a need to enhance the student experience. Change that is resource driven will result in the learning capacity of the model being distilled to its weakest level.

Students and mentors also expressed concerns about the potential of learning to be repetitious and narrow. There is a need for vigilance and rigour in considering the learning that placement areas have to offer to ensure progression occurs over the three year period.

Conclusion

Three examples of a Hub and Spoke approach to improving the quality of the students experience in practice settings have been described and reported (Table 5). The small numbers in each of these case studies make it difficult to generalise findings. However, when reviewed together the findings go some way to strengthening the evidence base for supporting quality learning environments for nursing students in Scotland.

A striking feature of the models is the number of clinical settings that are acting concurrently as hubs and spokes. A second feature is the relative success in accessing more community and specialism based placements. Amongst the student cohorts there is a strong sense of student agency, with evidence that they actively planned and constructed their learning pathways within these formative new models.

Table 5
Thematic summary.

Mentor and colleagues' perceptions	
Knowing the student as their mentor	Incentive for investing more in student (may mean more time/effort) Increased mentor creativity (may be more work) Better basis for relationship – what if a personality clash Basis for planning ahead together Continuity of own assessments/know previous assessments Can discuss student with other spoke mentors Early detection of problems
Hub and spoke impact on student experience	Students settle in quicker on return to hub (what if bad experience before?) Basis for better relationships with mentors Greater student choice and autonomy (relevance of some spoke visits questionable) Increased breadth and depth of learning Following patient journeys Increased student confidence Specialist hub placements may not give experience of general/basic care skills
Service/setting issues	Onus on staff and students to find spokes (not HEI) Some settings may not suited to be hubs (e.g. if too specialised) Some lack of clarity re structures and processes for model Short spoke placements not good for learning Some settings have too many students wanting to spend time there
Student Experiences: September 2009 cohort	
Hub experiences	Base for planning learning and following patient journeys Model helps towards inclusion of service user feedback in student assessment Continuity and connection for student, staff and service users
Spoke experiences	First placement students need prior preparation to get best from spokes Spokes give greater context, connection and continuity to learning Can follow service user journeys and help families
Student Strategies	Managing resistance from some placement staff Assertion – managing your mentor Controlling/managing your learning "Strategic spoking" (e.g. for skills development or avoiding hub) Path-making and path-finding – Transferring skills
Views of key NHS managers and HEI staff	
Key Developmental and Preparatory Processes	Key actors from HEI and NHS spending time working up and working out the model: consensus around the aim of the development Early engagement with practice, especially with managers and mentors Explaining the model and its rationale to mentors, students and other staff: communication and feedback essential Use of road shows and/or workshops Practice based facilitator essential to identify hubs and spokes Developing and sharing clear operational processes and procedures

The constraints of placement experiences can be expanded by a paradigm shift in practice learning. Expanding the physicality of the learning environment in its self, goes some way to supporting this change.

Implications for Nurse Education

- Practice Learning must be seen as an academic endeavour that promotes deep, meaningful, person-centred learning rather than superficial, compartmentalised placement-centred learning.
- It is feasible with planning & support to implement Hub & Spoke Models across all fields of practice.

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The views and opinions expressed are those of the Authors.

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Paper 6: Undergraduate student nurses' perceptions of two practice learning models: A focus group study (2014)

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Undergraduate student nurses' perceptions of two practice learning models: A focus group study

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SUMMARY

Background: Phase 1 of this study examined student, mentor and clinical manager's perceptions of a 'Hub and Spoke' practice learning model in year 1 of an undergraduate nursing programme. Findings from Phase 1 suggested that the model had significant educational merit in orientating students to clinical learning and emphasising the primacy of the mentor relationship in developing and supporting students. Following the students through year 2 of their programme, wherein they experienced a 'rotational' practice learning model, which provided an opportunity to explore student perceptions of both models.

Aims: To explore undergraduate nurses' perceptions of two experienced practice learning models: hub and spoke model, and the classical rotational model. In a previous study the hub and spoke model appeared to develop 1st year students' sense of belongingness, continuity and quality of practice learning, there for it was important to understand what students reported about these issues when recounting their 2nd year experience in the clinical setting that was organised according to a classical rotational model.

Design: Qualitative approach utilising focus groups.

Participants: 10 under-graduate student nurses at the end of 2nd year.

Methods: Focus group interviews.

Results: Students responded in ways that indicate they believed the experiences of year 1 had raised their faith in their ability to cope with the practice learning and educational demands of nursing. They saw themselves as being better prepared for year 2 as a result of their exposure to hubs and spokes. The study has identified traits of resilience, continued belongingness and self-confidence in orientation to learning in clinical practice in hub and spoke experienced students.

Conclusions: The student nurses found the hub and spoke model valid in 1st year, whilst stating that for 2nd year the rotational model can be valid. This supports earlier findings that student nurses require a structured and supportive 1st year learning environment to enable development of resilience for subsequent years.

Introduction

Students in the UK spend 50% of their programme in the practice learning environment of the NHS and other health and social care settings. Roxburgh et al. (2008) observed that the clinical experience is planned and managed in a variety of different ways according to both programme specification and placement availability. The practice learning setting, with its experiential learning opportunities according to Ohrling and Hallberg (2000) provides students with the opportunity to practise 'genuine' nursing, through undertaking activities in a clinical setting. The importance for under-graduate student nurses to be provided with the opportunities to experience 'real-life' hands on nursing care are well documented (Edwards et al., 2004; Kilcullen, 2007; Levett-Jones et al., 2008; Holland et al., 2010). However, Papastavrou et al. (2010) suggested that practice learning experiences in some cases do not advance intellectual developments. In contrast, Chapman and Orb (2000) and Banks et al. (2011) identify that important elements of practice learning from the student perspective are the need to practice skills for their future role, learn the routines, and develop relationships with staff and patients.

The work of Wenger (1998) informs that we learn through doing. He presents four important premises concerning learning. "Firstly, we are social beings and this is a central aspect of learning. Secondly, knowledge is linked to competence in valued enterprises. Thirdly, in order to gain knowledge, participation in valued enterprises is required and finally, our ability to experience the world and engagement with it is ultimately what learning is to produce" (Wenger, 1998 p. 4). In order to make sense from and learn from these experiences students require a supportive atmosphere and environment. This includes the staff–student relationships and exposure to meaningful learning situations for the stage of student development (Lauder et al., 2008a; Roxburgh et al., 2012). In the UK it is a mandatory requirement that undergraduate students, undertaking an approved education programme, are assigned a mentor who works with them for the duration of each of their practice learning experiences (Nursing and

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Midwifery Council (NMC), 2007). A study carried out in Australia by Croxon and Maginnis (2009) focussing on the development of clinical competency drew attention to the opportunities for learning from more experienced staff. The seminal work of Lave and Wenger (1991) termed 'legitimate peripheral participation' in which less experienced members of the community are inducted into its practices by modelling, prompting, and by the gradual transfer of increased responsibility is not dissimilar to the current day mentoring model. However, Holland et al. (2010) drew awareness to how mentors can act as 'gatekeepers' to what the student is allowed to experience and that mentors often have to choose between patient care and supporting new staff.

The effectiveness of practice learning environments has been studied with Greenwood (1993) and Papastavrou et al. (2010) suggesting that they can fail to provide students with positive examples of behaviour and recognising that the environment can be stressful and induce feelings of fear and anxiety which in turn affects the students' responses to learning (Chesser-Smyth, 2005; Holland et al., 2010). Roxburgh et al. (2012) linked to these relationships and learning situations, reported the need for students to feel empowered to learn (Bradbury-Jones et al., 2007; Levett-Jones et al., 2009). Early work by Cope et al. (2000) demonstrated that most students experience a cognitive apprenticeship in practice learning where mentors use strategies of modelling, coaching, scaffolding, articulation, reflection and exploration, in order to help students to learn. For this form of learning to be successful though it is crucial that students have the opportunity to work closely and regularly with their mentor.

It is important therefore, that the most effective model for practice learning is identified in order for students to experience quality of practice learning.

In a previous paper, Roxburgh et al. (2012) reported the predominant model of organising practice learning experiences is based upon a 'rotational' model. The authors detail how this model can be described as a 'serious of placements that have no defined connection between them other than providing exposure to a range of patient groups and services' (p783). Limitations of this model include students experiencing anxiety about the complexities of the care environment which results in a lack confidence (Campbell, 2008 cited in Roxburgh et al., 2012). Within this model the choice of placement is out with the students' control and the practice learning experience is only tenuously linked to student curiosities (Roxburgh et al., 2012). Similarly the rotational model requires the student to frequently change practice learning environment and as a result experiences issues of anxiety around 'fitting-in' to the team and constantly re-orientating themselves to the ward routines.

In contrast Roxburgh et al. (2012) reported how a hub and spoke practice learning model has the potential to increase consistency of learning experiences for students through its ability for students to experience the continuum of the client/patient journey. Within the model, spoke placements can be responsive to what is happening there and then as well as providing future planning of learning opportunities the student wishes to experience linked to a particular patient/clients journey. Furthermore hubs supported the student to 'fit-in' more quickly and form meaningful relationships with the team which resulted in mentors having a greater incentive to invest in the student. Furthermore students took greater ownership of their learning.

Overview of the 'Hub and Spoke' and 'Rotational' Practice Learning Model

A Hub is a clinical area that is the main base for practice learning and student attainment of Nursing and Midwifery Council (NMC) competencies and essential skills (NMC, 2006). A hub can be conceptualised as geographic in location but also is defined by consistency of and continual access to a named mentor/team for a whole year. Spoke clinical learning environments were characterised as secondary learning opportunities derived from and related to Hubs through the provision of additional learning experiences not offered in the Hub clinical learning environment.

In contrast to the hub and spoke model whereby one mentor supported and facilitated student learning for the whole of the first year, the rotational model means that each student has a minimum of 3 mentors over three clinical learning environment periods, in the second year of study. This model is typical of undergraduate nursing programmes in the UK.

This study builds on previous work which developed and evaluated the hub and Spoke model of practice learning (Roxburgh et al., 2011, 2012). Phase 1 of this study examined student, mentor and clinical manager's perceptions of a 'Hub and Spoke' practice learning model in year 1 of an undergraduate nursing programme, with a particular focus on enhancing the 1st year student experience of *belongingness, continuity, continuous support across three geographically diverse locations.* Findings suggested that the model had real value in orientating students to practice learning and emphasised the importance of the mentor relationship in developing and supporting student nurses. In addition, mentors and students reported the model as allowing feelings of belongingness to the team/clinical area and in promoting ease of mentoring continuity, student skill development and facilitating more meaningful student assessment. Roxburgh et al. (2012) further reported how in a 'Hub and Spoke' model students developed strategies to control and manage their own learning. In tandem greater connections and continuity of learning alongside more choice and autonomy were reported.

Phase two was designed to evaluate the degree to which key findings of belongingness, continuity in mentorship, and continuity in practice were apparent during year 2 when the practice learning model was delivered via the traditional placement allocation (rotational model). The funders, Scottish Government Health Department, Recruitment and Retention Delivery Group agreed to commission a second phase of research of this cohort through year 2 of the programme, due to the links between practice experience and student retention and attrition. It is recognised internationally that these are multifactorial but a number of key areas have been highlighted, including the quality of support and learning experiences in practice settings (Cameron et al., 2011; Pryjmachuk et al., 2009; Mulholland et al., 2008).

By doing so would inform and strengthen the evidence base for future modelling of practice learning that focuses on the student, deepening and expanding their learning rather than placement availability.

Methods

Study Aim

The aim of this study was to explore undergraduate nurses' perceptions of two experienced practice learning models: hub and spoke model, and the classical rotational model. In a previous study the hub and spoke model appeared to develop 1st year students' sense of belongingness, continuity and quality of practice learning, there for it was important to understand what students reported about these issues when recounting their 2nd year experience in the clinical setting that was organised according to a classical rotational model.

Theoretical Framework

The theoretical framework for the study drew on the work of Tinto (1993). Tinto's "Model of Institutional Departure" (1993) is based on the idea of 'integration' both academically and socially. He suggests that integration is a predictor of whether a student will stay or leave a programme of study. Tinto's theory aligns with the core concepts of this study namely belongingness, continuity, and practice learning environment.

Research Design

A qualitative approach, utilising focus groups, was adopted with the specific aim of capturing positive and negative aspects of both practice learning models.

Ethical Considerations

Students from the Sept 2009 cohort who participated in Phase 1 were written to and provided with information and the rationale behind continuing to follow their practice learning journey through year 2. Participant consent was maintained in Phase 2 from the original declarations made by participants in Phase 1 of the project following approval by the Chair of University Research Ethics Committee. Participants were assured of anonymity and confidentiality both during and after their involvement in the study. Participation remained voluntary.

