Becoming an Interprofessional Practitioner: Exploring the Application of Pre-Qualification Interprofessional Education in the Professional Practice of Midwives

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ABBREVIATIONS

CAIPE	Centre for the Advancement of Interprofessional Education
CETL	Centre for Excellence in Teaching and Learning
CNST	Clinical Negligence Scheme for Trusts
CTG	Cardiotocography
CUILU	Combined Universities Interprofessional Learning Unit
DGH	District General Hospital
DH	Department of Health
HEI	Higher Education Institution
IPE	Interprofessional Education
IPL	Interprofessional Learning
IPP	Interprofessional Practice
IPLU	Interprofessional Learning Unit
KSF	Knowledge and Skills Framework
NHS	National Health Service
NMC	Nursing & Midwifery Council
QAA	Quality Assurance Agency
REC	Research Ethics Committee
SHA	Strategic Health Authority
SHO	Senior House Officer
UK	United Kingdom
WHO	World Health Organisation

ABSTRACT

The rationale for interprofessional education (IPE) is based on the assumption that it will result in improved interprofessional practice. Despite the evidence that pre-qualifying IPE will modify attitudes and provide knowledge and skills for collaboration, this evidence tells us little about whether these new skills and attitudes can be applied and sustained in professional practice. The aim of this research project was to explore how midwifery students who participate in pre-qualification interprofessional education apply their learning to the context of professional practice, and what elements facilitate this application. A purposive sample of midwifery students, midwifery educators, Heads of Midwifery and newly qualified midwives from four universities in the UK participated in semi-structured interviews, focus groups and qualitative questionnaires. Using the principles of Grounded Theory, the emerging findings highlight how professional and systemic factors both promote and prevent newly qualified midwives from turning their interprofessional theory into practice. Graduates appear better able to apply their training when interprofessional working and learning is made explicit within both the university learning environment and the workplace. This understanding of how newly qualified midwives apply IPE to practice is useful for advancing IPE curriculum development and for encouraging effective interprofessional relationships between midwives and other health professionals.

CHAPTER 1 INTRODUCTION

1.0 INTRODUCTION

Interprofessional working and learning have become central priorities within health care in the United Kingdom and abroad. Improved communication and team-work between health care professionals is advocated as a strategy to solve numerous challenges within the health care system, such as, allocation of limited resources, poor clinical outcomes, and low job satisfaction. Consequently, it has been argued that new and different ways of training health professionals are required in order to embed the principles of interprofessional working in the next generation of health care professionals. In response to this, stakeholders from educational institutions, professional regulating bodies, and government agencies have directed funding and policy to support the inclusion of IPE in both pre- and post-qualification training for health professionals. Interprofessional working has also become a driving force behind educational innovation. At present in the UK, all educational institutions that provide training for health professionals are mandated to include some form of IPE within their curriculum. However, despite explicit educational policy recommendations, funding and curriculum development for IPE, little is known about whether IPE initiatives create interprofessional workers. Does IPE create a workforce of health professionals who are able to work collaboratively for the benefit of the patient? What more can be done within the university and the clinical workplace in order to help this new generation of health professionals to work collaboratively? These questions remain unanswered.

The current research project considers these issues. Specifically, this thesis describes a qualitative research project which examines interprofessional working and learning within midwifery practice. The research explores how student midwives who participate in pre-qualification interprofessional education (IPE) apply their learning to professional practice following qualification. The specific research question was: how do midwives and midwifery educators perceive the transfer of pre-qualification IPE to professional practice? This study identifies elements that both facilitate and impede interprofessional learning and working. The findings of the research are drawn from the experiences of student midwives, midwifery

educators, Heads of Midwifery and newly qualified midwives from four universities throughout the UK.

This chapter will describe the motivation behind the study, the rationale for interprofessional working and learning, an overview of IPE, including its history in the UK and its underlying principles, and a discussion of the relationship between interprofessional practice and interprofessional education.

1.1 Background on the Research Project

The motivation for this project came from several factors. I am a midwife from Ontario, Canada and although it seems almost inconceivable in the UK where this research was conducted, midwifery is a new profession in Canada. Ontario was the first Province to regulate and fund the profession in 1994. Since regulation, the 'new' profession of midwifery has faced the challenges of negotiating and integrating its place within the pre-existing health care system.

Interprofessional working relationships are critical to providing midwifery care in Ontario because of the mission of providing responsive, woman-centred care, and also because of the midwifery scope of practice (1). Midwives care for low-risk women and newborns. If a midwifery client's pregnancy, birth and postpartum are uncomplicated, the only health professional the woman will see will be her midwives. However, if a midwifery client develops clinical concerns which are beyond the low-risk sphere, then consultation and possibly a transfer of care to a physician may be necessary.

As a midwife who has been part of such interactions, I am interested in the interprofessional relationships that occur during the provision of maternity care. I am also interested in the education of midwives and how the skills necessary for interprofessional working can be learned. At present, IPE efforts for midwives are at an embryonic stage of development. Much planning and discussion are occurring at Ontario universities, and occasional, voluntary workshops are offered.

My interest in IPE has been further fuelled by my enrolment in doctoral studies at a university in England and my appointment as a senior lecturer at a university, which recently integrated student midwives into an IPE curriculum.

Unlike Canada, schools in the UK now provide IPE for health professions as part of the required curriculum. The long standing history both of midwifery as a profession and of IPE in the UK made it the ideal location for this project. Despite this long standing history, the advances in IPE in the UK are relatively new within the field of education as a whole and subsequently, limited evaluation has been conducted on how this training might influence professional practice (2). Without adequate reflection and evaluation, IPE, similar to other types of training for health professionals, may drive a further wedge into the classic gap between academic theory and clinical practice.

Beyond my direct experience of interprofessional working and learning both as a midwife and as an educator, I bring to my research two other belief systems. First, as a result of my undergraduate degree in Sociology and my Masters degree in Health Profession Education using critical feminist theory, I see the world through a lens that emphasises qualitative research and the cultural construction of the world. Also, I carry with me my commitment to the philosophy of midwifery care. My views of professions and of patient care are based on this worldview. Woman-centred or patient-centred care is at the crux of the philosophy of midwifery, and therefore, my analysis of interprofessional care derives from this viewpoint. Moreover, my commitment to midwifery care is rooted in my belief about the quality of care women should receive during pregnancy and birth. My goal in exploring interprofessional working and learning is to understand how to continue to improve the care offered to women during their experience of pregnancy and birth.

Subsequently, my assertion that interprofessional working and learning can be a beneficial part of a health care system that provides exemplary care to women and their families means that on a very basic level, I am a champion of IPE. My approach to this research would be very different if I entered this project as someone who thought interprofessional working and learning was irrelevant in the provision of health services.

These perspectives and experiences underpin this project. Accordingly, I am not a distant observer, removed from the research, looking for absolute truths. Rather, I am a participant in the world I am exploring. Reflecting on my own views and beliefs has been an intentional and continuous process throughout the research. I

sought to be aware of how my views and the views presented by participants mutually created the knowledge and theory that informed this project (3).

The resulting combination of these influences, fuels my desire to understand how interprofessional training is transferred into professional practice for midwives. Improved understanding of both the mechanics and value of IPE may help advance the field of IPE for midwives in Canada and in the UK. Ultimately, IPE based on this understanding can be used to foster effective interprofessional working relationships between midwives and other health professionals, which in turn, will benefit women and their families during the provision of maternity care.

1.2 The Rationale for Interprofessional Practice in Health and Social Care

The idea of interprofessional working in health care is not new. The first references to collaborative practice in the UK appear in the 1970's (4). Today, Pollard *et al.*, argue that "the idea of working across traditional boundaries remains central" in health care policies (4 pg12). The rationale for interprofessional practice (IPP) is influenced by political and professional drivers. The 1980s economic, social and political climate saw a restructuring of many public services in the UK, including the National Health Service (NHS) (4). The NHS was seen as being an underfunded, over-centralised organisation relying on bureaucratic systems that were twenty years out of date (5). The health care system became increasingly fragmented and consumeristic (4;6). This fragmentation was visible in the lack of national standards, and rigid demarcations between professions (5). The fragmentation of the system exacerbated failures of communication and team-work which resulted in adverse outcomes for patients. Public inquires such as the Victoria Climbié Inquiry and the Bristol Inquiry brought to the foreground the need for better interprofessional working relationships (4;7-10). Similarly, the rise of consumerism was responsible for mounting expectations of quality health care among the public (5-7). This political context led to a growing motivation to improve the quality of health care through collaboration (7).

The professional context of competing rivalries was also a contributing factor in the push for collaboration. This professional context was shaped by the growth of

specialties within the health professions in response to progressively more complex clinical knowledge. Increasing specialisation further fuelled the fragmentation of the health care system (7). Additionally, competing rivalries based on traditional hierarchies and differences in power and status contributed to communication breakdowns and poor clinical outcomes (4;5;7). Advocates for improved health care argued that power sharing and non-hierarchical structures between professions were required (4). The modernisation of the health care sector in response to changing political and cultural values called for greater differentiation of roles, greater referrals between professions and agencies, greater involvement and power for the public and service users (11). These determinants for collaboration challenged the traditional roles of health professionals (11).

The political and professional drivers were instrumental in changing the face of health care. The need for a modernised, integrated, seamless health service that moved beyond the fragmented and hierarchical model of practice that existed previously, was perceived as a way forward to provide better care for service users (4;5;12). Subsequently, these political and professional drivers have been reinforced by government policy. In the UK, the mainstreaming of IPP and IPE can be traced back to key policy documents (13). The 'NHS Plan' in 2000 was one of the first influential documents that advocated for collaborative practice and for collaboration between the NHS, higher educational institutions (HEI) and professional regulating bodies for delivering IPE (13). IPE became a central priority for HEIs following the next wave of policy documents, namely 'A Health Service for All the Talents' and 'Working Together, Learning Together' (13-15). Improved partnerships due to the restructuring of the professional regulating bodies and the formulation of Quality Assurance Agency (QAA) benchmarking statements on the shared values, practice and knowledge for health professionals were further policy developments that played a critical role in cementing the IPE agenda (13).

The political and professional drivers, together with key government policies have been strategic in promoting the case for interprofessional working and learning. These drivers provide the rationale for IPE developments at most UK universities. The significance of this policy framework should not be understated as it is a central factor in the advancement of IPE in the UK. Likewise, the absence of a cogent policy framework has hindered the advancement of IPE in other countries such as Canada.

1.3 Overview of Interprofessional Education

This section will outline the definition of IPE, its origins and the principles governing this educational intervention. Before examining the history of IPE in the UK, it is essential to provide a brief overview of what constitutes IPE as the central concept of this research.

1.3.1 Definitions Of Interprofessional Education

The most common definition of 'interprofessional education,' and the one that will be employed in this thesis, is the definition from the Centre for Advancement for Interprofessional Education (CAIPE): "interprofessional education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (16). IPE is then typically broken down according to when, in relation to qualification, the intervention occurs. Zwarenstein *et al.*, use the following two definitions to clarify this issue:

> Pre-licensure IPE is an educational activity that involves students at the undergraduate or post-graduate levels of training before qualification or licensure has been obtained to practice independently. Post-licensure collaboration interventions involve qualified members of two or more health and/or social care professions. (17)

There is little consensus in the literature around what constitutes 'effective' IPP (12). Some research focuses on aspects of team-work, while other research suggests a recipe list of attributes or capabilities health professionals should possess. This deficiency in the literature makes it challenging to know if IPE is adequately preparing graduates to be effective interprofessional workers because there is limited understanding of what constitutes effective interprofessional practice. This is echoed by Oandasan and Reeves who identify that the literature pertaining to how to assess the competencies required for collaborative practice is sparse (18). Despite these inconsistencies, a definition for 'collaborative patient-centred practice' is useful (19). This definition will be used throughout this project. It captures the essence of the concept of 'effective interprofessional practice:'

> [effective interprofessional practice is] designed to promote the active participation of each discipline in patient care. It enhances patient and family centred goals and values, provides mechanisms for continuous communication among caregivers, and optimises staff participation in clinical decision-making within and across disciplines fostering respect for disciplinary contributions of all professions. (20)

1.3.2 History of IPE in the UK

The World Health Organisation (WHO) first articulated the need for IPE over thirty years ago (18). Within the UK, growth of IPE started in the 1960s and gained momentum over the following thirty years. Barr recounted the history of IPE from 1966-1997 and described some of the key shifts that created the foundation for the IPE agenda. First, the political and policy changes which began in the 70's and 80s which saw increasing complexity within health care, increased demand for community based services, and greater consumer expectations created a climate that called for a more integrated and collaborative workforce within health and social care (21). These same policy recommendations and Department of Health (DH) documents, such as 'The NHS Plan' in 2000 and 'A Service for all the Talents' in 2001 lent support to the need for shared learning as a way of achieving the new workforce. (14;22).

At the local level, many centres were starting to offer workshops, conferences and training days focused on the creation of health care teams (21). These IPE initiatives were being developed within primary care, mental health, palliative care and other fields as early as the 1960s (23). The early projects were often isolated, small-scale initiatives (23). They were often work-based or post-qualification training for professionals.

At the same time, government reviews of education for health professions played a central role in fostering the context of IPE in the late 1990s (21). Trends in education such as the acceptance of the principles of adult learning, the creation of independent schools for allied health professions and the diminished status differentials between professions following the change of polytechnic schools to universities created a favourable context for a change in traditional health profession education (21). Further, professional regulating bodies began to lend support to the notion of interprofessional training. For example, there was the creation of the Health Professions Council (HPC) designed to reinforce the common strengths between professions (24). Also, the HPC, the Nursing and Midwifery Council and regulatory bodies in medicine, occupational therapy and physiotherapy developed statements supporting the principles of IPE (24-30). However, much of this early support, particularly within medicine, based on recommendation of the General Medical Council's publication of 'Tomorrow's Doctors' and the British Medical Association,

was countered by cautious language warning to introduce IPE in a measured way, with extensive evaluation and with the understanding that there was no evidence to support improved practice or improved outcomes from IPE (25;29-31). There was also the specific caveat that uni-profession education be protected (25;31). Accordingly, despite these statements of support, there was limited evidence that IPE was being implemented.

Despite the policy support for IPE, pre-qualification efforts were slow to develop. Barr identified 'four collective movements' in the efforts to begin pre-qualification IPE (32). These four groups included social work, nursing, allied professions and complementary and alternative therapies. Social work was the first of these movements (32). While these professions were attempting to bring other professions together for shared learning, medical education was advocating for greater specialisation (32). This created a more inward focus in medical education rather than looking outward to create partnerships with other professions. In addition to this obstacle, pre-qualification efforts were slow to develop due to the belief that IPE was better suited to post-qualification learning (32).

Support at the national level became instrumental in advancing IPE efforts. One of the national level developments was the formation of CAIPE in 1987. Also, DH policy documents such as Learning from Bristol reinforced the common learning agenda and called for a shared learning curriculum by the year 2004 (33). This report, together with other key documents such as, 'Meeting the Challenge: A Strategy for Allied Health Professions,' were central drivers behind national funding for four 'Leading Edge' sites which were hoped to successfully implement and evaluate sustainable and innovative IPE projects (13). This was followed by another significant development within the pre-qualification initiatives - the establishment of the Centres for Excellence in Teaching and Learning (CETLs), which provided funding and resources for IPE projects (23;34).

The policy changes within the health care system, the changing climate of education for health professions, including infrastructure support from professional regulating bodies and government reviews of education, and the small work-based local initiatives for IPE were key incremental factors which combined to provide a foundation for the IPE agenda within the UK. This agenda also became a central priority for the new government who in 1997 had campaigned on promises of

modernising the health and social care system through workforce training strategies (21). As a result of these forces and over thirty years later, most UK universities who are responsible for training health professionals now include some component of IPE within their pre-qualification training. Barr and Ross argue that IPE has become part of the mainstream agenda with government, educational institutions, the health care industry and professional regulating bodies all attempting to integrate it into their organisational systems (23). This integration is hoped to enhance the credibility of IPE (34). Although, it is important to note that the degree of support and priority given to this agenda is not uniform throughout educational institutions and regulating bodies.

1.3.3 Shared Learning within British Midwifery

Interprofessional working occurs constantly during the provision of maternity care. Referrals and consultations between professionals, handovers during shift change, management of obstetric emergencies, and case conferences are examples of interprofessional working in maternity (35). For midwives, they may work within a team of other midwives, or with other professionals sharing the clinical care of the woman and her baby. These interprofessional relationships frequently require negotiation between "two autonomous professional groups – midwives and obstetricians – either of which may need to take the lead in caring for a patient at different times" (35 pg 29). The lack of team-work and communication between professionals, the rigid adherence to professional hierarchies and differing approaches to care have posed challenges within maternity services (35).

Several DH and policy documents advocating for an interprofessional workforce have specifically addressed the need for interprofessional training for midwives. For example, the 'National Service Framework for Maternity Services' advocated for clinical staff who have multidisciplinary training (34). Likewise, 'Maternity Matters' discussed the need to develop maternity health networks comprised of various health professionals involved in the provision of maternity care (36). The 'Confidential Enquiries into Maternal and Child Health' report also stressed the essential role of teams during maternity care (37). They cite failures in communication and team-work as contributing factors to poor maternal health outcomes. More recently, the 'Kings Fund Inquiry' into maternity services in

England identified team-work as "one of the most important drivers of improved safety" in maternity care (35 pg 27).

The Royal College of Obstetricians and Gynecologists lend support to the notion of teamwork within maternity services (38). In their statement of support for the Kings Fund Inquiry they recognise the need for teams, for clearer leadership and for improved communication between health professionals. They also address the professional barriers between midwives and obstetricians (38). Likewise, the Nursing and Midwifery Council (NMC) provides further guidance on the training of midwifery students with regard to IPE. The 'Standards of Proficiency for Pre-Registration Midwifery Education' describes collaborative competencies on several occasions. Within 'Standard 15: Standards of Education to Achieve the NMC Standards of Proficiency' there is a description which stipulates the provision of "seamless care....in partnership with women and other care providers" during both the antenatal and postnatal period (39 pg 37,39). There is further discussion of appropriate referral and consultation with other professionals, effective working across boundaries, and "drawing on the skills of others to optimise health outcomes and resource use" (40 pg 40). Finally, this standard also articulates that midwives must be able to:

> Work collaboratively with other practitioners and agencies in ways which: value their contribution to health and care, enable them to participate effectively in the care of women, babies and their families, [and] acknowledge the nature of their work in the context in which it is placed. (40)

Similarly, the NMC 'Standards for Learning and Assessment in Practice' describes the need to create a learning environment which supports collaboration, interprofessional learning opportunities and effective relationships within an interprofessional team (40). This review of government policy documents and professional regulations and standards by the NMC underscore IPE as a priority in maternity care and in the training for midwives.

1.3.4 Principles Of IPE

Colyer *et al.*, suggest that the mainstreaming of IPE represents a significant 'paradigm shift' within the field of professional education (41). This represents a shift away from the accepted and established methods of teaching and learning (8).

Instead of the traditional educational processes, CAIPE recommends that IPE efforts be based on the following principles (8):

> Effective IPE:
> - Works to improve quality of care
> - Focuses on the needs of service users and carers
> - Involves service users and carers
> - Promotes interprofessional collaboration
> - Encourages professions to learn with, from and about one another
> - Enhances practice within professions
> - Respects the integrity and contribution of each profession
> - Increases professional satisfaction

Similarly, the QAA benchmark statement which outlines the 'common purpose' for all health and social care professionals focuses on three areas of effective team-working: values, knowledge, and understanding of health and social care practice (42). According to the benchmark statement, the shared values required for all health and social care practitioners include, respect, promoting informed choice decision-making by clients and patients, protecting service users from harm, exhibiting high standards of practice which justify public trust and confidence, co-operation and commitment to education (42). Further, the skills needed for promoting effective practice within health and social care must be based on: the assessment of individual needs, the development of focused intervention to meet the identified needs, the ability to implement the plan of intervention, and the ability to evaluate the impact of this intervention and care plan for service users (42). Finally, the statement acknowledges that:

> Each profession has an identifiable body of knowledge and will draw from this as appropriate. However, there are areas of knowledge and understanding that are common to all health and social care professionals. (42)

These areas of common knowledge and understanding for health professionals are summarised below (Table 1-1) (42). The CAIPE principles and the QAA benchmark statements can be used by educators to create learning outcomes. Although the specific learning outcomes will be varied between projects, IPE curricula are typically based on the development of 'collaborative competencies' or those that are necessary for working effectively with others (7). Barr *et al.*, argue that IPE initiatives should be collaborative, egalitarian, applied and should incorporate group-directed learning, experiential learning and reflective learning (32).

Table 1- 1: QAA Benchmark Statement – List of Common Knowledge and Understanding

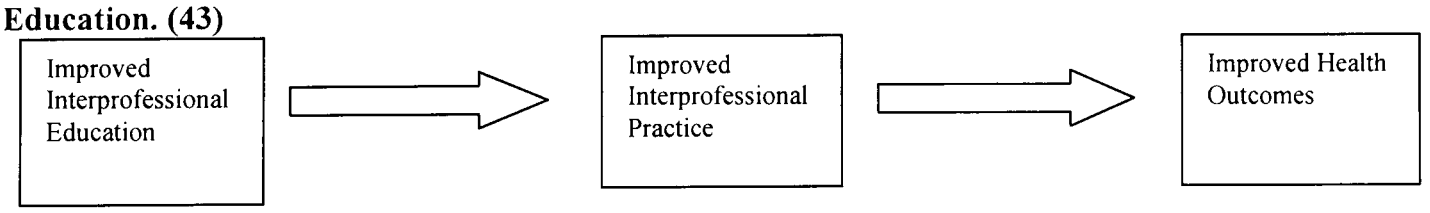
Knowledge and Understanding for Health and Social Care Practice	
• Ethical principles	• Structure, function of human body
• Legislation, professional and statutory codes of conduct	• Physical and psychosocial human growth and development, health education
• Research and evidence-based concepts	• Public health principles

Beyond these basic principles, there is little agreement in the field of IPE regarding curriculum details such as when, where, with whom, and the duration of initiatives to best achieve effective IPE. However, there is a growing body of evidence exploring these issues. A more in-depth review of the evidence supporting IPE will be presented in the next chapter.

1.4 The Relationship between Interprofessional Practice and Interprofessional Education

Despite the support for IPE from government, HEIs and professional regulating bodies, the foundations for its use are still somewhat tenuous. The rationale for promoting IPE is based on the assumption that it will result in improved interprofessional practice. There is a further assumption that this improved interprofessional practice will result in improved health outcomes for patients. This relationship has been illustrated by Stone (Figure 1-1).

Figure 1- 1: The Relationship Between Interprofessional Practice and Interprofessional Education. (43)



Stone argues that there is growing evidence that interprofessional practice can have a positive effect on health outcomes, and cites research done with patients suffering from hypertension, mental health concerns, asthma and in palliative care settings (43). This research indicating positive health outcomes associated with IPP continues to be a growing area in the interprofessional literature. Alternatively, research exploring the assumption that IPE will lead to improved interprofessional practice remains largely unexplored.

This assumption of improved professional practice as a result of IPE is in most of the rhetoric on the topic, although it is not frequently deconstructed. This assumption was noted by D'Amour and Oandasan who stated that:

> What has been hypothesised by many, but not yet proven is the idea that education to provide collaborative competencies to both pre-licensure and post-licensure health professionals will improve patient care outcomes. (12)

Further, Mandy *et al.*, identify that the goal of IPE initiatives suggest that it "will translate into productive relationships in practice" (22 pg 155). However, the authors neglect to cite evidence that graduates of IPE training programmes are able to perform as effective collaborators.

It is difficult to separate IPE from IPP as the two are interdependent (12). As such, Barr *et al.,* admit that it is difficult to establish a conclusive link between effective IPE and improved practice (7). Accordingly, there is little evidence devoted to this relationship. Yet, many authors have identified this limitation in the literature and have subsequently argued that deeper evaluations aimed at exploring the sustainability and transfer of IPE to the professional life of graduates are needed (2;12;43-48).

1.5 Purpose of the Research

The purpose of this research is to explore the assumption that IPE leads to improved collaborative practice. It will seek to understand how newly qualified midwives transfer their IPE training to the sphere of professional practice. The concept of transfer to practice is defined as "the ability to extend what has been learned in one context to new contexts" (49 pg 605). The specific research question of this study is: how do midwives and midwifery educators perceive the transfer of pre-qualification IPE to the professional practice of midwives?

On one level, this research will consider the gap between IPE theory and collaborative practice. However, the theory/practice gap is not a fixed duality (8). For this reason, the idea of looking at how graduates apply training in practice can be difficult to measure. It is not possible to simply look at the end product of how newly qualified professionals practice. Rather, it is necessary to contemplate both the process for acquiring collaborative competencies and the process of role transition

following qualification. As such, this research is not just about the intersection between knowledge and praxis. It also sheds light on the intersection between professional socialization, learners and roles models, and the goals and agendas of service organisations involved in training health professionals (6). This broader view of the context influencing learning and practice is necessary in order to fully understand whether graduates of IPE exemplify effective IPP.

1.6 Outline of the Thesis

The thesis begins with a review of relevant literature regarding transfer to practice, and of other educational concepts that inform IPE. Next, the methodology and methods employed during the research are outlined. Then, building on the foundation laid in these early chapters, the findings from participants will be presented. An emerging theory, drawn from the views of participants, for understanding how newly qualified midwives can apply their IPE theory to the sphere of professional practice is then presented. Finally, the key findings of the research are reviewed along with strategies for implementation. The thesis ends with a discussion of the areas for future research.

1.7 Significance of Research on Transfer to Practice

Ultimately, learning outcomes for IPE or any educational intervention form an important foundation, yet the application of this learning is dependent on the process of using this theory during the early days of professional practice (7). The value of research devoted to the issue of how graduates apply IPE learning in their professional practice cannot be understated. It may be one of the only means by which we can develop an understanding of the success of pre-qualification IPE programmes. Furthermore, insight gained through research on the transfer of IPE to professional practice would clarify issues such as the content and timing of further post-qualification initiatives designed to build on the pre-qualification foundation. As such, research exploring the lasting influence of pre-qualification IPE contributes to the literature and will be invaluable in shaping the development of both pre- and post-qualification efforts in IPE.

CHAPTER 2 LITERATURE REVIEW

2.0 LITERATURE INFORMING THE PROJECT

There are two relevant bodies of knowledge that underpin and inform the theory emerging from this project. The first body of knowledge comes from the literature on IPE. A review of this research provides a background on the evidence to support IPE, yet it also illustrates the void that exists within the literature pertaining to the sustainability and application of IPE training in practice. Many of the IPE initiatives described in the literature draw on the use of educational and sociological theories in an attempt to comprehend the complex processes of teaching and learning and the interactions between professionals. These theories also play a valuable role in understanding the barriers and enablers that influence transfer to practice. Accordingly, educational and sociological theories pertaining to curriculum development and the process of developing proficiency comprise the second body of knowledge informing this project. A review of each of these bodies of knowledge will be presented in this chapter. This foundation will be used to demonstrate the need for the current research by exposing gaps in the literature.

The context of complex service organisations and hierarchical professions also informs this project. A full exploration of the history and function of service organisations and of health professions is beyond the scope of this thesis. However, consideration of the highly bureaucratic nature of the NHS and the frequent reforms to this service will inform the analysis presented in later chapters which addresses organisational barriers to collaboration. Similarly, the bureaucratic structure of health care has preserved the autonomy and dominance of the medical profession (50). The NHS Service and Delivery Programme identified the interconnection between the complex organisational structure of the health care sector and the tensions between different health professions. In their report 'Achieving High Performance in Health Care Systems' they state:

> These 'semi-detached silos' promote technical expertise but preserve the profession's power within an organisation, which can make it more difficult to manage change at whole-organisation level. Occupational silos also conflict with managing patient services in care groups or care pathways. (50)

Further discussion of the role of professional identity and the tensions between professions as a barrier to collaboration and organisational change is

presented in subsequent chapters. This context of bureaucracy and hierarchy, along with the bodies of knowledge presented in this chapter, frame the data gathered from participants and inform the emergent theory.

2.1 IPE Literature

The literature on IPE grows exponentially on a daily basis. A field of research that previously was plagued by a terminology "quagmire," and by isolated, small scale initiatives, has come into its own (34;51 pg 5).

Current literature on IPE now includes a vast array of topics, a much broader spectrum than was seen in the last decade, including program development and implementation, faculty development, student evaluation of pilot projects, service user involvement, and debates such as when and where IPE should occur. The evidence base supporting IPE has also improved over the last decade. In 1999 and 2001, two Cochrane reviews identified that no literature on IPE met the rigorous inclusion criteria (48;52). This is not surprising since these reviews only consider randomised controlled trials and evaluations of statistical significance. However, new areas of research, such as interprofessional working and learning, often begin theoretically, based on more qualitative techniques. Subsequently in 2002, another review, the IPE Joint Evaluation Team (JET), using more inclusive methodological and outcome criteria, identified 353 research studies on IPE (53). Another comprehensive review of this scale done today would no doubt identify a greater number of studies, due in part to the volume of research done on the topic, and also due to the increasing variety of research methods employed.

An initial search of the IPE literature was undertaken prior to beginning this project, with the intention of exploring the known evidence regarding student outcomes from IPE. It was through this review of the evidence of student outcomes that the scarcity of literature on transfer to practice was discovered.

The search used the terms *IPE,* and *IPE AND student outcomes.* It was performed using electronic databases Pub Med, Medline, and ERIC. In addition, hand searches of the *Journal of Interprofessional Care*, government policies, conference proceedings and existing literature reviews were conducted. Attention

was given to publications that evaluated an IPE intervention at either the pre or post licensure level, were in English, and included details of outcome assessment.

In order to move through the literature in a meaningful way, a classification system became necessary. Several systems have been used by other authors. In their review of the IPE literature, Hall and Weaver used two categories of outcomes: system and content (54). They define system outcomes as those pertaining to process such as assessment of timing, teaching methods, faculty development, participant evaluation and institutional support for IPE. Content outcomes focus instead on the skills and knowledge gained by the participants such as understanding role demarcation, group dynamics, communication skills, conflict resolution skills and leadership skills (54). However, Trevillion and Bedford dispute the use of these categories, arguing that they produce overly abstract descriptions that do not capture the experience of IPE (55). They assert that all IPE interventions can be categorised according to the philosophical basis on which the curriculum is built. They propose the terms 'utopian' and 'pragmatic' as typologies for classification (55). Utopian interventions are those whose outcomes are centred around the reconstruction of the self, and the reorganisation of roles and relationships. While IPE interventions that aim to focus on real world issues, understood through practice, such as issues of inequality, miscommunication, and stereotyping are referred to as pragmatic (55).

A more commonly used classification for IPE outcomes was adapted by Freeth *et al.,* and continues to be used as both a helpful classification system of the literature and as a framework for assessing outcomes (7;18;53;56;57). The classification of outcomes is based on Kirkpatrick's typology of educational outcomes (Table 2-1)(7). Research aimed at evaluation of IPE outcomes can be classified according to which of the six outcomes are being assessed. This is the classification system that has been employed in this thesis.

The final step in narrowing the focus of the literature review was to pay particular attention to articles that related to the research question being addressed, which focuses on the issue of IPE transfer to the professional practice of midwives. With this question in mind, it is likely that research aimed at assessing Outcome Level 3, behavioural change, according to the Kirkpatrick modified model will be the most applicable.

Table 2- 1: Kirkpatrick's Modified Model of Education Outcomes for IPE (53)

Level 1	Reaction	Learners' views on the learning experience and its interprofessional nature.
Level 2a	Modification of attitudes and perceptions	Changes in reciprocal attitudes or perceptions between participant groups. Changes in perception or attitude towards the value and or use of team approaches to caring for a specific client group.
Level 2b	Acquisition of knowledge/ skills	Including knowledge and skills linked to interprofessional collaboration.
Level 3	Behavioural Change	Identifies individuals' transfer of interprofessional learning to their practice setting and their changed professional practice.
Level 4a	Change in organisational practice	Wider changes in the organisation and delivery of care.
Level 4b	Benefits to patients or clients	Improvements in health or well-being of patients/clients.

The majority of research written on the evaluation of IPE projects investigates outcomes that fall into the categories of Level 1, Level 2a and Level 2b according to the modified Kirkpatrick model. These outcomes consider issues such as the learners' views of the IPE experience, attitudes and perceptions toward other health professions, including stereotypes, and the knowledge and skills of collaboration gained by the learner. Research assessing these outcomes is more likely to occur at the pre-qualification level (7). However, even a cursory glance at these studies reveals that a minimal number are based within midwifery education.

2.1.1 Level 1 Outcomes

Level 1 outcomes focus on the learners' responses to IPE. An illustration of this type of research was conducted by Pearson and Pandya who found that 86% of participants in their IPE project held high expectations that IPE would be more beneficial for meeting their learning needs than uni-professional education (58).

A questionnaire developed by Parsell and Bligh to assess a student's readiness for interprofessional learning is commonly cited as a tool for assessing Level 1 outcomes (59). For example, a small number of speech and language therapy students participated in an IPE project involving feedback on a screening assessment of communication skills by students from physiotherapy, occupational therapy, nursing and medicine (60). The questionnaire by Parsell and Bligh, was used to show that the students were supportive of interprofessional learning. Specifically, the speech and language therapy students felt that patients would benefit from healthcare students working together to solve problems. The students also believed that shared

learning, with other health profession students, before qualification would improve collaborative relations after qualification (60). Baxter found the initial reaction by students toward IPE to be positive, however, the students were unsure as to how this learning should be incorporated into their training and how it would change their perceptions toward other professions (60).