Participants

Focus group participation involved purposive sampling. Of the original student sample some took leave of absence, progressed to sick or maternity leave or had withdrawn from the programme in the transition period from year 1 to year 2. In essence the sample had been reduced from 44 students to 35 students for Phase 2. The use of purposive sampling was therefore felt to be appropriate as it offered as Patton (1990) terms 'information-rich' cases which one can learn a great deal from about an issue of central importance. Participants in the focus groups were self-selecting.

Table 1 provides demographic, programme and location details of the students who completed data in Phase 2. It is included as a record of the composition of the study population and to allow readers to draw comparisons with other studies.

Data Collection

The overall study utilised data collection encompassing administration of *The Clinical Learning Environment Inventory* (CLEI) (Chan, 2002) to measure the quality of the learning environment, administration of the *Short Support Questionnaire* developed by Lauder et al. (2008b) and intended to allow students to identify and quantify the sources and levels of support they derive whilst in clinical learning. In addition 3 Focus groups were conducted with student participants from each of the campuses at the end of October 2011.

For the purpose of this paper findings from the focus groups are reported.

Table 2 provides attendance rates at the Focus groups.

Key findings from Phase 1 and student perceptions of their year 2 experience were explored. The key findings from Phase 1 detailed in Table 3 informed the basis of the focus group schedule.

Data Analysis

All focus group interviews were recorded and transcribed. Immediately following each focus group the researcher made notes of what the perceived main issues were. Following full transcription of the data, analysis by the researcher involved an iterative process, whereby coding categories were continuously revised. Patterning in the data was systematically identified and interrogated using the constant comparative method (Morgan, 1993). These were then reviewed by another member of the research team for accuracy. Agreement was reached by consensus.

Findings

Eight sub-themes arose when exploring the 'rotational' placement model and how it relates to the four main themes in Phase 1 findings; *belongingness, support, continuity in mentorship,* and *continuity in practice*.

One sub-theme, 'preferred placement model', cannot be compared to Phase 1 findings as it was only possible for students to articulate this after year 2 experiences allowed for contrast of the two practice learning models (Table 4).

Belongingness

In Phase 1 students detailed how being in a hub placement for a year made this sense of belongingness possible. In Phase 2 exploration of whether a sense of belonging occurred for students in a rotational placement model was explored. Students were asked to compare and contrast how they felt in each Semester in relation to the domain of belongingness within the rotational placement model.

> There's certainly not that familiarity that kind of comfort and kind of safety net you were used to, even just the orientation of the environment you are in, the staffing so people know you and you know them. They knew your limitations and what your strengths. Whereas there is still very much when you go into a new placement, they are still assessing you and you are still assessing them, so to try and get to know them (Campus A- S002 – year 2).

In contrast to year 1, there is a marked difference and variation in achieving a sense of belonging within the rotational model when comparing the verbatim quote made earlier with those previously reported in Phase 1.

Table 1
Breakdown of participants by demographics, location and programme.

Gender	Marital status	Age range	Highest entry qualification	Location	Mental health programme	Adult programme	Learning disability programme	Total participants
Male (N = 3) 8.5%	Married (N = 10) 28.5%	18–52 years	Wider access (N = 12) 34.25%	Campus A	8 students	11 students	4 students	23 students
Female (N = 32) 91.5%	Single (N = 25) 71.5%	Median age 31 years	HNC/HND (N = 12) 34.25%					
			5 + Standard/GCSEs/intermediate level 2 (N = 7) 20%					
			2 + highers (N = 4) 11.5%					
				Campus B	1 student	6 students	1 student	8 students
				Campus C		4 students		4 students
					9 students	21 students	5 students	35 students

Table 2
Focus group attendance rates.

Location	Mental health programme numbers	Adult programme numbers	Learning disability programme numbers	Total participants/% response
Campus A	N = 0	N = 4	N = 0	4/23 = (17%)
Campus B	N = 0	N = 2	N = 0	2/8 = (25%)
Campus C		N = 4		4/4 = (100%)

Table 4
Focus group attendance rates.

Location	Mental health programme numbers	Adult programme numbers	Learning disability programme numbers	Total participants/% response
Campus A	N = 0	N = 4	N = 0	4/23 = (17%)
Campus B	N = 0	N = 2	N = 0	2/8 = (25%)
Campus C		N = 4		4/4 = (100%)

> Really enjoying being back, feel a sense of belonging and attachment – the way you get from a job you enjoy. What I have found interesting about the hub and spoke is the way it can give you a real sense of belonging on return to ward. (Campus B – H008 – year 1).

Provoking Anxiety

A concept identified which was not previously reported in Phase 1 was that of 'Anxiety'. Students spoke of their heightened anxiety prior to going to each new placement mostly associated with what their mentor would be like and would they 'fit in' to the environment.

> I think the first few weeks you are just trying to get settled in. Just generally how you going to get on with your mentor, are you going to get a good mentor, because you hear that some people do not get a good mentor, and that would definitely have a detrimental effect on your learning. Finding your way and where things are and you have got to think about that every single time you go to a new placement you have got some kind of level of anxiety (Campus A – S012– year 2).

Of note is how students on one campus expressed their anxiety that they had to re-invent themselves whilst on the Hub and Spoke model rather than the rotational model. This was linked to the 'spoking' they experienced as can be noted in these Phase 2 excerpts where students reflect on the total placement experience.

> Because they (mentors) saw that you were only there for a week or two you had to work so much harder on the Spoke placements, you were just constantly having to prove yourself. You just constantly worried (Campus C – W004 – year 2).

Students on this campus could also demonstrate how this re-inventing themselves whilst on 'spoke' had prepared and increased their sense of confidence and resilience whilst on the rotational model.

> For me it's the experience in the hospital was definitely enriched by kind of like the confidence that we gained in first year and the diversity that we got in first year, being thrown in at the deep end and having to kind of like keep yourself afloat going into second year you really did feel going into the hospital you knew a bit more thanhad you gone through the rotational route (Campus C – W001 – year 2).

Table 3
Themes and sub-themes.

Themes	Sub-themes
Belongingness	'Provoking anxiety' 'Going backwards' 'Starting over'
Support	'Self-confidence' 'Resilience'
Continuity of mentorship	'Mentor attributes'
Continuity in practice	'Making sense of placement flow'. 'Preferred model'

Going Backwards

The concept 'going backwards' reflects how students perceived that the knowledge and skills which they had developed in 1st year were not recognised nor advanced whilst on the rotational placement model.

> My mentor stretched me a lot in my first year. I came out of my first year doing the patient management which the third years are meant to be doing just now. From that prospective I think I came a long way in one year. Then it was like when I got into starting second year I was going back the way. I wasn't getting to use all the skills I had been taught from the hub experience (Campus A – S016 – year 2).

Phase 2 findings are in contrast to student reports whilst on the hub and spoke model of how mentors (or the team) worked with them to ensure they progressed and planned for this progression over the duration of that 1st year.

> It was good to be back in my hub again — I was encouraged to carry on from where I was last time I was on the ward (Campus C –W004 – year 1).

A further observation in relation to the concept of 'going backwards' is the issue of clinical environments who appear to hold back students due to the notion of 'seniority', taking a view that the nursing care being delivered is out with the level of skill and competence of a student nurse.

> My placement in semester six was in Intensive Care. I was constantly told "You are only year two you shouldn't be doing that yet". I felt we had been given so much responsibility. I just expected it maybe wrongly when I carry that through. I felt in my last placement that I was told so many times "No you shouldn't be doing that you are only year two. I found that difficult (Campus B – H002 – year 2).

A strong link with the concept of 'going backwards' was assigned by students to their mentor and the relationships built between the two parties.

Starting Over

Barriers to relationship building between mentor and student may have been uncovered by students when on multiple placement allocations be they short spoke placements within the hub and spoke model or the cumulative effect of restarting rotational placements in year 2. Students' responses to this concept were elicited by asking the question "What were the main differences you found in year 2 placements compared to first year clinical placements?"

> I found that going into separate placements the very first time quite daunting for me, because one I was going into a completely different area that I had never been before and didn't know what it was going to be like I like the consistency of one placement for a set amount of time and I went out to other smaller placements I found it better (Campus A – S002 – year 2).

These beliefs of continually restarting their learning relationships influenced students' feelings of belonging and their perceptions of the type of educational opportunity available to them.

> Each placement you had to reinvent yourself to show them who you were and what you were capable of each time. Every time you are going into see somebody different, it's a totally different area yet again, you are trying to build this relationship to say we can do this also and please accept us. You can build it up it just takes time, but you don't have all this time as in hub and spoke you had the full year and build up your relationship with the main ones and other people were more accepting of you. I thought that was a good thing (Campus B – H002 – year 2).

Support

A main theme to emerge from the initial study of the hub and spoke model was the development of confidence in the students.

Self-confidence

Students responded in ways that indicate they believed the experiences of year 1 had raised their faith in their ability to cope with the practice learning and educational demands of nursing. They saw themselves as being better prepared for year 2 as a result of their exposure to hubs and spokes.

> Personally I find (hub and spoke) has given me more confidence, when you go into placements now you've got that bit extra knowledge where you have been in an area that students don't normally go, you've got that extra confidence to go "well I have seen this and I have done that, I can do this" (Campus B – H002 – year 2).

Students further disclosed these experiences made them different to peers in year 2 in how they responded to the pressures of practice learning demands and the opportunities they accessed in 'rotational' placement periods.

> We were given care management and delegation duties for that first term in our second year, which I don't know if we would have been able to do if we had not been on Hub and Spoke, it gave you confidence in your own abilities because you got to develop your capabilities that little bit more each time (Campus B – H008 – year 2).

Developing Resilience

Linked to self-confidence is the idea that students were sustained in times of stress and impetus by their own reserves of resilience. Knowing what was expected in year 1 provided a sense of direction for students in learning environments they considered less than optimal.

> Year 1 gave me the grounding to just be able to, go off on my own and find things to do, there was loads of things to do, but the attitude of my mentor was, "oh don't mind about that, the carers will do that" Well no I am not sitting in a nursing office all day, so I would just go and attach myself to whoever was doing anything. I don't know if I would have had that confidence had I not been on the Hub and Spoke (Campus C –W002 – year 2).

Furthermore, students identified how resilience also maintained them on the programme when they had a negative placement experience.

> Hub and spoke boosts your self-esteem, builds your confidence and encourages you to actually keep going and to keep learning. Going from the end of first year into semester four, I didn't have a good placement, and I thought do I want to be here. You can have one bad placement that just makes you think, if I had that in my first year how would that have influenced where I am now, I don't know (Campus A – S009 – year 2).

Continuity in Mentorship

Mentor Attributes

Students identified key elements in regard to mentor's attitudes to nursing and teaching students that impacted upon the student's perceptions of being mentored. Elements such as building mutual respect, mentors demonstrating they see teaching as a legitimate part of the registered nurse role and providing challenging learning opportunities form how students perceive mentor ability.

> On the Hub and Spoke you build up that trust and respect with student and mentor. Definitely don't get that on the rotational placement model. I asked if I could go on some training because there was new tracheotomy tubing. I was told that students didn't need to know that (Campus A – S002 – year 2).

However, when the clinical environment is right students are enthused and learning is promoted.

> My semester six placement was an absolute dream, … and there were mentor problems, but I never came across anywhere that is so geared towards student learning, they have online learning packs, resource packs in the library on pain on everything you will come across when you are there (Campus B – H008 – year 2).

In Phase 1, students reported that continual exposure to the same mentor led them to believe more in the accuracy and validity of placement achievements as feedback was consistent and constant. Experiences from the rotational model, where mentors were responsible for confirming learning in a shorter timeframe, was more variably reported.

> In first year I was able to go to her (mentor) and say look can we have a review at some point, go through where I am what I need to do, it was like yes no problem that's fine. In second year I felt it was more small bits here there I felt it was a bit more rushed. It's just about getting things signed of in the book so you can move on (Campus A – S012 – year 2).

Continuity in Practice

Making Sense of Placement Flow

Regardless of the intention to support students, either by team mentoring or by allocation to an individual named mentor, the security that students gained following a notional care pathway in year 1 evaporated for some students in year 2.

There is an emerging claim by students that equates learning with knowing what comes next in terms of the care pathway and in understanding the skills and knowledge that progress patient care.

> I think because we had done Hub and Spoke and I know for me personally I was always looking out with the setting I was going to do, I was like what's connected with that, what could I go to (Campus C – W003 – year 2).

Preferred Model

Students were asked to identify their preferred approach to a practice learning model. They were also asked to consider the strengths and weaknesses of both models. The students' preferred option was to have a mixed model; years 1 and 3 'Hub and Spoke' as this would afford all the benefits previously reported in Phase 1 and students expressed a liking for year 2 to be more akin with the rotational model.

> I think what a great idea it would be for year one, you do something in the community with a little bit of acute and then year three you do acute and you get your big busy wards and you get signed off, that

would be great, and year two could be a little bit whatever, because you will have time on your hands and you need the experience (Campus A – S009 – year 2).

Discussion

This study explored student nurses' experiences of belongingness, continuity in mentorship, and continuity in clinical placement during year 2 of their programme when placements were devised around a 'rotational' model. Findings reported here identify belongingness, support, continuity in mentorship, and continuity in practice learning as remaining central themes to the student experience. The study aimed to explore key student experiences from two diverse and different practice learning models, rather than a limited comparison of both models. The complexity of exploring the students experience is not reducible to simple comparison; rather the findings will contribute to the wider debate regarding practice learning in nursing.

Belongingness and the 'Rotational' versus 'Hub and Spoke' Practice Learning Model

Levett-Jones and Lathleans (2007) work looking at belongingness is both informative and useful. Their description of developing a sense of belonging is linked to the provision of a secure environment in which students can be valued within a group, and that an individual's professional values and behaviours complement the group and facilitate group cohesion.

The 'rotational' learning model is diverse and complex in nature (Campbell, 2008). Students generally reported more challenges when attempting to integrate and feel accepted within and by the team when on the short practice learning experiences dictated by the 'rotational model'. This is in stark contrast to the strong sense of belonging afforded by the elongated 'hub and spoke' model (Roxburgh et al., 2011, 2012). Developing a sense of team membership can only be achieved over time and many students felt this was limited on the 'rotational' model. A key aspect upon which student nurses are assessed is their professional behaviours and relationship building. However what this study highlights is the issue of how long does it actually take to establish a professional relationship between mentor and student in order for a valid and informed assessment to take place?

This study has to a degree found sympathetic results with Levett-Jones and Lathleans (2007) work in the hub and spoke cohort but has also extended the concept of where students align their belongingness. Students identified and aligned themselves using three main aspects of belonging; geographic locations, role models who mentor them personally and professionally and a larger clinical pathway ideal that allows them to match their work to the greater good of delivering holistic care.

When that alignment is lost students develop coping skills to try to realign their perceptions of belongingness to one of those aspects of belongingness. These three aspects of belonging might usefully be further studied to fully understand how students mediate their belongingness and more importantly how that belongingness promotes quality practice learning. Interestingly students expressed feelings of being able to cope with the complexities and diversity of the 'rotational' experiences, which suggests that their hub and Spoke experience had aided them to develop resilience for future placement challenges.

Mentoring and Clinical Learning

Students in general were stimulated and motivated throughout their hub experience promoting familiarity, belongingness and continuity (Roxburgh et al., 2011). This was ascribed to mentors (or the team) working with them to ensure they progressed and planned for this progression over the duration of that 1st year. Furthermore mentors reported students as being better able to form connections between education and practice.

Whilst Hub and Spoke enabled mentors to get to know the student capabilities and aid advancement of these this was not always the case on the 'rotational' model. The student reports of not being allowed to deliver certain aspects of care to patients or some management tasks was ascribed to their perceived lack of seniority to work within particular care environments. However this may also be an artefact of what Holland et al. (2010) termed 'gatekeeping' what students can and cannot experience. Roxburgh et al. (2012) previously noted that 'labelling' of practice learning environments constrained the learning opportunities available to students. This is further supported by the concept of 'going backwards' whereby a majority of students detailed how in some clinical areas mentors would not accept the levels of attainment they had achieved in year 1 as being valid, wanting students to demonstrate further their existing level of attainment.

This finding is not dissimilar to what Wenger (1998) terms 'an inbound trajectory' whereby learners need to legitimately feel part of the community of practice. However as the theme 'going backwards' demonstrates, short placements can be problematic and may not be long enough for the students to participate in meaningful ways. Whereas having a hub placement for a full year demonstrated that students did indeed become part of the community of practice.

A majority of students in Phase 2 emphasised that the focus of learning in a 'rotational' model was primarily on completion of the practice assessment documentation and in ensuring as many learning outcomes are 'signed' off. The rationale offered for such a focus has been illuminated by students where they have perceived some clinical areas as being limited in learning opportunities i.e. ITU. This is in contrast to students and mentors reporting previously how depth and breadth of learning along with innovation and creativity towards learning was achieved (Roxburgh et al., 2012).

Students have already identified how mentors can influence the 'fitting in' aspects of belongingness, and how mentors personal and professional characteristics and traits impact on student's perceptions of how well they are continuously mentored.

After analysing the diverse data collated in the fieldwork it is clear that mentors are yet again evident as a crucial link in achieving a sense of belongingness and instilling confidence in their student's abilities. Such is the pivotal nature of mentor influence on practice learning the issue of should all registered nurses be required to act as mentor is a question worthy of further exploration.

The theoretical framework that informed the study was reliant upon Tinto's "Model of Institutional Departure" (1993). The central concept within this paradigm is based on the idea of academic and social integration as a predictor of student retention. While Phase 1 saw a modest retention effect when compared to non 'hub and spoke' peers (Roxburgh et al., 2011) there is insufficient findings to claim a universal effect will be seen in other populations. What has emerged following students through year 2 is a strong sense of student agency, developing robustness and resilience within individual students, and throughout the student group who began as hub and spoke learners, which points towards an emerging integration story in this approach to modelling practice learning.

Conclusions

The student nurses found the hub and spoke model valid in 1st year, whilst stating that for 2nd year the rotational model can be valid. This supports earlier findings that student nurses require a structured and supportive 1st year learning environment to enable development of resilience for subsequent years.

When taken in isolation Phase 2 of this study adds to our knowledge of how students perceive clinical learning models impact on their learning capacity. As a two phase study the researcher has identified traits of resilience, continued belongingness and self-confidence in orientation

to practice learning in hub and spoke experienced students in comparison to their peers who undertook the rotational learning experiences. These findings contribute to the rather limited range of evidence on hub and spoke as a model of practice learning and its impact on supporting students practice learning experience.

Practice learning is a fundamental aspect of undergraduate nurse education and understanding its nature is a crucial step towards improving its effectiveness.

Limitations

The varied participation rates and generally small numbers mean that some caution is required in relation to the representativeness of the findings and any associated generalisations.

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Conflict of interest

No conflict of interest.

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Chapter 5 Reflections of the Research Methodology and Methods

5.1 Introduction

Chapter 5 explains the research methodology adopted in the papers presented for this thesis, and offers my critical reflections on these methodologies. I outline the philosophy that underpins the approach taken with the research studies, discussing the interpretive stance that was taken to research and the consequent choice of qualitative approaches. The chapter also discusses the strengths and limitations of the methods employed in each of my papers along with the means used to analyse the data, and the ethical considerations that an interpretive researcher must consider. In retrospect, given where my theoretical orientation has moved (as explained in chapter 2), I now look rather more critically on the premises of these studies, their categories of definition, multiple causes and uncertainties at play. In my reflections on the research approach, I explain some of these issues.

5.2 Theoretical framework and general methodology

Jonker and Pennink (2010) explain that a research paradigm is a set of fundamental assumptions and beliefs as to how the world is perceived which then acts as a thinking framework that guides the behaviour of the researcher. Ontology and epistemology are the two main philosophical dimensions to distinguishing research paradigms (Laughlin 1995, Kalof et al. 2008, Saunders et al. 2009). These relate to the nature of knowledge and the development of that knowledge, respectively.

A further distinction that is frequently made regarding research philosophies is between positivism and interpretivism (Bryman and Bell 2007, Hughes and Sharrock 1997, Travers 2001). Positivism, according to Wong and Ellis (2002), focuses on testable propositions. In other words, knowledge is only valid if it is derived from scientific methods, that is, mathematics and the sciences. In contrast, interpretivism focuses on sense-making and meaning (Schwandt 2000). By this I mean that the social world occurs according to how it is experienced and interpreted by people. Understanding of the world is reached by taking account of multiple realities, differing perspectives and views (Schwandt 2000).

The aim of interpretivism, therefore, is to understand the subjective experiences of those being studied, how they think and feel and how they act/re-act in their normal contexts. As a result of this, the logic and methods of certain natural sciences are not applicable to interpretive studies of societies. Unlike positive approaches in the natural world, where a particular event is understood to produce an identifiable result, interpretive approaches acknowledge that social actors do not react to stimuli in uniform, predictable or measurable ways. Instead, they actively interpret the situations in which they find themselves and act on the basis of these interpretations.

Hence, interpretive researchers endeavour to understand phenomena through accessing the meanings that participants assign to them. In direct contrast to positivist studies, interpretive researchers reject the possibility of an 'objective' or 'factual' account of events and situations, pursuing instead a shared (between the researcher and the interviewee) understanding of phenomena (Garcia and Quek, 1997). Generalisations from the setting, usually from a small number of case studies to a population, are not sought; rather, the intent is to understand the deeper structure of a phenomenon, which can then be used to inform other settings.

Mertens (1998) describes qualitative research as a naturalistic interpretive science which is often multi-method in focus and which provide insights into cultural aspects, organizational practices and human interactions. Interpretivism, by its nature, promotes the value of qualitative data in pursuit of knowledge (Kaplan and Maxwell, 1994). In essence, this research paradigm is concerned with the uniqueness of a particular situation, contributing to the underlying pursuit of contextual depth (Myers, 1997).

5.3 Preferred methodological approach

As an interpretive researcher, my natural leaning is towards the use of qualitative methods such as focus groups, individual interviews, and reflective diaries. In all of my papers included in this thesis, these approaches were used to varying degrees across the studies. Table 5 below provides an overview of the papers and methods.

Table 5: Research methods employed in each paper

Title of paper	*Research methods employed*
Paper 1: *A review of curriculum evaluation in United Kingdom nursing education (2008).*	• Literature review (utilising systematic methods)
Paper 2: *Fitness for Practice in Nursing and Midwifery education in Scotland, United Kingdom (2010).*	• Semi-structured interviews • Focus groups
Paper 3: *An integrative literature review of student retention in programmes of nursing and midwifery education: why do students stay? (2011).*	• Literature review (Integrative)
Paper 4: *Findings from the early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start NHS™, (2010)*.	• Job content questionnaire (Karasek et al. 1988) • General Perceived Self-Efficacy Scale (Schwarzer 1995) • Short Nursing Competency Questionnaire (Watson et al. 2002)
Paper 5: *Evaluating Hub and Spoke Models of Practice Learning in Scotland, UK: A Multiple Case Study Approach (2012).*	• Thematic content analysis (Reflective diaries) • Questionnaires • Focus groups
Paper 6: *Undergraduate student nurses perceptions of two practice learning models: a focus group study (2014).*	• Focus Groups

The aim of using multiple methods in these studies was to aid triangulation and to strengthen the trustworthiness of the data generated. However, it should be noted that some of my work presented in this thesis has involved mixed methods, such as using a questionnaire alongside interviews. With the exception of paper 4, however, the questionnaire was not employed for a statistical analysis but rather as a descriptive survey, and it was not the primary source of data but a supplementary source. Utilising qualitative approaches in my research provided the opportunity to explore the views and experiences of student nurses and newly qualified nurses. This required personal interaction to gain useful rich data that could be interpreted.

Exploring the insider's view is known as the Emic view and is characteristic of qualitative research (Holloway, 1997). The opposing view is the Etic view, which is more often associated with quantitative research (LoBiondo-Wood and Haber, 1998) and represents the outsiders' point of view or the researcher's perspective (Holloway and Wheeler, 2002). The papers presented in this thesis were studies of specific groups of 'insiders' in the process of practice placements, that is, student nurses, newly qualified nurses, and mentors, who had something in common.

McEvoy (2001) explored the issues of interviewing colleagues in familiar fields, and suggested that there are four limitations of the 'insiders' perspective. Firstly, there is the 'taken for granted perspective' where it is more difficult for the researcher, who is familiar with the social world, to question areas of that world that seem self-evident. Secondly, there is the view that the 'insiders' perspective tends to be more limited, as the insider lacks the distance that is required to maintain a balanced objective perspective of the social world of which they are part. Thirdly, insiders who are subject to the constraints of group membership often avoid asking questions about well-established social mores, and fourthly, insiders may be reluctant to talk about sensitive issues to someone who is a member of their social group. An outsider, on the other hand, is not subject to group restraints (Bonner and Tolhurst 2004), and has greater freedom to ask 'dumb questions'.