Nursing and medical students, from the University of Manchester, who took part in two half-day sessions of experiential interprofessional learning centred around 'breaking bad news,' reported that interprofessional interaction was the "most enjoyable feature of the course" (61 pg 141). A similar study also involving medical and nursing students conducted by Morison *et al.*, found that students were positive about participating in interprofessional initiatives, although they felt it should not dilute their unique professional learning (62).

Contrary to the finding that students reactions to IPE are positive, a study done at the University of the West of England involving 852 students from ten different professions upon entry to pre-qualifying programmes, found that students were somewhat negative in their views toward interprofessional interactions (63). In particular, mature students and those with previous experience working in health care settings expressed negative opinions (63). These findings may differ from that of the previous authors because the student respondents had not yet participated in an IPE project (60;61). However, the timing of the questionnaire alone cannot be the sole explanation for the negative views of IPE since another study performed at the University of Bristol, which also involved students prior to commencing an IPE project found that they had somewhat positive expectations that the programme would be useful (64). The students maintained these positive viewpoints in conjunction with knowledge of the potential sources of difficulty in IPE such as negative attitudes, poor communication, lack of respect, and limited understanding of each other's roles.

Level 1 outcome studies are most helpful to the field of IPE when they involve students who have participated in an IPE project, so that the reactions are based on experience rather than speculation. Overall, Level 1 outcomes studies reveal that learner reactions are usually positive with students identifying that they enjoy the interprofessional learning experience (7;60-62;65-68).

While research exploring student reactions to IPE may be a helpful starting point from which to gather further data, research done at the Level 1 classification will not provide information about curriculum design, about the skills or knowledge acquired by the student or about the transfer of IPE to practice.

2.1.2 Level 2a Outcomes

There is a considerable amount of literature devoted to the issue of how IPE modifies attitudes and perceptions. The work by Carpenter has been particularly useful in demonstrating that IPE projects improve attitudes and perceptions of other health professions by diminishing negative stereotypes (64). Other authors, such as Parsell *et al.*, reported similar improvements in attitudes as a result of IPE projects (66). Carpenter asserts that changing attitudes, especially negative stereotypes, is a necessary first step in building a foundation for collaborative IPP (64). However, there are also studies that suggest the opposite is true: IPE projects do not result in diminished stereotypes or negative perceptions of other professions (69). Moreover, Mandy *et al.*, found that IPE initiatives may actually reinforce stereotypical beliefs about other professional groups (22).

One shortcoming of Level 2a Outcomes is that they are strongly influenced by the type of IPE intervention. It is difficult to navigate through this body of research for meaningful outcomes when variables such as the duration of the educational intervention, the number of different professions represented, the interprofessional balance within small groups, the tools used to assess attitudes and the timing of the assessment may be vastly different. Regardless of differences in the findings, the authors who have conducted research into modification of attitudes as a result of interprofessional learning agree that the timing of the IPE project is a critical issue influencing changes in perceptions (22;66). It was found that IPE projects need to occur early in the pre-qualifying curriculum in order to effectively change attitudes (22). This suggestion, for early interprofessional learning opportunities during professional training, has also been supported by other authors, who found that students have preconceptions and stereotypes about other professional groups prior to beginning their pre-qualifying programme (2;70-72). Furthermore, evaluation of students at the beginning of their training has indicated that there may be a positive relationship between signs of high identification with

one's own professional group and willingness to engage in interprofessional learning (71). Therefore, it is important to capitalise on this moment of synergy between professional identification and readiness for interprofessional learning by beginning IPE projects early in the pre-qualification process. These findings contradict earlier research which asserted that professional identity needed to be well established before commencing interprofessional activities to prevent role insecurity (73).

2.1.3 Level 2b Outcomes

There is a transition in the literature evaluating pre-qualification IPE, moving away from Level 1 and 2a outcomes toward the assessment of skills needed for collaboration. This is likely due to the fact that government incentives have petitioned for pre-qualifying IPE and as a result, curricula must be designed and evaluated. Curriculum design in the field of health and social care often begins with a list of competencies or capabilities that graduates are hoped to have acquired during their training (74).

Barr was one of the first to attempt to define the competencies for IPE (75). Another example of this research is the capability framework created as part of the Combined Universities Interprofessional Learning Unit (CUILU) project (76). This framework is intended for use in the practice setting when students participate in interprofessional placements. It is hoped that the acquisition of the capabilities in a practice setting will facilitate an increased likelihood that students will be able to use the same capabilities in professional practice. However, to date this portage of capabilities to professional practice has not been explored.

The assessment of outcomes such as the acquisition of knowledge and skills needed for collaboration is best reflected in the growing number of projects devoted to practice-based or simulated-practice-based interprofessional learning. The clinical course at the Linkoping in Sweden was one of the first examples of such a project (77). A similar model was conducted in the U.K. (78). Both projects reported that students valued the hands-on experience gained in the clinical setting, developed improved skills in communication and reflection, and acquired a deeper appreciation for the role of the patient (77-79).

Within the context of midwifery education, there are two studies which have used simulated-practice-based interprofessional projects. The authors of these studies

found that students developed increased knowledge of the roles, responsibilities and training of other professions and enhanced team-work skills (45;80). These findings also reflect the changes in knowledge and skill following participation in IPE found during a systematic review by Barr *et al.,(7)*.

2.1.4 Level 3 Outcomes: Review of Research on Transfer to Practice

Despite the evidence that pre-qualifying IPE may be able to modify attitudes and provide knowledge and skills for collaboration, this tells us little about whether these new skills and attitudes can be transferred to professional practice (7). Research aimed at this endeavour typically falls into Level 3 on the modified Kirkpatrick classification.

Notwithstanding the need for research regarding this issue, there remains a dearth of studies devoted to this topic (43;45;52;81). Zwarenstein *et al.*, contend that although there is at present no reliable evidence for the effectiveness of pre-qualification IPE, more evaluation is needed (52). Specifically, research that considers the sustainability of changes in the professional life of graduates is needed (2). Additionally, Hean points out that despite the substantial amount of research demonstrating changes in attitude and stereotypes, it remains unknown whether these changes will persist over time (2). Moreover, in the systematic review conducted by Barr *et al.*, it was discovered that the studies assessing the impact on practice tended to focus on assessments of behaviour change, such as cooperation or communication (7). The studies did not address the transfer of these behaviours into professional practice. In addition to the concern regarding the scarcity of research, it is also worrying that the research done to date on transfer to practice has been according to Barr "poorly conceptualised and operationalised"(7 pg 78). For example, a recent study evaluating an IPE initiative at a Danish training unit argues that participants learned about team-work and gained an understanding of professional roles. However, the descriptions of research methods do not provide enough detail of when the follow-up with participants occurred after participating in the project and of what outcomes were being assessed (82).

Unfortunately, many studies claiming to explore this issue do so by asking students to speculate about how they anticipate they will use their IPE training in practice (83). For example, a group of 442 first year undergraduate students who

took part in a voluntary IPE curriculum felt that interprofessional initiatives were "going to be useful in the future" and helped them to know "what is expected" for interprofessional working (84). These findings are valuable for providing insight into motivation for participation into IPE projects, however, they merely represent hypothesizing about the challenges of professional practice from those who have not yet experienced it.

Despite these limitations, there are ten key research studies exploring the concept of transfer to professional practice (Table 2-2). The small number of studies exploring the potential lasting benefit of IPE interventions on professional practice did so through follow-up studies and longitudinal evaluation. It is likely that this body of research will continue to grow in the coming years as the schools that are currently running IPE curriculums begin to graduate students.

One of the first studies to examine the effect of undergraduate IPE on professional practice took place at the University of Liverpool (84). The IPE intervention was a two-day course for final year undergraduate students from seven health profession disciplines. A follow-up study was done at the end of the students' first year of professional practice to determine the effect of the interprofessional course on their professional practice. Fifteen participants representing all seven of the professional groups were interviewed regarding their recollections of the course and the perceived outcomes of the course. The participants reported that they had gained knowledge of other professions during the course which had helped them in their work. Specifically, they articulated that this knowledge had led to more appropriate referrals to other professionals, improved understanding of the skills of each profession and of the pressures that each profession faces, increased confidence in approaching other professions, and an improved awareness of holistic patient care. Participants also reported that, although the course may have reinforced negative stereotypes of other professions, their professional work had resulted in fewer negative attitudes toward other professions. This finding that the project reinforced negative attitudes may be a result of the short duration of the IPE intervention and the late introduction of these concepts during the students training.

Table 2- 2: Summary of Studies on Transfer to Practice

Author(s)	Date	Length of Project	Professions involved (#)	Total (#) participant	Time of follow-up	Data Collection
Leaviss	2000	2 day workshop	7	15	End of first year of practice	Telephone interview
Milne *et al.*	2000	8 day workshop	4	48	3 months after intervention	Questionnaire
Reeves & Freeth	2002	4 week placement	4	36	1 year after intervention	Questionnaire
Kilminster *et al.*	2004	3 day workshop	3	28	2 months after intervention	Interview
Pullon & Fry	2005	1-3 day workshops	7	153	0 months to 3 years after intervention	Questionnaire
Carpenter *et al.*	2006	2 year programme, part time	8	126	At end of 2 year programme	Interviews, focus groups, questionnaires
Pollard *et al.*	2006	3 year program	10	581	At qualification, 9 months after qualification	Questionnaire
Bayley *et al.*	2007	2 day workshop	7	110	Immediately, 3 and 6 months after intervention	Questionnaire, telephone interviews
Hylin *et al.*	2007	2 week placement	4	633	2 years after intervention	Questionnaire
Morison & Jenkins	2007	3 cohorts: no IPE, IPE lecture only, IPE lecture and 6wk placement	2	171	1 year after intervention	Questionnaire

A pilot project at the University of Leeds involving 28 students from nursing, pharmacy and pre-registration house officers had similar findings (85). At two months after participation in three IPE workshops, the participants reported improved communication skills, improved understanding of professional roles both their own and others, and improved referral and consultation with other professions. Specifically, the nurses and pharmacists reported "more interaction with doctors," and all participants were more willing to ask for, and offer, advice to others (85 pg 724). The authors suggest that the initiative was successful in meeting its learning outcomes because the workshops were based on clinically realistic scenarios, relevant for all the professions, the participants were near the time of qualification, and the context of the workshops was work-based and involved team-working (85).

Both Reeves and Freeth and Hylin *et al.*, conducted follow-up studies after the conclusion of their training ward projects mentioned in the discussion of Level 2B Outcomes (46;86). Both projects involved teams of pre-qualifying students from

four professional groups who planned, delivered and cared for patients on a hospital ward. The duration of the placement was four weeks in the Reeves and Freeth study and two weeks in the Hylin *et al.*, study. Both projects asked participants to complete a follow-up questionnaire after the placement. Reeves and Freeth conducted the questionnaire one year following the placement, while Hylin *et al.*, surveyed the students at two years post-placement. The aim of these follow-up questionnaires was to determine if the training ward initiative had any effect once the students were in clinical practice. Reeves and Freeth found that, overall, the students felt the training ward experience had been valuable preparation for their professional practice. In particular, the students valued the knowledge and experience they had gained of planning and delivering patient care, of other professional roles and of a practical understanding of interprofessional team-work. The authors assert that a clinically relevant IPE project provides "helpful experiences of collaboration which [students] can draw upon in the early part of their clinical careers" (46 pg 50). Hylin *et al.*, also identified that participants felt positively about their participation in the training ward (86). The participants articulated that they had learned about their own role and those of others and how to work in teams. The authors also cite descriptions of how the former students had used this interprofessional training during their communication with other professionals following qualification. Finally, participants described how lack of time, organisational issues and workplace patterns prevented them from encouraging team-work in their present clinical practice (87).

A longitudinal, qualitative study by Pollard *et al.*, followed 581 students from ten professional groups throughout a three-year IPE program. Questionnaire data collected at the time of qualification and nine months following qualification found that students who participate in pre-qualification IPE had more positive attitudes toward collaboration at the time of qualification, particularly with regard to professional relationships (63). This study also found that life experience and academic confidence enhances the ability to transfer interprofessional skills to the practice setting. During a similar follow-up study, Salmon and Jones found that IPE resulted in participants actively seeking out the contributions of other professionals when planning the organisation of care (81). Also, participants developed an understanding of how their field of practice fit into the larger context of health care services (81).

A study from Belfast, by Morison and Jenkins, provides a valuable perspective on the sustained effects of IPE after qualification (88). They followed three groups of students through their pre-qualification training and then followed-up again at one year post-qualification. The first group of students received no IPE during their training. The second group of students participated in classroom-based IPE, and the third group of students participated in a blended IPE, incorporating both classroom and practice components. The nursing and medical students who participated in the project completed a questionnaire "designed to assess their attitudes to shared learning, team-work and interprofessional communication and to help determine whether the experience of shared learning had any sustained effects" (88 pg 451). The researchers found that one year after qualification, there was no difference between the group with no IPE and the group with only classroom IPE in terms of their views toward collaborative practice. However, those students who participated in the combination IPE felt that it had strengthened their learning of their own role and the roles of others, and it had fostered skills in team-work and communication. Further, one year after qualification, the students in the combined IPE group were able to recognise the importance of IPE, and were more team-oriented in their approach to clinical practice. Only the group of students with the combination of classroom and clinical IPE were able to apply their knowledge in practice and to demonstrate a deeper learning of the interprofessional capabilities.

Although the literature regarding the sustainability of pre-qualification IPE is limited, there is a growing body of evidence, which suggests that post-qualification IPE may have a significant impact on the clinical practice of health professionals. A key example of this is a longitudinal study by Carpenter *et al.*, (57). The IPE project involved a two year program for students training in community mental health services. Level 3 Outcomes were assessed at the end of the second year through focus group discussions with students and with team managers in the workplace, and through individual interviews with students following completion of the course. Students who had participated in the project were found to have a higher propensity for role conflict when compared with other colleagues. The authors suggest that these students are more likely to challenge the status quo in their professional practice as a result of this role conflict. The interview data also suggested that students found the demands of the program to change practice and implement learning had increased

their difficulties in professional practice. At the same time, the participants found themselves to be an assertive member of the team.

A post-qualification study conducted by Bayley *et al.*, involved a two-day workshop with follow-up of the participants immediately after the completion of the project, three months later and six months later (89). This study found that participants demonstrated an improved understanding of team-work and of the roles of other professionals in the first three months following the workshop. However, these beneficial effects had disappeared by the six month time point. The participants identified that workplace demands prevented successful translation of their training into action (89).

A similar study done in New Zealand, involving professionals from seven different health and social care occupations, found that, when asked about the impact of IPE, 92% of participants thought their professional practice had improved, 68% reported a positive influence on their workplace practice, and 79% had increased their understanding of another profession's skills or competencies (90). However, the time between the IPE intervention and participation in the research questionnaire was inconsistent. Consequently, it is unclear if these results are speculation about what it might be like when the participants return to professional practice, or if they represent their reflections after a period of time has elapsed.

The research done by Milne *et al.*, also exhibited minimal time between the intervention and the follow-up (90). A follow-up study was conducted only three months after an IPE intervention involving 48 mental health professionals. Although the researchers found a statistically significant increase in interprofessional competency following training, it is difficult to know if these effects will be sustained over time.

Despite the small number of these studies, the findings appear to be consistent with other literature from the field of health profession education examining the transfer of training to professional practice (91-93). In particular, most research on this topic shows that understanding the roles and relationships between other professionals and understanding role transition, including incorporating new knowledge and new responsibilities, are key issues that affect how graduates turn theory into practice (92). Additionally, this time of transition can be frustrating for

newly qualified professionals as hierarchy within a workplace can prevent their ability to bring about change (7). In discussing the issue of application of IPE theory to professional practice, Barr *et al.*, are careful to point out that it may not be realistic to expect newly qualified professionals to be agents of change within a workplace (7). However, they suggest that pre-qualification training in IPE can create graduates who are receptive to innovation and who can respond to change in the workplace (7).

Most post-qualification studies which focus on the transfer of inter-professional learning to professional practice, fall under the category of Level 4a and Level 4b Outcomes in the modified Kirkpatrick model with a broader attention to organisational changes in practice. There is some evidence that post-qualification initiatives have been successful in improving IPP, and therefore may provide insight into possible pre-qualification transfer to practice (81). These studies will be discussed in the next section.

2.1.5 Level 4a and Level 4b Outcomes

Insight into the portage of IPE to professional practice can be gained through a review of the literature focused on Level 4a and Level 4b Outcomes. Since it is difficult to assess changes in professional practice, it may be necessary to look at the research demonstrating changes in patient outcomes and organisational practice as an indication of improved IPP as a result of IPE. The majority of this research comes from post-qualification projects. It may be easier for those already in practice to bring about change within the workplace. They may have different motivation for undertaking IPE training and they may be in a position of greater power than a newly qualified professional.

Examples of changes in organisational practice, or Level 4a Outcomes, can be seen in several studies. Salmon and Jones found that IPE resulted in participants actively seeking out the contribution of other professionals when planning the organisation of care (81). Also, participants developed an understanding of how their field of practice fit into the larger context of health care service. The study by Carpenter *et al.*, introduced previously, which involved longitudinal data on post-graduate students in community mental health, also found evidence of changes in organisational practice (57). Moreover, this study demonstrated that there was perceived benefit to service users in regard to social functioning and quality of life

(57). This finding would be classified as a Level 4b Outcome, or those which refer to changes in patient outcomes. A systematic review conducted in 2005 of the post-qualification literature also supports these findings (17). The authors concluded that there was reliable evidence of a positive effect on patient care. The authors state that interventions can have a positive effect on the delivery of care in a range of areas, including: geriatric evaluation and management; congestive heart failure: neonatal care and screening" (17 pg 154; 52).

2.1.6 Summary of the IPE Literature

The review of the interprofessional learning literature highlights several issues. First, there is evidence to support positive reactions by learners to interprofessional learning, and changes in students' attitudes and stereotypes following participation in interprofessional learning initiatives (76). Furthermore, students who participate in IPE appear to gain the knowledge and skills required for collaboration, while at the same time, clients and patients appear to benefit from interprofessional team-work (94).

However, the review of the literature has also highlighted the dearth of research devoted to the topic of whether newly qualified health professionals will transfer their learning from IPE projects into practice. In addition to the small number of studies that have been done on the topic of transfer, there are further limitations of the research that has been done to date. For example, the studies have been small in scale, the IPE interventions have been short in duration and not sustained over time, and the time elapsed between the intervention and the follow-up has not been long enough to allow for adequate reflection on practice (90;93). Another weakness of these studies is the reliance on self-report data collection. Although this method can provide insight into the personal experiences of participants, there is also a need for the inclusion of additional perspectives such as testimony on staff competence, such as reports from clinical supervisors" as suggested by Milne (90 pg 99). Moreover, despite the fact that interprofessional team-work is essential in maternity care services due to the need for rapid, complex responses requiring extensive skill, there seems to be a paucity of research on IPE that includes maternity care providers, especially midwives (90;95;96). These

shortcomings of the literature make it difficult to determine the influence of pre-qualification IPE on the professional practice of midwives.

2.2 Educational Theories Underpinning IPE

Educational theories have been used to support the pedagogy of IPE in an attempt to improve the credibility of this new educational paradigm. These theories have been borrowed from various health disciplines and from the fields of sociology and social psychology (7). However, there is little agreement in the literature about a 'universal' theory for IPE. Rather, multiple theories continue to be used to support curriculum development.

In a review of the IPE literature, Barr *et al.*, identified 24 out of 107 studies making explicit reference to a theory (7). Yet, these authors also noted "widespread implicit use of the general tenets of adult learning theories" (7 pg 121). Knowledge of the principles of adult learning theory and of other theories such as experiential learning theory, reflective practitioner theory, the contact hypothesis, and social identity theory is useful for promoting an understanding of interprofessional learning. Each of these theories will now be reviewed.

2.2.1 Adult Learning Theory

Adult learning, or andragogy, was first described by Knowles in the 1980s (97). Andragogy was intended to describe the process by which adults learn. There are commonly thought to be seven principles of adult learning. They can be summarised as (7;97-100):

1. The need to know: adult learners are self-directed and autonomous.
2. Learners self-concept: an adult learner has a self-concept of being responsible for their own life and decisions.
3. Role of learner's experiences: the adult learner's life experiences influence how they learn and what they learn.
4. Readiness to learn: adult learners need to be ready to learn. They become ready when they identify something they do not know that would help them cope with their current situation.
5. Orientation to learning: adult learners engage in learning when it is problem-centred, task-oriented and perceived to be relevant.
6. Motivation: adult learners are motivated by internalised pressures not external motivators.

7. Safe learning environment: adult learners thrive in a safe learning environment where they can actively plan, control, evaluate their learning through dialogue with others.

Adult learning encourages active learning grounded in the experience of the learner and aimed at application to relevant personal situations (100). From this description and the principles previously outlined, it is evident that adult learning is supported by other educational measures, such as self-directed learning, and problem-based learning and their variations - enquiry-based learning, and guided discovery learning. In keeping with adult learning, in problem-based learning or enquiry-based learning, "learners identify gaps in their knowledge and/or skills, agree what information is needed to fill them, locate sources, assign tasks and pool findings to resolve the problem" (7 pg 95).

The principles of adult learning have significant implications for the role of teachers. Instead of taking on the role of expert and being responsible for transmitting knowledge to students, the role is more akin to a facilitator; one who is responsible for creating a learning environment that supports students to develop their own knowledge.

It is anticipated that adult learning principles create a deeper and more permanent knowledge and understanding than traditional educational methods (7;66). Adult learning theory has been a central tenet of most health profession education programmes and continuing education programmes for practicing health professionals for over twenty years.

These same principles, and the goal for deep and meaningful learning, have been seen as being essential components in IPE programmes. For example, Barr *et al.*, remind us that active learning, a principle of adult learning, is reflected in the definition of IPE (7). The authors summarise adult learning as being "problem-centred, cyclical, situated, shared and intimately entwined with doing" (7 pg 122). They go on to contend that if IPE is based on adult learning it will succeed so long as "collaboration matters to participants, the educational experience is active, valuing and building upon prior knowledge and practice experience, and is recognised as relevant to participants' developmental needs" (7 pg 123). This is a critical statement as it reminds those who are designing and evaluating any IPE curriculum that the

motivation of learners, the relevance of content and the application to practice are significant in determining success.

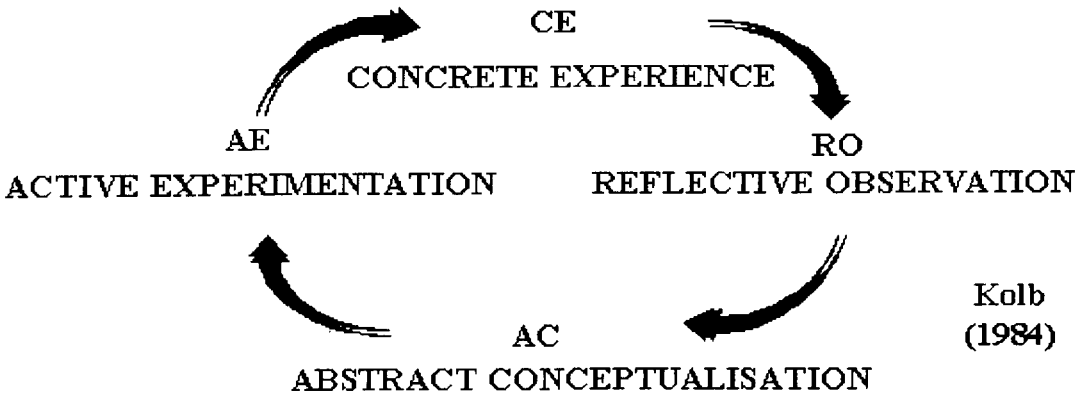
2.2.2 Experiential Learning Theory

Experiential learning has also been cited by many authors as an educational theory underpinning IPE initiatives. Experiential learning theory posits that learning is the process "whereby knowledge is created through the transformation of experience" (101 pg 41). This theory stresses the process of learning, rather than learning being a result of cause and effect mechanisms.

Kolb described a process of learning comprised of a four stage cycle (Figure 2-1). In his cycle, learners move through the phases of concrete experience (CE), reflective observation (RO), abstract conceptualisation (AC), and active experimentation (AE) (102). This process involves students participating in new experiences (CE), then reflecting on and observing their experiences from another perspective (RO), then creating concepts that integrate their observations into logical theories (AC), and then, finally, they use these theories to solve problems (AE) (66;103).

Similar to adult learning, it is anticipated that experiential learning results in deeper learning. This deeper learning is encouraged through a flexible, learner-centred approach. Active involvement of students in the learning process, an emphasis on personal reflection, and the use of real world examples help integrate theory and practice (103;104).

Figure 2- 1: Experiential Learning Cycle, Kolb (101)



Within an educational context, the use of experiential learning in curricula translates into simulation-based learning, service-learning opportunities, role play, case scenarios and problem-based learning as methods for teaching and learning (49;66).

Experiential learning theory provides two valuable contributions to the pedagogy of IPE. First, the importance placed on the learning process rather than outcomes and on tangible experiences is particularly useful for IPE. This lends support to the creation of a context where different health professionals come together to learn, grounded in real clinical situations (103). Second, Kolb identified that certain professions demonstrate competency in certain domains of the learning cycle over others. For example, traditional sciences often have aptitude in abstract conceptualisation (AC) and active experimentation (AE), while those in service-based disciplines have aptitude in concrete experience (CE) and reflective observation (RO) (103). This indicates that professional socialisation processes have a powerful effect on learning styles. The interface between professional socialisation and learning is an important consideration for IPE curriculum development and evaluation.

2.2.3 Reflective Practitioner Theory

The ability to reflect on one's learning is inherent in both the processes of adult learning and experiential learning. Reflection is a key educational concept that has become central in both uni-professional education for health professionals and IPE (100). The concept of developing professionals who are capable of reflecting on their actions was originally described by Dewey, but has been best articulated by Schön (105). He argued that the formal theory of traditional professional education did not prepare students for the new, complex and 'swampy' problems encountered in professional practice (18;66;97).

These complex issues require the ability for two kinds of reflection. First, students need to engage in 'reflection-in-action.' This occurs immediately when confronted with a challenging situation (97). In this way, learners can reflect on and change what they are doing while in the process of engaging in practice (18). Likewise, learners need to demonstrate 'reflection-on-action,' where they reflect back on the experience after it has passed in order to understand the events and make

decisions about how to approach this situation if encountered again (18;97). As a result of this ability to reflect both in and on practice, the reflective practitioner is "able to recognise and tolerate the uncertainties and limitations of actual practice" (103 pg 584).

The process of becoming a reflective practitioner is grounded in the need for a reflective practicum or, an opportunity to experience reflection in practice (105). Schön argues that school-based professional training places priority on "knowing that" or technical rationality over "knowing how" (105). Accordingly, a reflective practicum based in a real practice setting is needed in order to cultivate skills in reflection and knowing how. The reflective practicum, similar to adult learning, emphasises a facilitator or mentor as teacher rather than a lecturer or instructor (105).

As described above, reflection is a key strategy for approaching complex situations or confusing problems. Oandasan and Reeves argue that IPE could be conceived as a complex situation to which reflection could apply (18). They cite professional hierarchy, role divisions, decision-making and communication as examples of complex issues encountered during interprofessional working and learning (18). Clark also asserts that reflection underscores the need for both theoretical and "artistic dimensions of professional practice," which are required for collaborative working (103). Finally, the need for experience in practice as articulated by Schön lends support to practice-based IPE for health professionals.

2.2.4 Contact Hypothesis

The contact hypothesis, or contact theory, is frequently cited in the literature as a theoretical foundation to support IPE projects. This theory was developed within social psychology as a means to explain prejudice between different social groups (7). Allport, the original contact theorist, asserted that under certain conditions, contact between members of different social groups could minimise tensions and prejudice (7;106;107). This contact needs to be properly managed in order to be effective (106;107). In fact, superficial contact or contact not managed appropriately may actually reinforce stereotypes (107). Allport warns that casual contact between in-group and out-group members may "leave matters worse than before" (107 pg 264).

The optimal conditions to minimise prejudice during contact include equal status between groups, working toward a shared goal, and institutional support (7;107). Modern contact theorist argue that when these conditions are adhered to contact between members of different social groups has a reliable and independent effect on minimising stereotypes and prejudice (108).

Within the context of IPE the list of optimal conditions for contact has been expanded to include positive expectations by participants, a positive and successful experience of cooperation, a focus on understanding difference, participants seeing 'others' as typical rather than exceptions of their professional group, and institutional support as variables to promote successful contact (7;76;106;109). As discussed in the review of the IPE literature, there is some evidence that when these conditions of contact are successfully adhered to, the contact between different interprofessional groups can minimise negative stereotypes (64). There is also evidence that, when the conditions of the contact hypothesis are not met, the same change in attitudes and stereotypes does not occur (106;110).

Hean and Dickinson argue that contact theory can be used when developing and implementing IPE projects (106). Specifically, the conditions required for successful contact between groups can be used as core principles for curricula. However, creating the optimal conditions for successful contact may be challenging for IPE projects because, although there is control over creating an optimal climate for contact within the educational institution, students may find themselves in clinical settings for placements that do not adhere to these same conditions (106). Also, Hewstone and Brown warn that in-group members may discount positive experiences by seeing individuals as the exceptions to the rule and therefore not experience a modification of beliefs about all members of the out-group (111). Another limitation of the contact theory`s application to IPE is that it focuses exclusively on the interactions between individuals and makes no mention of the larger social and systemic influences that can impact attitudes and stereotypes (106). Thus, although contact theory has been influential in the IPE literature and provides the theoretical underpinnings for many IPE projects, it cannot, in isolation, provide the necessary mechanisms to create effective interprofessional working and learning.

2.2.5 Social Identity Theory

Social identity theory is also drawn from social psychology. This theory is based on the notion that individuals "derive their definition of self from their group memberships" (106 pg 482). As such, individuals perceive themselves according to shared characteristics within their social group (112). This shared social identity of the group provides a positive identity over other groups (112;113). Viewing oneself according to group membership is thought to satisfy the need to belong and to achieve a positive identity (113). As a result, individuals favour their own group over outside groups (113). This favouring of the in-group over the out-group is believed to be a cause of stereotypes, prejudice and discrimination between opposing groups (100;113).

Tajfel and Turner, the originators of the social identity theory, saw Allport's contact theory as being too individualistic as it ignored the impact of group membership on prejudice (113). Thus, rather than simply encouraging contact between different social groups, social identity theory argues that the best way to minimise discrimination is to create a shared group identity among members (113).

When applied to interprofessional working and learning, the social identity theory has been used to describe interactions between different professional groups. For example, Colyer argues that the favouring of the in-group over the out-group explains the conflicts between professional groups and poor interprofessional working (112). There is "an interpersonal-intergroup continuum where individual health professionals define themselves according to their occupation group" (100 pg 235). Individuals then attempt to maintain this personal and collective identity based on their occupational group (100). The conflict between professional groups comes when "different professional 'tribes' seek to maintain" their in-group identity (112 pg 128).

It has been proposed that social identity theory, in addition to explaining possible grounds for professional rivalries, may be helpful in developing IPE initiatives. In order to use the social identity theory to improve interprofessional working and learning, it is necessary to create a common in-group identity that unites various professions (112). This promotes a shared sense of belonging to a larger group of health professionals rather than to individual professional groups (112).

Another postulated use of social identity theory within IPE is as an outcome measure which can be empirically tested (114).

The social identity theory challenges some of the concepts articulated in the contact theory. For example, the notion of bringing together different groups as proposed by the contact theory warrants careful consideration if these different groups carry with them the in-group identity and preference described in social contact theory (106).

2.2.6 Summary of Educational Theories Underpinning IPE

The theories described here – adult learning theory, experiential learning theory, reflective practitioner theory, contact theory, and social identity theory – are the most frequently cited educational theories used to support IPE projects. There are other theories that appear less frequently in the IPE literature. They have been summarised by Barr *et al.,* (7). Table 2-3 outlines the key concepts of these theories.

The short-coming of most of the theories discussed in this chapter and in the table above is the focus on the individual and their behaviour and attitudes. They fail to consider the impact of social systems of power, status, and leadership, or the impact of policy and organisational strategies on working and learning.

Table 2- 3: Additional Theoretical Perspectives Summarised from Barr et al., (7)

Theory	Central Idea
Realistic Conflict Theory	Inter-group attitudes reflect shared objectives. Divergent objectives cause hostile inter-group relationships.
Social Exchange Theory	Individuals act favourably in social relations based on calculation of a return of similar benefit. The result may be incurring obligations or indebtedness.
Cooperation Theory	Individuals do better by cooperation than when working alone, without cooperation there is a loss to both parties and can bring on retaliation.
Relational Awareness Theory	Predominant motivational style is 'altruistic-nurturing,' but in conflict situations it becomes 'analytic and autonomizing.' Working environment needs to be controlled to reduce this counterproductive behaviour.
Social Defence Theory	Individuals ability to collaborate decreases during times of anxiety and stress. Denial and projecting onto others become coping mechanisms.

A full analysis and comparison of these relevant theories is not the intention of this chapter. Rather, it is hoped that this overview of theories will encourage an understanding of the various pedagogies underpinning many IPE projects. This understanding provides a useful background for the analysis presented in future chapters.

2.3 Educational Theories of Professions and the Transition to Practice

In addition to exploring the educational theories for teaching and learning that have been used to support IPE curricula, it is valuable to examine within the educational literature, the process of professional socialisation and its impact on IPE efforts and key models which have considered how students apply learning to practice.

2.3.1 Professional Socialisation

According to Freidson, a profession is "an occupation that controls its own work, organised by a special set of institutions" (115 pg 10). Professions are sustained by a unique ideology and expertise (115). The growth of critical analysis of professions in the 1960s began to shift thinking away from the altruistic nature of professions. Instead, researchers examined the political influence of professions, the relationship between professions and power, the influence of professions on the market, and the class and gender structures within professions (115-118). Some theorists began to examine how professions gain and maintain power within society. For example, Illich asserted that by creating a monopoly over a body of knowledge and by mystifying their expertise professions gain power and control (119). Larson argued that professions create a need for their services and at the same time create a scarcity of resources by restricting training and licensing of new members into the profession (117). Both Parkin and Witz explored these tactics further by considering professional closure strategies or ways in which professions mobilise power in order to gain control over resources and opportunity (118;120). A unique body of knowledge, access to an exclusive clientele, and autonomy over a specific skill set are ways in which closure strategies help a profession to take control over their occupation (120).

Subsequently, professions begin to define the boundaries of their occupation. Professions use boundaries to promote their unique ideology (121). These boundaries also serve to mark the contrast between rival professions (121). The boundaries and the quest for autonomy and control have created traditional hierarchies and silos between professions each defined by their unique identity, values, and scope of practice.

Each unique professional world view is then taught and reinforced through the process of professional socialisation and educational training (54). Professional socialisation is the process for acquiring the knowledge, skills and values associated with one professional culture (122). This process takes place during professional education resulting in 'occupational neophytes' who can convince "others and themselves that they possess the expertise and the personal qualities" of the occupation (123 pg 245). For example, seeing others in clinical practice, reflecting on what has been observed and mirroring that behaviour are key ways in which health profession students learn about their profession and how to conduct themselves to fit within that profession (124). Professional socialization fosters the development of both a cognitive map representing the knowledge base of a profession and a normative map representing the values and morals of the profession (103). Professional identity develops as a result of professional socialization.

The history of professions and the process of professional socialisation and identity formation have a significant impact on the development and success of interprofessional education. The traditional boundaries between professions have been reinforced by the separation of professional training programmes within educational institutions. Also, there has been considerable debate about the intersection of IPE and the development of professional identity. For example, there is some thought that an early introduction to IPE may help prevent the development of a rigid and elitist professional identity. There is little doubt that professional ideologies have been a significant barrier to collaborative working and learning and warrant further examination within the field of IPE.

2.3.2 Skill Acquisition and Transition to Practice

Models of skill progression describe how learners acquire skills, and then transition through a process whereby they become experts able to use these skills proficiently in practice.

Schön articulated how professionals need to have opportunities for both learning to 'know that' and to 'know how'(105). He advocated for learning in practice so that professionals have the opportunity to develop skills in reflection, both 'in' and 'on' action. This process of reflection has been seen as a critical component of how learners develop the artistry of their profession (105).

In addition to the literature on becoming a reflective practitioner, the Dreyfus Model is frequently cited as an explanation for how professionals become proficient in practice (125). This model is comprised of five levels of proficiency: novice. advanced beginner, competent, proficient and expert (125-127). The novice professional exhibits rigid adherence to rules and lacks discrete judgment. The advanced beginner separates aspects of their work and gives equal importance to all tasks. Their situational perception is still fairly limited. Competent professionals are characterised by conscious deliberate planning and their ability to cope with multiple activities and sources of information. These skills develop further into the ability to take a holistic view of situations while also prioritising tasks. These are characteristics of the proficient professional. Finally when a professional has become an expert they no longer rely on rules and guidance. They demonstrate an intuitive grasp of situations and tasks, and have a broad vision of what possible outcomes may occur in any given situation (125). During the transition from novice to expert, the individual moves from reliance on abstract principles to using concrete experiences from past learning. Next, the learner's perceptions change such that they begin to see a situation as a complete whole rather than as a series of discreet parts. Finally, the learner ceases being a detached observer and instead becomes an involved performer who is active in the situation (125-127).

This model has been particularly useful within health profession education because of its emphasis on learning from experience (127). For example, Benner's analysis, based on the Dreyfus Model, was pivotal in the field of nursing education for defining the skill development at each of the levels of proficiency and the accompanying implications for teaching and learning at each level (126).

Eraut also based his work on the Dreyfus Model, but argued for the inclusion of tacit knowledge and intuition as components of expertise (127;128). Eraut argued that the model of progression for most professions needed to include the period before and soon after qualification. This recognised that the progression toward professional competence continues to develop on the job and can be applied to those in later stages of their career as a pathway for career progression. The continuation of the process after qualification allows for opportunities to extend competence to a wider spectrum of situations, to become more independent, to have certain tasks become more routine and to cope with a heavier workload (128). This process is

summarised by professionals moving from awareness to understanding, to ability to do, then to competence, excellence and finesse (128).

Boud is another theorist who has influenced the understanding of how professionals learn within a practice or workplace setting. Boud advocated for reflective learning within the workplace, and similar to adult learning theory, he stressed the importance of the learner and the learner's intent as key factors that influence motivation and stimulus for learning (129). Likewise, experiential learning in the workplace is an essential component for facilitating learning and reflection (129;130). Experience, both prior experiences and those gained by learning at work, is both the foundation for and stimulus of learning (131). Boud argued that learning in practice should not be confined to the traditional professions, but rather that workplace learning promotes the development of enterprise by contributing to production and the development of individuals by contributing to the acquisition of knowledge, skills and the capacity to learn. Thus workplace learning benefits both the organisation and the learner (130). Learning at work and from hands-on experiences provides a way to facilitate deeper learning and is a necessary step for translating theory into practice (130).

Several key models for attaining professional expertise have been presented here. These models are valuable to the current research for two reasons. First, it makes explicit the different types of knowledge that are required for professional practice: knowing that and knowing how, or as described by Kinchin *et al.*, expert knowledge and expertise in applying knowledge (127). Second, it delineates learning as a process that occurs over time and in a progressive manner. The exact process of applying knowledge to practice and developing professional expertise remains unknown. So too does the nature of the progression, whether it is linear or cyclical. The socially constructed nature of professions, education and health services, may mean that it is not possible to have a fixed and universal process for developing professional competence. Yet, attention to this process, including the development of professional identity, the acquisition of technical skills and the interface between the academic institution and the sphere of professional practice in influencing professional competence, is a worthwhile endeavour for any educational programme, but especially in the case of IPE where this process remains unexamined.

2.4 Summary of Literature Informing the Research

The aim of this chapter was to review the bodies of knowledge that have informed this research project. The review of the IPE literature using the Kirkpatrick model of educational outcomes, the review of the educational theories underpinning IPE curricula, and the examination of theories of attaining professional identity and proficiency have provided a background understanding of interprofessional learning which will be essential during the analysis presented in future chapters. However, more significantly, this review of the literature has illustrated the scarcity of research regarding how graduates apply IPE theory to professional practice. The current research will attempt to fill this void in the evidence by describing how students who participate in IPE are able to acquire the necessary skills for collaboration and then effectively apply them to professional practice following qualification.

CHAPTER 3 METHODOLOGY

3.0 THEORETICAL ASSUMPTIONS OF THE RESEARCH

This research project began to take shape following an exploration of the evidence within the IPE literature pertaining to student outcomes. Examination of this literature, reveals that little is known about the lasting effects of IPE or whether the investment of time and energy in this new endeavour translates into health professionals who are able to work collaboratively. It is recognised that this research question could be explored using many different research methods. However, underpinning the selection of research methods is the research paradigm.

Guba and Lincoln define the research paradigm as the basic belief system or worldview that guides the investigator" (132 pg 105). They suggest that a researcher must not begin the process of inquiry without examining and understanding the paradigm that guides their work (132). To that end, the ontological, epistemological and methodological ideologies that inform this research will be discussed.

3.0.1 ONTOLOGY, EPISTEMOLOGY AND METHODOLOGY

Ontology is concerned with the nature of reality (132). Epistemology is dependent on the nature of reality defined through ontology, and is concerned with what one can know about the nature of reality and the relationship between the knower and the unknown (132). The methodology refers to how one can go about uncovering the nature of reality (132). These ideologies are reflected in the paradigm used to guide the inquiry.

Guba and Lincoln have provided analysis and comparison of inquiry paradigms which inform research (132-134). The two central, competing paradigms, are the positivist and naturalist paradigms (Table 3-1). Positivism is the 'received view of science,' which focuses on a single, objective reality, subject to verification for the purpose of demonstrating cause and effect relationships, which can then be generalised to other contexts (132;133). In contrast, the naturalist paradigm is grounded on the existence of multiple realities, created subjectively between the researcher and the participants and by the research context (133).

The current research project employs a naturalistic paradigm of inquiry. Specifically, from an ontological perspective, it does not assume a single, objective reality. Rather, it is acknowledged that multiple realities exist subject to the context and the participants. Accordingly, the project is not intended to be generalised to other settings or contexts.

Table 3- 1: Contrasting Positive and Naturalist Paradigms (133)

About	Positivist paradigm	Naturalist paradigm
Nature of reality	Reality is single, tangible and fragmental	Realities are multiple, constructed and holistic
Relationship of knower to known	Knower and known are independent	Knower and known are inseparable and interactive
Possibility of generalisation	Time and context free, generalisations are possible	Only time and context-bound working hypotheses are possible
Possibility of causal linkages	There are real causes before or simultaneous with effects	State of mutual construction, cause and effects are indistinguishable
Role of values	Inquiry is value free	Inquiry is value bound

The epistemology of the current study is based on the understanding that the beliefs and values of the researcher cannot be removed from the process of conducting research, or from the findings. It is recognised that the views of the researcher influence the research design and the process of inquiry such as the questions asked, how they are asked, and how the responses from participants are interpreted. It is also acknowledged that the views of participants are shaped by participating in the research. There is an act of reflection and analysis by participants, about the topic, which accounts for why they agree to participate, and for the views they present during generation of data. Further, the interaction between researcher and participant is subjective and mutually created during the act of data generation. The researcher's perception of the participant may influence the process, and so too may the participant's assumptions about the researcher. The principles of the naturalistic paradigm assert that it is not possible to remove or to make neutral this relationship between researcher and participant, nor would it be desirable (132). The interconnection between researcher and participant is part of what shapes the research findings. However, this should be accounted for through the act of the researcher locating themselves and engaging in reflexivity throughout the project (135).

From a methodology standpoint, qualitative research lends itself well to the naturalistic paradigm, as the nature of the research question is often focused on understanding how a reality or social phenomenon works (136). Also, qualitative research based on exploring, in-depth, a topic about which previous knowledge does not exist is well suited to a naturalistic paradigm (136).

Specifically within qualitative research, the current study is based on a grounded theory methodology. Grounded theory is closely aligned with the principles of naturalistic inquiry (137). Grounded theory, as originally described by Glaser and Strauss in the mid-20th century, emphasised meaning and processes of social phenomenon (138). Grounded theory attempts to make explicit the implicit social processes (139).

However, this methodology was influenced by a positivistic context of research, which existed at the time of its inception. For example, quantitative research terminology was frequently used in the original documents, there was some suggestion that data are separate and removed from the researcher, and there was an assumption of an external, objective reality (138;139). Subsequent researchers have argued that grounded theory can retain its original principles without adhering to the ontology of an objective truth (138;140). For example, Charmaz argues that grounded theory fosters interpretation of the world of participants and of how these worlds are constructed and connected (3;138). This reflects the social construction and existence of multiple realities.

The current project adopts this more constructivist grounded theory stance by searching for meaning and understanding, rather than truth (3). Further, the analysis does not attempt to be neutral or removed from the researcher's values or interactions with participants (3).

These theoretical assumptions of a naturalistic paradigm, including the ontology of multiple, socially constructed realities, an epistemology reflecting the values and interaction of the researcher, and methodologies incorporating qualitative, constructivist grounded theory, are the foundation for this research process and govern the descriptions of the specific research procedures that follows in subsequent chapters.

3.1 Research Question

The aim of the study is to understand how the knowledge, skills and attitudes gained through pre-qualification IPE are transferred to the professional practice of newly qualified midwives. The basic research question is: how do midwives and midwifery educators perceive the transfer of pre-qualification IPE to the professional practice of midwives? A further objective associated with the goal of this research is to understand the elements that promote or prevent newly qualified midwives from using these acquired skills and knowledge in practice.

3.2 Research Design

A qualitative, grounded theory methodology will be used to understand the process of how IPE influences professional practice. This methodology is well suited to the research question at hand as it will promote the generation of theory and understanding of a phenomenon that has previously been unexplored (141). Also, Bluff argues that grounded theory is an effective methodology for the field of maternity care because it provides an effective strategy for understanding women's' perspectives (139). This section will briefly describe the principles underpinning the grounded theory methodology.

The qualitative nature of this methodology will allow participants to provide rich descriptions of attitudes and beliefs from which the process of application to practice can be understood. In keeping with grounded theory, data from participants allows theories to be generated. In this way, theory emerges from data, rather than being imposed from previous, existing theories and frameworks (141). As such, grounded theory is more concerned with generating new theories than with testing hypotheses.

If the theory emerges from data, it follows that the process of how the data are collected is crucial. The researcher must be willing to go where the theory takes them as they attempt to understand the research situation (139). Specifically, there is a continuing search for data that disconfirm the proposed theory (140). For this reason, although the researcher can anticipate some of the necessary steps in data collection, there may be new discoveries during the process of constant comparison

that are not anticipated and which lead to the need for further data collection (141). Accordingly, the sampling of participants also emerges from the data (141).

Generating theory occurs through the iterative process of constantly comparing data and analysis (140). Theory is then refined through further data collection (139;141). The process of data analysis begins at the same time as data collection. Analysis focuses on the process of constant comparison, whereby each new piece of data is compared with earlier data. Codes and categories are developed. A core category that occurs frequently in the data and which explains the relationships between other categories will eventually emerge (139). The core category is used to summarise and explain the new theory generated from the data. This results in an "inductive generation of theory" (140 pg 91). In the end, it is hoped that the proposed theory will provide an interpretation of the social phenomenon being explored (138). Specifically, Glaser suggests that good grounded theory should help those experiencing the phenomenon to make sense of their situation (141).

3.3 PARTICIPANTS

In keeping with grounded theory, it was understood that the participants would be added to, as needed, in order to generate theory. Four universities were the central sites from which participants were drawn. At the outset of the research, it was anticipated that data would be collected from three main groups of participants from these universities: Heads of Midwifery, midwifery educators and newly qualified midwives. The inclusion of three different groups of participants was an attempt to overcome the weaknesses of previous research examining transfer to practice, which relied on self-report data from graduates. In this way, the data from educators and managers was hoped to create a broader understanding of the phenomenon. This section will describe the rationale for the decisions made regarding selection of participants. Specific details of the research procedures for each participant group will be the focus of the next chapter.

3.3.1 HEADS OF MIDWIFERY AND MIDWIFERY EDUCATORS FROM UNIVERSITY A

University A varies slightly from the other university sites. For example, midwifery students were recently integrated into the IPE curriculum at this

university, therefore, no graduates with IPE training were available for participation and the concept of IPE was still relatively new. Yet, it was decided to include this site due to the proximity to the researcher, who held a post there, and because it was thought that these perspectives would be useful for uncovering the anticipated influences of the IPE curriculum on the practice of new midwives.

3.3.2 Midwifery Educators from Universities B, C, and D

Although the interviews with participants from University A were thought to be helpful in understanding the anticipated result of interprofessional training, it did not provide an understanding of the influence of IPE on professional practice. Furthermore, as University A had not yet had graduates from the midwifery course who had participated in the interprofessional curriculum, other universities with midwifery graduates in practice were identified. Universities B, C and D were chosen due to the similarities in the IPE curricula and previously made contacts at these sites, thus facilitating access through gate-keepers within the institutions. The midwifery educators from these sites had been involved in the IPE curriculum and were thought to add a valuable perspective about the educational process.

3.3.3 Heads of Midwifery from NHS Trusts linked with Universities B, C and D

Universities B, C and D each have NHS Trust sites with whom they work in partnership for the provision of clinical placements during the training of student midwives. The Heads of Midwifery at these sites represented employers and managers of newly qualified midwives who had participated in IPE programmes. Accordingly, these Heads of Midwifery or suitable alternate senior midwives were seen as being well poised to provide insight into what influence, if any, the interprofessional training had on the practice of new midwives.

3.3.4 Newly Qualified Midwives

The newly qualified midwives group, which was defined as midwives who had graduated from undergraduate midwifery training at University B, C and D in the last two years, were included in order to understand the application to practice from those who were directly experiencing it.

3.4 Generating Data

The basic methods for generating data included document analysis, interviews, focus groups and qualitative questionnaires. Literature from previous research was used to inform the research questions, however this was limited by the scarcity of research and validated assessment tools pertaining to the topic. Accordingly, the questions used in the interviews and focus groups were created for the purpose of exploring a new phenomenon and for generating new theory.

This chapter will outline an overview of the methods used in the study, including the evidence regarding the advantages and disadvantages of each research method. The research procedures will be described in Chapter 4.

3.4.1 Document Analysis

Document analysis was selected as a method for collecting information about the four university sites, their IPE curriculum and the educational context of the institution. The goal was to conduct an exploratory, mapping exercise of the educational context surrounding participants. It was thought that this document analysis would be valuable for direct information about each university site but also as a jumping off point to direct further inquiry (142). Also, this background information could be used as a way to validate information provided by participants (143). As such, the analysis was more similar to secondary analysis of existing documents rather than content or discourse analysis. The disadvantages of examining documents in the public domain are that the researcher cannot ask direct questions or actively pursue specific paths of inquiry. Rather the researcher must take the information as face value and cannot control for missing data, or the truthfulness of what is contained in the document (144).

3.4.2 Interviews

Interviews were selected as an optimal strategy for gaining rich descriptions from participants of their experiences and insight (139;145). The interviews were semi-structured. This allowed the researcher to ask particular questions, but also to leave the interview open so that topics could be explored in more depth when raised by the participant, thus facilitating flexibility, allowing the researcher to ask for clarification and elaboration, while at the same time, cultivating rich data with in-

depth responses from the participant (145). One of the benefits of interviews is that the data can remain grounded in the participants' own words (139). Also, face-to-face interviews allow the researcher to observe nonverbal cues (146). Some of the disadvantages of face-to-face interviews are the time commitment involved in travelling to multiple sites and the associated cost, and the potential for the participant to modify their answers in order to please the researcher (146).

The interview questions were generated using relevant literature for the purpose of generating new theory. The interview questions were revised and refined during the process of data collection in accordance with the constant comparison method advocated in grounded theory (141). This process involves comparing data from each new interview with the information from previous interviews. This comparison helped to clarify categories and themes that were emerging. It was then possible to refine the interview questions throughout the process as a means to prove or disprove the theory emerging from the categories and themes (141).

Telephone interviews were conducted for some participants rather than face-to-face interviews. These telephone interviews were conducted because of limitations of scheduling and travel funding, and in the case of the newly qualified midwives, it was selected as a strategy for increasing participation (147). The inclusion of telephone interviews for the newly qualified group is well supported by the literature which indicates that telephone interviews are a strategy for overcoming respondent reluctance to participate, for including participants who might otherwise not be able to participate, and for increasing participant's perception of their own anonymity in the project (147). Telephone interviews have been demonstrated to be effective for generating in-depth responses from participants (147). In particular, some participants may feel more comfortable discussing sensitive issues over the telephone (148). This method of interviewing also minimises the cost and time involved in travelling to interview sites, thus possibly allowing the researcher to cover a broader geographical area and to include a greater number of participants. The limitations of this technique include the inability to read non-verbal cues and to build rapport between the researcher and participant (146;147). Careful review of the literature regarding telephone interviews allowed the researcher to be aware of advantages and disadvantages associated with this method of data collection. Specifically, this included pre-interview preparation such as pre-testing the audio-taping techniques,

making arrangements with participants for a quiet room to minimise noise distractions, practicing strategies for allowing open exchange of dialogue during the call, and keeping an eye on the time, since telephone interviews are best kept to 30-45 minutes, to avoid participant fatigue (149;150). The disadvantages of telephone interviewing include the inability of the researcher to see the nonverbal cues provided by the participant, and the inability of individuals without access to a telephone to participate (147). Despite these disadvantages, the research literature is favourable in stating that telephone interviews yield data that is just as in-depth and valuable when compared with face-to-face interviews, and can provide a cost effective means to improve participant response rate (147).

3.4.3 Focus Groups

Focus groups were selected as an optimal strategy for shedding light on the attitudes and opinions of midwifery educators, while at the same time, allowing for group interaction and discussion that could give rise spontaneous reflection and stimulation of new perceptions (151). The interactions among participants during focus groups creates synergy which may help generate rich data (136). Accordingly, the researcher can play a more facilitative role during the focus group thus allowing the main interaction to be between participants rather than between the researcher and participant (148). This can help ensure that the research findings are grounded in the views of the participant and may help to remove the bias of participants attempting to provide answers they believe the researcher is expecting. Also, focus groups were thought to be the best method of data generation for the midwifery educators group, since many perspectives could be elicited in one session, thus maximising the data (148). Also, from a practical standpoint, it was anticipated that scheduling one focus group would be easier than attempting to schedule individual interviews with many midwifery educators, thereby, also reducing travelling time and cost. The disadvantages of focus groups as a method of data collection are that the interaction between participants may remove some control from the researcher for managing the agenda and asking the desired questions (152). Also, participation from the research subjects may be compromised if they feel unable to share their honest opinions due to the presence of colleagues, co-workers without confidentiality.

3.4.4 QUALITATIVE QUESTIONNAIRE

Qualitative questionnaires were introduced as a method to elicit data from the newly qualified midwives group due to poor recruitment for face-to-face interviews. The questionnaire contained three open-ended questions, drawn from the semi-structured interview script which had been created for this group of participants. The questions were kept short, minimal in number and open-ended to allow detailed responses (153). However, it was acknowledged that a self-administered questionnaire may reduce the depth of responses and the ability to expand on issues compared to interviews. For this reason, the questionnaire encouraged participants to provide contact information if they were willing to take part in a telephone interview. A questionnaire was seen to be an optimal strategy for increasing the number of participants at a low cost and low time commitment for both the researcher and the participant (146). This was seen as an important issue as it was thought that newly qualified midwives working shifts on evenings and weekends may not have a workload that allows for an hour long interview. The qualitative nature of the questionnaire meant the data could be coded similarly to a transcribed interview script. As such, the constant comparative method could be used to compare data generated through the questionnaires with that collected through the interviews and focus groups and could contribute to the process of saturating codes and categories.

3.5 RIGOR

There is much debate in the qualitative research literature about appropriate frameworks for evaluating the quality of research (154). Some authors argue that qualitative research should be held to the same standards as quantitative research (155), while others believe that a unique set of criteria, specific for qualitative inquiry should be followed (133). Others argue that since there is no unified paradigm for qualitative research, likewise there should be no prescribed set of criteria for judging quality (154). Underlying some of this debate is the question of whether the criteria for evaluation of quality should be based on epistemological and ontological grounds. Regardless of the philosophical differences between paradigms, in the end, research must be appraised for its merits (154).

In the field of qualitative research, the criteria for 'trustworthiness,' described by Lincoln and Guba, is still the most commonly used technique for appraising research (133). Lincoln and Guba described the concept of trustworthiness as the ability of the researcher to persuade the audience that the findings are "worth paying attention to" (133 pg 290). They divided trustworthiness into four areas: credibility, confirmability, dependability, and transferability. Credibility relates to whether or not the findings are truthful, while confirmability examines whether researcher bias has influenced the findings. Dependability relates to whether or not the findings can be replicated, and transferability is the degree to which the findings can be transferred or applied to other contexts or phenomena (133). Credibility and transferability are somewhat similar to the positivist concepts of internal and external validity. Likewise, dependability and confirmability are akin to instrument reliability and intra-observer reliability.

Although it is possible to see the similarities between the concepts of trustworthiness and the concepts of validity and reliability, there are important ontological differences that separate them. For example, in naturalistic inquiry the sampling of participants does not attempt to be representative of the general population. For this reason, Lincoln and Guba argue that naturalistic research cannot be applied to other settings (133). Further, the naturalistic paradigm would not believe that such a practice is possible as the social world is always changing and as there is no absolute reality. This belief also effects the application of dependability. The researcher must disclose all the processes and steps that were undertaken during the research project so that others could use similar methods and techniques (133). However, it would be impossible to replicate the study because the social world in which the research takes place is not constant and even the act of conducting the research will affect the social context.

Another example of the differences between positivistic inquiry and naturalistic inquiry is the relationship between the researcher and the participants. Positivistic inquiry attempts to remove the researcher from the phenomenon being examined. The researcher is required to be objective and distant from the subjects. Conversely, in the naturalistic paradigm the researcher is seen as being an active participant in the research process. Each qualitative research methodology will approach this issue differently, but in general, there is a shared belief that all

researchers have their own bias, values and beliefs and it is not possible to separate these from the research. Therefore, one way to minimise this is for the researcher to recognise and declare their bias in some way, such as the brief explanation given in Chapter 1 (page 11) of this thesis.

The concept of trustworthiness, as described by Lincoln and Guba, has shaped the research design of this project. This has been selected for two reasons. First, despite the fact that Strauss and Corbin, two of the original grounded theorists, describe their own criteria specifically for the purpose of judging grounded theory research, it was felt that these parameters of significance, theory/observation compatibility, generalisability, consistency, reproducibility, precision and verification were too closely tied to the values and beliefs of positivistic inquiry (138).

Further, although subsequent authors have suggested the use of "authenticity criteria" for grounded theory methods, the ease of 'translating' the elements of trustworthiness into language understood by quantitative researchers was seen as being helpful so the research could be understandable to a broader readership (133). However, as discussed earlier, the ability to translate these concepts to similar positivistic terms does not mean that the criteria are emulating the same standards, based on the same beliefs about how the world works.

In this research project, several elements have been designed to enhance the trustworthiness of the research. The measures to improve trustworthiness began during the initial stages of designing the project. In this way, as suggested by Morse, rigor becomes a process rather than an afterthought or criteria applied in retrospect after completing the research (155).

The act of members checking the transcript of their interview and the researcher declaring her bias were strategies used to improve the credibility of the research (142;156;157). The credibility of the findings was also addressed through triangulation (142;157). Triangulation involves the combination of multiple data, methods, researchers and theories in order to strengthen the rigor of qualitative research (158). Denzin describes these four types of triangulation (158). Data triangulation occurs when a variety of sources are used to collect data. This could involve data drawn from multiple settings or participant groups. Similarly, the use of

multiple methods to collect data is recognised as triangulation of methods. Denzin suggests that triangulation of methods can occur both within one methodology or across methodologies (158). The involvement of more than one researcher during the exploration of the phenomenon represents investigator triangulation. Finally, triangulation of theory involves the application of multiple theories or perspectives for interpretation of the data (158). In this project, the four groups of participants – Heads of Midwifery, midwifery educators, student midwives and newly qualified midwives – have provided different perspectives regarding the issue of transfer to practice. Also, for the purposes of triangulation, four university sites have been included. Both of these would represent triangulation of data, while the inclusion of interviews, focus groups and qualitative questionnaires would represent triangulation of methods.

It was hoped that the confirmability and dependability of the research would be enhanced through the act of memoing and through the Ph.D. supervision process, which acted as a form of peer debriefing and audit (142;157). Finally, although transferability from this study to other contexts or the same context at a different time, is not the goal of this type of research, it is hoped that enough explicit information about the conduct of the research has been included so as to inform other researchers who may wish to explore the topic.

3.6 Ethical Considerations

Ethical approval for the project was obtained from the NHS Research Ethics Committee (Appendix 1). Research and Development approval was subsequently obtained from all 14 NHS Trusts involved in the project. Also, ethical approval was sought and obtained by all four university sites where data were collected. The letters of ethical approval from these sites are available upon request.

3.6.1 Risks and Benefits

Participants were informed about the nature of the study and their participation, specifically including the assurance that they could withdraw at any time and that privacy and confidentiality would be maintained. The participants were not at risk of harm during their participation. Participants were given an opportunity

to review the transcript of their interview or focus group prior to the researcher completing the written description of the findings. Participants were also offered an opportunity to read the final thesis, upon request.

3.6.2 Confidentiality and Privacy

Immediately upon agreeing to participate, all individuals were assigned a code for anonymisation purposes. This code was used for all data collection and analysis. Pseudonyms have been used in this written report. Extra measures have been taken to ensure that any details that might potentially identify the participant, including the place of employment, the community, the university or NHS institution have been obscured.

Interviews and focus groups were audio-taped following signed consent from the participant. The tapes were transcribed in full. Field notes were made for each interview and focus group. The tapes, transcripts and field notes were given a code to ensure anonymity.

Only the researcher and her supervisors had access to the raw data. All data, including contact information for participants, tapes, transcriptions, field notes, and disks have been stored securely in a locked filing cabinet. All data pertaining to the study will be destroyed five years after completion of the Ph.D. thesis in accordance with the Data Protection Act (159).

3.6.3 Ethical Implications

Potential conflict of interest was addressed by disclosing to all participants that the researcher was a registered midwife and midwifery educator. Students from University A, where the researcher held a post, were assured that their participation was voluntary and that their decision to participate would not be known by anyone other than the researcher and her supervisors. Specifically, their participation would not be made known to the other midwifery educators. Similarly, the newly qualified midwives from NHS Trust sites were assured that the Head of Midwifery who delivered the letter to them, would have no knowledge of their participation in the study.

Acknowledgment was also made of the role of power between researcher and participant. During interactions with the four participant groups, there were times

when the researcher was in a role with both more and less power than the participants. In particular, during the interviews with student midwives and with newly qualified midwives, where the researcher's position as an educator and more senior midwife could have influenced the participant's experience, it was emphasised that the researcher was also in the role of doctoral student.

Finally, it was also recognised that the topic of IPE as a government policy and an educational priority may have impacted the responses of the participants. The policy emphasis surrounding IPE could result in opinions from participants that are designed to demonstrate endorsement with this agenda. However, the consistency within the range of responses from participants verifies that this desire to please the researcher or to defend the policy in question is unlikely to have influenced the findings.

3.7 Summary of Research Methodology

The aim of this research was to understand how the knowledge, skills and attitudes gained during pre-qualification IPE are applied to professional practice. The use of qualitative, grounded theory methodology guided this research and allowed the emergent theory to be drawn from, and remain grounded in, the data from participants. The selection of research methodology was informed by the researcher's position as a midwife, an educator and a champion of IPE. Being a researcher who is engaged with the topic in question means that my views and the views of participants, are interconnected and influence each other. In this way, the findings of the study represent the mutual creation of knowledge between researcher and participant, in an attempt to make sense of the social process being examined.

CHAPTER 4 METHODS

4.0 Research Methods

A grounded theory methodology was used to facilitate an in-depth exploration of a topic about little was known. The research methods described in this chapter, including participant selection, recruitment, data generation and data analysis are in keeping with the principles of this methodology.

Ethical approval for this study was obtained on May 10 2007. Data collection occurred from June 27 2007 until June 30 2008.

4.1 Participants and Research Setting

4.1.1 Sampling and Recruitment

Participants were drawn from four university sites. Originally, five universities were approached, but there was no response from one site despite repeated attempts at contact, thus accounting for the final four sites. There were also four participant groups: Heads of midwifery, midwifery educators, newly qualified midwives, and student midwives.

The four university sites were chosen both by purposive and convenience sampling. They were purposively selected due to the similarities of the curriculum between the sites and the inclusion of student midwives within the IPE curriculum. Other factors, such as the duration of the IPE training, the content of the curriculum, and the professional groups involved, were similar at the four universities. Accordingly, these sites were selected in an attempt to overcome the weaknesses associated with comparing IPE curricula despite variations in duration, timing, content and participants which have been identified in previous work on the topic. However, the sites were also selected based on convenience, as either the researcher or the Ph.D. supervisors had a relationship with the universities and could make contact through gate-keepers at each site to gain access to participants.

The initial sampling of participants - newly qualified midwives, midwifery educators and Heads of Midwifery - was purposive. Accordingly, the groups of participants identified were chosen due to their experience with IPE (140). In

keeping with grounded theory methodology, it was understood that the sampling of participants would be added to, as needed, in order to generate theory. In this study, additional sampling of participants was required in order to add depth to the data and in an attempt to test the theory that was emerging. This additional theoretical sampling saw the inclusion of a group of student midwives from University A. Although University A had not yet graduated midwives who had participated in IPE, it was determined to be important to gather insight from those at that site who had first-hand knowledge and experience of the IPE curriculum. It was hoped that the students in the second year of their direct-entry training would be able to bring to light the interface between the academic setting and the clinical setting where they participated in placements.