A number of authors identified further disadvantages of being an 'insider'. These include not being seen as a researcher by the participants (Hamersley and Atkinson 1995), potential to be biased towards the interpretation/findings (Bowers 1988), reliance on participants with whom the researcher feels comfortable (Miles and Huberman 1994), and focusing on dramatic events rather than the routine (Gerrish 1997). However, Bonner and Tolhurst (2004) suggest that it is not unusual for the researcher to be part of the social group they intend studying. Morse and Field (1996) challenge that cultural understanding cannot be achieved through one or two interviews. Their position is that time in any culture is required to gain a holistic perspective.

However, in the case of these studies, I am, in effect, an 'insider' as a result of my professional role as a nurse, a mentor, and a nurse educator, and am very familiar with students' experience in nursing. Benefits of being an 'insider' have been identified. These include being familiar with the culture being studied (Reed and Proctor 1995), gaining access more easily to potential participants (Shenton and Hayter 2004), establishing a rapport (Gerrish 1997, Platzer and James 1997), and dealing with ethical concerns

(Platzer and James 1997). Similarly, Wetherall et al. (2001) highlight that researchers both influence and are influenced by the process of engaging in research.

Lamb and Huttlinger (1989) suggest that reflexivity recognises this reciprocal relationship and seeks to make it explicit. The argument is that a basic feature of social research is its reflexivity, 'the way in which the researcher acts on the world and the world acts on the researcher, in a loop' (Wetherall et al. 2001 p17). Koch and Harrington (1998) talk of reflexivity as the 'critical gaze turned towards the self' (p888), thus examining the personal position, identity, and self of the researcher as an on-going process. The values, assumptions, prejudice and influence of the researcher must therefore be acknowledged and taken into account and even, according to Hammersley and Atkinson (1995), utilised. Through utilising a reflexive approach in all my studies the aim was to make the whole process transparent and open, thus providing a clear audit trail, considered by Koch and Harrington (1998) to be an important method of achieving trustworthiness in qualitative research.

The following sections provide an overview of the various methods employed in the published studies: focus groups, interviews, reflective diaries, questionnaires, explaining my rationale for choosing these as well as their strengths and limitations. Then I explain broader issues of methodology in terms of my choices for the different studies: sampling of participants, approaches to data analysis, ensuring trustworthiness, and ethical considerations.

5.4 Purpose and function of focus groups

The main purpose of focus group research is to draw upon participants' attitudes, beliefs, feelings, experiences and reactions in a way which would not be feasible using other methods such as observation or one-to-one interviews (Jamieson and Williams 2003). Compared to individual interviews, which aim to obtain individuals' views, attitudes, beliefs and feelings, the focus group elicits a multiplicity of views within a group context. Hence the key characteristics which distinguish focus groups are the insights and data produced by the interaction between participants (Kitzinger 1995). Interaction also enables participants to ask questions of each other, as well as evaluate and reconsider their own understandings of their specific experiences (Jamieson and Williams 2003). The philosophical underpinning in the use of this methodology is based on the premise that attitudes and perceptions are not developed in isolation but through interaction with other people (Jamieson and Williams 2003). These attitudes, feelings and beliefs, according to

Sim (1998), may be partially independent of a group or its social setting, but are more likely to be revealed via the social gathering and the interaction which being in a focus group entails.

5.4.1 Potential and limitations of using focus groups

As with all research methodologies there are advantages and disadvantages to the use of focus groups. Barbour (1999) claims that a key strength of focus groups is their ability to elicit information in a way which allows researchers to find out why an issue is salient, as well as what is salient about it. As a result, Webb and Kevern (2001) suggest that the gap between what people say and what they do can be better understood. Conversely, to achieve such insight requires considerable skill in facilitation (Robinson 1999), which Mansell et al. (2004) suggest includes acquiring the theoretical knowledge pertaining to the role, practicing the use of open questions, and being astute at identifying group dynamics. Furthermore, the potential for 'group think' to occur when individuals within a group conform to the opinion of the majority (Crawford and Acorn 1997) is a consideration for the facilitator as this poses limitations in data collection from the focus groups. The use of focus groups during the preliminary stages of a research project is supported by Jamieson and Williams (2003), Robson (2002), and Barbour (1999) as they are helpful in exploring and developing research questions and interview guides and in refining research questions.

Numerous authors have suggested that focus groups are an economical way of tapping into the views of a number of people, simply because participants are interviewed in groups rather than one-to-one (Barbour and Kitzinger 2001, Holloway and Wheeler 2002, Kruegar 1994, Robson 2002). A distinct challenge of focus groups is that they can be difficult to organise (Kruegar 1994): it is not always guaranteed that participants will turn up (Robson 2002) and the time required to transcribe tape recordings can be costly (Barbour and Kitzinger 2001). Robson (2002) cautions that focus groups may be limited in terms of their ability to generalise findings to a whole population, mainly because of the small numbers of participants and the likelihood that the participants will not be a representative sample.

For the participants, focus groups can provide a 'safe' forum for the expression of views, particularly for people who are reluctant to be interviewed on their own (Sim 1998). However, conflicts may arise between personalities (Creswell 1998). Robinson (1999) highlights that confidentiality can be a problem between participants, especially if they are

known to each other. A further limitation of the focus group is that it is, in some ways, a one-sided relationship, with the researcher gaining important insights into the subject being explored while individual respondents simply share their experiences (Mansell et al. 2004). I would suggest, though, this is not a phenomenon peculiar to focus groups; the same could be said of most research methods.

5.5 Purpose and function of research interviews

Communication via conversation is a fundamental part of everyday life. We all interact with each other through questions and answers (Parahoo 1997). In fact, Atkinson and Silverman (1997) suggest we live in an interview society where this has become the favoured form of research. Research interviews are clearly different to conversation because they usually have a clear purpose, a set agenda and are carried out at a prescribed place for a set length of time (Parahoo 1997). Despite the clear agenda, qualitative interviews involve personal sharing (Morse and Field 1996). Hammersley and Atkinson (1995) describe interviews as 'solicited insider accounts, which provide the means of treating participants' expert knowledge of the phenomenon under study as a resource' (p129).

Holloway and Wheeler (2002) observe that many novice nurse researchers rely on interviews because they wish to gain these 'insider' views of a phenomenon. Selection of the interview is supported by Robson (2002) who accepts that interviews lend themselves to a study with a combination of methods. Developing interviews that generate personal data requires understanding of the technique as a conversation about a subject of shared interest (Kvale 1996). The participant can provide the insider's view of the subject while the researcher is interested in exploring it, with a view to explaining the themes that exist within it. A major difference between focus groups and one-to-one interviews, however, is the involvement of the participants in responding to and challenging each other's statements and, therefore, in sharing the researcher's burden (Barbour 1999).

5.5.1 Which style?

Interview styles range from structured to unstructured (Robson 2002). The structured interview is basically a questionnaire carried out in the form of an interview. This type of interview would not have allowed the depth and range of rich data required for any of the studies in this thesis.

Semi-structured interviews involve a guide of interview questions that the participants are asked, not necessarily in the same order (Holloway and Wheeler, 2002). Here the interviewer knows what topics must be covered in the interview and has set questions to ensure this. Morse and Field (1996) point to the usefulness of this method in generating qualitative data. They state that it allows the participants the freedom to express thoughts and feelings, while allowing the interviewer to cover all areas required. It further ensures that important topics are not forgotten in an intense interview situation, and helps to maintain focus.

Morse and Field (1996) observe that while the unstructured interview is often the tool chosen by the inexperienced interviewer, experienced interviewers can obtain very high quality data. The role of the interviewer is to listen to the story of the participant and allow the participant to develop his or her own story (Holloway and Wheeler 2002, Morse and Field 1996). The unstructured interview can be aided by the use of active listening techniques and the use of probing questions (Parahoo, 1997). Morse and Field (1996) point out that while it is useful to make use of active listening, care must be taken if a therapeutic relationship is developing, as the purpose of the interview is not to offer intervention or counselling.

5.5.2 Style selected

In all studies involving interviewing reported in this thesis, a semi-structured interview style was selected. Holloway and Wheeler (2002) advise that most interviews involve an agenda of some description that is used to guide the interview. As there were a number of issues to cover, a semi-structured interview schedule was taken to each interview. Holloway and Wheeler (2002) describe this as an 'aide-memoire'. Each interview began with an open question; 'what motivated you to take part in this research project?' This acted as a common starting point and acted as a way of getting the participant talking and thus 'breaking the ice' (Gillham 2000). Time was allowed for the narrative to unfold and, when necessary, the narrative was prompted with questions. All topic areas were covered while allowing the interview to flow naturally.

5.6 Purpose and function of reflective diaries

Prior (2004) states that defining what a document is, for the purposes of social research, is not simple. Any number of items could be regarded as documents, such as patient records, policy briefs, newspaper articles, or the reflective participant diaries that I used in

my studies. Despite the importance of documents for educationalists and practitioners, and for the organisation of contemporary societies more generally, social research methods tend to focus on the analysis of speech and action (Prior 2004). Documents are sometimes seen as inappropriate or secondary sources, unable to indicate sufficient insight into systems of social meaning and practice (Miller and Alvarado 2005). A number of authors identify that documents are an underutilised resource in qualitative social research tending to be used as a supplementary source of data (Hodder 2003, Prior 2004, Silverman 2001). Documents' reputation for being time-consuming, complex and challenging may account for their relative under-use (Hallett 1998). Rafferty (1998) however, argues that documents have much to offer, not only as a means of narrating the development of nursing, social and health issues, but also to explain the origins of many contemporary attitudes towards them (Rafferty 1998).

Participant diaries, Robson (2002) explains, are a form of self- administered questionnaire. As such there are a number of considerations that the researcher must take into account when intending to use diaries as a data collection tool. Firstly, the diary places a burden on the participant as participants tend to be required to complete these on a regular basis. In the case of my use of diaries for the Hub and Spoke project, students were asked to complete these on a twice-weekly basis over a period of a year. Noticeable was the drop of rate in completing the diaries and the quality of the written information over this period. Robson (2002) further notes that participants completing diaries must be clear about what they have to do, why they are doing it and when to do it.

For the Hub and Spoke project participants, I opted to provide semi-structured questions to guide the completion of the diary. These semi-structured questions acted as a prompt for the students to think about the activities they were involved in whilst undertaking practice learning. Robson (2002) also suggests that in studies carried out over time that the researcher should check that diaries are being completed and not assume that they are. This was a suggestion that I followed, as I collected the diaries at the end of each semester and commenced analysis of those semesters' data. Robson (2002) also advocates that diaries are a good means by which to generate questions for interviews/focus groups. The diaries in my study, once analysed, led to the creation of questions for the focus groups in the Hub and Spoke study. Patton (2002) details their important incorporation into qualitative research methods as providing a means of data triangulation, to increase the comprehensiveness and trustworthiness of any single study.

5.7 Purpose and function of questionnaires

The incorporation of questionnaires into a research study is advocated as a cost-effective means of gathering information (Denscombe 2003). Researchers can survey large samples of the population across wide geographic locations less expensively than conducting face-to-face interviews. This is primarily as a result of the researcher not having to travel to reach participants. The most common means of questionnaire administration are by a mail drop or by using an on-line survey package. Paper 3 submitted in this thesis utilised an on-line survey. Denscombe (2003) further states that questionnaires are less intrusive than other survey methods such as focus groups or interviews. People participating in surveys can complete them whenever they want. They're also more likely to respond honestly to questions if they know their answers are anonymous (Bowling 1997). Questionnaire formats are familiar to most people. Nearly everyone has had some experience of completing questionnaires (Jack and Clark 1998). The important point to note here is that the researcher is not usually present when the questionnaire is being filled in, hence there are no verbal or visual clues from an interviewer that may influence the person surveyed. Questionnaires are easy to analyse. Online questionnaires are easiest to analyse because they are directly imported into a database and statistically analysed. There are, however, disadvantages to the use of questionnaires in research studies. It is recognised that surveys tend to have a poor response rate (Gasquet et al. 2001), responses to questions are often incomplete or missed completely (Bowling 2005), and the researcher is not in a position to check the truth of the answers supplied (Denscombe 2003).

In paper 4, the cross-sectional survey involved administration of a paper-based questionnaire via the link nurse for Flying Start NHS^{TM} to newly qualified nurse participants. A stamped addressed envelope was included. Over a four-week period, two e-mail reminders were sent to participants again via the link nurse on behalf of the project team. Newly qualified nurse participants (n=97) comprised a convenience sample.

Overall, the methods used in the studies are different to those I hope to use in the future going forward. The post-positivist assumptions that informed these methods were useful but only to a point. I have begun to realise how these are somewhat too linear, measurement-oriented and tidy to address the unpredictable complexities and competing demands of learning in practice.

They also tend to smooth out messy variances in the search for themes and models. While such approaches have their place in supporting professional learning and practice, they do not help to address the emerging dynamics of learning, the nested systems, the effects of perturbations and how these become amplified or not, and the self-organising patterns of practice that are ubiquitous in nursing work. In my early explorations of complexity theory, I can now see that there are a range of methodologies that could be used to examine these dynamics. However, I discovered these after the studies were complete.

5.8 A critical review of the methods employed in each paper

5.8.1 Papers one and three

Various methods of literature reviews may be used depending on the primary research question and the overall aims and objectives of the research (Jones 2010).
The rationale for conducting and publishing the two literature reviews is that these are a fundamental activity which usually precede any major new research study in order to determine the existing evidence base (paper one). Furthermore, literature reviews can also be done as independent scholarly works (paper 3). Similarly, it can help inspire new research innovations and ideas while creating greater understanding about a topic (study two and paper 3).

The 'gold standard' of literature reviews is that of a systematic literature review (Centre for Reviews and Dissemination (CRD) 2009). Systematic reviews are located within the post-positivism paradigm, in that they are derived from scientific methods, in particular randomised control trials (RCT). This paradigm is based on a number of principles, including: a belief in an objective reality, knowledge of which is only gained from data that can be directly experienced and verified between independent observers (Wong and Ellis 2002). Phenomena are subject to natural laws that humans discover in a logical manner through empirical testing, using inductive and deductive hypotheses derived from a body of scientific theory (Robson 2002). Its methods rely heavily on quantitative measures, with relationships among variables commonly shown by mathematical means (Melnyk and Fineout-Overholt 2005). Although a systematic review is the most rigorous method for minimising bias, it's also likely to provide more information than necessary to answer a simple question. (Melnyk and Fineout-Overholt 2005). Systematic reviews can include empirical evidence from quantitative and qualitative studies as well as theoretical or 'grey' policy literature. They incorporate the findings from a variety of research designs. However, as they involve multiple methodological perspectives, they are more complex to

undertake. The key differences between a systematic review and a literature review requires pre-determined inclusion criteria and the ability for replication (CRD 2009)

In recognising the strengths of a systematic review, paper one used systematic review methods in that a protocol was developed restricting the publication dates to 1997-2006 and having explicit inclusion and exclusion criteria. Search terms included the use of Boolean operators to link key words. Furthermore, the papers retrieved were read and filtered by three of the authors. In an ideal world a full systematic review would have been a preferred option. The rationale for not conducting a full systematic review was a pragmatic decision primarily based on the time it takes to conduct a full systematic review. As the study paper one reports on was funded by a Government organisation there were extremely tight timescales to report back results.

Paper three took an integrative review approach. Integrative reviews, in contrast to the post-positivism paradigm of systematic reviews are located within the interpretative paradigm. The focus in the interpretative paradigm is on the relationship between socially-engendered concept formation and language (Robson 2002). Containing such qualitative methodological approaches as phenomenology, ethnography, and hermeneutics, it is characterized by a belief in a socially constructed, subjectively-based reality, one that is influenced by culture and history (Angen 2000). The rationale for this approach was that it suited the area of inquiry best, and allowed the researchers to draw conclusions about the current state of knowledge among diverse studies (Russell 2005). The qualitative nature of the data required to answer the research question necessitated an integrative review approach to incorporate essential qualitative data.

More pragmatically, two members of this study team had previous experience of integrative review methods. By utilising an integrative review approach this afforded a variety of perspectives of diverse methodologies without an overemphasis on empirical based research (Emeis 2012). It also affords the ability to answer a targeted question using a systematic search strategy and rigorous appraisal methods. Whittemore and Knafl's (2005) integrative review process as detailed on page 105 of this thesis was adopted to enhance rigour.

With hindsight a systematic review may have provided more insightful results as utilising an integrative approach proved to have a number of limitations as detailed on page 110 in this thesis. However, due to the complexity of systematic reviews and the challenges associated with conducting a systematic review namely, resources, expertise and rigour I

would have to give careful consideration about incorporating this method into a funded study with time limitations.

5.8.2 Papers two and six

Both these papers are located within the interpretive paradigm, with the associated studies utilising focus groups and interviews as the best method of addressing the research questions.

A strength of paper two is the sample size and the range of participants who took part in this phase of study one (further details can be found on page 94 in this thesis). In order to achieve such a large sample and range of participants, two of the researchers MR and KH spent six months data collecting. In advance of data collection I spent approximately 4 months making contacts with each of the HEI's and securing a named person in each to act as a link for the project team. This I believe paid dividends. For this phase of the study fliers were produced as a means of communication and dissemination with students, mentors, NHS managers and academic staff. In addition I spent a significant amount of time meeting with academic staff in all the HEI's to discuss the project and the requirements to have a good sample to truly inform the study. Given the strength of the sample size and the richness of the data this was the best method for this phase of the study. However, caution and consideration need to be advised as this was extremely resource intensive, in that, two researchers were required to attend each focus group. Focus groups were run over two days at HEI and in NHS premises across Scotland over a six month period. In addition travel and accommodation costs were expensive. With the volume of data collected transcription costs were expensive and the time for the research team to analysis and agree themes was lengthy and involved three members of the team spending 3 days to agree the final overvall findings.

In contrast, paper six had an extremely small sample size. Of the original phase one sample some students had taken leave of absence, progressed to sick or maternity leave or had withdrawn from the programme in the transition period from Common Foundation to Branch (Field Specific) Programme. In essence the sample had been reduced from 44 students to 35 students for phase two.

It's difficult to determine why the sample size for these focus groups was as low, as the response rate by the students overall in phase two of the hub and spoke study was

relatively good. For example, completion of the CLEI tool at the end of semester's four to six was comparative with their completion rates in phase one.
I followed the same lessons I had learned from study one in that the importance of communication with the students and arranging their focus groups when they were on campus at a mutually convenient time for them to minimise any additional burden.

I can only surmise that the students were experiencing evaluation fatigue. My rationale for this assumption is based upon my insider knowledge of the number of evaluations the students are requested to complete; end of semester evaluations, end of year evaluations, the national student survey, and end of placement evaluations. I can offer no other significant reason.
With hindsight I could have conducted telephone interviews with the students who did not attend the focus groups, however, again time constraints was an issue with this phase of the study due to the funders deadlines requiring to be met.
A further consideration could have been to incorporate the CLEI data into this paper as a means of strengthening the findings. However, my rationale for not doing this was that as the CLEI data had been collected across both years involving the control and innovation group this data will provide me with another dimension to the study and importantly for myself another potential publication.

5.8.3 Paper four

Paper four is located within the post-positivism paradigm as it utilised a quantitative approach. The rationale behind utilising a survey design for this phase of study one was that in large, geographically dispersed populations, this was perceived by the team as our best option in order to address the research question. However, a major limitation of utilising this method was a poor response rate.

When a response rate is very low the responses received may only be the opinions of a very highly motivated section of the sample (that is, people with strong opinions who take the time and trouble to complete and return a questionnaire) (Edwards et al. 2003).
Two large systematic reviews (Edwards et al. 2003, McColl et al. 2001) of interventions to increase survey response rates (inclusive of both the general public, patients and healthcare professionals) identified factors that enhance response rates (financial incentives, recorded delivery systems, shorter questionnaires, relevance of the survey topic, use of reminders and pre-notification contact). Two smaller systematic reviews of randomised controlled trials that specifically focused on healthcare professionals found the

use of financial incentives, reply paid envelopes, shorter questionnaires, recorded delivery and survey personalisation to increase survey response (Field et al. 2002, Kellerman and Herold 2001).

In considering the findings from the systematic reviews the actual questionnaire design in this study was possibly too large (page 116 provides further details on the survey items). By designing a questionnaire which was attempting to capture a significant and diverse range of information may well have put people of completing it. An alternative to this could have been to develop for example, two separate questionnaires and spread the distribution times between the questionnaires.

In considering the issues of pre-notification contact, the study utilised the link nurse for Flying Start in each of the 14 Health Boards. The aim of using this link nurse was to communicate the study and the survey with her NQP and to distribute the survey. It was also to ensure anonymity for the participants. However, it is unclear as to how much time and effort the link nurses were able to spend on this activity. Similarly, by utilising the link nurse for this task may well have been seen by some participants as a means of identifying them to the project team as a participant. In future I would opt to contact potential participants directly either by way of an introductory letter or telephone call. The questionnaire when distributed also had a pre-paid envelope so the participant could post it back directly to the project team. Via the link nurse two reminders were sent out via email. Again, in the future, to maximise response rates I would do these reminders myself either by telephone or email. It may also be prudent in the future for me to consider the use of telephone completion to get information from non-responders.

The systematic reviews also detail how financial incentives can increase response rates. However, I believe there are ethical considerations by using financial incentives. The most significant that I can see is that this could be perceived as a form of coercion. The form of the incentive may cause bias because particular groups may find it more appealing than others (Edwards et al. 2003). Incentives that require people to identify themselves on the forms can possibly lead to untruthful answers or a lower response rate (McColl et al. 2001).

5.8.4 Paper five

In bringing together the findings from the three study sites funded to model and enact a variety of hub and spoke models, the paper was modelled on a case study approach. As each of the HEIs model was different, a range of methods was necessary as no one method could capture the complex social phenomena under study. The idea that a one size fits all would not work as complex intervention science shows (Möhler et al. 2012). Hence using a case study approach drew out these complexities.

In defining case studies, Stake (1995) distinguishes three types, the intrinsic, the instrumental and the collective. For the purpose of this paper a collective case study approach was utilised. In a collective case study, the researcher coordinates data from several different sources, such as in this paper the three HEI.

By adopting a case study approach in writing the publication offered a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon (Yin 1994). This provided the opportunity to examine the complexity of the interrelationships between these different studies, not only with each other, but also with the varying contexts within which the projects were situated.

For comparing different cases, be they of individuals, groups or organisations, can illuminate the significance of the idiosyncratic as opposed to the common, or shared experience (Yin 1994). This is one of the prime reasons for the approach adopted within this paper. However, a key challenge when writing this paper was that it was difficult to present accessible and realistic pictures of that complexity in our writing. Often, by writing about one aspect of the issue as, for example, in one HEIs story, other aspects of it are inadvertently obscured.

By definition, case studies can make no claims to be typical. We have no way of knowing, to what extent our three HEI,s are similar or different from other such HEIs. Furthermore, because the sample is small and idiosyncratic, and because data is predominantly non-numerical, there is no way to establish that data is generalisable of our larger population.
For these reasons, a key determinant of the quality of a piece of case study research is the quality of the insights and thinking brought to bear by the particular researchers. When reading the publication, readers are accessing our construction of the data around issues we judged to be important. No matter how objective we endeavored to be, this means that the research is not, and cannot be, completely objective, nor can we easily make

transparent all the judgments we have made. However, we have endeavored to present adequate evidence, from the data, to support the stories, but a certain amount has to be taken on trust.

5.9 Sampling methods

Robson (2002) and Holloway and Wheeler (2002) concur that sampling procedures in qualitative research are not so rigidly prescribed as in quantitative studies. As was the case in my own studies, qualitative researchers often do not know the number of people who will be involved in the study before the study commences (Holloway 1997). Sample selection in qualitative research does, however, have a profound effect on the ultimate quality of the research (Lincoln and Guba 1985). Too few or too many participants can jeopardise the overall research aim. Too few can lead to lack of transferability, but too many may lead to inability to become immersed in the data due to the overwhelming volume of transcripts obtained (Kvale, 1996).

In all of my studies, purposeful sampling was selected. The rationale for this selection was based upon the ability of this method to allow the researcher to access a number of individuals within the group of nurses who had knowledge and experience of the study topic until saturation had been achieved. Procedurally, this was achieved by the researcher analysing data collected concurrently (Robson 2002). By utilising concurrent data analysis the researcher can determine the point at which there is consensus on the range of issues deemed to be relevant to the participants, even if determining agreement on each of these individual issues is not feasible (Kreugar 1994, Robson 2002). When no new issues are forthcoming, a point of saturation will have occurred and further data collection is unnecessary. This feature was adopted for all the studies presented in this thesis.