Access to participants from University A was facilitated through the researcher directly as she held a post at this university. Access to the midwifery educators was gained through the Lead Midwife for Education at each institution. The Lead Midwife for Education is recognised by the NMC as having a role of leadership in the development, delivery and management of midwifery education programmes (40). The Lead Midwife for Education works with the local NHS Trusts and with the members of the midwifery academic team. Thus, the Lead Midwife for Education is the gate-keeper for gaining access to a group of midwifery educators at any given institution. The midwifery educators provided information about the associated clinical Trust sites where their students participated in placements. However, as the university was not aware of where each of their recently graduated midwives were practicing, and because of ethical restraints preventing disclosure of the names of former students, it was recognised that the Head of Midwifery at the NHS Trust sites linked with each university would be the gate-keeper of the information regarding newly qualified midwives. The Heads of Midwifery were identified at each site by information available in the public domain such as websites for the Trusts or through the Research and Development Office. Access to the newly qualified midwifery participants was gained through the subsequent contact and relationship with the Head of Midwifery at each Trust site.

4.1.2 Description of Research Setting

Four universities are at the centre of this research project. The four participant groups - student midwives, newly qualified midwives, midwifery educators and Heads of Midwifery - were drawn from the university sites. Similarities between the four sites, with regard to content and structure of the IPE curriculum, were essential to allow comparisons across sites and to create a larger 'cohort' from which to draw participants. Simple document analysis was conducted to foster an understanding of the IPE curricula at each site and the context of the educational institution. Further description of the document analysis procedure will be provided in section 4.2.1.

The four sites are similar in that they all have 3-year IPE training programmes as a requirement for all health and social care students. Further, the professional groups involved in IPE at the four sites are relatively similar and most importantly, all sites include midwifery students. Table 4-1 provides an overview of the four university sites.

Table 4- 1: Overview of IPE at the Four University Sites

	University A	**University B**	**University C**	**University D**
Year IPE started	1999	2003	2000	1999
Professional groups represented	**midwifery**, nursing, operating department practitioners, occupational therapy, paramedics, physiotherapy, radiography and radiotherapy, social work	medicine, **midwifery**, nursing, operating department practitioners, occupational therapy, pharmacy, physiotherapy, speech and language therapy	diagnostic imaging, **midwifery**, nursing, occupational therapy, physiotherapy, radiotherapy, social work	audiology, medicine, **midwifery**, nursing, occupational therapy, pharmacy, physiotherapy, radiography, radiotherapy, social work
Pedagogy	Contact hypothesis, adult learning	Contact hypothesis, adult learning, experiential learning	Enquiry-based learning	Experiential learning, guided discovery learning
Faculty training	Yes	Yes	Yes	Yes
Voluntary or compulsory participation	Compulsory	First two years compulsory, two voluntary modules	Compulsory	Compulsory
IPE module during each year of 3 year training	Yes	Yes	Yes	Yes

For the purposes of clarification during later chapters, in which the university sites are compared and contrasted, the next section will provide a brief background for each of the four universities, including the goals and structure of their IPE

curricula. In order to ensure the anonymity of the sites, all references have been removed from the following descriptions.

UNIVERSITY A

University A is considered an innovative institution. It is located in the city centre and has over 30,000 students. This university has been providing IPE, in some form, for over a decade. IPE modules are now compulsory for all health profession students and comprise 25-30% of a student's credit for qualification. The professional groups involved in IPE include midwifery, nursing, operating department practitioners, occupational therapy, paramedics, physiotherapy, radiography and radiotherapy, social work. The underlying principles of the IPE curriculum include:

- Students learning with, from and about each other
- Promotion of interprofessional capability
- Placing the patient/client/service user/carer at the centre of the learning
- Adult learning, constructivist and active learning approaches to the student experience
- Authenticity, a focus on the reality of practice, and the centrality of the service user and carers in learning opportunities and assessment strategies
- E-enhancement of the programme

Five modules make up the IPE curriculum. There is one module in year one, two modules in year two, and two modules in year three. The curriculum is supported pedagogically by the contact hypothesis and the belief that "learning together, under the right conditions, strengthens professional identification, breaks down stereotypes and so aids collaborative practices." E-learning plays a significant role in the IPE curriculum by complementing face-to-face tutorials and by serving as a format for asynchronous learning activities.

Although University A has a long-standing history of IPE projects, a midwifery course was not offered at this institution until 2006, therefore, the inclusion of midwifery students is relatively recent. The first group of midwifery students, who have participated in the IPE curriculum at this university, will graduate in 2009.

UNIVERSITY B

University B is located in a thriving cathedral city and serves 13,000 students. All students from medicine, midwifery, nursing, occupational therapy, operating department practice, pharmacy, physiotherapy, and speech and language therapy are required to participate in the IPE curriculum. IPE in some form has existed at this institution since 2003. The goal of the pre-registration programme is to offer a curriculum "to all undergraduate healthcare students from the first year of their professional training to encourage early interaction between different professions." The goals of the curriculum are outlined in the following table (4-2) and from this statement from the school's website:

> The overall aim of the IPL programme is to foster the skills, knowledge, attitudes and behaviour that facilitate effective interprofessional team-working. We believe that opportunities for interaction between the different professions play a crucial role in facilitating this process.

Table 4- 2: Goals of IPE Curriculum at University B

1.	Identify key principles that facilitate effective interprofessional team-working.
2.	Understand why improvements in IPP are important to patient care.
3.	Describe their own role as a health professional as part of a multiprofessional team.
4.	Learn about the role of other healthcare professions and how they would collaborate to provide the best patient care.
5.	Begin to understand the benefits of and constraints on interprofessional team-working.

The theoretical basis for the IPE curriculum is taken from the contact hypothesis and the principles of adult and experiential learning. The curriculum is comprised of four IPE modules. During the first unit, students are allocated to small groups of 8 students from various professions. The groups work together over seven weeks, using case scenarios. The second unit draws students together in small mixed professional groups to focus on communication. The third unit of IPE was piloted in 2006 and took the form of a one-day conference. Attendance was voluntary. Unit four began in May 2008 and was a half-day workshop focusing on interprofessional issues relating to specific clinical topics. Service users and practitioners were involved. Again, attendance at this workshop was voluntary.

The midwifery programme identifies the participation in IPE on their website for prospective students. They state that "effective interprofessional working is essential in midwifery practice, to deliver quality, effective care to women and their families."

In addition to the pre-qualification training, University B also provides training, for post-qualification health professionals at local NHS Trusts.

UNIVERSITY C

Similar to University A, this university is in a busy city centre and has over 30,000 students enrolled. University C introduced IPE for all health profession students in 2000. The professions involved include: diagnostic imaging, midwifery, nursing, occupational therapy, physiotherapy, radiotherapy and social work. The goal of the IPE curriculum is to provide:

> Opportunities for students from a range of health and social care professional programmes to learn together to enhance collaborative working through effective team-work which acknowledges professional diversity.

The curriculum has three components designed to facilitate an interprofessional experience:

- Uni-professional modules for each professional pathway
- Shared modules, in which students from two or more professional pathways learn together
- Interprofessional modules, which are compulsory for all students

The curriculum employs an enquiry-based learning approach. The first module uses case scenarios to incorporate health policy, health promotion and interprofessional learning outcomes. The second module uses a conference format, while the third module uses e-learning technologies.

University C has comprehensively evaluated their IPE programme since its inception. The findings from several of the research projects have made significant contributions to the field of IPE and to this project.

UNIVERSITY D

University D is one of the top ten research universities in the UK. Twenty four thousand students study at this urban institution. IPE began at University D in 1999. The IPE curriculum has evolved since this time. Pre-qualifying students from audiology, diagnostic radiography, medicine, midwifery, nursing, occupational therapy, pharmacy, physiotherapy, social work and therapeutic radiography participate in the IPE modules. The University also provides a two-day training

workshop for all group facilitators. The goals of the IPE curriculum at this university are outlined in Table 4-3.

Table 4- 3: Goals of IPE Curriculum at University D

1. Respect, understand and support the roles of other professionals involved in health and social care delivery.
2. Make an effective contribution as an equal member of an interprofessional team.
3. Understand the changing nature of health and social care roles and boundaries.
4. Demonstrate a set of knowledge, skills competencies and attitudes which are common to all professions, and which underpin the delivery of quality patient/client focused services.
5. Learn from others in the interprofessional team.
6. Deal with complexity and uncertainty.
7. Collaborate with other professionals in practice.
8. Understand stereotyping and professional prejudices and the impact of these on interprofessional working.
9. Practice in a patient-centred manner.

The educational theories that underpin this curriculum include experiential learning, guided discovery learning, collaborative learning, and interprofessional learning. The curriculum comprises both 'learning in common,' which refers to topics and content shared between all the professions, and 'interprofessional learning units,' which refers to learning with and from others. It is during the interprofessional learning units (IPLUs) that 10-12 students from the various professional groups come together to learn. The curriculum is made up of three IPLUs with 'learning in common' to support each unit. The IPLUs bring the students together into mixed groups at seven different points throughout their three years of training. The content of the units are as follows:

- Unit 1 - Collaborative Learning: introduces students to the concept and practice of collaborative learning and team-working, develops the knowledge, management and IT skills needed to participate in collaborative learning, supported by on-line methods.
- Unit 2 - Interprofessional Team-working: provides students with opportunity to apply team-working and negotiation skills in an interprofessional context.
- Unit 3 - Interprofessional Development in Practice: helps students examine interprofessional working in modern health and social care services from a personal, professional and organisational perspective.

This curriculum advocates for "working in close collaboration with colleagues in practice." Accordingly, Units 2 and 3 involve a component of learning in practice. Unit 2 has the students participate in a practice audit in a clinical area, while Unit 3 has the students involved in service development projects.

The practice project component of the IPE curriculum at University D is a unique feature that differentiates this site from the three other sites included in this project.

4.2 Generating Data

The basic methods for generating data, together with specific procedures of data collection for each university and participant group, will be described in this section.

Heads of Midwifery and Midwifery Educators From University A

Initial data generation involved semi-structured interviews with Heads of Midwifery at the four NHS Trusts linked with University A and a focus group with the midwifery educators. The four Heads of Midwifery, one from each site, were invited to participate through an information letter and participant information sheet (Appendices 2, 3). Face-to-face interviews occurred following signed consent (Appendices 4, 5). Similarly, the midwifery educators were sent a letter and participant information sheet outlining the project (Appendices 6, 7). Following signed consent (Appendix 4), a focus group occurred (Appendix 8).

As the research progressed, student midwives from University A were also recruited to participate. Students from University A in the second year of their direct-entry training were invited to take part in the project through an information letter and participant information sheet (Appendices 9, 10). Face-to-face interviews occurred following signed consent (Appendices 4, 11).

Midwifery Educators from Universities B, C, and D

Access to the midwifery educators was gained through sending an information letter and participant information sheet to the Lead Midwife for Education at each institution (Appendices 12, 13).

The inclusion criteria for participating in the focus group required that the midwifery educators have both knowledge of the IPE curriculum at their university, and had experience in evaluating student midwives during their clinical placements. Midwifery educators with no experience of IPE were excluded from the focus group.

Following agreement to participate and signing of consent forms (Appendix 4), a focus group took place at all three university sites (Appendix 14).

HEAD OF MIDWIFERY FROM NHS TRUSTS LINKED WITH UNIVERSITIES B, C AND D

Universities B, C and D each have NHS Trust sites with whom they work in partnership for the provision of clinical placements during the training of student midwives (Table 4-4). The Heads of Midwifery at each of the associated Trust sites were invited to participate in the project.

Table 4- 4: University Sites and Associated Number of Trust Sites

University	**# of Associated Trust sites**
University B	3 Trust sites
University C	7 Trust sites
University D	3 Trust sites
Total	**13 Trust sites**

After receiving an invitation to participate and participant information sheet and signing the consent form, interviews were conducted with Heads of Midwifery or an alternate senior midwife (Appendices 15, 16, 17, 18).

NEWLY QUALIFIED MIDWIVES FROM UNIVERSITY B, C, D

All participating Heads of Midwifery or senior midwives at the NHS Trust sites delivered an information letter and participant information sheet (Appendices 19, 20) to newly qualified midwives within their institution who had graduated from one of the three university sites in the last two years. The inclusion criteria specified that they must be a qualified, practicing midwife who graduated from one of the three university sites (B, C, D) in the last two years and who had participated in the IPE program. Newly qualified midwives with no experience of IPE were excluded from the research.

The intention was that newly qualified midwives interested in participating would contact the researcher directly, and interviews would occur on a first come. first served basis, but would include no less than five and up to 50 interviews. The number of newly qualified midwives included in the study would be determined by saturation, or the point where no new codes or categories are being generated (140). From conversations with the Heads of Midwifery at the Trust sites it was thought that 65 midwives met the inclusion criteria (Table 4-5).

Table 4- 5: Anticipated Number of Newly Qualified Midwives

University and NHS Trust Sites	Number of Anticipated Newly Qualified Midwives
University B	
Trust site 1	5
Trust site 2	10
Trust site 3	5
University C	
Trust site 1	2
Trust site 2	3
Trust site 3	10
Trust site 4	10
University D	
Trust site 1	10
Trust site 2	5
Trust site 3	5
Total	**65**

Despite two reminder mailings, the placement of a recruitment poster within the Trust site, the request to attend in-house training sessions, and an invitation to participate in a telephone interview rather than a face to face interview, the response rate from newly qualified midwives was zero. A decision was made by the researcher and her supervisors, which was approved as an amendment through the NHS Research Ethics Committee, to incorporate a qualitative questionnaire as an attempt to yield response from this group of participants.

Sixty-five qualitative questionnaires were sent out to the seven Heads of Midwifery to be delivered to the newly qualified midwives at their sites (Appendices 21, 22, 23). The questionnaire included an option to volunteer to participate in a telephone interview (Appendix 24).

4.2.1 Methods for Generating Data

The methods for data collection used in this research project included document analysis, interviews, focus groups and qualitative questionnaires. Literature from previous research was used to inform the research questions, however, this was limited by the scarcity of research and validated assessment tools pertaining to the topic. Accordingly, the questions used in the interviews and focus

groups were created for the purpose of exploring a new phenomenon and for generating new theory.

Field notes were written to capture details regarding the context of the interviews or focus group and to aid in recall when analysing the data (139). All participants were asked if they wished to review the transcript of their interview or focus group following transcription.

Document Analysis

Document analysis was conducted of websites and publications from each of the four university sites. All documents analyzed were available through the public domain, such as internet or literature searches. These documents were not critiqued by the researcher as discourse or content analysis, but rather were used to gain a basic understanding of the IPE curricula and the context of the educational institution. The documents were reviewed as a mapping exercise to gain insight into the research setting prior to commencing interviews and focus groups with participants. Syllabi, assessments and lecture notes were not reviewed as part of this analysis. In order to maintain anonymity of the sites and participants the findings from this document analysis will not cite the source of the website or literature.

Interviews

The interviews were semi-structured. They lasted 60-90 minutes and occurred in locations convenient for the participant. With the consent of the participant, all interviews were audio-taped.

Telephone interviews were conducted for some participants rather than face-to-face interviews. Two interviews with Heads of Midwifery and one educator focus group took place over the telephone. Also, all of the interviews with newly qualified midwives were conducted *via* telephone. In keeping with the research on effective telephone interviewing, these interviews were kept to 30-45 minutes in duration (149;150). The interviews were audio-taped with consent.

Focus Groups

The focus groups were also semi-structured. They included up to ten and no less than three participants (152). All focus groups lasted 60 to 120 minutes. Following consent, the focus groups were audio-taped and transcribed verbatim.

Qualitative Questionnaire

Qualitative questionnaires were introduced as a method to elicit data from the newly qualified midwives group due to poor recruitment for face-to-face interviews. The questionnaire contained three open-ended questions, drawn from the semi-structured interview script which had been created for this group of participants. The questions were kept short, minimal in number and open-ended.

4.3 Data Analysis

Within grounded theory research, the process of data analysis begins at the same moment as data collection. There is a process of constant comparison between data and the emerging theory (141). Constant comparison allows for development and refining of categories and their properties (140). These categories then begin to form the foundation of the theory.

4.3.1 Concept Mapping & Constant Comparison

The process of concept mapping and constant comparison occurred at two stages during the project. First, concept mapping and preliminary coding was done following each focus group and interview, to identify possible categories and subcategories within the data. This was done by the researcher making notes in a field diary, immediately following the interview. This initial stage of concept mapping facilitated further comparison between one interview and the next. The constant comparison process involved comparing the first interview to the second interview, then comparing the third interview to the first two interviews and so on, until data generation ceased. This comparison clarified categories and subcategories of coded data. It was through this process of seeing emerging codes and concepts that it became possible to modify and focus questions for participants. This process was also critical in the decision to add a new group of participants, which led to further

data generation. Likewise, this comparison allowed the researcher to determine when saturation had occurred, or when there were no new codes or categories resulting from the data (140).

A similar process took place when all the data had been collected. All transcripts were transcribed verbatim. Participants reviewed their transcripts to ensure that they were an accurate account of their interview or focus group. The transcripts and questionnaires were read and coded by hand by the researcher using the process of open coding. This involves coding the data, line-by-line, with words or phrases that summarise the essence of the statement made by the participant (139). The first step within the coding process involved the researcher and her Ph.D. supervisor, both independently, coding five transcripts. The codes and categories generated by the researcher and the supervisor were consistent. The remaining transcripts were coded by hand by the researcher. The constant comparative method was used again, to compare each transcript and the codes until no new codes were emerging from the data. Comparison was also undertaken to search for data that did not fit, or that contradicted, the emerging codes and categories, in an attempt to prove or disprove the emerging findings. This initial step of open coding resulted in a list of 38 codes. Comparison of codes within this original list was done as a step in axial coding, whereby the relationship between codes is explored. This process allowed clustering together of codes that related to one another. This resulted in the formation of categories (139).

4.3.2 Memos

Memos were used in the form of a field diary. During the stage of data generation and analysis, the researcher documented thoughts about codes, emerging categories and theory. This reflective process of memoing helped to clarify interview questions, participant selection and the relationships between categories. Memos were also central in the process of determining when saturation of data and codes was reached (140;141).

4.3.3 Sorting & Writing

NVivo computer software was used to help organise the coded data. The researcher coded the transcripts and questionnaires by hand but then entered the codes into the software. Entering the codes into the NVivo software made for easier

comparison between codes and categories, as all of the data with one code could be reviewed. It was then possible to ensure that the code accurately captured the essence of the statement.

When all the codes and categories of data were saturated, data generation ceased and sorting of the categories began. This provided a means to organise the theory into a meaningful framework. Axial coding of the initial list of 38 codes facilitated clustering of codes that related to one another. The initial sorting of codes resulted in six categories. Further comparison and axial coding between categories resulted in the emergence of three categories: micro, meso and macro levels, which influence the application to practice. The micro level category included those subcategories pertaining to the learner. The meso level category included subcategories involved in the learning environment and the macro level considered the influence of the workplace.

Although the essence of these categories stayed substantially the same, further consideration of how subcategories and categories related to each other, showed that the micro, meso, macro levels did not go far enough to describe the process of application to practice. Also, during the process of selective coding, when categories are related to the core category, it became clear that these three categories did not accurately capture the core category. Based on this examination of the relationship between categories and the core category, the three new central categories were determined (Table 4-6). Active verbs were used to describe the new central categories and their subcategories, in an attempt to represent the process uncovered from the data (145).

Table 4- 6: Three Central Categories and their Subcategories

Category	Subcategories
Developing Interprofessional Skills	• Acquiring Interprofessional Skills • Learning in Mixed Professional Groups • Perceiving the role of the Midwife
Engaging with the Curriculum	• Enhancing logistics • Contextualising the Curriculum • Facilitating Learning
Promoting IPE in the Workplace	• Supporting IPE Agenda in the Workplace • Transitioning New Graduates • Evolving Professions

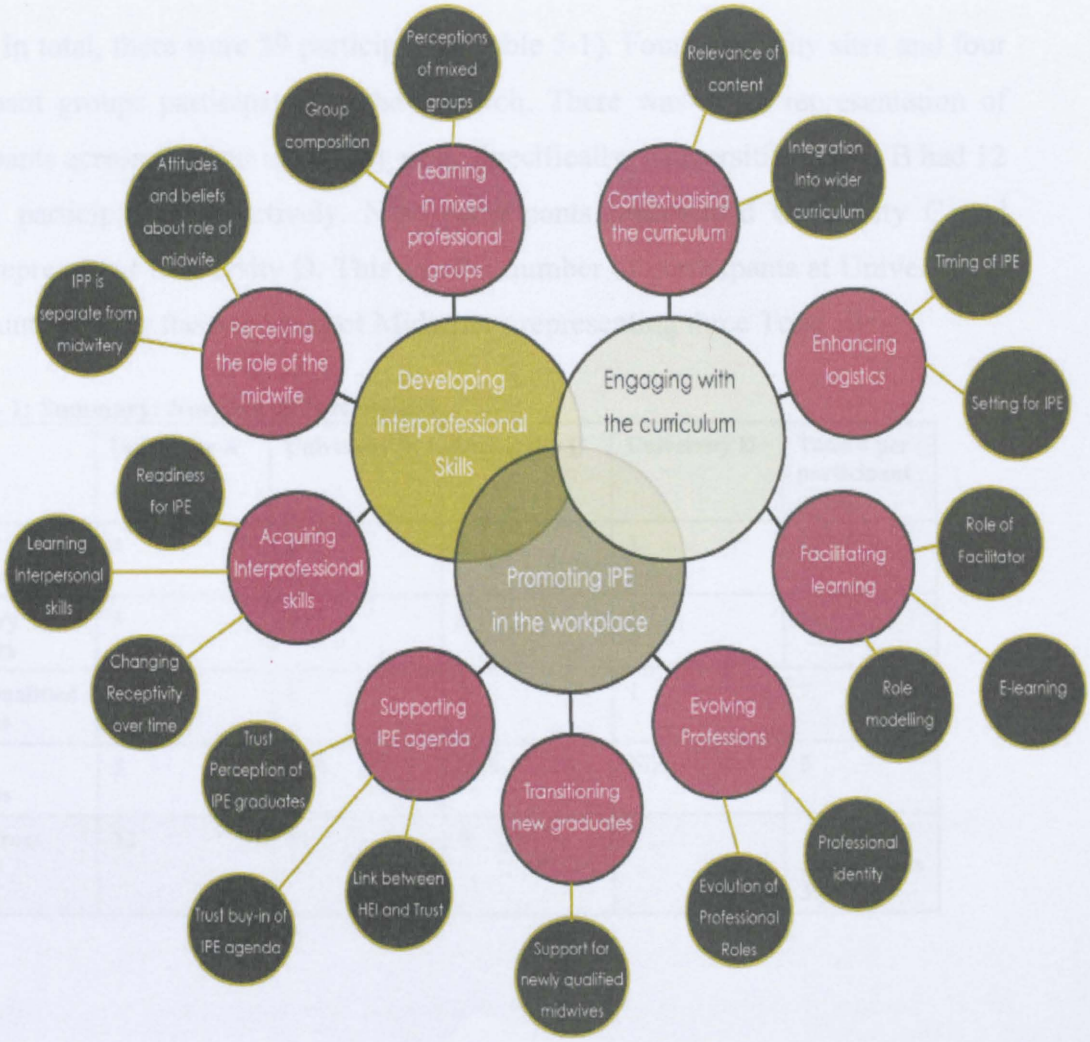
In grounded theory, the final component of sorting data is selective coding whereby the central categories are related to the core category. The central categories come together to make sense of and describe the core category. The core category then represents the emerging theory which remains grounded in the data from the participants. These findings, including the central categories, the core category, and the emerging theory are presented in subsequent chapters.

CHAPTER 5 RESULTS

5.0 Overview of the Results

This chapter will describe the findings from participants. What follows is a brief description of the participant numbers and then quotations outlining participant perspectives. Quotations from participants will be presented as evidence to support the generation of the categories and the emerging theory. Since the data analysis resulted in the generation of three central categories, the findings will be presented in this chapter according to these categories: i) Developing Interprofessional Skills, ii) Engaging with the Curriculum, and iii) Promoting IPE in the Workplace and their sub-categories. These categories can be represented pictorially (Figure 5-1).

Figure 5- 1: Three Central Categories and Subcategories.



5.1 Description of Participants

The participants in this research came from four geographical regions throughout the UK. All participants in this project were female and all were of a white British heritage. Extensive demographic information was not obtained since the goal of qualitative research is not be representative of the general population. The representativeness of the participants instead is more concerned with the participants' experience of the phenomenon in question. All participants had knowledge of IPE either through direct participation or through supervision and mentoring of students and graduates with IPE training.

A summary of participants is provided below. In order to maintain confidentiality of the participants and to minimise the likelihood of recognition of participants based on descriptions of Trust sites and university affiliation, participants will be referred to in the study by their participant group and a number.

In total, there were 39 participants (Table 5-1). Four university sites and four participant groups participated in the research. There was equal representation of participants across the four university sites. Specifically, Universities A and B had 12 and 11 participants respectively. Nine participants represented University C and seven represented University D. This smaller number of participants at University D is accounted for by the one Head of Midwifery representing three Trust sites.

Table 5- 1: Summary: Number of Participants

	University A	**University B**	**University C**	**University D**	**Total # per participant group**
Heads of Midwifery	4	3	3	1	**11**
Midwifery Educators	3	5	3	5	**16**
Newly Qualified Midwives	N/A	3	3	1	**7**
Student Midwives	5	N/A	N/A	N/A	**5**
Total # from each site	**12**	**11**	**9**	**7**	**Total # of participants 39**

The universities also had associated NHS Trust sites where students participated in clinical placements, and where the midwifery graduates were employed (Table 5-2). A similar number of Trust sites linked with each university contributed to this research.

Table 5- 2: NHS Trusts Participating per University Site

University	# of Trust sites
University A	4 Trust sites
University B	3 Trust sites
University C	4 Trust sites
University D	3 Trust sites
Total	**14 Trust sites**

At University A, all four of the possible Heads of Midwifery participated in the research. Also, one midwifery educator focus group occurred and five interviews were conducted with student midwives. The student midwives were all in their second year of training in the direct-entry midwifery course. None of the student midwives who participated had a prior career as a health professional.

University B had three NHS Trust sites from which to draw participants for the Head of Midwifery group. All three of the midwives in these posts participated in the research. A focus group for midwifery educators also occurred at University B, with five participants attending. Three newly qualified midwives who graduated from University B were included in the study.

Participation from University C was comprised of a focus group with three midwifery educators, three newly qualified midwives and three Heads of Midwifery. Two NHS Trust sites associated with University C declined participation following review by their respective Research and Development boards, due to lack of financial compensation for staff to take part in interviews. Also, one participant who had a staff position at two sites associated with University C participated as a representative from both of the two smaller Trusts. Thus, although seven possible Trust sites were identified as being linked with University C, only four sites ended up participating in the project.

Finally, at University D, five participants attended the midwifery educator focus group, one newly qualified midwife returned the questionnaire, and one Head of Midwifery was interviewed. Similar to University C, one midwife, in a post

specifically focused on IPE, worked between the three Trust sites where students undertook placements. As a result, the interview was conducted with one midwife, but she represented three Trust sites.

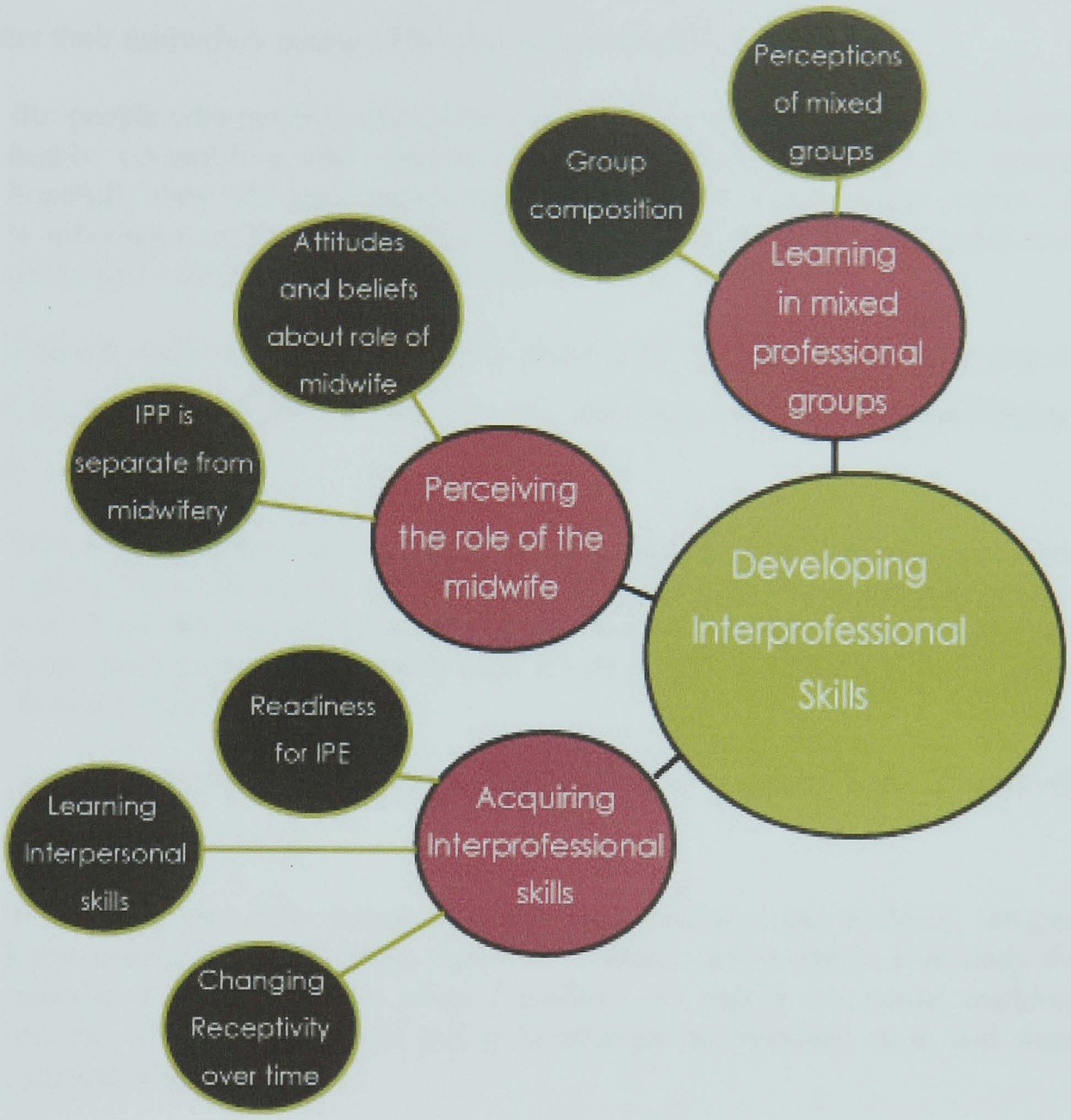
Examination of the participant numbers based on the four participant groups reveals similar representation across the four groups. The Heads of Midwifery and midwifery educator groups involved the maximum number of possible participants. For example, only one focus group could be done at each university site and only one Head of Midwifery was present at each Trust. In total, there were 11 Heads of Midwifery and 16 midwifery educators who participated. The interviews with student midwives and newly qualified midwives continued on a first come, first served basis until saturation of data was reached. In this way, the generation of data determined the number of participants rather than a prescribed sample size. Five student midwives participated in the project. Seven newly qualified midwives returned the qualitative questionnaire and five of those participated in a telephone interview.

Thus, in summary, the midwives and student midwives were chosen due to their experience with IPE. The contributions of these 39 participants, through the rich descriptions of their experiences, facilitated saturation of data. The four university sites were chosen due to the similarities in structure and content of the IPE programme, for the presence of midwifery students and for the availability of a known gate-keeper who could assist in granting access to participants. These similarities between sites allowed for comparisons across sites and for the generation of sufficient data.

5.2 Central Category: The Development of Interprofessional Skills During Pre-qualification Training

This central category describes how student skill development is shaped by the degree of openness to acquiring new skills, the response to learning in mixed professional groups and the perception of the midwife as an interprofessional worker (Figure 5-2). The process by which students develop interprofessional capabilities during their pre-qualification training warrants consideration as it influences how graduates are able to apply their IPE training once in practice.

Figure 5- 2: Central Category: Developing Interprofessional Skills and its Subcategories



5.2.1 Acquiring Interprofessional Skills

The participants were able to identify attitudes and beliefs that both promoted and prevented students from acquiring interprofessional competencies. The willingness to acquire the new skills needed for IPP was influenced by beliefs about the skills that students already possess and by beliefs about whether or not interpersonal skills can be learned. However, according to participants, the willingness to acquire interprofessional skills changes during the duration of pre-qualification training.