In support of the researcher's selection, Patton (1990) suggests that all types of sampling in qualitative research may be encompassed under the broad term of purposeful sampling. He states that 'qualitative inquiry typically focuses in depth on relatively small samples, selected purposefully' (p169). The underlying principle is in selecting information-rich cases, that is, cases that are selected purposefully to fit the study. 'Information-rich' cases, according to Patton (1990), are those from which one can learn a great deal about issues of central importance to the purpose of research, thus the term, 'purposeful sampling'. Morse (1994) states, 'when obtaining a purposeful sample the researcher

selects participants according to the needs of the study' (p129). She proceeds to describe this type of sampling as the researcher initially choosing to 'interview informants with a broad general knowledge of the topic or those who have undergone the experience and whose experience are considered typical' (p129). This description seems to indicate that the sampling is directed by a desire to include a range of variations of the phenomenon in the study.

5.10 Data analysis

Across all my qualitative studies involving focus groups and interviews outlined in this thesis, my preferred analytical approach has been to use thematic analysis. My rationale for the selection of this approach is the flexibility of thematic analysis. It also aligns with my own interpretative stance to research in that the interpretive perspective is based on the idea that the focus is more on depth of inquiry, particularly personal and shared meaning, and more flexibility is afforded as to how data may be interpreted and represented (Denzin and Lincoln 2011). Also linked to my interpretive stance is the fact that in qualitative research the researcher is positioned as being an active participant in the research process.

5.10.1 Conducting a thematic analysis

Thematic analysis is a qualitative analytic method for 'identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail. However, frequently it goes further than this, and interprets various aspects of the research topic' (Braun and Clarke 2006, p.79).

Braun and Clarke (2006) outline a series of phases which researchers must undertake in order to produce a thematic analysis. Firstly, is immersing one's self in the data; in other words, becoming familiar with the narratives. For me, this stage actually begins when I transcribe my focus groups/interviews. Although this process is time-consuming, I find that by the time I have transcribed I begin to get a good feel for the narratives unfolding. In support, Bird (2005) states that such action should be seen as 'a key phase of data analysis within interpretative qualitative methodology' (p227). Lapadat and Lindsay (1999) also state that the close attention required when transcribing can facilitate the close reading and interpretative skills required to analyse the data.

The second stage in Braun and Clark's (2006) model is commencing and generating an initial coding frame. I altered this slightly, because I tended to note down my initial impressions of potential main codes immediately after conducting the focus group/interview. Codes label a feature of the data (semantic content or latent) that appear interesting to the analyst (Braun and Clarke 2006). When coding, I code the complete transcript(s). At this stage I use open coding. That is, my codes are relatively descriptive and involve grouping large chunks of data in terms of content. In practical terms, when I code data, I use different colour highlight pens for each code. Usually at this stage I have a large number of codes in my data.

This step is then followed by searching for key themes in the transcripts. That is, that I am now comparing and contrasting all my codes and sorting them into what I think are the key themes and what can be sub-themes across all my transcripts. The process involves constantly checking and reviewing the themes. I tend to have paper extracts of the themes and put them into piles for ease of moving them around. Often at this stage I find that I collapse themes. By this I mean that two or three themes might become one theme or may become sub-themes or may even be discarded. At this stage I am looking to see if there is coherence or a pattern developing.

The fifth stage is to define and name the themes. Braun and Clarke (2006) define a theme as something that 'captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set' (p82). In essence, this is when consideration is given to the story being told by each theme linked to the research question(s). A tip from Braun and Clarke (2006) is if you are able to describe the scope and content of each theme in a sentence or two. They advise if you cannot achieve this then further refinement of the theme is required. The names that are given to themes must be immediately recognisable to a reader and provide a sense of what the theme is about (Braun and Clarke 2006).

The final stage is to produce a report. A crucial feature when producing the report is to ensure that 'the analysis provides a concise, coherent, logical, non-repetitive and interesting account of the story the data tell – within and across themes' (Braun and Clarke 2006 p24). When producing my reports I endeavour to produce enough evidence of the themes through incorporating enough data extracts, that is, verbatim quotes, to demonstrate the prevalence of a theme. These extracts I endeavour to embed within an analytical narrative that illustrates the story I am writing. My biggest endeavour is to always make an argument in relation to my research question(s) and to go beyond just describing.

Braun and Clarke (2006) inform that this procedure allows a clear demarcation of thematic analysis, providing researchers with a well-defined explanation of what it is and how it is carried out whilst maintaining the flexibility tied to its epistemological position.

As with all methods of analysis there are disadvantages to the utilisation of this method to be considered. Firstly by its flexible nature, the range of things that can be said about the data is broad. Although flexibility is an advantage, the distinct disadvantage is that higher level categories, formed too soon, can influence the researcher in deciding which aspects of the data to focus on. Linked to this point is the potential for a weak analysis, which may overlook important dimensions in the data, reflect mostly the researcher's prior conceptions, or smudge nuances into overly generalised themes. Robust approaches to ensuring trustworthiness are one way to prevent weak analysis.

5.11 Ensuring trustworthiness

Qualitative research presents problems related to rigour, which mainly refer to the trustworthiness of the research (Morse and Field 1996). Hand (2004) acknowledges, however, in qualitative approaches, that the researcher and research cannot be meaningfully separated, and that neutrality is impossible. She further concludes that researchers both influence and are influenced by the process of engaging in research. The values, assumptions, prejudices and influence of the researcher must therefore be acknowledged and taken into account and even, according to Hammersley and Aitkinson (1995), utilised. Streubert and Carpenter (1999) define qualitative research as being trustworthy when it presents an accurate portrayal of the experiences of the participants. Presenting an accurate portrayal involves a number of aspects, which were outlined by Guba and Lincoln (1989): credibility, transferability, dependability and confirmability.

5.11.1 Credibility

Credibility deals with the focus of the research and refers to confidence in how well data and processes of analysis address the intended focus (Polit and Hungler 1999). Koch (1994) states that credibility is enhanced by accurate interpretation of the research experience, while Guba and Lincoln (1989) relate it to accuracy in reporting of the participant's experience. To address these points, in all the studies, participants were involved at two stages in the data analysis process. Firstly, a member of each focus group was asked to read the transcripts and verify the contents. Secondly, participants interviewed were asked to read their transcripts and make any comments on accuracy.

Guba and Lincoln (1989) describe this as ‘member checks’ and a means of enhancing trustworthiness. Furthermore, analysis and coding of data was conducted independently by at least two members of the study teams followed by the team meeting, reviewing and agreeing consensus. However, Sandelowski (1999) argues that, because multiple realities exist that are dependent on subjective interpretations, validation by participants and independents is questionable. Even though I acknowledge Sandelowski’s argument, I uphold my actions on the basis that the intent was not merely to verify that data are labelled and sorted in the same way, but to determine whether or not an independent individual would agree with the way the data were labelled and sorted.

5.11.2 Transferability

Holloway and Wheeler (2002) describe transferability as being how well the results could be transferred to the whole population. Transferability can be enhanced by comprehensively describing the research context and the assumptions central to the research. The person who wishes to transfer the results to a different context is then responsible for making the judgment of how valid the transfer is (Lincoln and Guba 1985).

5.11.3 Dependability

Robson (2002) explains that credible research will be dependable. Throughout all my studies a clear description of the decisions made throughout the process have been documented and retained. Equally, the published papers within this thesis should allow the reader to check and replicate the process.

5.11.4 Confirmability

Streubert and Carpenter (1999) define confirmability as a process principle. Any reader should be able to follow the whole research process and understand the decisions made (Holloway and Wheeler 2002). When confirmability exists, readers can trace data to their original sources (Holloway and Wheeler 2002). To achieve confirmability I compared my codes with those produced by my colleagues. The fact that we produced similar codes helped to enhance the confirmability by assessing my findings. This was a means of further ensuring trustworthiness. In addition, the participants were asked to confirm that the findings represented their own views and experiences.

5.12 Ethical considerations specific to the studies

A key issue which required careful consideration and handling in all the studies was that of the power differential between me and the student participants. An example being, that students who were recruited to my studies from my own School knew me as a lecturer. This power differential, according to Ferguson et al. (2004), is grounded in the differences between students and the lecturer in terms of knowledge, skills and attitudes and by the need of students to achieve specific goals that require the assistance of their lecturers. In other words, a key feature in the relationship is that of trust. This power differential is greater where the researcher (me) is directly responsible for the students' welfare, that is, in my role as academic mentor. Edwards and Chalmers (2002) term this 'double agency'. Double agency is described as fulfilling two roles simultaneously in relation to the same individual. This power differential places a great responsibility on me to ensure that I act in the best interests of the students (Ferguson et al. 2004). An alternative to this could have been that I did not conduct focus groups or interviews with students from my own school. However, my argument for doing so is that I believe valuable and rich information would have been lost. For example, the tone of voice used in answering questions, the body language and makeup of the group and initial impression forming of what the key issues being raised are.

A key means to ensure that students' best interests are upheld is through ensuring that the research proposed is reviewed by an ethics committee. Although some of my studies have been deemed 'evaluation' by the National Research Ethics Committees, therefore, ethical approval is not required, I have always submitted my proposals to the ethics committee within the School of Nursing and Midwifery at the University of Stirling. My rationale for doing so is that unbiased reviewers who have no conflict of interest can scrutinise my proposal as a means of ensuring protection of the students. This is, I believe, an essential means of ensuring confidence in my research processes. Furthermore, by following ethical principles as detailed below, it has always been my intention to protect the welfare and rights of the student participants.

5.13 Ethical principles

The rules related to balancing risks and benefits in research were first explored following the Second World War (Holloway and Wheeler, 2002). The Declaration of Helsinki (1964, revised, 1975, 1983 and 1989, 2008) sets out principles to govern research and to develop the distinction between treatment-focused and new-knowledge-focused research. All the

studies in this thesis were clearly new-knowledge-focused or non-therapeutic study (Holloway and Wheeler, 2002). As a moral enterprise, I believe it is essential to explore the moral and ethical principles faced by researchers.

5.13.1 Respect of autonomy

In terms of research, Graziano and Raulin (1993) describe the rights of the individual as being of prime importance. Qualitative research has the problem of providing information that will not detract from the flexibility of the study in terms of providing unwanted direction or being coercive (Beauchamp and Childress 1994, Holloway and Wheeler 2002). However, it is essential to disclose adequate information, which will allow the participant's understanding. Beauchamp and Childress (1994) describe understanding as a central concept to informed consent and thus autonomous choice. Autonomy incorporates the concept of voluntaries, which relates to freedom from coercion and manipulation.

In all of my studies these issues were addressed by supplying the participants with carefully worded information leaflets, which they were encouraged to read at their leisure. This allowed the freedom to decide about participation and removed the coercive influence the researcher may have had. It was felt the information leaflet provided the balance between provision of enough information and risk of bias by provision of too much information. In relation to participation in focus groups and ensuring that information provided by participants remained confidential, I set ground rules at the beginning of each focus group, explaining that any participants who did not wish to accept these ground rules were at all times free to withdraw. In setting these ground rules my main stipulation to participants was that everybody's opinion is valid, even though individuals may not agree with that view. Also that information disclosed within the focus group did not leave the room, that is, no participant should disclose out with the focus group what another participant had said. With respect to ensuring anonymity of participants in the focus groups, no individuals were identified. For example, that when reporting verbatim quotes they were always reported as Focus group A or Focus group B rather than by name, role and so on.

As outlined by Beauchamp and Childress (1994), granting access involves giving up some privacy. However, this does not imply that the participants are giving up their right to confidentiality. Confidentiality means that the information shared as part of the research is done so in confidence. The participants were consenting to have their views used to develop a description of the experience of the group to which they belong. The

participants were also trusting that the information would be used for the purpose for which it was intended and that they would not in any way be identifiable in my reports of the research. The participants were therefore guaranteed anonymity. To ensure this, participants were identified by number only during the data collection, analysis and reporting stages to protect their identity during all studies (Holloway 1997).

5.13.2 Non-maleficence and beneficence

Non-maleficence relates to the obligation not to intentionally inflict harm (Beauchamp and Childress 1994). In all studies the participants maintained the right to withdraw from the research process at any time without any detriment to their studies/work. To ensure they understood this, the information sheet contained information outlining their rights. All participants were asked to sign a consent form which also detailed their right to withdraw at any time. Furthermore, all information leaflets provided contact details of an independent senior colleague who could be contacted should participants have any concerns about the conduct of the researcher. The consent forms were retained for the duration of the study. In order that the data remained confidential, they were stored in a locked cabinet. All computer data held were password protected.