Readiness for IPE

Some of the students that were enrolled as direct-entry students in their pre-qualification training, expressed the belief that they already possessed the skills necessary for effective interprofessional working. Student midwives and newly

qualified midwives explained that students already have a certain skill base when they enter their midwifery course. This was summarized by one student:

> But people who get onto these courses, especially midwifery. where it is quite highly competitive and you do have to be interviewed for the course, hopefully they will have some capabilities before they got on the course....It is still important to be really good at it, but everybody has a reasonable level of the skills already. (Student Midwife 1)

Another student expressed how her personality and upbringing have already instilled some of the skills that she thought were necessary for interprofessional working:

> With my personality and how I've been brought up I don't judge people. And I get to know the person before I make a judgment on it...if it makes sense, I don't have first impressions and I do try and get to know the person first and learn about them and you know look for the positives in them before I judge. (Student Midwife 2)

A third student felt that she was going to be a certain type of midwife regardless of the IPE training:

> You might have little things along the way that you sort of think, 'oh you know maybe I should change that.' But I think, on the whole, I'm really the midwife I'm going to be when I qualify...so unless it's some sparkling miracle IPL thing, it's not going to change me between now and then. (Student Midwife 3)

Not only did student midwives and newly qualified midwives believe that they already possessed the skills necessary for interprofessional working, but some Heads of Midwifery also expressed that the skills for interprofessional working are not lacking in newly qualified midwives. One Head of Midwifery expressed this when she said:

> I think midwives here have always been able to and had to be linking with other professionals. (Head of Midwifery 10)

Learning Interpersonal Skills

In addition to believing that student midwives already possess many of the competencies necessary for interprofessional working, many of the participants articulated the belief that interpersonal skills, such as communication, professionalism, respect and team-work, could not be taught, nor learned in the academic setting. Again, it was believed that someone either already possesses these skills or they do not, and they cannot cultivate these abilities through formal

instruction. This sentiment was expressed by one student, who felt very strongly that IPE training was not going to help her develop interpersonal skills:

> I personally don't think it makes any difference...those interaction skills are something I think you've either got or you haven't...and IPL training isn't going to make a difference. (Student Midwife 3)

And she went on to explain:

> It doesn't matter how much you try and force interprofessional learning on them if they're not that type of person that will stand up and speak out and question and look at everything else around them then you're not going to make them into this amazing interprofessional worker. And I think a lot of it comes down to the type of person and I don't necessarily think that training, the interprofessional learning, I don't think it will change an awful lot. I think it's very individual....It's very rarely I think going to change their views. They're still going to be the same person. (Student Midwife 3)

The belief that interpersonal skills could not be taught and that someone's personality cannot be changed through formal education was also held by some Heads of Midwifery:

> I think it is incredibly variable because you can't change personalities. You can change experiences, and the way people react but you can't actually change personalities. (Head of Midwifery 10)

> No you can't teach those skills. Sometimes, you know, it is very obvious the student who is going to have those skills quite early on...and then you see those who are going to take a long time to get to where you want them to be....It is more actually about the individual's skills in fact. Like communication, I know some fantastic communicators within our midwives, and I know who's not. (Head of Midwifery 3)

CHANGING RECEPTIVITY OVER TIME

Despite the beliefs identified above, which indicate a lack of willingness to acquire new interprofessional skills, there was evidence from participants that the response and openness to IPE changes over time, with further exposure to IPE and to IPP within the practice setting. This change in willingness to participate in IPE was most aptly described by the midwifery educators. One midwifery educator described how the students' initial frustration with IPE is not present after participating in further modules:

> There are frustrations with it and the students initially are very reluctant and confused about what's expected of them, but once they get to the end of the seven weeks and they've befriended each other and they've worked towards and achieved the assessments of the unit, they're actually very

> complementary. They fill in a questionnaire at the beginning and then after the seven weeks, and they've done their final assessment and presentation. They are asked to complete it again just to see how their opinion has changed. So we have all the data, and it does change. (University B Participant 2)

It was also noted that students go through a developmental process while participating in IPE, where they recognise the value of it after further exposure:

> I remember one of the presentations...[the students] presented their opinions of what they thought about the program, what they thought of the other people, and what they thought of the process. And when they all answered their own questionnaire about how they felt at the end of the program and how they had evolved and how positive it was and what an enriching experience it had been. It was a really interesting part of the presentation. And the other group agreed that they had also gone through that process. (University B Participant 1)

5.2.2 Learning in Mixed Professional Groups

At the four university sites, students participated in IPE modules in small groups comprised of students from various health profession programs. The perceptions regarding learning in mixed professional groups were conflicted. Some participants felt that the experience of being in a mixed professional group aided their interprofessional skill development. At the same time, other participants felt that the mixed profession learning context was not necessary and had not contributed to skill development. For all participants, issues pertaining to group composition influenced their response to the value of mixed group learning.

Perceptions of Mixed Professional Groups

Some of the participants identified ways in which the mixed professional learning groups had been beneficial for cultivating and developing skills required for IPP:

> I've facilitated for about five years now and one group stick in my memory and there were only two professions in that group. There was about eight in the group and the first time they met, the two professions sat at opposite ends of the room, and there were derogatory comments from one profession to the other in their earshot. And yet, I have to say, at the end of the nine weeks, they had worked together and produced the report and the presentation. So okay, they may not have come as far as other groups, but they actually had two professions come together to produce something and in the end, that is beneficial. (University B Participant 2)

Specifically, participants felt the experience of mixed professional groups promoted knowledge of the other professions and of their training:

> They did say that they found it really helpful, the student midwives....I think they [the midwifery students] are more sympathetic towards the medical students while they are on delivery suite as a result of IPE...I think that went a long way to help them on understanding and having some sympathy and empathy. In the end that understanding does go a long way. (Head of Midwifery 8)

This experience was also thought to be beneficial for helping students to see other professions as equals rather than as opponents, or as being superior or inferior to their own profession. It was also suggested by a few participants that the group-based environment encouraged informal relationships between students.

Despite some of the possible benefits of learning in mixed professional groups, many of the students saw this as an element of tokenism that did not aid in their development of interprofessional skills:

> But it doesn't matter who it's with. It could be someone from out in the street. Just by mixing us up in terms of professional groups I don't think aids interprofessional collaboration as such...and the work that we have done this week we could have done as a bunch of midwives...there was nothing interprofessional really about it that we couldn't have done elsewhere. (Student Midwife 3)

This view was echoed by another student who said:

> I think we could learn to be effective interprofessional workers as a group of midwives. I don't see how it benefited that we were working with...I think it would have been much better being a group of midwives and discussing what are the professionals that we might come into contact or why would we come into contact with those people. (Student Midwife 4)

Another student described how, despite being in a mixed professional group for her IPE modules, she had not been able to interact with the other students. She described this to be in opposition to what she thought IPE would be about:

> We didn't actually have a chance to talk about different people's professions. And I think that's the aim of it. I would have liked to have a sit down for a seminar talking about what they did, how they did it and their experiences on placements. I mean one of the groups we got to do a focus group and we got to discuss what we learned about working with other members of multidisciplinary teams and that was really interesting. To find that nurses do this and midwives do this and we're all enjoying it but there's certain things that we don't like about each one. And it was interesting to know that

> everybody's going through the same experience even though we're in different jobs. (Student Midwife 2)

GROUP COMPOSITION

Although participants were not uniform in their opinion regarding the benefit of learning in mixed professional groups, all participants were concerned that the composition of the groups needed to reflect the reality of professional practice. In particular, the absence of medical students at three of the universities was disappointing and was seen as possibly limiting the relevance of IPE for student midwives. The midwifery educators saw this as a significant barrier within the IPE curriculum:

> One of the problems that we have identified is that the natural alliance for us as midwives is with doctors...in practice they see the importance of good communication skills with our medical colleagues, but then in the University those people have not been a part of the group of shared disciplines. I think that is one of the biggest challenges and criticisms. (University C Participant 1)

> If we are really going to make interprofessional curriculum credible then it is important that we make sure that the groups that are learning together include the right, natural alliances, because I think that was a big disappointment to a lot of our students initially, that medical students were actually not involved. (University C Participant 3)

Likewise, the Heads of Midwifery stressed that the mixed groups needed to reflect the professions with whom midwives have contact with in the clinical setting:

> I think if you are going to do interprofessional education you can't just say, let's tick the box because we've done work with the radiologists and the physios, and the OTs or the whole range of other people who you may have involved, because they are not the people that we work closely with most of the time. So, obviously medical education needs to have closer alignment with midwifery. Each of those other professions are ones that we don't encounter too frequently....I think it needs to go beyond the clinical therapists, like the radiographers, to involve the group that midwives come into contact with the most. (Head of Midwifery 2)

The students and newly qualified midwives echoed this same concern that the mixed groups did not reflect the reality of practice for midwives. The students indicated that mixed groups comprised of relevant professions would improve their understanding of the roles of other professions:

> We don't have any contact with any medical students academically, but yet in practice we do all the time....I don't know the difference really between an

> SHO, Registrar or Consultant. I had a medical student working with me yesterday...but I have no idea whether she knows how to take a blood pressure. [laughing] Does she know why I put this lady on a CTG [Cardiotocography]? I don't know if she might know more about it than I do. So if we would have learned more about medical staff...but I think if we work with professionals who we were going to come into contact with more often and learned about their role and how it interacts with ours and how we can get the best out of the two professions working together, that would have been really interesting and really good and valuable. (Student Midwife 4)

Similarly, one newly qualified midwife explained that interacting with relevant professionals was critical for promoting knowledge about the role of the midwife. She described the value of a training day for midwives and medical students at the hospital:

> That was really good because the med students had no idea about our training really and about midwives because they had something like two weeks obstetric training and then they qualify, and they are the people in charge, or that you sort of go to if things become out of the norm. (Newly Qualified Midwife 3)

5.2.3 Perceiving the Role of the Midwife

In addition to perceptions of the relevance of IPE and the experience of mixed groups, midwives and midwifery students appear to hold strong beliefs about being a midwife, which influence their response to IPE. One midwife indicated that although she was keen to support IPE, she was also "quite precious about being a midwife" (Head of Midwifery 3).

Similarly, students upon application and entry to the midwifery program, already have clear perceptions of the role of the midwife:

> When I had mi interview to come onto Midwifery they said to me the places had all gone and they said 'we've got places on the Nursing course do you want to do that instead?' and I just thought...it's like somebody going for an interview to be a plumber and saying [laughing] would you like to be a mechanic or an electrician. I was just like, 'thanks, but no.' (Student Midwife 4)

There were divergent opinions from participants about how IPE would influence the professional identity of midwives. There was some concern that students would not be able to fully engage in IPE until they had a better understanding of their own professional identity. At the same time, there was also the

view that there is a dichotomy between the competencies required for IPP and the competencies required for being a good midwife.

Attitudes and Beliefs About the Role of the Midwife

There were concerns from some participants that student midwives had not developed a clear professional identity before commencing IPE. One midwifery educator identified that students struggle with understanding the depth and breadth of being a midwife until they have completed their first clinical placement:

> The other problem that we have is that most of our students when they start IP, they do the theory module before they've even set foot in practice. So that's very hard for them and they don't even know their own professional identity. (University C Participant 1)

Another midwifery educator described how this limited understanding of the role of the midwife presented some challenges for IPE:

> I think in year one, they have trouble with their own professional identity, so that, in addition to trying to get to know what everyone else does, is quite hard for some of them. (University C Participant 2)

One of the student midwives expressed a similar concern when she stated, "until you know what their roles and responsibilities are in conjunction with yours, you don't know exactly where everybody fits in" (Student Midwife 3). She also thought that the effectiveness of IPE was minimised because they were students, not professionals with a clear understanding of their work environment. Other students described how their motivation to engage with IPE might have been improved if they had a stronger connection with the midwifery profession before commencing IPE.

Interprofessional Practice Separate From Midwifery

Developing a professional identity, shaped and informed by interprofessional learning, will help to build a foundation for collaborative competencies and will create professionals who see those competencies as inherent to their professional role. Although several of the participants took this perspective and saw the skills for IPP as being inherent to the role of the midwife, others saw the interprofessional competencies as being separate from the competencies required for being a midwife:

> It felt quite separate because you were in separate groups away from the midwives. It did feel almost like you weren't doing your midwifery practice or your midwifery training at all. (Student Midwife 1)

> I think the students see it as two separate things. (Head of Midwifery 6)
>
> It just seems something they've got to do and it really seems apart from...this would be the feedback from the midwifery students, it sort of stands alone. (University A Participant 1)

Some participants described it as almost a conscious choice, to either be a midwife or to be an interprofessional worker. This was best captured by one student:

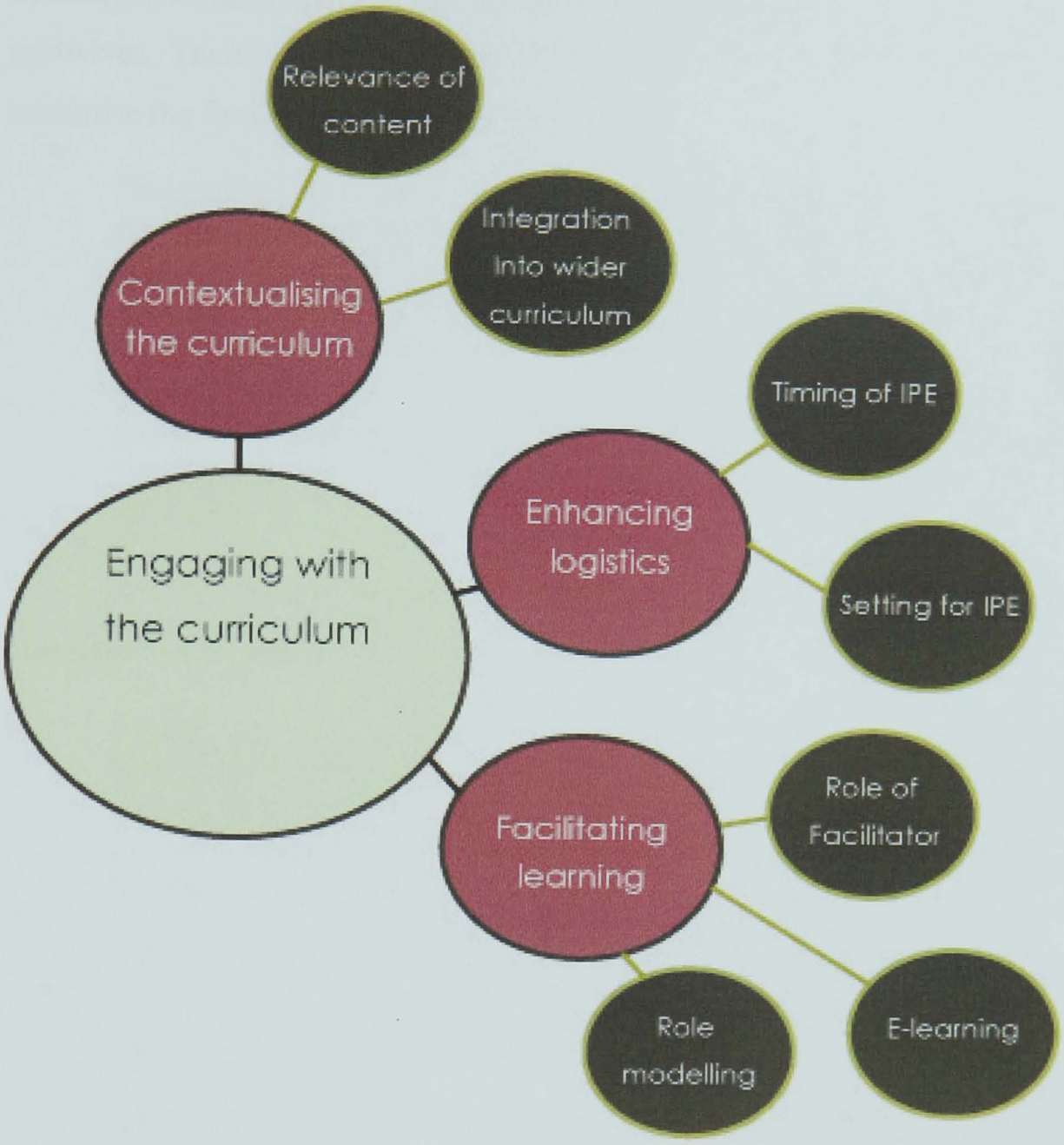
> Obviously it's very important to work interprofessionally, but at the end of the day, if it was a choice between being a really good interprofessional worker or being a really good midwife, I know which one I would pick. It is integral to do it but I would say that it is not as important as the practice itself. I'm not saying that it is okay to be a really bad interprofessional worker. But it is okay to be a good interprofessional worker and a really good midwife. I'd rather that, than be a good midwife and a really good interprofessional worker. (Student Midwife 1)

5.3 Central Category: Engaging with the Curriculum

While the previous central category focused on the attitudes and beliefs of students and midwives, with the purpose of determining the impact of those attitudes on the development of competencies for collaboration, this category widens the focus away from the individual learner, to look at the learning environment and the logistical issues that influence how students engage with the IPE curriculum (Figure 5-3).

Organising curricula to bring together students from various health disciplines is not an easy task. Organisational barriers continue to plague many IPE initiatives. These barriers significantly influence the outcomes of initiatives. From the interviews and focus groups conducted in this study, the logistical issues, such as timing and setting of the IPE curriculum, issues pertaining to the content of the curriculum, as well as the roles of facilitators and role models, were identified as key factors.

Figure 5- 3: Central Category: Engaging with the Curriculum and its Subcategories



5.3.1 Enhancing Logistics

Logistical issues, such as the timing and setting of IPE within health profession training, have a considerable influence on the success of the initiative. On the surface these seem like simple issues to resolve, but when timetables of multiple health profession training courses need to be aligned, or when geographical distances separate schools or placements it can become quite complex. Participants in this study highlighted concern regarding the optimal time for introducing IPE and regarding the optimal location for IPE in order to enhance student learning.

Timing of IPE

There has been ongoing debate in the literature about the best time to introduce students to IPE. There are some who advocate for an early introduction and

those who advocate for a delayed introduction, until the more senior years of training. This disagreement was also evident in the interviews and focus groups with midwives. There were those in favour of the early introduction of IPE in order to minimise the formation of negative stereotypes:

> The earlier that it can occur, the better. Rather than having a qualified doctor wondering why a midwife would do graduate studies....There is a relatively probationary period of medical education. Especially for the speciality of obstetrics, you are usually well the way through before you come to the speciality. It is introduced in year two I think, but then you come back to it at a later point if you are choosing that speciality. Otherwise the exposure to midwifery will be fairly limited. We try very hard to give a good introduction to midwifery for the medical students. So...it needs to start earlier. (Head of Midwifery 2)

At the same time, there were those who thought students need to have completed some practice placements before commencing IPE:

> I think we were too early in our training, to be honest, to really get any benefit of it. I think we should've done it after we had some placements. And I know that would've taken away from the fact that we might not have gotten the full benefit of it, but, I don't think, from my experience, that anyone took anything really in. (Student Midwife 1)

> I think my personal view would be that they would not be ready to do that until probably six months before the end of qualifying. Because, I think...do they have enough life skills to prepare them? (Head of Midwifery 3)

Issues of timing are influenced by concerns relating to professional identity development. The argument for delaying the introduction of IPE until later in the process of training is based on the idea that students will better understand interprofessional relations if they have a strong professional identity and if they have experienced profession-specific clinical placements. This argument was summarised by one student:

> We went straight from starting university the first day and then we went into IPL and we didn't really do any midwifery beforehand. But this year we went to uni and did normal course stuff and then went into IPL and I think because we'd had the experience of practice we could actually say as a student midwife this is how I feel it is in our practice. So it felt more like you could involve yourself and use your practice. (Student Midwife 5)

One of the newly qualified midwives even went so far as to say that IPE is best accomplished post-qualification rather than pre-qualification:

> The Trust that I now work with has developed an excellent series of study days for midwives and doctors – I have learnt more from just two of these days than I did in the entirety of my training. (Newly Qualified Midwife 2)

However, not all participants felt the timing debate was a significant issue. One Head of Midwifery expressed her belief that timing issues were a secondary concern when she stated, "regardless of whether we do it once the students are qualified, or when they are students doesn't make any difference as long as it is effective" (Head of Midwifery 5).

SETTING FOR IPE

Similar to the debate regarding the best time to introduce students to the IPE curriculum, there were also debates among participants regarding the optimal setting for IPE. The crux of the debate about the setting for IPE is whether these skills can be learned in the academic domain or if they are best learned in practice.

Despite the fact that practice-based IPE was a component of the curriculum at only one of the four sites, there was strong support from participants for the idea of IPE within the clinical setting. The perceived benefit of practice learning was thought to relate to the capacity for students to observe interprofessional working in action and to have hands-on practice for some of these skills. Several Heads of Midwifery thought this experience would be valuable:

> It's kind of learning in practice really, isn't it? So I suppose it's about giving students the opportunities to develop those skills through their training in their midwifery education. (Head of Midwifery 9)

> You do have to see it in practice. [The students] need to have it pointed out to them. (University B Participant 3)

In particular, participants advocated for the hands-on experience of seeing and participating in collaboration:

> I think probably in the practice setting. You can have a scenario where the midwife is actually looking after someone and then they have to refer to the doctors and then they would have to carry on seeing how the doctors were working. I suppose you could do it in a classroom, but I think you just end up thinking, 'what if,' but actually doing it with hands-on experience is one thing. (Head of Midwifery 6)

> Personally I think, through experience working when they're in practice and actually seeing it working. Seeing it in action, being able to attend meetings,

> case conferences, or joint clinics and seeing how the midwife interacts. (Head of Midwifery 10)

Additionally, one midwife described how seeing interprofessional working in practice would assist students in understanding their own role and those of other professions:

> Until you are actually linked with a doctor or linked with the physio or linked with an obstetric sonographer you don't actually appreciate what they can do. You can sit in a classroom and receive your knowledge through your formal teaching. But until you're actually in the post, and actually seeing, 'oh the doctor came in and did…' and, 'the ultrasonographer gave me those results.' Then you are not actually, 'working with.' And when you look at the woman in a continuum of care, through the middle the student has to see how all these roles interact and how they impact on the woman as she moves through the service. (Head of Midwifery 1)

Although the student midwives interviewed had not experienced practice-based IPE, they could see the value of this setting for developing skills for collaboration and for gaining an understanding of the scope of practice of other professions:

> I think you know if you want true IPL stuff you've got to include it within the placement setting and probably shadowing…maybe spend a day with someone in this profession. Following them around and see someone doing that. See what they do in a day and then you can understand how they fit in within that role…shadowing I think but it's...following them, observing and discussing why, you know, how they get this information, who they get it from, what failings there are. And I think that would be far more valuable than sitting in the classroom discussing what that person's role is. (Student Midwife 3)

> I would say it's one of those things you can't learn in the classroom. It wouldn't matter how many times I can be taught in the classroom how to do a baby check, but until I do it the first time, I wouldn't have been confident in it. (Student Midwife 1)

This student went even further to say:

> It doesn't really click with you, what you're actually doing and that it does have a part in your placement, sometimes until you actually go out on placement and you say, 'okay I get it.' I just honestly think, like I said before, that it's just one of those things that you can't pick up from a book, you can't pick it up from a lecture. I think, as well, while they're in practice, and you're watching them do it, stays in your head more anyway. I couldn't tell you what a physiotherapist does, but when you see it in practice, you know, watching someone care for a mother or baby, it clicks. (Student Midwife 1)

It was also identified that IPE, in the practice setting, could not exist in isolation. It needed to be supported by a strong foundation of IPE developed within the academic setting. A blended approach to IPE, with both an academic component and a practice-based component, was seen as advantageous for responding to different learning styles:

> The academic setting is useful, but I do think that it is important that it takes place in the clinical setting as well. I think, probably, academic work before is good and I do think the students need to see it in practices as well, and actually we need to practice what we preach in practice as well. (Head of Midwifery 8)

> Different people have different learning needs don't they? And different learning styles. So, I suppose having a range. Everybody needs the practice, but for some if you understand how it works it might make that practice easier. So I suppose having the opportunity to do the theory bit would be beneficial for many people. And I suppose it would aid the reflection as well, because you can kind of go back and think, 'Oh, yes, well, I did this and that was the theory it relates to and that's how it makes sense to me.' (Head of Midwifery 9)

The combination of academic and practice-based learning was also thought to be beneficial for ensuring that learning was supported by evidence and knowledge:

> I believe that they should be having a fine balance between academic and practice. And you've got to remember that our profession of midwives, it is about 40% academia, with at least 60% practice. And that's really where you are going to get your confidence. That's where you are going to get your experience. Yes, it has to be underpinned by, by knowledge, and by evidence-based practice and all the rest of it, but in order to have expertise and that confidence, it is the exposure that you need. And I don't think that anything further, in an academic way, would help them prepare for the multidisciplinary working when they qualify. But I think they need further exposure and support, as students, in the practice area. (Head of Midwifery 5)

> I think they need some academic input, but you have to lead by example and if they see it happening in practice then they are much more likely to take it on board. And if they can from the time they start their training, see interprofessional training happening then they will accept it as normal. I guess if they didn't have the academic input they might not question why that's a good thing. So it's one thing to accept something, but it's recognising the benefit of it. (Head of Midwifery 7)

Similar to other educational initiatives, many IPE curricula have used elements of e-learning. This is seen as a way to bring students together to learn while, at the same time, minimising some of the organisational barriers such as time-tabling conflicts which may prevent students from coming together in mixed groups.

This means that, in addition to the academic and practice-based setting for IPE, there is also the virtual setting in which students are engaging in IPE curriculum. Although it was not a key topic for discussion with the Heads of Midwifery or midwifery educators, the student midwives who had experienced aspects of this virtual setting had comments about how this impacted their learning:

> But a lot of it's based on online learning. I don't like that way of learning at all, personally. Because I learn a lot more face-to-face talking, watching in the classroom, having discussions, things like that. Reading about what people have written online and things like that, I am not motivated to do that. (Student Midwife 1)

> I think the internet learning is good if you have the time to do it. But I think there should be an emphasis that the lecturers provide you with a full lecture. That means you are getting all the information you need and the e-lectures are just an add-on. (Student Midwife 5)

This student also expressed that support from the lecturer during the online learning was vital:

> Perhaps just a bit more availability from the lecturer because we've not had any input on the internet at all. Not from what I can see when we are doing our communication on-line. (Student Midwife 5)

5.3.2 CONTEXTUALISING THE CURRICULUM

Similar to the organisational details of the curriculum, the participants addressed several aspects regarding the content of the curriculum, which appear to influence the level of engagement with IPE. There were some frustrations in relation to the relevance of the content of the IPE sessions. Also, it was identified that integrating the IPE goals and objectives into the uni-profession curriculum was a key component of providing the broader context for IPP, yet there were varying degrees of integration at the four university sites.

RELEVANCE OF CONTENT

Many of the students and newly qualified midwives voiced concern that the content of the IPE sessions was too simplistic. They went on to describe how the concerns over the content impacted the possible outcomes of participating in IPE:

> It feels a bit like the University knows we need to learn it. It's got to be part of the curriculum, so they put it in, but the outcome that they're going to get from it is not what they want. I don't think....It's no good just putting a group

> of interprofessionals together and then teaching them about something a bit basic and a bit random. (Newly Qualified Midwife 4)

Specifically, the students outlined how the content was not helpful for learning skills they could use in practice:

> I spent four weeks doing IPL in total and I'm no better off now than I was when I first started this. Other than what you pick up in your own placement. these sessions really don't seem to have aided me in any way....I can't think of anything that we've covered and I thought, 'Oh! Well that will help me to interact better in my working environment.' (Student Midwife 3)

Further, it appears that the concerns about the content caused frustration among students and this in turn decreased their motivation to engage in IPE:

> There was a lot of stuff that made people switch off with the IPL. Things like, you know, just stating real basic stuff like, you know, how to sit when you're talking to someone. I know that it's good to have that knowledge, but a lot of the stuff that we were taught was really, really simple. (Student Midwife 1)

There were also examples given of how the content was not always applicable to midwifery practice issues:

> I don't feel as though the sessions that we went in for really meet my understanding of interprofessional working. I didn't learn anything about other professions or how they interrelated with Midwifery....Plus, we're looking at consulting with an elderly gentleman who had some operation. So totally removed from what we do as midwives. But even then...as a mature adult you can look and say, 'well I should have done this, and I should have done that.' (Student Midwife 4)

> Course content was incredibly repetitive and largely inapplicable to midwifery practice. (Newly Qualified Midwife 2)

There was also frustration from students that the content and facilitation of sessions did not promote interaction between professional groups nor did they see how it was going to contribute to their ability to collaborate with other professionals:

> This has not been interprofessional...you're in a mixed group doing something totally, you know, basic, like research, so I don't think in any way that it's aided my interprofessional collaboration. (Student Midwife 3)

Integration into Wider Curriculum

In addition to contextualising the curriculum, the midwifery educators articulated that it was essential to ingrain the IPE principles into the pre-existing midwifery curriculum in order to help students fully engage with IPE:

> You can't see it as a separate entity....We really tried to ingrain it into the rest of the curriculum, otherwise, you know, we would just be doing it because it's the flavour of the month, and not instead, because we believe in it. (University C Participant 1)

> There should be things that, having done the [IPE], they should then be able to use those interprofessionally learned skills and knowledge bases in subsequent uni-professional activities. So, although it is three discrete units there are bits of it woven into the whole curriculum. (University D Participant 1)

> It's rippled throughout the program in other ways. When we do teaching we talk about what would be the role of the other professions. You know, why would you call that person when dealing with obstetric emergencies, or when you are dealing with child protection. (University B Participant 2)

The midwifery educators provided examples of how the aspects of interprofessional collaboration had been built into the academic assessments within the midwifery-specific curriculum:

> The other thing about the interprofessional modules is that it is really, very heavily ingrained through most of the actual taught sessions....For example, it comes up in their assessments in their professional modules. There is an expectation that it is part of the learning outcomes and it is actually written as a learning outcome, that they need to be able to refer that their essay is about an interprofessional situation. (University D Participant 4)

> We also weave it into our academic written assessments asking them to consider interprofessional roles in working within the assessments being undertaken. (University B Participant 1)

They also provided examples of how the capabilities for interprofessional working had been included in the assessment of clinical practice skills:

> And [it's incorporated into] the practical assessments. After each unit they do, they have a placement and it's assessed in practice. Each outcome or each set of outcomes has outcomes linked to interprofessional working and learning. (University B Participant 2)

> And that's the key. It's not just in the IPL modules, it is scattered throughout our curriculum as well. One of our practice outcomes is about liaising effectively with other professionals. (University B Participant 2)

However, when asked further questions about the assessment of these competencies in practice it was highlighted that they were not explicitly labelled as 'interprofessional competencies' but rather that it was understood that they were inherent in the other assessment areas, such as communication skills and care management. One participant from University D clarified that the skills, such as

communication, interprofessional working, and making appropriate referrals. were included in the practice assessment, but that they were not separated as 'interprofessional skills.' She described it as being integrated into the other assessment areas because 'it's just part of the role of the midwife.' Another educator expanded on this thought:

> We have competencies that are not specific to interprofessional working, but again, we've got to keep them really broad so the midwives and the mentors can interpret them differently for students at different levels. But we do have it at every level. So it is highlighted throughout the curriculum. (University C Participant 2)

5.3.3 Facilitating Learning

In addition to the logistics and content, the role of the facilitator in the academic setting and the mentor in the clinical setting were established by participants as key roles influencing the IPE curriculum.

Role of Facilitator

The focus groups with midwifery educators demonstrated support for the IPE curriculum. Also, it was clear that they enjoyed facilitating the IPE sessions:

> I believed that I benefited from it, so that's why I wanted to be involved in the curriculum. It is why I was quite keen. (University D Participant 2)

The midwifery educators also found facilitating IPE to be valuable for their own personal skill development:

> I enjoy it. I enjoy facilitating it. I think it is helpful. It has helped me to have an appreciation of how it links to the current curriculum, and how it's embedded in the curriculum, and how the other bits of the program link into it. (University B Participant 2)

The students and newly qualified midwives had a different perspective regarding facilitation. They identified that disorganised, unprepared and poorly trained facilitators were common within the IPE curriculum and were a central influence in their dislike of IPE and their inability to engage with the curriculum.

The students voiced concern that the training for facilitators had not been adequate to prepare them for facilitating the IPE sessions:

> The facilitator didn't know any more than we knew…he maybe spent an hour looking at what he should have done for the whole week. (Student Midwife 3)

> I think perhaps the facilitator should be given more guidance on what's the correct amount of input and what they should be doing in order to prepare for those sessions. (Student Midwife 5)

> But, I really think the tutors aren't quite sure what's going on with the assessments for each individual group. (Student Midwife 1)

Some facilitators were perceived as not supporting IPE and as seeing it as being of lower status and importance than their profession-specific curriculum:

> We didn't have a teacher who was...he didn't do any of the lessons. We had homework to do before each seminar but he was just going through that with us through the lesson. He wasn't giving us lessons. I'd rush to get to the lecture if I'd been at home or something and I had to travel to get here and he'd end up saying, 'oh we're not going to have a long session today. I'm not feeling too well. I'm going to let you go early.' We had half an hour sessions half the time, when it was supposed to be two hours. (Student Midwife 2)

> The second week was a bit annoying though this year, because the tutor that we had didn't really do anything extra. He just did the e-lectures. He would just play the e-lectures on the board. I thought he was going to do something additional because we're supposed to watch the e-lectures in preparation for the lesson, not in the lesson. And I think it just bores people. (Student Midwife 1)

The students went on to articulate how the facilitator influenced their participation and motivation for IPE:

> Our lecturer seemed to shun responsibility to lecture. So if we had a three hour lecture he'd make some sort of excuse and just teach for an hour on every lecture which was quite frustrating because you make the effort to go into the University and then he only teaches you for an hour, which means that you're not really getting the feedback that you need. (Student Midwife 5)

> If all the teachers knew what they were teaching and when they were teaching it and therefore that gives us more confidence in what we're learning but the fact that the teachers either, don't have the passion for it, or are not prepared doesn't really help....It makes me not want to go to. (Student Midwife 2)

ROLE MODELLING

Role modelling by mentors and other professionals in the clinical setting was also seen as a key factor for influencing student engagement in IPE. Role modelling was described as being central in the process for professional development:

> I think a lot of it is subliminal and if we have good role models...I certainly remember when I was training, both as a general nurse and during my

> midwifery training, there were two or three people, who I can still remember, and I was thinking, 'Oh gosh! I wish I could be like that.' And they have the leadership skills that I admired....And if you've got the role models [on the labour ward] then people will take what they want from individuals. (Head of Midwifery 4)

> I suppose for the students that is about role modelling or when the newly qualified staff see that they pick it up, don't they. They are quite good about picking up on good role modelling. They are watching all the time. (University B Participant 3)

It became apparent that role models who were not supportive of IPE or of interprofessional working posed a significant barrier to students and newly qualified midwives learning of interprofessional collaboration in practice.

> People who've been practicing for many years and who have not had interprofessional learning [will be a barrier]. However, there are people who've been practicing for many years who are excellent communicators and have excellent respect for other professions. But there are those that don't and are very hierarchical. (University B Participant 1)

> If their role models are not demonstrating effective interprofessional working they won't embrace it and take it on. (University B Participant 2)

Conversely, senior midwives and role models who were champions of interprofessional working and learning were seen as an asset within the clinical setting for their ability to encourage students to engage in IPE:

> I think the other thing that's important, that can help or hinder, is role modelling from senior midwives. If senior midwives can offer support, if they see midwives working in a competent way, interprofessionally, with other midwives I believe that could help. It will help encourage them as well. (Head of Midwifery 8)

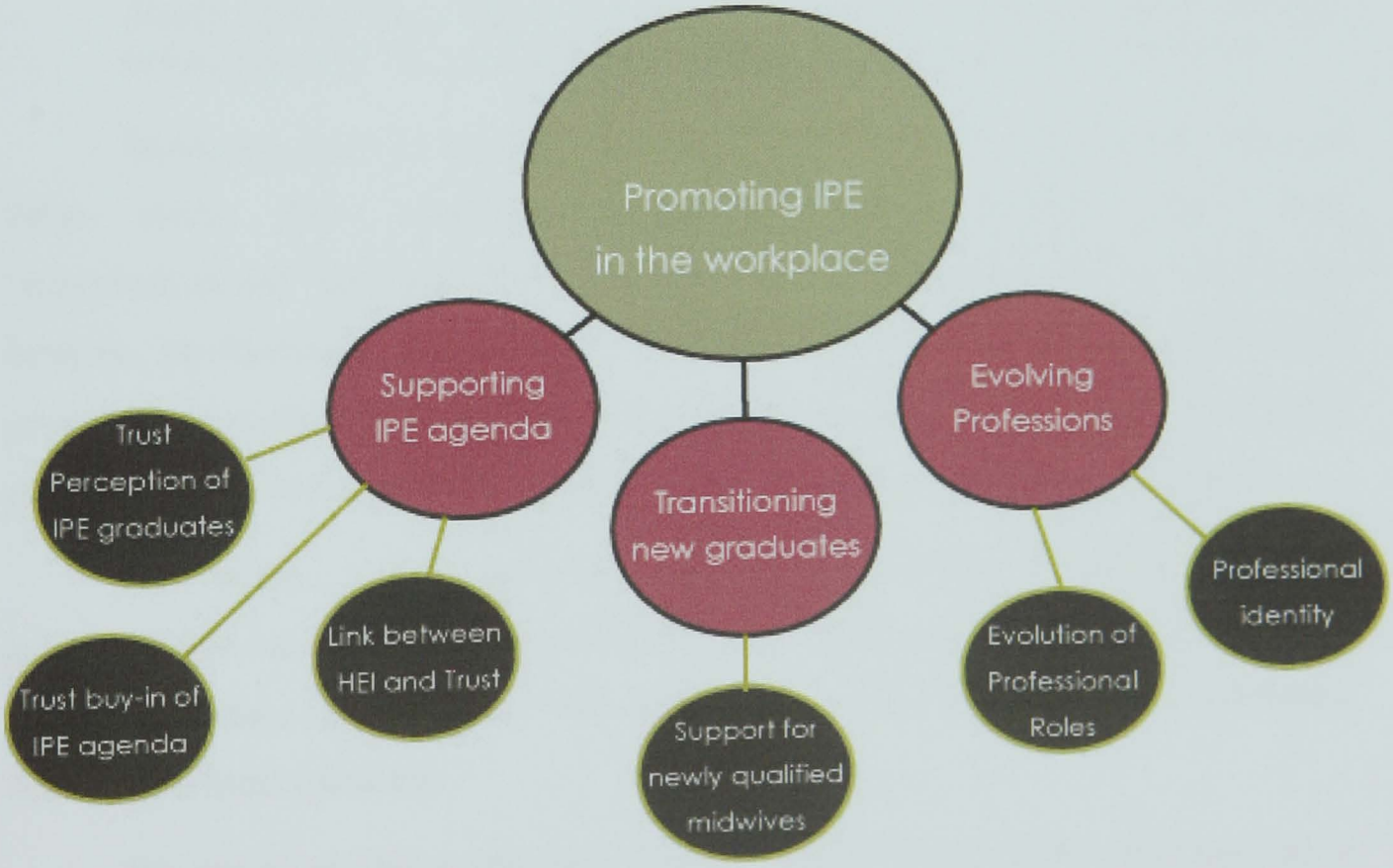
5.4 Central Category: Promoting IPE in the Workplace

The previous two categories have highlighted the individual and logistical factors that can influence the acquisition of IPE competencies. The current category will examine these matters further by looking beyond skill acquisition to examine the application and transfer of these skills to the realm of practice. The extent to which the clinical workplace supports and promotes IPE and IPP has a significant influence on whether these acquired skills will be sustained after qualification. Much of the work to create a favourable learning environment within the HEI will be fruitless if

IPE is not supported within the clinical setting, where students participate in placements and where they will ultimately be employed as health professionals. In this way, the HEI and the NHS Trust have a symbiotic relationship, where the actions of one party can either promote or hinder the actions of the other party. An example of this within the context of IPE is the impact of role models in the clinical setting. Students whose mentors in the clinical area were champions of IPE were exposed to more collaborative learning opportunities than students whose mentors did not support IPE. Consequently, the actions of staff in the clinical area directly impact the attempts of the HEI to create a favourable learning environment for IPE.

The participants gave further examples of the ways in which the Trust site played a role in either promoting or preventing IPE. According to participants, the extent to which the clinical institution promotes IPE is made visible through their support for both IPE placements and further interprofessional training post-qualification, through their support for the newly qualified midwives and through the evolution of professions and roles among staff (Figure 5-4).

Figure 5- 4: Central Category: Promoting IPE in the Workplace and its Subcategories



5.4.1 SUPPORTING IPE AGENDA

Most of the participants identified that study days initiated by the Trust were a way in which the principles of collaboration were incorporated into the working culture. These study days took the form of mandatory training or 'skills drills.' The Heads of Midwifery described how these study days provided opportunities for various professional groups to come together:

> We do emergency obstetric training mandatory study days annually, and those are for all professionals - doctors, nurses and midwives - and I think at this stage they are very successful. We all attend those training days together. (Head of Midwifery 8)

Study days are viewed positively because of the attendance of all the professional groups:

> We then do involve our obstetrics staff within our mandatory programme. So we have, you know, some cross teaching, but we also have some cross attendance. We encourage our doctors to come and we did an obstetric emergency day and we have doctors attend that alongside the midwives. So that is always good, and we do encourage that sort of thing. There have been some Trust wide multidisciplinary days on subjects, such as bereavement, where we've had a whole range of professionals attend and the Trust does encourage that. Anything like that is again good. (Head of Midwifery 10)

However, upon further discussion with participants, it appears that many of these study days resemble 'multiprofessional' learning, rather than 'interprofessional' learning. This was demonstrated through minimal interaction between professionals and minimal discussion of how the various professional groups could work better together. Instead, it was simply an opportunity for various professionals to come together, in the same room, to learn common information.

Conversely, a few participants provided examples of interprofessional initiatives that incorporated a discussion of collaboration and team functioning. One example of how collaboration was supported in the workplace was debriefing following critical incidents:

> We are a very busy unit, and we are relatively short staffed, and we have a fair amount of clinical incidents or near misses and if people are involved in a big incident they are debriefed by our patient safety advisor, (we used to call her clinical risk manager, just to put that into context, but she wanted to be cuddlier than that. So she's now the patient safety advisor) and they possibly take part in a root cause analysis, and that is a big deal for people. Even

though it happens relatively regularly, and that's a multidisciplinary thing. (Head of Midwifery 9)

Another Head Midwife described how interprofessional risk reviews of clinical events were done on a daily basis. She felt these discussions had improved referral and communication between professionals:

> In practice the midwives and doctors are working together all the time. There is a very, very open referral system because our midwives work in integrated systems, and we have case-loading teams and the rest of the midwives are all integrated. So there's quite a small core team that's based here, so midwives are often referring to consultants and obstetricians, and it's very easy and open-ended and we do clinical events, risk reviews that we do every day: events that happened in the previous 24 hours get discussed. And that's a very multi-professional group, so it will be the consultants, the labour ward coordinator on call, the supervisors, one of us is on a rota to do that, and anybody else who's been involved so sometimes it's an anaesthetist, a paediatrician or the students, (medical students or any student), and any of the midwives who've been involved. We encourage them to come along and it's a kind of 'no blame' culture...so in practice, I think it does work well. If you go down to the labour ward you see all the midwives, and they're talking quite easily with all the doctors who are on. (Head of Midwifery 7)

Several of the participants identified that there was still much more that could be done within their institution in order to support the interprofessional agenda. For example, one of the student midwives suggested that informal gatherings with different professions were needed in order to facilitate collaboration:

> I think there should be more coffee mornings where everybody can go and have a coffee, including doctors, radiographers, social workers where everybody can just come in, have a cup of tea and sit down and chat because I think if you get to know the person as a friend then you are more likely to work better together. (Student Midwife 2)

Some of the Heads of Midwifery articulated that there is a responsibility at the Trust level to carry on with the principles of IPE, yet this commitment to sustaining the principles of collaboration had not been taking place:

> And, I don't know whether the three-year programme is designed to meet those needs [for interprofessional training], or if we do enough after qualification to ensure those needs are met....You know, I just want midwives to understand the wider agenda really. And once you got them through university, you know, that's your bit done and that's probably our responsibility to do that, you know, and making sure that they understand that wider agenda. (Head of Midwifery 3)

This participant went on to describe that there are not measures in place for the Trust to maintain the IPE agenda:

> I just don't know how we're going to sort of keep all of that moving forward, like, you've got to let the university-based finish. But how do we take that journey forward really? I think it's great that the university is doing it but I'm not sure if we're actually, or how we are actually going to sustain that afterwards. (Head of Midwifery 3)

One of the students developed this idea further. She spoke about how the workplace culture at the Trust would need to change in order to continue to support IPE initiatives. She stated:

> And unless the whole system of work is changed so, you know, you will have interprofessional meetings, you will have a communal area where you can meet informally as well and just things like that where we'll meet to discuss whatever interprofessionally. And that, I think, a lot of that comes from the top down as well. So you've got, you've sort of got to meet in the middle. It's got to be things in place that support interprofessional learning and then also the people that are willing. (Student Midwife 3)

The views from participants presents a picture, whereby, the Trust has paid little attention to the ways in which they could support interprofessional learning and working beyond the inclusion of multiprofessional study days. The students were aware that the workplace culture did not support the principles of collaboration they had been learning in school. They identified this as a significant barrier in their ability to apply their IPE learning within the clinical setting.

However, there was, within the group of Trust sites, one site that had taken strides towards promoting IPE and IPP within their workplace culture. Two key features identified at this site that promoted a culture of collaboration were an identified staff position whose remit was IPE, and the presence of consultant midwives, who were involved in higher level decision-making within the management of the maternity care at the institution:

> The [IPE] post was put together by a consultant midwife and consultant obstetricians, so there was already joint support for it before we started. I do think we've had an advantage in that the consultants here are very pro-midwife and they want it all to work together and having two consultant midwives who are very...they are functioning at a very high level. So that actually works very well in terms of midwifery has a voice at the highest level....I guess if I would have to say the one big driver for interprofessional stuff that has kept it going is the consultant midwives. Definitely, they've kept it up here as the important point to keep going and they don't keep quiet.

> And they're in a position of power, which is something in the past that midwifery just hasn't had and managers have never had. (Head of Midwifery 7)

It was also highlighted that at this site there was a Trust-wide division responsible for education with a collaborative philosophy:

> We've also got now a division called IDEAL, which is 'Integrated Division of Education And Learning'....It overlooks the whole of the Trust, so education for the whole of Trust is under one umbrella. At the moment, the director of that is a consultant obstetrician, but that may well change that she may well not always be doing that, but she has lots of different disciplines – midwives, nurses - so that's very integrated. So, I think the philosophy is integration throughout, certainly in this Trust, so I don't think there's anything that would stop [newly qualified midwives] from using that [IPE] training. (Head of Midwifery 7)

Link Between HEI and NHS Trust

The interviews highlighted both the nature of the relationship between universities and Trust sites, as well as the importance of forging a strong interdependent approach to IPE. At many of the Trust sites there was limited knowledge about the IPE curriculum. For example, several of the Heads of Midwifery described how they were aware that the IPE curriculum was taking place, but they had little understanding of the objectives or content of it:

> I am aware to an extent....We have been involved in curriculum planning but as far as the interprofessional training goes, I don't feel we're that well informed as we could be, to be honest...but we're more involved with the mentoring and signing off of each placement. (Head of Midwifery 1)

> I know about it, but I wasn't aware that it had actually started yet. (Head of Midwifery 5)

For those who were aware of the IPE curriculum there was an element of angst as to what it would ultimately mean for the Trust. One Head of Midwifery described her frustration with how decisions made at the HEI dictated the service at the Trust:

> I think as well sometimes with Midwifery Education as a practice provider, or for any of the educations, it's a bit of the tail wagging the dog. We have to cut our service to fit the HEI, which is sometimes, there's a bit of antagonism about that. (Head of Midwifery 1)

Again, the one Trust site that had a more supportive environment for IPE provided an example that proved the exception to the rule. The midwifery educators

and the Head of Midwifery described how the HEI and the Trust collaborated together to implement the IPE curriculum. At University D, in the second and third years of the IPE curriculum, students are involved in clinical audits and service development projects at various NHS institutions. This was beneficial for the students and for the Trust. From the student perspective, the audits helped them to see the real world application of their IPE work. From the perspective of the Trust, there have been audits that resulted in changes in practice. These benefits were outlined by the participants. First, a midwifery educator described the impact of the projects:

> The things about the practice placements in year two and three is that they are real projects and the projects that the students do are the property of the Trust or the organisation where they have been based. So they have actually done a useful piece of work that is then taken by the service and developed further and actually we've got quite a few examples of where that has led on to real audit's, subsequent service development and new ways of working, innovations where they have changed practice, saved money. (University D Participant 1)

The Head of Midwifery also commented on the benefits of the projects from the perspective of the Trust:

> It was interesting, their [the students] insight was absolutely fantastic for us because it was like fresh eyes looking at it....The third year they are supposed to implement some sort of change in practice. So it's up to us to choose what we need changing, and we support them. (Head of Midwifery 7)

The involvement of the clinical staff in helping facilitate the IPE curriculum through the audit and service development projects was seen by many participants as a key strategy for strengthening commitment to IPE and interprofessional working within the clinical setting:

> I think the big change in the local maternity unit was when they actually hosted a year two project. There was actually a group doing a clinical audit in midwifery on the main unit. And I think at that point, a lot more midwives got on board with the idea [of IPE] because they could actually see what they were doing, and that there was a benefit to them that all these different interprofessional groups were actually working together as a team. I think that changed a lot of people's ideas in the local unit....It actually being in the Trust is quite beneficial. In the year since they've actually done that and run the unit it has made a very big difference at the Trust. People know more about it. It's vision, it's there. These people are there for a couple of weeks wandering around the building, clearly and obviously doing something that's useful, and it is something that has an impact. (University D Participant 1)

Training was provided for the clinical staff so that they were fully aware of the objectives of the IPE curriculum. Within the clinical area this provided extra support for the ideas of interprofessional working. As a result, interprofessional working was a tangible ethos within the culture of the clinical environment. This in turn meant that interprofessional working was role modelled for the students when they were present in the clinical area during both their IPE module and their professional placements:

> That's how we work here, so it's nice to think that when the students come through they are used to that...I do think that they know that it's part of the culture. That's what they're expected to do. Most of them don't even question then or question the interprofessional stuff at all. It is taken for granted. It makes our job much, much easier. (Head of Midwifery 7)

This Head of Midwifery also described how an explicit understanding of the principles of IPE at the Trust level has helped to foster the relationship between the university and the Trust, which in turn, helped to build support for IPE within the institution:

> So there is a big, big...a very solid relationship between the University....So we have the insight of what the aims were of the interprofessional education. I think that probably made a difference. (Head of Midwifery 7)

5.4.2 Transitioning New Graduates

In addition to the strong relationship between the university and the clinical institution, the transition process for new graduates was identified as a key opportunity for promoting the continuum of IPE in the workplace. A formalised preceptorship programme was in place at all of the Trust sites as a means to facilitate the transition from student to qualified midwife. The preceptorship programme was seen as being a vital component in helping newly qualified midwives gain the confidence and autonomy for professional practice:

> I still feel that we are building on the foundation or the foundations are being built when they are qualified midwives. And they're relying heavily on the preceptorship year to actually build on that foundation. (Head of Midwifery 5)

> For these newly qualified midwives there are things that they are not competent or confident in....I think if they're supported through that, because if they get affirmation that they are actually doing a good job and making sure they can ask questions. I think that will help them in that transition because they will have the confidence that actually, they are making all the

> decisions themselves....It is still a huge transition. They get really scared about accountability – have they made the right decision? And they start to doubt things that, actually, a couple weeks ago when they were students, they wouldn't have thought about. So the biggest thing is supporting them, I think. (Head of Midwifery 7)

The Heads of Midwifery described the usual programme of preceptorship:

> We have quite a structured preceptorship package....They are precepted for a year and in the course of that year they will learn various skills that we know they have to have to make that band five to band six move with the ongoing appraisal. We appraise at six months after qualifying to check their progress, including KSF [Knowledge and Skills Framework], and we have an appraisal again at a year under KSF to make sure they've met their gateway. And we tie their gateway to things like their medicines management, their IV therapies, their suturing...they have to have rotated throughout all the areas. They have to have done days and nights, to get the feel of nights, and the feel of days. We have a satellite clinic at another hospital. They have to go there, so they get used to being a little deserted, a little bit out. And they have a written package of competencies and experiences we like to get them to a governance strategy meeting, child protection. They have got to have experienced the bare roots so they have some hooks on which to hang a greater experience. So they are precepted, they have their packages, they know what they've got to absorb from each area to get that band six qualification, and sorry to say but band six is what brings the money in, so that's what they do. (Head of Midwifery 1)

In order to understand how this preceptorship programme would help graduates apply their IPE to practice, participants were asked to describe their perception of graduates with IPE training and whether or not they would be seen as more favourable candidates at interview. Also, they were asked to describe whether these graduates would be successful in applying their IPE training at the Trust.

NHS Trust Perception of IPE Graduates

The participants outlined that systemic support for IPE within many NHS institutions may be minimal, and that the relationship between universities and Trust sites influences the extent to which Trusts prioritise IPE. However, at many of the Trust sites in this project, the Head of Midwifery spoke favourably about the possible contribution of graduates with IPE training. Graduates with IPE training were seen as possible resources to other staff and as individuals who could contribute to the long-term vision for the profession:

> If I was down to two equal candidates, nothing to choose between, I would definitely go for the person with the interprofessional learning...I think my

> gut feeling would be to go with them because that's the future of midwifery...but the problem is that the people interviewing may not feel that way. And they may also not be quite enamoured with the wider issues within midwifery and they may be more protective of the midwifery identity. So it's also getting other people to see them as a resource. (Head of Midwifery 3)

> I think you are more likely to get the candidates that I would want working here with the inclusive training, with the interprofessional training than the ones who haven't been. So I guess I would be more likely, if I knew what training programme they had been on, to perhaps hire the local students who I know have gone through this process....Certainly, those are the midwives of the future that I would like here, because as I say, my long-term vision for here is a very different model of midwifery care than it is now. So I don't want people who are not team players, who do not have respect for the other disciplines to be working here. It just would not fit in with where I want to take the unit. (Head of Midwifery 4)

This view that newly qualified midwives with IPE training are an asset to the Trust is an indication of the support for interprofessional working within the Trust. It is one of the first steps in promoting broader culture change. However, this indication of support may also be an element of tokenism as Trusts attempt to appear supportive of IPE. The means by which these graduates are encouraged to make use of their IPE training once in clinical practice warrants further exploration.

Support for Newly Qualified Midwives

When the Heads of Midwifery were asked how they supported newly qualified midwives to continue their development and learning in the principles of interprofessional working they identified that this had not been seen as a priority within the preceptorship programme. Many participants felt that the transition for newly qualified midwives needed to focus on refining clinical skills rather than interprofessional skills:

> I think what we do in the profession, what we tend to concentrate on after qualification is getting them through, if you like, a very much task oriented procedure of preceptorship. Can they cannulate? Can they suture? Can they put up an epidural? Not, could they sit around the table and chair a case conference, could they go and present some findings with a domestic violence group? We don't concentrate on those. We do concentrate very much on delivering midwifery as opposed to widening out really. (Head of Midwifery 3)

They identified that the competencies for interprofessional working were not assessed in the same way as the clinical competencies:

> I wonder if they look at interprofessional skills as something that is removed, as in something they actually have to achieve almost, or whether it's just. I've got these boxes to tick about suturing and epidurals and so on. But there isn't a box on interpersonal or interprofessional skills. So maybe that is something that that they don't think about in the same sort of way as the practical stuff. (Head of Midwifery 9)

It was articulated that the main purpose of the preceptorship programme was to focus on clinical competencies. At the same time, other Heads of Midwifery realised through participating in the research interview that interprofessional competencies should be incorporated into the programme of preceptorship:

> And actually thinking about it, it's probably something that we don't focus on enough, because within their preceptorship programme there is nothing really about…there is a bit about handovers and things, but there's nothing specific really about interprofessional skills. Maybe that's something we need to look at? Some individuals are going to be really good at it and others aren't. So I suppose if it was brought into the preceptorship programme then they would be able to at least, it would make them think about it. (Head of Midwifery 9)

There was some discussion from participants that newly qualified midwives, in their first one to two years of practice, may not be fully able to make use of their IPE training. One midwifery educator described how graduates don't make an impact in practice until several years after qualification:

> If you really think about when people start making an impact in practice it's not in their first two or three years after qualifying. The first two or three years they are learning the nuts and bolts and the grassroots. They are at the bottom of the heap. Hopefully, we've sown seeds so that five years later when they are beginning to have more senior posts that will actually have a big impact. (University D Participant 1)

However, another midwifery educator expressed how post-qualification is a time when new midwives start to make connections between theory and practice. As such, it can be a critical time for continued IPE training:

> They only see the value of that once they've gone through their own programme of education when they get into the clinical areas and there are multidisciplinary working settings. I think that's when they really make the link between the theory and the practice. (University C Participant 1)

Similarly, making the link between IPE theory and practice reinforces the relevance to midwifery:

> They said it's only really after qualification, when you get to that level, that you realise how you do need to communicate with other health professionals, and the importance of it and the relevance of it in order to provide good

> quality patient care…it's only post-qualification that they really appreciate the value of it. (University C Participant 3)

Some participants felt strongly that the newly qualified midwives should not be expected to act as agents of change. They suggested that it was important to give these new midwives space to adjust to their new role as qualified professionals:

> There's a confidence factor, and I think particularly as a newly qualified midwife, all you can focus on at that point is getting through the first 12 months, that you're somewhat reluctant to put your head above the power pit because it's overwhelming that first 12 months. (Head of Midwifery 4)

> When you finish your training you have a very narrow view of what being a midwife is. So I think, on qualification, to expect them to be good change agents is not going to happen….It happens maybe after qualification and during the next three-years time, we are trying to get them to develop other skills and look at the pathways that they want to take. (Head of Midwifery 3)

However, these same Heads of Midwifery also identified that by the time the newly qualified midwives had consolidated their clinical skills and were feeling more confident, they were not likely to get back involved in opportunities for interprofessional working:

> Then the skill is to harness the ones that are doing well and have the confidence and pull them into things. Rather than, and we are as guilty of this in as anywhere else, of just letting people go on and not doing anything with them….The newly qualified girls, they don't always see the wider aspect of their role about safeguarding or substance misuse issues or social services….Then they qualify and then they're busy doing the year consolidation and then they don't get back involved. (Head of Midwifery 4)

> I think there is a danger, sometimes, to think, 'I won't ask her, she's only been qualified so long'….but they have a very different perspective and they are actually much closer to the ground, and what's going on than we do. We do need to use their skills much more. (Head of Midwifery 3)

All of the newly qualified midwives reflected that they wished IPE had been a stronger presence during their first year of practice. This was captured in one of the questionnaires when the midwife stated, 'I do think that it should have been there and compulsory from the beginning' (Newly Qualified Midwife 6). Also, one of the newly qualified midwives stated that she felt this would have eased her transition to professional practice:

> I feel IPE should have been initiated from the first year of practice. This would have aided my transition from student to midwife. (Newly Qualified Midwife 5)

These sentiments expressed by participants make a case for the importance of explicit post-qualification IPE initiatives to consolidate the theoretical IPE training.

5.4.3 Evolving Professions

In addition to the systemic supports and stakeholder relationships that appear to be critical in promoting IPE in the clinical workplace, participants highlighted the role that professional boundaries and roles play in this process. They discussed issues of professional cultures and ideologies that shape the climate for collaboration. Increased patient expectations, greater role diversification and reductions in workforce numbers are part of the landscape that shape these aspects of the evolving workplace (160).

Evolution of Professional Roles

The participants were keenly aware of an evolution of professional roles. They articulated ways in which the role of the midwife had changed in the last ten years. Likewise, they saw the development of new professions as another illustration of this evolution.

Within the profession of midwifery, one example of this evolution of roles was how the scope of practice has broadened. Several of the midwifery educators mentioned suturing and ventuse delivery as examples. Twenty years ago, it was a new idea for midwives to be suturing, but now it is standard practice. Similarly, some midwives in the UK are now training to use a ventuse – a practice that has traditionally been in the consultant's scope of practice.

The participants also noted the development of new professions as a reflection of changing professional roles. The educators at University B spoke about the advent of health care assistants which, as a profession, have a more interprofessional focus. The scope of practice of health care assistants appears to be more patient and less profession-driven. One midwife described how this scope of practice allowed greater flexibility and less role division for health care assistants compared with midwives:

> We [midwives] have these defined roles and it's caused a division. It is a very defined role, whereas with a health care assistant can do an awful lot...well you can send them off to the gyne ward and you know they are

> interchangeable. They can be employed anywhere in the Trust. (University B Participant 4)

The evolutionary theme also came up in the focus group at University D. They discussed how IPE was a process of evolution and revolution. They described how, just like evolution, there will be species that die and new species that are created. They too noted that the newer 'species' of professions have a scope defined by client needs rather than professional jurisdictions:

> If this [IPE] goes on, and it could, I can see new sorts of professionals. In fact, we've already got some in terms of...we've got allied mental health practitioners, and they're not nurses, and they're not doctors. They are a new species. They are actually client-specific, rather than profession-specific. They actually use the skills from three or four different professions but applied to one client group. (University D Participant 1)

CULTURE CHANGE

In addition to the evolution of professions, many participants described how the climate of professional practice had changed in the last decade. One midwifery educator captured this idea when she stated, "but we are getting there. It is evolution, not revolution" (University D Participant 1). The participants also gave examples of increased collaboration between midwives and other professions:

> Midwives everywhere have to deal with a lot of social issues today, which probably we didn't deal with when I was a student midwife, because we didn't actually realise the impact of those social issues on health. (Head of Midwifery 3)

> If we had had something more interprofessional and [the medics] had it too, it may have improved things. I think it probably would have reduced the hierarchy, and there certainly wasn't anywhere near as much multi-disciplinary working on guidelines and things then as there is now. (Head of Midwifery 9)

More specifically, several participants mentioned how the patterns of communication had changed to be less hierarchical:

> It's not such a huge issue to communicate now. Going back in the dark ages, during my time, really but you would virtually curtsey before you spoke to senior medical staff. There was a definite difference, a definite hierarchy, and nowadays, there really is, there is not so much of that. (University D Participant 5)

> I think one of the things I've noticed being a long time in the National Health Service is that we always used to think, 25 years ago, that we did have interprofessional communication. Of course we did, we had letters to people,

> we used to talk to each other, we had case studies, but I've noticed now that there is a difference in the meaning of interprofessional communication, whereas before we used to tell each other things, we would inform each other of things. Now there is much more of a discussion...or a dialogue. (University D Participant 4)

Another change noted by participants was a greater recognition and respect for the contributions of other professions. For example, one midwifery educator had been involved in teaching obstetrics to medical students:

> You go back five or ten years and you would never have done that. A medic would never have asked a midwife to come and teach doctors, but now, actually they say, 'you are the best person to do this. This is your field of expertise, you come and do this.' (University D Participant 1)

Other participants commented on the presence of midwives within the academic sphere as an illustration of improved recognition of the contributions of various professions:

> I was at a conference on preterm labour at the Royal College of Obs[tetricians] and Gyne[cologists] and there was all these eminent people speaking, and there was a midwife speaking about her projects. It was just...ten years ago, that would never have happened. (University B Participant 1)

> I definitely think nurses and midwives as a profession are getting much more respect from other professions as we become more academic and are more respected by other professions. (University B Participant 4)

However, participants were also aware that the professional boundaries and the culture of midwifery were a significant barrier to cultural change within the profession:

> And the one thing that we bring with us is our professional culture, which takes a long time to change. And some of those things hold us back, purely and simply because we hold on to what we deem to be really fundamental to our profession...because there is an embedded understanding and even in statutes it's embedded to know what a midwife does, and the scope of her practice - it tends to somehow hold us in a particular place and position. (University D Participant 3)

Despite these challenges, there remained great support for the notion of promoting a more collaborative workplace culture. The evolution of professions and the creation of a more favourable work environment, that supports collaboration, were seen as part of a process of cultural change which is still underway:

> We are working in a dynamic area of care and it will be evolutionary and it will move on. And in 10 or 15 years...it will have changed phenomenally from what it is now....We are talking about a huge cultural change and it takes 20 years to change a culture. Is it surprising that it's taken us 20 years? No, it's not surprising. It probably took us 10 years to get off the ground. And I think that yes, we are probably on a roll now because people are on board and that's snowballing down the mountain, and it will pick up speed, and it will pick up extra bits and pieces and the spin-off will be very positive. (University D Participant 3)

> I think there will be a blurring of boundaries, of role boundaries, which I think is happening now. It takes such a long time for that to evolve. When you think about suturing, well 20 years ago it was, you know, 'Oh my goodness,' and now it's, 'of course a midwife does it.' It doesn't happen overnight, though. I think the effects of IPL will take 20 years as a whole cultural shift. (University B Participant 4)

Some participants spoke about how IPE will help to foster these changes. They described how, as more students graduate with IPE training, the workplace will become more collaborative:

> I think that as more years go through [IPE], and more of the students then graduate and are in practice...I think that will help. (University B Participant 1)

> I think there's going to be an impact that you won't be able to delve into....It does change the way people think and it does change the way people behave, and that has got to be good for clients. Because at the end of the day, it's client safety, client care that we are actually looking at - not just necessarily the well-being of professional people. (University D Participant 3)

5.5 Summary of Results

The data from participants formed three central categories: developing interprofessional skills, engaging with the curriculum, and promoting IPE in the workplace. The central findings of this study will be summarised under each of these categories.

5.5.1 Developing Interprofessional Skills

The first central category was concerned with the process of acquiring skills for collaboration. When exploring the development of interprofessional skills, the participants discussed sources of resistance that prevented students from acquiring new skills in collaboration. For example, the belief held by students and some

midwives that midwifery students already possessed the skills for interprofessional collaboration, and the belief that interpersonal skills needed for collaboration could be acquired informally, resulted in the perception of the IPE curriculum as irrelevant. At the same time, it was identified that midwifery students became more positive about the relevance of IPE with greater exposure and participation in IPP. This change in receptivity to the IPE curriculum over time encourages the acquisition of skills for collaboration.

The participants also articulated negative experiences of working in mixed professional groups during the IPE curriculum. The main reason cited for negative experiences within the mixed groups was the lack of relevance when the composition of the group did not have representation from professions most frequently encountered in practice. These negative experiences prevented midwifery students from having effective opportunities for learning in mixed groups.

The relationship between professional identity and IPE was also a key topic for participants. There was a disconnection between the perceived core competencies for midwifery and the relevance of IPE. Participants did not view IPP as an essential role of the midwife. As a result, priority was given to profession-specific training rather than the IPE curriculum.

The resistance to acquiring new skills through IPE, to learning in mixed professional groups, and to perceiving the midwife as an interprofessional worker prevented midwifery students from fully developing interprofessional skills.