5.13.3 Justice

The issue of justice is primarily concerned with equality; the aim being to treat all the participants as equal (Murphy and Dingwall 2001). Beauchamp and Childress (1994) define this as formal justice. In all the studies, participants were all treated equally despite their known differences, such as student nurse, mentor, academic, or manager. A decision to treat all participants equally occurred before any data collection took place due to having clearly defined inclusion/exclusion criteria in place.

5.14 Lessons learned

What has become apparent to me is the extent of the journey I have gone through during these studies. When starting out on the FFP project, my research experience was minimal. I discovered how conducting and managing research projects can be frustrating, exhilarating, and ground-breaking. It is also an emotional rollercoaster, with many highs and lows.

I can still recall my feelings at working with and meeting up for the first time with such high profile colleagues in the field of nursing research, colleagues whose work I had read, and

cited in my MSc Dissertation. Working with this team, I believe, gave me a very sound grounding in the variety of research methods, which I have described earlier in this chapter and explored in more detail in the previous chapter of this thesis. My support and guidance from these colleagues still remains today. Furthermore, study one has afforded me the opportunity to build significant networks with colleagues in all the HEIs across Scotland which has since stood me well. In other words, I recognise my transition from a practitioner/educator to a researcher. Personal challenges I have overcome whilst working on study one has been acknowledging that recruitment to such large-scale multi-site studies is not easy. Having to think inventively as to how best to recruit a sample is one such challenge. For example, in designing phase two of this study, I thought focus groups would be a good data collection method. However, with hindsight, trying to get a group of busy mentors, for example, all to one location for up to an hour is not always a viable option. To address this shortfall, I reverted to conducting one-to-one telephone interviews with mentors at all hours of the day and night. A further strength that I gained from working in this team was that a number of the team were Editors of journals. Through writing with them I learned to hone my writing skills, which has afforded me many successes in getting my subsequent works published.

Study two afforded me the opportunity to build on the knowledge and skills I gained from study one. From the lessons learned in that study, I now had the skills and confidence to design a study and evaluate a new practice learning model I had developed. The results of this study have increased my confidence that we can, as educators and researchers, develop new practice learning models that can enhance the student experience. I believe my biggest achievement in practice has been the hub and spoke models widespread adoption by a number of the HEIs in Scotland, evidence of which can be seen in Appendix 8.

As I continue to work and study, I have forged a strong sense of the importance of practice and lived experience. I am aware of the whirl of ideas, memories, hopes and dreams that led me to begin this journey. I notice the changes in my thinking, my perceptions and my identity that have occurred over the last eight years or so since starting on my research journey.

5.15 Conclusions

In this chapter I have set out my position as a researcher and my preferred approaches to conducting research studies. I have discussed the strengths and limitations of the methods

employed in each of my studies along with detailing my approaches to data analysis. I have also detailed the ethical considerations an interpretive researcher must consider. The following chapter will provide conclusions, recommendations and some future implications for practice.

Chapter 6 Conclusions, Recommendations and Some Future Implications for Policy and Practice

6.1 Introduction

In concluding this PhD and the journey undertaken, it is helpful to return to my starting position and to highlight the reasons why I undertook this journey and the associated issues I identified as limiting the development of the capabilities of our undergraduate student nurses.

Chapter one opened with the recognition of the significant influence that practice learning plays within undergraduate nurse education. I had become acutely aware and, more importantly, frustrated at the apparent lack of a cogent, coherent, theoretical framework when designing practice learning experiences to promote nursing capability. I had become aware through conducting the study 'Nursing and Midwifery in Scotland: Being Fit for Practice' (Lauder et al. 2008) that there was great variation between Scotland's Higher Education Institutions (HEIs) in where and how students were placed, and, more importantly, how students were being supported in practice learning. Recurrent stories by students told me how some placements were perceived to be 'good' and others 'bad' (paper two). I knew such negative experiences were influential in students considering leaving their studies. These instances were sometimes personal tragedies but had wider implications in financial terms for HEIs and even their reputation (paper three). Furthermore, the direction of health and social care policy in Scotland is firmly rooted in developing services that are primary care-based and focused on health improvement. Yet the study 'Nursing and Midwifery in Scotland: Being Fit for Practice' (Lauder et al. 2008) demonstrated that students' practice placements still tended to reflect a secondary care, illness-orientated focus.

This led me to consider: what are the essential dynamics that contribute to a positive practice learning experience for our undergraduate student nurses?

In a similar vein, whilst reporting the findings from the 'Early implementation of the Scottish programme for newly qualified nurses and midwives: Flying Start NHS' (paper four), I was drawn again to the two major areas reported by NQP as being problematic for them in easing the transition from student to NQP, namely, practice learning environments and issues of support. In both of these studies, key recommendations were that modelling of support and the practice learning environment required modernisation. This study, as

reported earlier, found that the majority of NQP intended to remain in the NHS. However, a small number of NQP, such as the student nurses, were considering leaving.

These accounts made me aware that prior to these studies I had given little consideration to this aspect of nurse education, reflecting a view prevalent in UK nurse education that this aspect of preparation was ultimately the responsibility of the NHS as practice provider.

In 2010, as part of a team, I received funding from NHS Education for Scotland to 'Develop, Implement and Evaluate New Approaches to Providing Practice Placements in the Pre-Registration Nursing Programmes: Contemporising Practice placements for Undergraduate student nurses: Are 'Hub and Spoke' models the future?' (Roxburgh et al. 2011). Based on the findings from this study I was awarded further monies to conduct 'A follow up to new approaches to providing practice placements in the pre-registration nursing programmes: A comparison study of the year one pilot students and their year two experience' (Bradley et al. 2012).

When I took the time to consider and reflect systematically on the matter, I realised that over the years, both as a practicing nurse and latterly as an academic, that the support of pre-registration students in the practice setting and the facilitation of their learning have been perennial issues for debate at least in the last two decades, both nationally and internationally. The ways in which theoretical and practical components are combined, what are the most effective methods of teaching and assessing practical skills, who is best placed to undertake this, and what characterises a positive and supportive practice learning environment are just some of the challenges that I and other nurse educators have witnessed and been involved in addressing. Through designing, implementing and evaluating the Hub and Spoke model of practice learning, almost all of the aforementioned challenges identified throughout this thesis were addressed. The research also indicates that commitment at organisational level to support mechanisms such as these is crucial to their success.

Through the conduct of the two research studies reported by my publications included in this thesis I offer the following conclusions and recommendations.

6.2 Key conclusions and recommendations for the future

The factors affecting the perceived quality of practice learning are complex, unpredictable and constantly changing in response to factors as diverse as demographics, medical technology, gender roles, academic inflation, EU legislation and changing clinical priorities. Hence, uncertainty and complexity can be suggested to characterise the debate over practice learning environments for undergraduate nursing students (papers two and five).

Students in the hub and spoke study related that most of the memorable experiences and educationally valued clinical recollections originated from their elongated hub placements (Papers five and six). In contrast to Year One and the strong sense of belonging reported by students, there is a marked difference and variation in achieving a sense of belonging within the traditional model (Paper six and Bradley et al. 2012). This continual moving from placement to placement can result in learning time being compromised as students engage in the constant process of orientating themselves to new environments and the teams (Roxburgh 2014, and paper five).

As a result, many students today report feeling like ‘visitors’ to their clinical placement and that they do not ‘belong’. Being ‘accepted’ and feeling ‘part of the team’ are key dynamics in students gaining the greatest benefit from their clinical learning experience (Levett-Jones and Lathlean 2007, Roxburgh et al. 2011, and paper six).

HEI, NHS and the Professional regulatory body need to redesign practice learning models.

An overall recommendation from this study is for HEIs and the NHS to explore new ways of working to support education in practice more effectively. Within this, I offer three specific recommendations for change.

Recommendation one:

> *Curricula designers should consider adopting the hub and spoke model of practice learning. Alternatively, consideration should be given to designing practice learning experiences which follow the patients’ journey from entry to exiting the healthcare system. This could offer a more rounded and informative learning experience for the student and, in addition the students’ practical experiences, can more truly reflect the shape of the NHS they aspire to work within.*

Linked to the above observations is the emerging narrative of how students may feel like 'visitors' to their practice learning experience. This is in part attributable to the short duration of practice experiences and the constant need to orientate themselves to these new surroundings and the practice environments' routines of working. However a more worrying narrative is the sense of not 'belonging' which, in turn, can, in many students, decrease their motivation to learn and increase the risk of them leaving programmes (Papers three, five, and six).The professional regulatory body (NMC) should consider providing students with longer periods of time in practice learning environments when setting out their recommendations for programmes.

Complexity Theory offers one possibility to consider when designing practice learning experiences to promote greater nursing capability. It appears to have advantages in its ability to characterise some of the illogical behaviour of learning systems. Furthermore, it offers a means of opening up constructs which are currently locking in our current model of practice learning. Designs for practice learning experiences that take cognisance of the dynamic, ever-changing complex environments in which students will be working should more adequately prepare them for their future. As noted throughout this thesis, change is the only constant. Complex systems continue to evolve and the results of their interaction cannot be predicted. Enabling students to understand the dynamic I believe will help develop important capabilities for responding to complexity.

Recommendation two:

Specific educational interventions may be necessary to address the 'second year dip'.

Students reported 'dips' in their commitment to the programme, re-considering nurse education as a viable career choice, but were sustained by their experience of Hub and Spoke (Paper six). If this 'dip' is a phenomenon that occurs across the sector, more specific pedagogic interventions could be designed and aimed specifically for students at the one-year point.

Recommendation three:

Nursing needs to radically rethink current models of support for students in practice such as mentoring.

A theme which arises consistently in the literature and in my own studies is the challenge for registered nurses who act as mentors and who are charged with teaching students clinical skills finding enough time to act as role models and teachers (papers two, four, five, and six).

A potential solution to this is developing a modern-day version of the clinical teacher in tandem with rethinking the current mentoring model. It takes time to effectively support and mentor students throughout a practice learning experience. From the student perspective it appears that the overall perception of the quality of their practice learning experience is related to their time spent with the mentor, the quality of that relationship and the duration and location of the practice learning environment (Papers two and six). Workload modelling has a key role to play in the challenges identified in practice learning. Workforce planners have a vital role in defining the nature of the workforce the NHS needs now and in the future; their work inevitably has a significant impact on the shape of education programmes.

Throughout this thesis I have highlighted how problems continue to beset the practice learning experience for today's students. Of particular note is the lack of rigorous conceptualisation of both practice and learning in the related literature.

6.3 Areas for future research

As I continue to develop my research programme beyond these six published papers, I am supported by my early training in reflexive practice as both an educator and a practitioner. My early readings of Freire (1970), Schön (1983), and Mezirow (1991) have served me well as I see how prominent this approach is in today's educational research world. I have engaged in reflexive practice as a nurse, an educator, a student and as a researcher. As a researcher, I am guided by Etherington's (2004) work which highlights reflexive research practice and find my grounding here. However, as I go forward in expanding my thinking, I also take guidance from Seidman's (2013) advice to new researchers to find our own way and listen to our own inner sense regarding preferred research methods.

My aspirations post-doctorate, are to take the new knowledge that I have generated and acquired and further explore and develop practice learning experiences for our undergraduate student nurses. Key to this piece of work is to:

1. Further develop the hub and spoke model incorporating aspects of complexity theory and practice learning theory as discussed in chapter two. The time is right, as nursing curricula across Scotland are about to undergo their five-year re-validations in 2016.

2. As detailed in Paper five, all three case study sites reported how the hub and s poke models promoted deeper, meaningful student learning. I am keen to investigate this further in relation to how a 'good' practice learning experience promotes deeper, meaningful student learning.

3. Throughout all my studies and reviewing the literature the most influential role in a successful outcome is that of the mentors. To date I have not come across any studies which examine how mentors practically undertake their role. I feel this is an aspect of practice which is worthy of further investigation.

6.4 Contribution of this thesis to undergraduate nurse education

In considering the contribution of my studies to undergraduate nurse education, I feel the most significant contribution has been to advance our theoretical thinking on how to design practice learning experiences to develop our students' capabilities. By this I mean that through designing a hub and spoke model underpinned by broad principles, and in my findings from the literature and those from my other studies, I was able to address a number of the issues which we know pose challenges for our students. Examples include support and how best to provide this, how to address the issues of gaining a sense of belongingness, developing resilience in our student population to better deal with the complex and ever-changing situations they find themselves in and, most importantly, developing a deeper learning and understanding of the context of providing healthcare.