5.5.2 Engaging with the Curriculum

The central category, engaging with the curriculum, brought together the views expressed by participants relating to logistics, content, and methods of teaching and learning used within the IPE curriculum. Again, participants highlighted both sources of resistance and factors that optimise a student's likelihood of participating and engaging fully with the concepts of IPE.

Logistical issues were identified as being central in helping students fully engage with the IPE curriculum. The deconstruction of the debates regarding the timing of introducing IPE and the setting for IPE indicated that having IPE occur throughout one's pre-qualification training and having exposure to both academic and practice-based IPE are optimal logistical arrangements for the curriculum.

Conversely, the content and lack of integration of IPE into the profession-specific curriculum were seen as sources of resistance. Specifically, the content of the IPE curriculum was seen to have two main short-comings: the content was too simplistic, and it often did not involve opportunities for students to interact, and therefore to learn with, from and about each other. Further, the IPE curriculum was perceived to be marginalised and removed from the profession-specific training. Consequently, it was challenging for participants to contextualise the IPE curriculum content and to see its relevance for practice.

Participants recognised difficulty in facilitating collaborative learning when there was little support and training for IPE among academics. Similarly, the absence of IPE training for clinical mentors translated into a lack of champions for IPE within the clinical setting. This impeded integration of the IPE curriculum and reinforced the perceived lower status of IPE compared with profession-specific training.

Although logistical details of setting and timing appear to facilitate engagement with the curriculum, the inability to contextualise the curriculum and the minimal priority given to facilitating learning through role modelling are significant barriers preventing students, clinical mentors, and educators from engaging with the IPE curriculum.

5.5.3 Promoting IPE in the Workplace

The final category of promoting IPE in the workplace examined the interface between the university and the workplace. Participants articulated that a poor relationship between the HEI and the NHS Trust, and minimal support for the IPE agenda within the Trust acted as barriers which hindered the support for IPE in the workplace. This further contributed to the lack of integration of IPE within profession-specific training and to the perception that IPE was removed from the role of the midwife.

Although participants reported that there was minimal support for the IPE agenda within the Trust sites, there were positive views about the potential contributions of graduates with IPE training. These positive perspectives may help new graduates in the transition to practicing midwife. However, at the same time, it was highlighted by participants that IPE was not a recognised or explicit component of the preceptorship program for newly qualified midwives. This may prove to be a

barrier for new midwives who are in transition and who are attempting to integrate the theory of their training with the reality of practice.

Despite these barriers, participants remained hopeful that the evolution of professional roles, including the advent of new, client-centred, rather than profession-centred roles, and an increasing awareness of the need for collaboration they had witnessed in recent years would promote a change in the workplace. In order to promote IPE in the workplace, this evolution of roles and of how professionals work together needs to continue. Further, the support for IPE within the workplace and the process of helping graduates transition to practice warrants careful strategy and consideration.

CHAPTER 6 DISCUSSION: THE THREE CENTRAL CATEGORIES

6.0 Discussion

The findings from this research, as presented in the previous chapter, provide support for the existing literature on IPE, but also at the same time, provide new insights into factors which facilitate or impede the application of pre-qualification IPE to practice. The findings will now be discussed further within the context of previous work. The discussion has been organised according to the three central categories.

6.1 Developing Interprofessional Skills

6.1.1 Acquiring Interprofessional Skills

Receptivity to IPE, and the impact of attitudes and beliefs on the outcomes of IPE has been well documented by previous authors (59;64;161). This study also contributes to this body of knowledge by identifying that student midwives are less receptive to IPE when they believe that they already possess the skills necessary for collaboration. Other authors have identified that students already hold stereotypes about their own and other professions upon entry into their health discipline (2;70;71). This has fuelled further research into whether or not IPE can modify these stereotypes (22;64;66;110). However, few authors have explored students' perceptions of their own knowledge and skills prior to commencing IPE.

Similar to the findings of the current study, Pollard *et al.,* found that at the time of entry to their health discipline training program, students over-estimated their skill and knowledge base (87). Specifically, students with previous higher education training were found to be the most positive regarding their pre-existing communication and team-work skills. At the same time, students also had negative or neutral views about the value of IPE at the time of entry to their studies. In particular, the group of student midwives who participated had a negative correlation between their view of IPE and interprofessional interactions. Pollard argues that these

students "only value IPE if they perceive poor interprofessional collaboration in practice environments" (87).

In the current study, participants expressed the belief that student midwives already possess the skills necessary for effective IPP prior to commencing IPE. Some participants felt that these skills were present at the time of entry to the midwifery course, while others felt that the midwifery profession-specific training was effective in fostering these skills. This raises questions of the perceived lack of relevance of the IPE curriculum.

The participants also expressed the belief that interpersonal skills cannot be formally taught. This is not a new concept. There is a common misconception that values and skills in communication and professionalism will emerge without any need for direction or formal instruction (162). However, there is evidence that interpersonal skills, such as communication and professionalism can be taught and can be predictive of future behaviour (163-168). For example, medical students who exhibit conscientious behaviour during their pre-clinical years appear more likely to exhibit professionalism in the clinical setting (163). Also, as identified by Von Fragstein *et al.*, "the teaching and assessment of clinical communication skills have become central components of undergraduate medical education in the UK" (169 pg 1100). Professionalism and other interpersonal skills are not so subjective that it is impossible to determine their existence (163).

The belief that students already possess the skills necessary for IPP and that skills, such as communication and team-work, cannot be formally taught, are barriers that prevent the acquisition of IPE competencies. This is an important finding that can inform approaches to teaching and learning within IPE. The principles of adult learning, one of the theoretical underpinnings for IPE, asserts that adult learners are motivated by identifying problems or gaps in their knowledge, which they then seek to solve for themselves (98). In this way, learning is made more relevant as it reflects self-directed learning objectives. Adult learners are motivated by these internal drivers rather than by external drivers dictated by others. Further, the outcome of learning is "more likely to be positive if the learner chooses the direction, the content and methods" of what is taught (7 pg 96). Educational theorists also argue that adult learning should be based on prior knowledge and experience, so that the life experience of the learner becomes the basis for learning and defines the learning

needs (97). In this way, learning experiences should "expose inconsistencies between students' current understandings and their new experiences" (97 pg 214).

The participants of this study identified that the knowledge and skill development currently included in the IPE curriculum was not a relevant learning need, since they believe student midwives already possess the required skills. The students experienced dissonance between their perceived learning needs and the learning objectives of the IPE curriculum. In this way, when considering the principles of adult learning, the curriculum is not responsive to the previous life experiences of the students. Subsequently, it is unlikely that the new learning will challenge pre-existing attitudes and beliefs. These short-comings will lead to minimal internal motivation to develop skills for IPP.

The belief that midwifery students already possess the skills necessary for IPP not only inhibits the creation of a favourable learning environment, it also reflects beliefs about the profession of midwifery and IPP. When it is deconstructed, there are several possible explanations for this belief. First, it is possible that the participants have not accurately judged the skills required for IPP. For example, many of the students highlighted the need for effective communication and respect during interprofessional interactions. Yet, none of the students mentioned aspects of ethical practice, reflective practice or knowledge of other professions training and scope of practice, which are seen to be core capabilities for interprofessional working (76). This exposes a limited understanding of IPP. Conversely, it is also possible that the participants have an accurate assessment of the capabilities required for IPP yet, they have not accurately self-assessed their own abilities. The students who participated in the project were at the beginning of their second year of training and this timing may reflect the over-confidence and over-estimation of knowledge and skill identified by Pollard *et al.* (87). Finally, it is also possible that participants believe they are prepared for collaborative practice because they do not see it as a priority within the profession of midwifery and therefore, the baseline skills they already possess seem adequate. It is likely that elements of these three possibilities were influential in shaping the participants' beliefs about acquiring interprofessional skills. A discussion of how the competencies for IPP align with the competencies for midwifery practice is presented shortly.

Despite the resistance to IPE identified by participants in this study there was evidence that the receptivity and willingness to participate in IPE changed over time with further exposure to this learning modality and to interprofessional interactions in the clinical setting. Other researchers have also identified this shift in reaction to IPE over time (170;171). The study by Pollard *et al.*, mentioned previously, also noted this shift. The authors noted that students appeared to be less positive about their communication and team-work skills and about their response to IPE during their second year of training, but then regained the positive view at the time of qualification (87). Pollard *et al.*, also found that although students were positive about their own professional relationships at the time of qualification, they were increasingly negative in their view of interprofessional interaction among other health professionals (87). The authors argue that this negative attitude at the time of qualification may reflect unrealistic perceptions of collaboration at the time of commencing IPE. Further, Pollard *et al.*, assert that the negative attitude might also be a result of the student's heightened awareness of collaborative practice and that this raised awareness has caused students to be more critical of interprofessional interactions (87).

A change in response to an educational intervention over time reflects the cycle and process of learning, as described by many educational theorists. Barr *et al.*, describe the 'PDSA cycle' whereby students move through a learning cycle of Plan, Do, Study, Act (7). This mirrors the process of experiential learning described by Kolb, as outlined in Chapter 2 (page 41). This process involves students participating in new experiences, then reflecting on and observing their experiences from another perspective, then creating concepts that integrate their observations into logical theories, and finally, they use these theories to solve new problems (103).

The conscious competence learning model provides yet another framework for this process (172). This model has learners move through four stages, beginning with 'unconscious incompetence,' then 'conscious incompetence,' followed by 'conscious competence,' and ending with 'unconscious competence.' Chapman suggests that, when learners are not aware of their skill deficiency, they will "not see the need for learning" and thus will be in the unconscious incompetence stage (172 pg 1). Establishing the awareness of this deficiency is the first step in the learning cycle. Unfortunately, teachers often begin teaching with the assumption that the

students are at the second stage of conscious incompetence, yet it will not be effective until learners become "aware of their own incompetence" (172 pg 1).

A change in response over time to the intervention can also be facilitated through the use of reflection, as articulated by Schön (105). Stark *et al.*, argue that reflection "helps students to integrate theory and their understanding gained from experience, whilst developing future practice" (168 pg 25). As students continue to be exposed to new learning opportunities and problems they engage in reflection-in-action. They use previous theories to construct a plan for solving the problem and then act. Next, they engage in reflection-on-action as they monitor and evaluate the events to consider how they could approach this problem differently if encountered again (105;168). This process of reflection allows students to identify learning needs and areas for further study. Engaging in this process while participating in IPE improves a student's ability to identify the IPE skills they need to acquire for practice. Also, structured tools used to promote reflection provide a means to rigorously assess attitudinal learning objectives such as professionalism and communication (168).

The students who participated in the current study were not able to identify a change in their response to IPE over time since they were at a relatively early stage of their training. Further, their view, that they already possessed the necessary skills, indicates that they have not yet reflected on their experiences in order to identify gaps in their own competency. However, the midwifery educators, Heads of Midwifery and newly qualified midwives all expressed the belief that students need to see interprofessional working in practice in order to reinforce the relevance and to provide the context for the midwife's role within collaboration. In particular, the newly qualified midwives felt they did not appreciate the value of IPE until after qualification. This highlights the evolution of the response to IPE from student to newly qualified health professional. These changes in receptivity to IPE need to be considered when conducting evaluation of IPE initiatives, and they illustrate the need for continued exposure to IPE during both pre and post-qualification training.

6.1.2 Learning in Mixed Professional Groups

From discussion with participants in this study, it became clear that the motivation to engage in IPE is not only shaped by the willingness to acquire the

skills for IPP, but also by the response to learning in mixed groups. Engaging in IPE in small groups, comprised of students from a variety of health profession disciplines, has been a consistent component of almost all face- to-face IPE curricula. The notion of bringing students together to learn is advocated, theoretically, by social learning theory and the contact hypothesis. Social learning theory posits that knowledge is created in the social exchange between individuals (103). It emerges from interactions and from learners contributing to each others' understanding (103;162). Students who learn together through interaction often "correct each others' bias and false assumptions" (103 pg 580). The contact hypothesis takes this notion further by arguing that positive changes in beliefs and attitudes will be maximised and negative stereotypes will be minimised when different social groups are brought into contact with one another (2;107). The importance of minimising stereotypes has been highlighted by other researchers who assert that stereotypes interfere with interprofessional team-working (64;110;173). Conditions, such as equal status of participants, common goals for the group and positive expectations of the contact, are considered to be prerequisite conditions for the contact hypothesis to be successful in minimising stereotypes (2;107). However, researchers who have examined the contact hypothesis' ability to minimise stereotypes have made inconsistent conclusions. Some authors have supported the original hypothesis by demonstrating positive changes in attitudes and stereotypes following exposure to IPE (61). Yet, at the same time, other authors have claimed that there were no changes to stereotypes following IPE exposure (64;110;173). One author even found that not only was IPE not successful in minimising stereotypes but it may actually contribute to increased negative attitudes about other professions (22).

However, group dynamics and interactions are shaped by more than just stereotypes. Focusing exclusively on stereotypes ignores the broader context that influences interprofessional interactions. Further, minimising stereotypes is only one of the possible outcomes of having mixed health discipline students learn together. For example, mixed groups may promote knowledge, trust and respect for other professions.

In this study, participants were asked about their general thoughts on participating in mixed groups and the influence it had on the learning environment rather than focusing on a change in stereotypical beliefs. The conflicted opinions

expressed by participants in this study regarding the experience of learning in mixed professional groups reflect similar findings in previous research. Specifically, in both the current project and in earlier research, it has been suggested that there are different responses to learning in mixed groups from different professional groups. In particular, some professions such as Occupational Therapy and Midwifery have more negative views than others (87).

Several authors have identified that students value the opportunity to learn in small groups comprised of various health professions (61;86;174;175). For example, students appreciate learning in mixed professional groups as it fosters a greater understanding of diverse professional roles and it helps them to be more comfortable interacting with students from other disciplines (174;176). Students also appreciate relating to each other on a personal, rather than a professional level (175). Further, in a study by Hylin *et al.*, students expressed that learning in mixed groups created a foundation for future collaboration (86).

Yet, contrary to these positive perceptions, other research has identified that students do not perceive mixed professional groups to be a positive learning environment (63;177). In a study by Clarke *et al.*, some students articulated that learning in mixed groups had a negative effect on their learning, especially when group conflict and diversity was not managed adequately by facilitators (177). When these negative perceptions are explored further, issues, such as unequal group composition where one profession is represented in larger numbers than the other professions, differences in the status and priority awarded to IPE by different professional groups, and unequal previous exposure to the particular learning style, such as problem-based learning, have been highlighted as having a significant influence on student experience (79;177;178).

These barriers to effective mixed-group learning have been used to make recommendations for planning and implementation of IPE. Researchers argue that it is essential that IPE learning groups remain small in size, with no more than eight to ten students, with an equal representation of professions (18;179). Stable group membership is also important, with all group members participating equally in terms of time allocated to attending IPE sessions and with consistency in terms of voluntary or involuntary attendance (78;177;180).

In addition to these recommendations, the absence, or limited participation, of medical students in many IPE initiatives has also been identified as an obstacle to meaningful mixed-group experience (79;181). For participants in this study, the absence of medical students was frequently discussed as not only being a disappointing feature of IPE, but also as a significant barrier for developing knowledge that could be translated into practice. In practice, midwives interact most frequently with doctors, nurses, health visitors, social workers, and occasionally paramedics or physiotherapists. But in this study, at two of the university sites, medical students were not involved in IPE at all, and at the third site, medical students were only involved through a one day conference. From the perspectives of the participants, the relevance and future application of any beneficial aspects of mixed group learning was significantly compromised when the group composition did not reflect the reality of professional practice for midwives.

In addition to group composition, Reynolds and Crookenden argue that group dynamics, during IPE, contribute to student preparation for working within an interprofessional team in the clinical setting (176). In their study, students who were positive about group function were also more confident regarding their skills for future seminar work and for working in teams in the clinical environment. It follows that careful attention needs to be paid to group dynamics and group composition as these issues have both short- and long-term impacts on sustaining IPE training in the clinical setting.

6.1.3 Perceiving the Role of the Midwife

In addition to the receptivity to IPE and the response to learning in mixed professional groups, the perception of participants regarding the professional identity of midwives also appeared to influence the acquisition of capabilities for IPP. Professional identity develops as a result of professional socialization, which is the process for acquiring the knowledge, skills, values and roles associated with one professional culture (122). In this way, professional socialization fosters the development of both a cognitive map representing the knowledge base of a profession and a normative map representing the values and morals of the profession (103). As such, professional cultures are separated by their unique ontological and epistemological underpinnings. Traditionally, as identified by Parsell and Bligh, the

structure and organisation of academic disciplines within a university, "reflects these professional ideologies" (59 pg 98;182). The sphere of professional practice, in turn, has also been governed by clear boundaries and hierarchy, which help delineate the roles of the professions (59). Identifying oneself with the culture of a profession has intrinsic worth because professional identity becomes a valuable part of one's personal identity (183). Professional socialization and development of professional identity are an important part of the training of new professionals (72).

There has been considerable debate regarding the intersection of IPE and the development of professional identity. Some researchers argue that lack of professional identity at the time of entry to training results in role insecurity, which in turn causes a reluctance toward collaboration (73). In contradiction to this, other sources state that students enter their health profession course with a strong sense of professional identity already secured (71;72). Parsell and Bligh suggest that a conflict exists between "the retention of professional identities through adherence to a discipline-based approach to learning, and a 'readiness' for sharing expertise with other students through team-based approaches to learning" (59 pg 98). Conversely, Hind *et al.*, found that students with strong professional identities were more positive about IPE than those with a less clear sense of professional identity (71). Further, Ponzer *et al.*, identified that participation in IPE may actually result in greater clarity of one's professional identity (170). In particular, when group tasks relate to client care, students appear to develop a clear understanding of their professional role and responsibility (175).

Despite the debates about when professional identity forms and is cemented as part of one's personal identity, there is little debate that professional cultures govern attitudes towards collaboration (71;72;182;184). For example, doctors are more likely to see clinical work as an individual responsibility, while nurses are more likely to see clinical work as a shared, team responsibility (72). These beliefs appear to remain consistent before and after exposure to IPE (72). Moreover, participation in IPE does not inhibit the influence of profession-specific factors in shaping students attitudes towards collaboration. In fact, Pollard *et al.*, found that one's chosen profession accounts most strongly for differences in attitudes toward collaborative learning at the time of qualification (87).

Since the current project focused exclusively on midwives, unique insight was gained into the perception of identity development and the beliefs held by midwives about collaboration. The identity associated with being a midwife was of critical importance to all participants. They strongly identified with the values and attitudes associated with the professional culture of midwifery. This was clear from students as they described their process of applying to the midwifery course, when they expressed that they would not consider any other health professions as suitable careers. It was also evident when Heads of Midwifery stated that they were supportive of IPE but that they were, "precious about being a midwife."

Resistance to IPE was expressed by both students and midwives, based on the assumption that midwives have historically been effective at collaboration and that these skills had been successfully learned through the traditional uni-profession training. Also, there was concern expressed that participating in IPE would somehow lessen or dilute the professional identity of midwives and that it would take away from midwives being able to perform profession-specific skills. Many participants expressed that there was a need in the profession for those who could be, 'just midwives.' This implies that interprofessional working is not a skill involved in being a midwife. These views reflect a belief that interprofessional learning and working is removed and separate from the competencies required for being a midwife. Thus, it appears that midwives, as a professional group, may be resistant to IPE and to interprofessional working. Midwives appear to be entrenched in historical professional silos. Midwives may be protective of their professional identity because of the historical and structural context of professional patriarchy. For example, Witz used midwives as an example of a profession effected by the professional closure strategies used by medicine (118). She retraces how the patriarchal profession of medicine succeeded in excluding midwives from childbirth by defining it as an abnormal process, one requiring specialised medical attention, by restricting the scope of practice to focus on only 'normal' births and thereby de-skilling the midwifery profession (118). A strong adherence to one's professional identity is a common response when threatened by closure strategies. This protectivist attitude will have consequences for student motivation to participate in IPE, midwifery educator facilitation of IPE and the ability of newly qualified midwives to apply their

IPE training in a work environment that does not see the need for interprofessional collaboration.

6.1.4 Summary of Category: Developing Interprofessional Skills

This central category highlights how attitudes about IPE and the development of a professional identity can act as barriers or enablers for interprofessional skill development. From the perspective of the participants in this study, the attitudes that appeared most influential to the development of interprofessional skills were an openness to acquiring new skills, the response to learning in mixed professional groups and the perceptions of the role of the midwife.

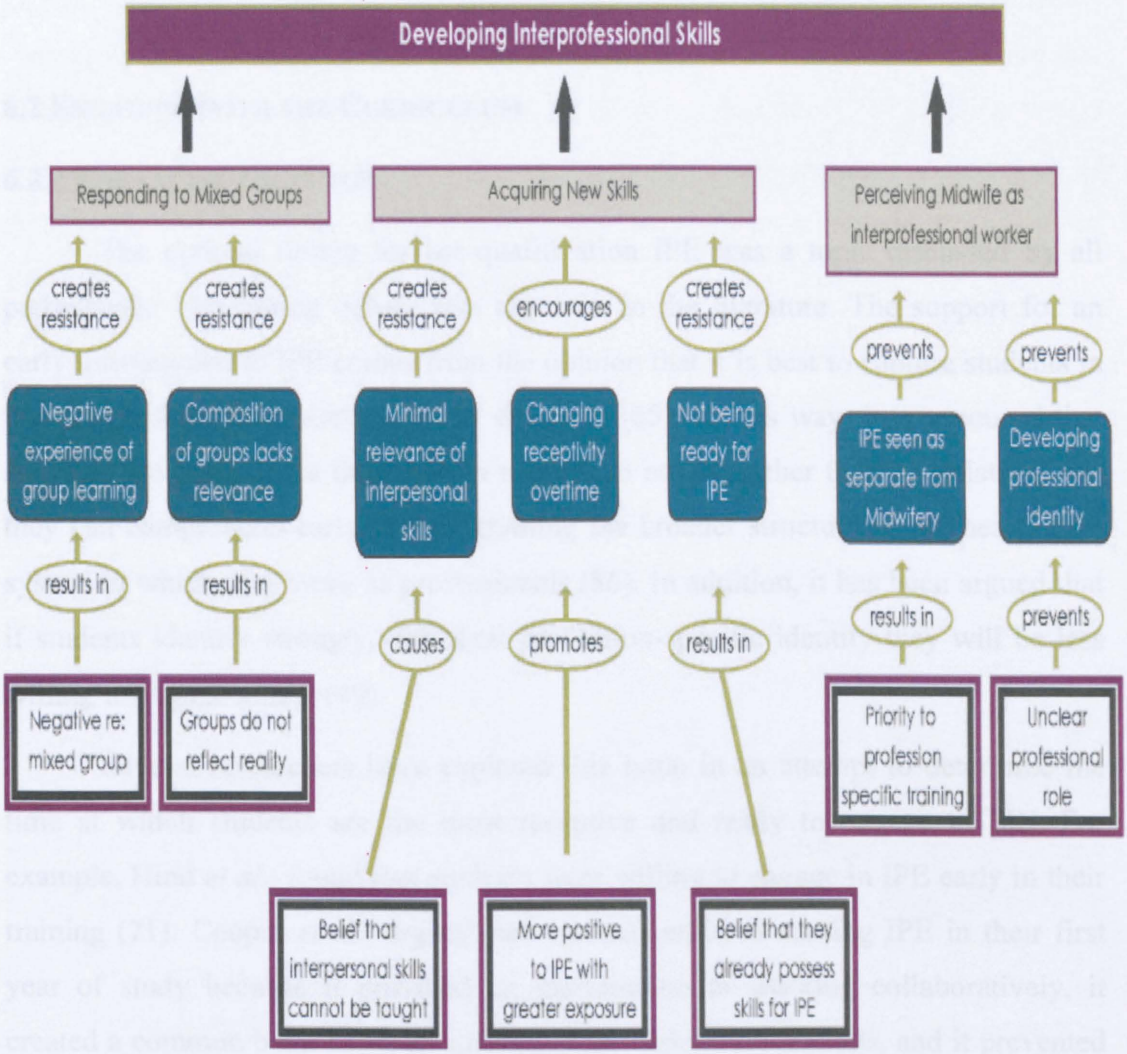
The responses from participants have illustrated some of the attitudes and beliefs that influence motivation and engagement in IPE. Examples of tension and resistance have come to the foreground. Freeth *et al.*, state that learner resistance to IPE can develop because, "it is not perceived to be as important as profession-specific learning; team-working skills are considered marginal to other practice skills;" and it, "is potentially threatening to self-identity" (185 pg 93).

These and other sources of resistance were evident in the views of participants. Specifically, the students who expressed the belief that they already possess the skills necessary for IPP also articulated resistance to learning IPE skills. They did not perceive IPE skills to be relevant and they developed a sense of disconnection between what they were being encouraged to learn and the competencies they thought they needed to acquire to be competent midwives. Further, the concern that learning in mixed professional groups was not beneficial, especially when the group composition did not reflect the realities of practice, was also a source of resistance to developing IPE skills. Again, IPE was seen as lacking relevance and context for practice. Finally, issues of professional identity also acted as sources of resistance to IPE activities. The perception that IPE competencies are separate from the required competencies for midwifery practice encourages the opinion that IPE is not a necessary or relevant part of the professional development of midwives. The influence of these attitudes on the development of competencies for IPP is illustrated in the following diagram (Figure 6-1).

The identification of these sources of resistance and the impact they have on skill development is helpful for the development of recommendations for change to

current IPE initiatives. For example, the relevance of IPE and the associated intrinsic motivation can be greatly increased through practice-based projects, which may be a way forward for curriculum development.

Figure 6- 1: Factors Influencing the Development of Interprofessional Skills



These sources of resistance, as identified by participants, exposed the dissonance between the learning needs of students and the objectives of IPE. Consequently, IPE will be seen as irrelevant and as such, low priority will be given to the capabilities for collaboration. IPE will then be seen by students, educators, clinicians and other stakeholders as being of lower status than traditional uni-profession education. Further, learners will only develop interprofessional capability when they recognise the relevance of the skills for collaboration (172). As in any educational context, issues of resistance and status will negatively impact student

knowledge, skill and attitude development: IPE appears to be no different. This requires careful attention since, it follows that, if student development of interprofessional competencies is hindered, then so too will the ability of graduates to apply these skills to practice.

6.2 Engaging with the Curriculum

6.2.1 Enhancing logistics

The optimal timing for pre-qualification IPE was a topic discussed by all participants. The timing debate also rages on in the literature. The support for an early introduction to IPE comes from the opinion that it is best to capture students in the time before professional identity develops (65). In this way, it is espoused that students can learn about their role in relation to others, rather than in isolation, and they can comprehend early in their training the broader structure of the health care system in which they work as professionals (86). In addition, it has been argued that if students identify strongly with their profession-specific identity they will be less willing to engage in IPE (49).

Several researchers have explored this issue in an attempt to determine the time at which students are the most receptive and ready to engage in IPE. For example, Hind *et al.,* found that students were willing to engage in IPE early in their training (71). Cooper *et al.*, argued that students enjoyed starting IPE in their first year of study because it provided an introduction to working collaboratively, it created a common bond between students from various professions, and it prevented negative stereotype formation (83).

Those in support of a later introduction to IPE believe that students benefit from having completed profession-specific placements before beginning IPE. This is thought to foster a clearer understanding of their professional role within the health care system and the realities of professional practice, before they begin to blur the boundaries between professions (65;186). Pollard *et al.*, found that students appreciated having some clinical practice experience before commencing IPE, as it helped put interprofessional competencies into the context of practice (181).

Notwithstanding this on-going debate, focusing on the issue of timing is too simplistic. The underlying concerns made manifest in the timing debate are those pertaining to issues of professional identity and stereotype formation. Professional identity and stereotype formation have been extensively researched as part of the evaluation of IPE initiatives. The findings from this research indicate that students commencing pre-qualification studies have already established their professional identity, as well as stereotypical views of other professions (70;72). This would indicate that early introduction to IPE may be ineffective in preventing formation of stereotypes. Likewise, later introduction to IPE may not be necessary as a means of supporting professional identity development.

Not only is it useful to shift the debate away from issues of timing, but it is also useful to shift the debate away from the issues of stereotypes and professional identity, since they represent only two of many affectable outcomes of IPE. This is reinforced by Pollard *et al.*, who argue that focusing on issues of stereotypes and professional identity indicates simplistic expectations about the value and desired outcomes of IPE (181). Oandasan and Reeves also suggest moving the debate away from the question of timing, and instead, recommend using learning outcomes and the desired goals of IPE to direct issues of timing (18). This supports the notion of a continuum of IPE that has been identified by other authors, whereby IPE is introduced at various times throughout both pre- and post-qualification training based on the development of competencies relevant to each stage of training (83;187).

The continuum of IPE would mirror the features of a spiral curriculum. The spiral curriculum is described as:

> An iterative revisiting of topics, subjects or themes throughout the course. A spiral curriculum is not simply the repetition of a topic taught. It requires also the deepening of it, with each successive encounter building on the previous one. (188)

The key features of the spiral curriculum are: topics are revisited, there is an increasing level of difficulty, new learning is related to previous learning, and the student's competence increases with each successive exposure to the topic (188). As a result there is progressive reinforcement of learning as the information moves from simple to complex (188). For example, within the IPE curriculum, competencies focused on development of knowledge about the training of other professions are

well suited to an early discussion within the IPE curriculum. However, other competencies such as the ability to critically reflect on team functioning, may optimally occur later during the pre-qualification training, once some experience in the clinical setting is gained.

Shifting the debate away from timing issues and instead looking at creating a continuum of IPE throughout the training process will minimise some of the logistical barriers that have affected IPE projects. It will also promote deeper engagement with the IPE curriculum, as students will be able to build on their competencies as they progress through their training.

In previous research and in this study, there is a discrepancy between participants regarding the value of academic, classroom-based IPE and practice-based IPE (175). Following this discussion of the various settings for IPE, it is evident in the comments from participants that learners are more positive about their educational experiences when they can see direct relevance between the experience and their current or future practice (18).

Also, as highlighted by the participants, the discussion of setting must also include attention to the virtual setting that has been created through e-learning opportunities. The Centre for Inter-Professional e-Learning advocates e-learning as a means to ensure a safe learning environment for students to explore issues of professional ideologies, to create equitable exposure to a range of opportunities, to incorporate service user perspectives, to encourage group identity among students thus minimising issues of status and power, and to facilitate participation across geographical barriers (189). Several studies have found this learning environment to be beneficial for students. However, students have requested that e-learning activities be better integrated into the curriculum and be more reflective of clinical practice (83;181). It is unlikely that e-learning used in isolation will result in sustainable competencies for collaboration. However, e-learning can be a helpful complement to both classroom-based and practice-based IPE. Further research is warranted to explore whether or not the postulated advantages, such as creating a safe learning environment and an equitable group identity can be actualised.

All participants were supportive of the need for practice-based IPE. This setting for IPE is beneficial for students for several reasons. First, students can be

given formal opportunities to participate in team-work and to work together with other students and professionals (62). Students are also given the opportunity to participate in 'real life' clinical care, which will help enable the development of responsibility and autonomy (79). This formal opportunity for hands-on experience of collaboration demonstrates the importance of experiential learning as a means for developing interprofessional capabilities. When students are engaged in practical, personal experiences they move beyond learning by rote into the realm of integrative learning. This results in deeper learning that integrates the four types of learning – experiencing, reflecting, thinking and acting (102). Research from several disciplines supports this assertion by demonstrating that students who participate in experiential learning have significantly higher knowledge and greater change in attitudinal scales than students who participate in dialectic learning (104).

In addition to the benefit of experiential, formal learning within the clinical setting, it has also been suggested that non-formal learning in the clinical setting is helpful for students to develop collaborative skills and competencies (190). Non-formal learning occurs outside the formal curriculum (18). For example, students are exposed to and observe models of professional behaviour during clinical placements that promotes learning the norms of professional behaviour (190). As such, this informal learning plays a role in the professional socialization processes (18). Pollard argues that:

> The power of this type of learning is demonstrated by the fact that, where contradictions exist between formal and non-formal learning, learners tend to embody the latter rather than the former. (190)

Not only is practice-based IPE beneficial to students for developing a deeper understanding of collaboration and practical skills in team-work and communication, but practice-based IPE has also been shown to be beneficial to patients and clients (60;74). Further, it is also beneficial for staff in the clinical area as it creates a greater awareness among staff of the value of collaboration.

However, many IPE initiatives have been unsuccessful in implementing IPE in the clinical setting, due to logistical difficulties. In particular, those in charge of the clinical area may be reticent to coordinate IPE opportunities as it could require an increased workload for staff and increased demand for placements, including arranging for mentors in suitable clinical environments (175;181). In lieu of this

opportunity, many classroom-based projects have attempted to integrate clinical input through the involvement of service users and the use of simulation (18).

The other challenge of implementing IPE initiatives in the clinical area is ensuring consistent and well-planned opportunities for students. Traditionally, learning about collaboration in the clinical setting has been 'ad hoc,' based on available opportunities (191). Likewise, it was assumed that much of this learning would take place on an informal basis (186). As a result, students are dependent on the quality and opportunities of the learning environment in which they find themselves (181;186).

A more formal and explicit integration of IPE into the clinical setting is necessary for students to fully benefit from this learning environment (186;191). Assessment of students learning in the practice setting needs to reflect this explicit integration, as does the role modelling provided by clinical staff. The importance of these two issues in shaping the learning environment will be discussed in greater detail later in this chapter.