The issue of support was addressed by the students having continuous access to the same mentor (or mentoring team) over a much longer period of time. This resulted in a stronger mentor-student relationship. Through this ongoing relationship greater trust developed, and, due to a greater investment of the mentors' time, promoted the feeling

that they had a greater responsibility for the student. Furthermore, from the mentors' perspective they felt more able to plan the students' learning experience as they had a greater understanding of the students' abilities and limitations. Mentors also believed they were in a greater position to provide a more informed assessment of the student and to provide the student with a more critical dialogue due to working with them for this longer period of time. Gaining a sense of belongingness for the student was also significantly influenced by having an elongated practice learning experience, coupled by continuous access to the same mentor and wider clinical team.

As a result of these aforementioned experiences the students recognised how this model of support, the trusting relationships and the open dialogue which they experienced had led them to develop greater levels of resilience. Deeper learning occurred as a result of, firstly, following notional patient pathways. By this the students were able to, for example, follow a patient from admission to discharge and all the associated services which that patient experienced. This provided the student with a more detailed understanding of the conditions of care. Secondly, through a more planned and systematic approach by the mentor and student to utilising and creating learning opportunities, greater depth of learning and developing knowledge occurred. Through utilising a hub and spoke model, students, whilst experiencing their practice learning, became part of a community of practice. Although this was not an aspect I had set out to achieve at the onset this was a naturally occurring phenomenon as a result of having an elongated experience which enabled the students to overcome issues of settling in to the team, understanding and not having to continually learn the practice learning environments routines and as a result becoming legitimate and valued members of those teams.

Furthermore, seven of the eleven HEIs in Scotland have implemented a hub and spoke model for practice learning which can only be a good thing for our wider student body. In addition, one HEI has also implemented a version of the hub and spoke model with Allied Health Professional undergraduate students.

Finally, the publication of the six papers included in this thesis has provided an original contribution to this field.

6.5 Some final thoughts

In concluding this journey I recognise how I have shifted in my thinking and my positioning as a researcher throughout the process of the study. Firstly, when setting out on the FFP

project my concern was around the academic aspect of how curricula produce NQP who are Fit for Practice. I believed, like many nurse academics, that the practice element of the circular was the primary responsibility of our NHS partners. However, when students recalled as they termed ‘good’ placements and ‘bad’ placements, and how these have such a significant influence on their experiences, confidence, hopes and dreams of becoming a nurse, this gave me food for thought. This interest was further piqued when conducting the Evaluation of the Early Implementation of Flying Start NHS™ phase of the FFP study. NQP also raised issues of how support and practice learning environments influenced whether they would leave or remain in the profession. This led me to conduct a review of the literature to better understand what factors influence why our students stay (paper three) and why they leave (Cameron et al. 2011).

All of the above led me to change my thinking such that while the NMC state HEI and NHS have an equal responsibility, I now firmly believe that the HEI must take more responsibility to work with and support students whilst in practice learning. In other words, the hands-off approach is not a tenable option.

When developing and implementing a new way of working, caution is required. For all the success of developing a hub and spoke model there was considerable resistance from academic and clinical colleagues. Unsurprisingly, given the complex nature of such a development, key to overcoming this was to negotiate buy-in from key personal contacts; for example, the Directors of Nursing in the partner NHS Boards and the Head of School, whose support gave authority to the study. Continuous open dialogue with the NHS practice learning areas, academic colleagues and students was also imperative. It allowed people to share their anxieties and concerns which could then be challenged in a constructive forum and ways found to ensure the project proceeded.

Novel models will therefor require time to be thought through, new practice learning areas identified and, more importantly, mentor preparation redeveloped. Selecting practice learning areas to champion a new way of working will also be a crucial factor. All of these negotiations with the teams will involve finding ways to reconcile the very authoritative research findings with the messy difficulties of continuing my everyday work as a nursing educator and the ever evolving nature of healthcare policy and practice.

Having discovered complexity theory, I believe this offers productive insights in developing a way forward.

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Appendices

Appendix 1: Journals' aims and scope and author guidelines and links to Journal and Publisher websites

Nurse Education Today

Aims and Scope:

Nurse Education Today is the leading international journal providing a forum for the publication of high quality original research, review and debate in the discussion of **nursing**, **midwifery** and interprofessional **health care education**, publishing papers which contribute to the advancement of educational theory and pedagogy that support the evidence-based practice for educationalists worldwide. The journal stimulates and values critical scholarly debate on issues that have strategic relevance for leaders of health care education.

The journal publishes the highest quality scholarly contributions reflecting the diversity of people, health and education systems worldwide, by publishing research that employs rigorous methodology as well as by publishing papers that highlight the theoretical underpinnings of education and systems globally. The journal will publish papers that show depth, rigour, originality and high standards of presentation, in particular, work that is original, analytical and constructively critical of both previous work and current initiatives.

Authors are invited to submit original research, systematic and scholarly reviews, and critical papers which will stimulate debate on research, policy, theory or philosophy of nursing and related health care education, and which will meet and develop the journal's high academic and ethical standards.

The journal employs a double blind peer review process for all submissions and its current Impact Factor is 1.218 making it one of the leading nursing education journals (© Thomson Reuters Journal Citation Reports 2013).

Author Guidelines and web links:

The Editors of *Nurse Education Today* welcome the submission of papers for publication in the form of research findings, systematic and methodological reviews, literature reviews and Contemporary Issue pieces that contribute to, and advance, the knowledge of, and debate within, international nursing, midwifery and healthcare education.

For enquiries relating to the submission of articles (including electronic submission) please visit this journal's homepage. Contact details for questions arising after acceptance of an article, especially those relating to proofs, will be provided by the publisher. You can track accepted articles at:

http://www.elsevier.com/trackarticle. You can also check our Author FAQs (http://www.elsevier.com/authorFAQ) and/or contact Customer Support via http://support.elsevier.com.

Nurse Education in Practice

Aims and Scope:

Nurse Education in Practice enables lecturers and practitioners to both share and disseminate evidence that demonstrates the actual **practice** of **education** as it is experienced in the realities of their respective work environments, that is both in the University/faculty and clinical settings. It is supportive of new authors and is at the forefront in publishing individual and collaborative papers that demonstrate the link between education and practice.

Nursing is a discipline that is grounded in its practice origins - nurse educators utilise research-based evidence to promote good practice in education in all its fields. A strength of this journal is that it seeks to promote the development of a body of evidence to underpin the foundation of **nurse education practice**, as well as promoting and publishing education focused papers from other health care professions which have the same underpinning philosophy.

Case studies and innovative developments that demonstrate how nursing and health care educators teach and facilitate learning, together with reflection and action that seeks to transform their professional practice will be promoted.

The opportunity to stimulate debate is encouraged as is the promotion of evidence-based nursing education internationally.

New sections:

Learning and teaching in practice

Papers which focus on nursing education in the clinical/practice environment, from clinical staff involved in the education of student nurses in practice, as well as educators involved in the development of the workforce through post-qualifying education and training initiatives, are welcomed. It is essential that, as in other areas of nursing education, the evidence-base to education in the clinical environment is developed, where student nurses learn to become nurses; and professional caring practitioners develop and maintain their own knowledge and skills in order to transform the way they develop and deliver quality care to their patients and clients. One field that this is especially visible is known as Practice Development.

Author Guidelines:

The Editor of Nurse Education in Practice, Karen Holland, welcomes the submission of papers for publication. Submission to this journal proceeds totally online.

Types of Manuscripts

Original Research articles and reviews should be up to 5000 words including in-text references, but excluding abstract, keywords and the bibliographic reference list (authors should include a full word count, with their article submissions).

Issues for Debate: The Editor welcomes papers which will stimulate debate and have a direct impact on nursing and midwifery education and scholarship. Issues for Debate papers should not exceed 2,500 words, including in-text references, but excluding abstract, keywords and the bibliographic reference list.

Midwifery Education papers: Original research, reviews and Issues for Debate articles that pertain specifically to midwifery education are all welcomed by the Editorial team. The usual guidelines for article length and format (as outlined in these Guide for Authors) should be followed. At point of submission, authors are requested to select 'Midwifery Education Paper'.

Learning and Teaching in Practice: Original research, reviews and Issues for Debate articles which focus on nursing education in the clinical/practice environment are welcomed. The usual guidelines for article length and format (as outlined in these Guide for Authors) should be followed. During the submission process you will be asked to select that your article is to be submitted for the Learning and Teaching in Practice section.

Guest Editorials: The Editor encourages Guest Editorials to be submitted on a variety of current issues impacting and influencing nursing and healthcare education. Guest Editorials can have a national or international focus. Editorials should not exceed 1,500 words.

Web links:

http://www.nurseeducationinpractice.com/home

http://www.nurseeducationinpractice.com/aims

http://www.nurseeducationinpractice.com/authorinfo

Journal of Clinical Nursing

Aims and Scope:

The *Journal of Clinical Nursing* (*JCN*) is an international, peer reviewed, scientific journal that seeks to promote the development and exchange of knowledge that is directly relevant to all spheres of nursing practice. The primary aim is to promote a high standard of clinically related scholarship which supports the practice and discipline of nursing. The Journal also aims to promote the international exchange of ideas and experience that draws from the different cultures in which practice takes place. Further, *JCN* seeks to enrich insight into clinical need and the implications for nursing intervention and models of service delivery. Emphasis is placed on promoting critical debate on the art and science of nursing practice.

JCN is essential reading for anyone involved in nursing practice, whether clinicians, researchers, educators, managers, policy makers, or students. The development of clinical practice and the changing patterns of inter-professional working are also central to *JCN*'s scope of interest. Contributions are welcomed from other health professionals on issues that have a direct impact on nursing practice.

JCN publishes high quality papers that make an important and novel contribution to the field of clinical nursing (regardless of where care is provided), and which demonstrate clinical application and international relevance.

Topics include but are not limited to:

- Development of clinical research, evaluation, evidence-based practice and scientific enquiry;
- Patient and family experiences of health and health care; illness and recovery;
- The nature of nursing need, intervention, social interaction and models of service delivery;
- Clinical nursing leadership;
- Examination of clinical decision-making;
- Exploration of organisational or systemic factors that enhance or impede the provision of effective, high-quality nursing care;
- Application and dissemination of clinical knowledge and theory;
- Role development and inter-disciplinary working, exploring the scope and changing boundaries of clinical nursing; and
- Cultural comparisons and evaluations of nursing practice in different health sectors, social and geographical settings.

Useful Resources

I would like to take this opportunity to direct you to the Nurse Author & Editor website at http://www.nurseauthoreditor.com The site is a valuable resource for authors, editors and reviewers involved or wanting to become involved in nursing journals and the *free* Nurse Author & Editor newsletter contains useful articles including the Writing for Publication booklet which you may find helpful.

Author Guidelines:

1. GENERAL

Please read the guidelines carefully for details on the submission of manuscripts, the journal's requirements and standards as well as information concerning the procedure after a manuscript has been accepted for publication in *JCN*. Authors are encouraged to visit Wiley Blackwell Author Services for further information on the preparation and submission of articles and figures.

1.1 Essential Criteria

The Editors welcome papers that develop and promote knowledge that is directly relevant to all spheres of clinical practice in nursing and midwifery around the world. Therefore, papers must demonstrate clinical application and international relevance, and make an important and novel contribution to the field. The Editors are also looking for papers which will be widely read and cited, thereby having an impact on nursing knowledge and practice. Manuscripts undergo an initial review by the Editor-in-Chief and the Editors before peer review, to assess whether they meet these essential criteria. There is no process of appeal against rejection at this stage.

1.2 International Relevance

Papers submitted should be relevant to the Aims & Scope of *JCN* and written in a way that makes the relevance of content clear for *JCN*'s international readership. For a discussion of what international relevance means and what makes a paper internationally relevant, please see Watson *et al*.'s editorial on 'What makes a *JCN* paper international?'.

Before submitting your paper, please ensure that:

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Hub and Spoke Model Information

University	Hub and spoke Model Adopted (yes/no)	Name of Key contact for this
Robert Gordon University	Yes for AHP's YES for Nursing	LESLEY FORSYTH l.forsyth@rgu.ac.uk Alison McLellan RGU
University of Dundee	yes	Carol Kynaston
Abertay University	No	
University of Edinburgh	no	
Edinburgh Napier University	Yes	m.conlon@napier.ac.uk MARGARET CONLON.
Queen Margaret University	Yes	CAROLINE GIBSON - CGibson@qmu.ac.uk AILSA MCMILLAN
University of Stirling		

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University of Glasgow	yes	deirdre.moriarty@glasgow.ac.uk
Glasgow Caledonian University	Yes	Joan Smith J.Smith@gcu.ac.uk 331-8334
University of west of Scotland	Yes	Maria Pollard. mariapollard@uws.ac.uk
Strathclyde University		
Open University		
University of Aberdeen		
University of the Highlands and Islands		