At the same time, while there seems to be support for including some classroom-based IPE as part of the curriculum, it is clear that there are limitations to the value of this setting. In particular, there may be minimal opportunity for interaction between students, there may be unequal participant numbers and unequal contributions, and there may be inconsistent facilitation of group activities (62). Therefore, many researchers and educationalists have called for a combination of both academic and practice-based IPE, which includes the benefit of academic training for building a foundation of theory and knowledge, but also includes the hands-on experience provided through practice-based initiatives (62;181). Furthermore, several studies have identified that students request IPE clinical placements in addition to their classroom training, as a way to gain the skills necessary for collaboration (78;181).

The study by Morison and Jenkins adds strength to the assertion that a combination of academic and placement IPE is advantageous (88). They followed three groups of students through their pre-qualification training and then followed up again at one year after qualification. The first group of students received no IPE during their training. The second group of students participated in classroom-based

IPE, and the third group of students participated in a blended IPE, with both classroom and practice components. The researchers found that one year after qualification, there was no difference between the group with no IPE and the group with only classroom IPE in terms of their views toward collaborative practice. However, those students who participated in the combination IPE felt that it had strengthened their professional role, it had increased their knowledge of the roles of others, and it had fostered skills in team-work and communication. The students with the combination of classroom and clinical IPE were able to apply their knowledge post-qualification and demonstrate a deeper learning of the interprofessional capabilities.

The views from participants presented in the current project also support the assertion that a combination of academic and practical learning is necessary for students to fully engage with the IPE curriculum. This reinforces the notion of a continuum of IPE learning, not only continuing throughout the pre- and post-qualification training, but also continuing throughout both the academic and clinical components of training. The effectiveness of this continuum relies on both the quality of the content presented and the degree of integration throughout the training course. Both of these issues will now be addressed.

6.2.2 Contextualising the Curriculum

The perceived relevance of the curriculum has a direct impact on the status of IPE. The frustrations voiced by the participants regarding the relevance of the content in the IPE curriculum warrant further investigation, as they play a significant role in student learning.

As discussed, some participants felt they already possessed the skills necessary for effective IPP. Further discussion with participants brought to light that a possible underlying cause of this stems from the view that, some of the content in IPE curricula is too simplistic. If the content itself was seen as being basic and simplistic, then it becomes clearer why participants self-assessed that they did not need to acquire new skills from the IPE modules, in order to be effective interprofessional workers.

It is crucial that the topics and the level of information covered in IPE are relevant to all students involved (186). For example, if problem-based learning

scenarios are being used as a teaching strategy, they need to be scenarios that reflect the realities of clinical practice for all participants (181). For student midwives, this means the scenarios should reflect some aspect of maternity care. It then becomes necessary to intentionally compose small groups of students from professions that work together in the provision of care. One additional challenge in attempting to ensure that the content of learning scenarios is relevant to all participants, is avoiding making the scenarios too broad and unrealistic. Scenarios are most useful when they closely resemble the realities of clinical practice. Similarly, Hylin *et al.*, assert that clinically-based IPE needs to reflect profession-specific tasks (86). In their training ward project, students from all professions were responsible for conducting basic patient care. However, this was met with resistance from medical and physiotherapy students, as they felt that this diminished their professional role and that they did not have enough time for their profession-specific tasks which usually do not include basic care (86).

Morison *et al.*, argue that IPE is unlikely to succeed when the subject is common but the content taught is profession-specific (62). IPE should involve opportunities to learn with and from others. Therefore, if a group of students have come together to learn about the management of HIV in pregnancy, unless they are discussing how they can work together to provide the best plan of care for the woman, they are not learning relevant skills for collaboration (18). Harden also articulates this by stating, that if the goal of IPE is to create effective collaborative workers, then the content must be shaped by the knowledge, skills and attitudes needed for collaboration, not by profession-specific content (192). Unless students are learning to work together they are simply learning in parallel (192). Thus, providing ample opportunity to learn from each other is essential for creating relevant IPE.

The relevance of IPE curricula will be further enhanced by ensuring appropriate learning outcomes and objectives. There needs to be a shift away from behaviour modification and modification of attitudes and stereotypes and more focus placed on skills for collaboration (186). As introduced previously, the CUILU 'Interprofessional Capability Framework' provides an example of a validated framework of interprofessional learning outcomes, which is based on capabilities for practice. The framework incorporates outcomes that reflect the complexity of

interprofessional learning and working, yet it is relevant to all health profession groups by drawing on the QAA benchmark statements (76). The framework defines the learning outcomes in terms of 'capabilities' rather than 'competencies.' This attempts to recognise the complex processes that professionals perform, whereby they are required to integrate and apply their knowledge in a way that goes beyond simply being 'competent' to perform a task (76). The capabilities are based on domains of ethical practice, knowledge in practice, interprofessional working and reflection. The work done to validate the framework indicates congruence between the capabilities needed for effective IPP and the learning outcomes included for assessment in the framework (76). In addition, the framework has two other valuable contributions. First, the capabilities included are highly relevant for all health professionals. Therefore, it can minimise divisions between professions. Second, when student's use the framework as a tool for assessing their own learning they are able to apply and transfer the theoretical classroom learning to practice-based learning. This integration, in turn, leads to higher levels of capability and will support the relevance of IPE curriculum (76).

Another key step in increasing the relevance of the IPE curriculum is to be explicit about the rationale behind IPE and to contextualise the content. Involving service users and clinical practitioners in teaching IPE, and incorporating real life examples and outcomes are ways in which the curriculum becomes more meaningful (181;186;193). The link between clinical learning and theoretical IPE also needs to be reinforced and contextualised. Hylin *et al.*, suggest presenting clinical learning as "problem-based learning in real life" (86 pg 286). Contextualising IPE on these three levels makes visible the connections between the theory of IPE and the realities of IPP.

A subsequent example of the dissonance between professional identity and IPE competencies and the lack of integration of this curriculum into the wider profession specific curriculum was the view that the interprofessional skills are inherent in the role of the midwife and therefore are not explicitly described within practice assessment. This is contradictory to the views expressed by other participants where IPE was seen as separate from the role of the midwife. This seems to suggest that further development and a deeper understanding is necessary in

articulating both the role of the midwife and the role of a collaborative health professional. It may be that there is uncertainty as to what constitutes effective IPP.

There is some evidence that students are able to see how IPE complements their profession-specific training. In a study by Cooper *et al.*, students recognised that communication skills, problem-based learning, case study analysis and team-working were areas covered in both curricula streams (83). The students could see that IPE was building on their profession-specific training and helping them to develop these skills at a deeper level. For example, the students expressed that their uni-professional training had taught them how to communicate with clients, yet, their IPE training had taught them how to communicate with both clients and other health professionals (83).

The competencies for IPE need to be woven throughout the pre-qualification training (47). This reinforces the notion of a continuum of learning and the principles of adult learning discussed earlier, whereby students are encouraged to build upon previous knowledge and experience. However, this constant and continuous theme of IPE needs to be articulated and made explicit. All staff and students need to understand the goals and methods used during IPE (86). Making these assumptions explicit provides further rationale and contextualisation for students participating in IPE and helps them to make connections about transferring knowledge from one setting into another.

As expressed by the midwifery educators in this study, incorporating IPE competencies into formal assessments is one way to integrate IPE into the broader, uni-profession curriculum. The other value of formally assessing IPE competencies is that it removes the perception that IPE is an add-on to the rest of the curriculum, thereby increasing its' status and relevance. In particular, including IPE assessment within the assessment of clinical skills while on placement helps make an explicit link between theory and the practical aspects of IPE gained in the clinical setting (181). This not only ensures the relevance of the content of IPE, but it ensures the relevance to practice (181). This is a key step in helping students to transfer their IPE learning to clinical practice after qualification.

Unfortunately, promoting the integration of IPE into the wider profession-specific curriculum has not received much attention in the current body of literature

examining IPE. It is assumed that IPE is integrated into the wider uni-profession training, but explicit strategies for how to ensure this happens have not been considered. Simple steps, such as requiring all students to participate in IPE rather than having voluntary participation, and having IPE assessments count towards qualification requirements, are some first steps for embedding IPE into the core curriculum. Without a clear strategy for incorporating IPE into formal assessments, into training for mentors and academics, into systemic support in both the clinical setting and the educational setting, IPE will likely remain marginalised. This, in turn, will minimise the relevance of IPE for students and professionals and hinder the sustainability of IPE competencies.

6.2.3 Facilitating Learning

Another barrier to successful IPE articulated by student midwives was their frustration about the training for the facilitator. Other authors have identified this tension regarding student expectations for the role of the facilitator (175). Specifically, students often express the desire for more tutoring and guidance (86). To date there has been limited exploration of the perception of the facilitators. However, there is some evidence suggesting that educators are uncertain about the amount of direction they should provide to students when facilitating (79). This brings to light one of the central barriers to effective IPE: facilitation. Educators are traditionally trained in a didactic teaching style and they may feel inadequately prepared for taking on the role of facilitator rather than the role of expert teacher (18;175;180). Educators may also be limited by a focus on their own discipline. Specifically, as argued by Miller *et al.*, "the majority did not acquire their skills in an interprofessional environment and many do not practice within one" (175 pg 270). In addition to a lack of hands-on interprofessional knowledge, educators may demonstrate aspects of defensiveness towards other professions, silo mentality and academic elitism (194).

Effective training for educators in IPE is necessary in order to prevent them from reverting to their traditional teaching styles and methods (194). The role of the IPE facilitator requires a specific skill set, which will be new to many educators. Facilitators need knowledge of the pedagogy of adult education, experiential learning and IPP. Likewise, they need skills in communication, giving feedback, and small

group facilitation (18;86). Facilitators also require strategies for encouraging team formation and maintenance, and for negotiating issues of power, hierarchy and differing professional languages and philosophies (18;195). Finally, it is crucial that facilitators reflect on their "own professional beliefs and attitudes toward collaboration" (12 pg 13).

Facilitation styles have a direct impact on team functioning (79). Accordingly, faculty development is a critical step in creating an effective IPE curriculum. Faculty development will result in well trained IPE facilitators who can foster student learning, yet it will also create champions and advocates for the IPE curriculum. Champions play a key role in making the content relevant and meaningful for students, embedding IPE into the wider curriculum and thereby creating a more favourable learning environment for students to engage with the IPE curriculum.

Similarly, the views of participants supports previous research findings that role models in the clinical setting also play a key role in creating a supportive IPE environment (18). Role modelling by mentors and other clinical staff during placements is a significant part of the education process for health professionals (190). Students learn professional behaviours and how to interact with other professionals by observing the behaviour of staff in the placement setting (190;196). Students will adopt behaviours that they perceive as 'normal' based on observations of mentors (190). Maudsley emphasises that most of what is learned during health profession training is outside of the formal curriculum (197). Hafferty describes the formal curriculum as the intended and endorsed curriculum, while the informal curriculum is the ad hoc and inter-personal teaching and learning that takes place between faculty and students (198). He also outlines the hidden curriculum as the organisational and cultural influences that inform student learning. Mentors and role models play a significant role in both informal curriculum through their discussions with students, and in the hidden curriculum through their everyday actions based on the professional culture in their work environment. When students find conflict between the formal curriculum and the informal learning they observe in the clinical setting they will tend to embody the informal learning (190). Consequently, the models of collaboration students are exposed to in the clinical setting have a stronger influence on their development of collaborative competencies than the academic

theory acquired in the classroom setting (84;190). In this way, role modelling of negative attitudes and behaviour can undermine IPP (162).

This poses a significant challenge for IPE because, although mentors are well suited for modelling and assessing profession-specific behaviours, the role modelling and assessment of interprofessional behaviours has traditionally been irregular and unplanned (186). Yet, the importance of modelling these behaviours is evident. For example, when a student is paired with a mentor who is a champion of IPE the student is more likely to be included in, and directed toward, positive experiences of IPP (76). And the reverse is true, so that, when a mentor does not acknowledge the importance of IPP the student will not have the same opportunities to participate in effective IPP (76;199). Further, Pollard *et al.*, found that students do not have the confidence to take initiative to create positive interprofessional experiences when there is no explicit support from their mentor (181).

There has historically been no mechanism for ensuring that clinical staff and mentors are aware of the goals and learning outcomes associated with IPE, nor do they perceive IPP as a priority (190). Therefore, not all staff in the clinical area are able to adequately support students in the development of interprofessional competencies. However, the importance of role modelling in helping students acquire interprofessional competencies is apparent. This suggests that training for mentors and clinical staff in the goals and objectives of IPE is a critical component of ensuring a positive learning environment (76;199). Without appropriate training, reinforced by policy documents, clinical staff will continue to be unable to articulate the attributes and characteristics of interprofessional working, they will not serve as effective role models, and will not have mastered appropriate teaching and evaluation methods for IPE (166). All staff in the clinical area, not only those who act as formal mentors for students, need to be aware of the impact of role modelling on student development (166;197;200).

Steinert points out that faculty development for both academic facilitators and clinical role models needs to focus on change at both the personal and organisational level (194). The personal level requires development of knowledge, attitude and skill in IPE and practice. At the organisational level, systems need to promote opportunities to learn and work across disciplines, to empower team-work and to address barriers to IPE (194). Training for facilitators and clinical mentors

contributes to the large scale culture change that is needed for the development of an effective learning environment (175). This type of culture change is required in order for the goals of IPE to be integrated into the formal, informal and hidden curriculum. This will create consistency throughout a student's pre-qualification training which is currently absent according to the views of participants, as presented in this study.

6.2.4 Summary of Category: Engaging with the Curriculum

The findings outlined in this central category indicate that issues, such as timing and setting of IPE, the content of the IPE curriculum and the role of facilitators and role models, are key factors that influence the learning environment and context of IPE.

The debate regarding the timing of IPE within pre-qualification training was identified by participants and in the existing literature. However, when the IPE curriculum becomes mired by debates about logistical issues, such as timing, it is difficult for participants and advocates of IPE to look beyond these debates and to fully engage with the curriculum.

The findings from this study support the assertion made by previous authors for a continuum of IPE throughout pre-qualification training, shaped and directed by learning outcomes. The timing debate exists because stereotype modification and professional identity development were seen as critical outcomes of IPE. This fuelled extensive research devoted to understanding when and how stereotypes and professional identity developed. However, despite the extensive research, the findings of these studies remain contradictory and controversial. The shift away from the timing debate, to see IPE as a continuum over time, acknowledges that there are many desirable outcomes of IPE beyond the issues of stereotypes and identity.

Incorporating IPE at various times during pre- and post-qualification training, based on the development of learning outcomes appropriate to each stage, will promote deeper learning as students will have more opportunities to engage with the concepts of IPP, thus affording the chance to reflect on their learning.

Setting is another logistical issue that has a significant influence on the development of IPE curricula. Participants in this study, as in previous literature, debated the merits of classroom-based and practice-based IPE initiatives. The participants highlighted that classroom-based IPE was not sufficient for encouraging

students to engage with the principles of IPP. Despite the growing evidence asserting the benefits of practice-based IPE, initiatives taking place in this setting remain the minority. This is often due to logistical difficulties of arranging placement opportunities in the clinical area. It has been assumed that learning about collaboration is already occurring in an informal manner, yet this untested assumption leaves students dependent on inconsistent, ad hoc opportunities. The difficulties in arranging the logistics of clinical placements and the inconsistent opportunities for students indicate a dissonance between the university and the NHS Trust site, with regard to their support of, and commitment to the goals of IPE. Further discussion of this important partnership will be presented in the next category.

Only one of the universities involved in the current project incorporated formal, explicit, practice-based learning into their IPE curriculum. However, all the participants felt this would be a helpful addition to IPE at their site. Again, the evidence from this project indicates the need for a continuum of IPE, incorporated into both academic and clinical settings, in order for students to fully engage with interprofessional working and learning.

Just as integral as the discussion regarding when and where IPE should occur, there is the issue of 'what' should be included in the content of the curriculum. The views of participants raised some concerns that the content of IPE is too simplistic. The relevance of the curriculum could be enhanced by ensuring that problem-based scenarios and clinical tasks are relevant for all professions involved. Further, the curriculum needs to be based on learning objectives and outcomes that are directly related to the knowledge, skills and attitudes required for collaborative practice. The purpose of IPE is for students to learn how to work together, and when they are not provided with opportunities to do so, or when they are simply learning the same content but without interaction, they are learning in parallel. In this way, there were examples from all four university sites of students participating in 'multiprofessional,' rather than 'interprofessional' education. This multiprofessional education is unlikely to result in sustainable changes in practice following qualification.

The discussion of content also identified that integrating the principles of IPE into the wider uni-professional curriculum was essential for raising the status and

increasing the relevance of IPE. This integration will minimise the marginalisation of IPE as an unnecessary 'add-on,' removed from the rest of one's professional qualification training. The likelihood of sustainable outcomes is greatly increased if the relevance and integration of IPE can be improved. Strategies for fostering this integration include, incorporating IPE into formal assessments both in the academic and clinical settings, improving training for academic facilitators and clinical mentors, and promoting systemic support for IPE at both the university and the clinical sites.

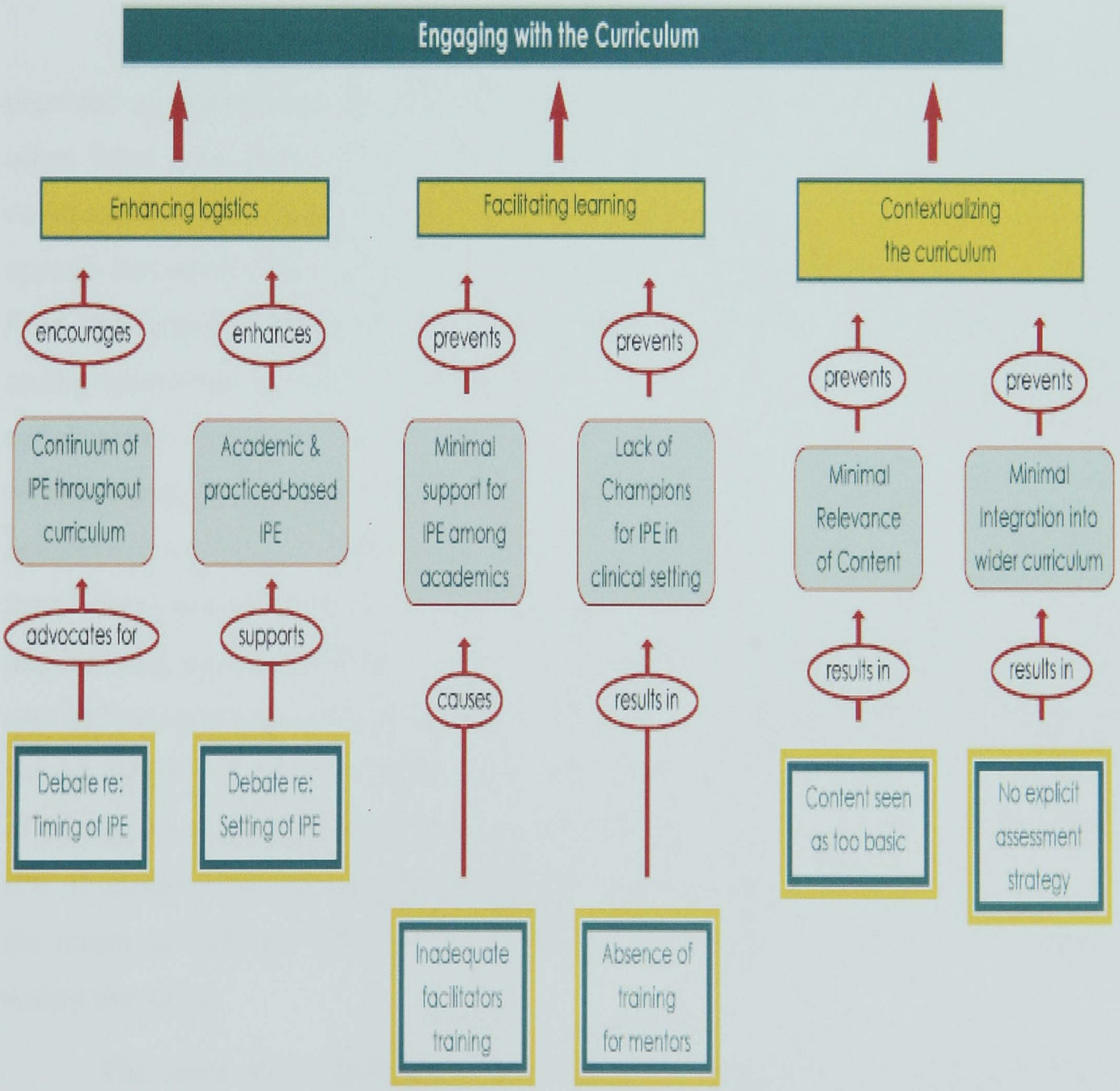
Finally, facilitators and clinical mentors were identified by participants as being critical for improving the quality of the content of the IPE curriculum, and for improving the relevance and application of IPE to practice. This issue highlights the importance of creating a favourable learning environment, which includes educators in both academic and clinical settings who are champions of IPE. Not surprisingly, when facilitators and role models were supportive of IPE, students were presented with greater opportunities to engage in IPE and IPP. A key component of creating these IPE champions is supporting training opportunities for facilitators and mentors. Beyond creating staff and educators who support IPE, this training will also help to embed the values and goals of collaboration into both the university and NHS culture. This is one of the first critical steps in facilitating systemic change to promote a culture of collaboration.

The organisational and logistical issues presented here have a significant influence on the ability of students and educators to participate in and learn from the IPE curriculum (Figure 6-2). The ability of students to engage with the IPE curriculum will not only influence the development of IPE competencies, but it will also shape the extent to which graduates are able to sustain these competencies in practice. The engagement of students could be better facilitated by establishing a continuum of IPE. This continuum improves upon the challenges in timing, setting, and integration into the wider curriculum by weaving IPE throughout a student's pre-qualification training at different times, in different settings and into their uni-profession curriculum. Such a continuum of IPE would be well suited to promote deeper learning of the competencies required for collaboration, it would enhance the status of IPE within the university, and it would change the perception of IPE from being a separate and removed entity from the rest of the professional training to

being an integral part of training for all health professionals. As a result, a more favourable learning environment would be created for IPE.

The creation of a favourable learning environment is a critical step in ensuring the success of IPE. This highlights the need to move beyond the focus on the individual, which has plagued much of the IPE research. Instead, there is a need to look at the broader supporting systems that influence the acquisition and sustainability of IPE competencies.

Figure 6- 2: Factors Influencing Level of Engagement with the IPE Curriculum



6.3 Promoting IPE in the Workplace

6.3.1 Supporting IPE Agenda

According to the participants in this study, joint implementation of the IPE curriculum between the university and the clinical site appears to offer a significant contribution to promoting IPE within the workplace. Co-operation between the university and the Trust is a necessary ingredient for promoting interprofessional learning in practice and may contribute to the sustainability of this learning following qualification.

The inclusion of University D in this study and its associated Trust sites provided an interesting case example – one that contrasted with the other sites. The other Trust sites claim to have measures in place that promote interprofessional collaboration. Yet, when the examples of these measures are deconstructed, it appears that some of this support for the interprofessional agenda may be inadequate. First, the examples provided by Heads of Midwifery were often representative of multiprofessional working and learning rather than examples of interprofessional collaboration. Instead of learning with, from and about each other, as the definition of IPE would entail, they were simply learning with each other in parallel. This demonstrates a lack of understanding about the principles of IPE and IPP. Further, the students were able to provide several examples of how interprofessional working and learning could be further expanded and developed within the institution. This was indicative of minimal integration of IPP into the workplace ethos. Finally, there was an absence of systemic support for the IPE agenda as illustrated through the lack of awareness among participants about financial and resource allocation to sustain IPE. It appears that although individuals within the Trust appear to be supportive of the notion of IPE and IPP, there is little evidence that these notions are a priority within the Trust.

The need for stakeholders and decision makers beyond the educational institution to support the principles of IPE and IPP has been highlighted by many authors. The body of literature devoted to the planning and implementing of IPE within the HEI has highlighted the importance of support at all levels of decision-making, from the government to senior administration (12;54;179;184). Many of these authors assert that factors, such as leadership, allocation of resources, financial incentives and logistical decisions, are ways in which an institution can demonstrate

support for IPE (12;179). This systemic support is a key component in helping overcome barriers which impede IPE implementation (179). This same systemic support has been identified as being critical in influencing collaborative patient care. The governance and leadership within the clinical workplace and the structuring of clinical care have been noted as essential in this endeavour (12). The importance of systemic support has also been identified by Pollard *et al.*, who assert that the management and leadership style of an institution strongly influences the quality of collaboration (181).

However, the evidence presented by previous authors outlining the need for systemic support has some limitations. First, much of this literature comes from research based on the planning and implementation of IPE initiatives within educational institutions. There is little attention paid to the support needed to sustain IPE after implementation. Similarly, there is little consideration of the required support beyond the confines of the educational institution. There has been some debate about the support offered by professional regulating bodies and the government, yet only rare mention of the support offered by the clinical work environment. Another limitation of the existing literature is the focus on the importance of senior management in supporting the IPE agenda. Understandably the support of senior management is crucial to the success of IPE initiatives, yet in order for the support to be sustainable it must exist at all levels of the institution. It must trickle down from the top of the decision-making hierarchy to those doing the day-to-day work. Finally, although it is difficult to achieve since there will be no universal answer to the question of how best to support IPE initiatives to promote application within practice, there has been little attempt by previous authors to identify specific strategies to facilitate supportive processes within institutions. These strategies need to address not only the allocation of finances and resources, but they must also address the every-day mechanisms for providing care such as the ways in which information is exchanged between professionals, and the protocols and procedures which govern practice and interprofessional relationships. The findings of this study provide a new contribution to this body of literature by identifying the importance of systemic support within the Trust environment in order to help graduates with IPE training apply their skills and to embed the principles of IPE and IPP into the culture of the workplace.

At University D, as a result of the clinical audits and service development projects in the IPE curriculum, the university and the Trust work together to deliver the pre-qualification IPE. The disconnect between the HEI and the clinical workplace at other university sites was illustrated through the lack of awareness by staff about the IPE curriculum, by the lack of training provided for mentors to facilitate assessment of IPP during placements, and by occasional animosity on behalf of clinical staff for having to adopt the agenda dictated by the HEI.

Gilbert also noted the division between the academic setting and the practice setting (201). He argues that the practice setting is inadequately supported both pedagogically and economically to support IPE. Further, the priorities of the HEI and the Trust may be in opposition to each other (201). For example, the university may be attempting to promote the IPE agenda while the Trust is more concerned with reducing the number of clinical incidents. This division creates a significant barrier to the promotion of IPE and IPP in the workplace.

The lack of support for IPE within the clinical setting means that students are faced with a learning environment that directly contradicts the theory of interprofessional collaboration being presented through IPE. This was true of a study conducted by Barnes *et al.*, who found that students received "daily influence from their workplace that could often act as barrier to implementing" (202 pg 434). Similarly, the lack of awareness by clinical staff and mentors about the IPE agenda will influence student learning. For example, Pollard *et al.*, found that without adequate resources and support from staff, IPE opportunities for students and newly qualified professionals will not be provided (181). Further, the lack of awareness by clinical staff about IPE and IPP may mean that they reinforce negative stereotypes and hierarchies (106;201). These same staff will then be inadequately prepared to assess the student's ability to demonstrate collaborative competencies.

The implications of the lack of awareness of IPE among clinical staff reinforce the concept that the support for the IPE agenda must filter down to all levels of staff within the clinical environment. Support from senior staff and management needs to also be ingrained among mentors in order to ensure a positive learning environment where students can see IPE and IPP in action, where their competencies are adequately assessed, and where they are provided with opportunities to participate in collaboration. The release of clinical staff for training

in IPE is the first step in promoting a stronger relationship between the HEI and the Trust site. As a result of this training, mentors will learn about ways to improve their own interprofessional working. This is a critical component for creating a culture of collaboration.

A strong relationship between the HEI and the clinical workplace will improve the acquisition and application of IPE competencies, while at the same time encouraging a more collaborative work environment. In this way, the university and the clinical workplace are interdependent (175). From the perspective of the Trust, IPE contributes to interprofessionality within the workplace (175). In fact, the students can act as agents of change to help promote collaboration (175). Moreover, a positive environment, which promotes interprofessional collaboration, will be helpful in making the Trust more attractive to newly qualified professionals (175). This cultural change, which promotes IPE, will help to embed a collaborative ethos (175).

From the students' perspective, a workplace culture that supports collaboration reinforces their theoretical learning (175). This environment makes visible for students the ways in which IPE fits into clinical practice. For example, students who have shadowed effective teams report a greater connection between their IPE and uni-professional training (175). As a result, the support from the Trust helps improve the HEI-based IPE by demonstrating application of their learning. Thus, a strong relationship between the university and the clinical environment, which integrates and makes explicit the principles of IPE and IPP, will promote a deeper understanding and will help with the integration of interprofessional theory and practice (191). This is at the crux of the issue of application to practice. At many of the Trust sites that participated in this project, despite a strong foundation of IPE at their academic institution, students found themselves doing placements and searching for employment at clinical institutions where the concept of interprofessional collaboration was not a priority.

A continuum of learning, facilitating IPE both during pre-qualification and post-qualification, relies on congruence and interdependence between the HEI and the Trust (175). As introduced in Chapter 2, a recent longitudinal study of post-qualification IPE by Bayley *et al.*, provides evidence that IPE initiatives need to be reinforced 3-6 months after exposure (89). They found that the largest improvement

in team-working and understanding of other professional roles was in the first few months after an IPE intervention. However, the beneficial effects on team-working had faded after six months. Again, the Trust site linked with University D provides an example of practical ways in which this continuum can be promoted. This Trust created a post whose remit is to promote IPE by both supporting the HEI-based curriculum in practice, through overseeing the audits and service development projects, and also by developing and implementing interprofessional-based continuing education opportunities for clinical staff. In this way, both the university-based curriculum and the practice setting have been re-engineered to promote a culture conducive to interprofessional collaboration (175). Administrative developments, such as creating new posts, integrating IPP into job descriptions, training clinical staff in IPE and creating champions of IPE in the clinical workplace, demonstrate support for the IPE agenda on behalf of the Trust (175). These developments also help to strengthen the relationship between the HEI and the Trust so that, together, they promote an optimal learning environment for students and qualified professionals.

6.3.2 Transitioning New Graduates

The views of participants demonstrated that the transition from student to newly qualified health professional is a complex process. It is during this time that graduates learn how to transfer their pre-qualification training into their new role as a qualified health professional. Much research has been devoted to this area of study. It has been well established that this transition time has a significant impact on the professional development of the individual. It is also well established that the working environment plays a key role in this transition process. Issues such as workload, organisational culture, and management attitude are organisational constraints, which affect this transition (89). For example, a labour ward that continually has staff shortages will result in inadequate support for newly qualified midwives (92).

Novice practitioners often enter the workplace feeling insecurity and fear about their new role as a responsible professional (92;200). The weight of responsibility and accountability for patient care and clinical decision-making can be a heavy burden for new professionals (92;203;204). A comprehensive plan of

preceptorship will help newly qualified professionals to, "consolidate their knowledge and feel confident about their role transition and future practice" (92 pg 336; 204). These concepts are not new within the field of nursing and midwifery. The NMC guideline on preceptorship outlines that this period is for providing support and guidance during the transition from student to qualified professional. They go on to define the roles of the preceptor and the new registrant and the period of preceptorship (205). Rigorous preceptorship programmes are now found at all NHS Trusts for nurses and midwives.

Despite the body of evidence describing the benefits of preceptorship and interventions to ease the transition from student to professional, the process of how students with IPE training transition into the role of effective interprofessional workers has not been examined. The views of participants regarding the transition of newly qualified midwives highlighted that graduates have difficulty transferring clinical midwifery skills. It was also identified that most preceptorship programmes focus almost exclusively on clinical skills, such as suturing, medications management, and documentation. Interprofessional competencies were not included during preceptorship. This is problematic for several reasons. First, if their interprofessional competencies are minimised in favour of clinical skills, newly qualified midwives will have little ability to consolidate these collaborative competencies and they will not see their applicability to practice. Second, this illustrates for the newly qualified midwife that interprofessional collaboration is not part of the working culture at that institution. Finally, this reinforces the opinion that skills for effective interprofessional working are not part of the required skill set of a midwife who is fit for purpose.

When participants were asked about the barriers that might prevent graduates from applying their IPE training in practice they mentioned the implications of a busy ward environment, the presence of senior midwives who did not support interprofessional working and the lack of confidence that plagues most newly qualified midwives. They did not identify the absence of IPE in the preceptorship programme as being a barrier. This absence of IPE in the preceptorship programme is an example of how training strategies within an institution may not reflect the personal, professional and academic needs of staff (160). Further, there can be incongruence between the goals and vision of the institution decision-makers and the

training and educational strategies happening on a daily basis. In other words, interprofessional working can be a clearly defined mandate by the senior administrators for the Trust, but the mandate may not be carried out in the daily actions of the staff.

This "disparity between the ideal and reality" of clinical practice is a common issue for newly qualified professionals (92 pg 338; 200). It appears that IPE is no different – the theoretical basis presented during academic training may not represent the reality of IPP in the clinical workplace. However, Van Der Putten argues that a dichotomy between theory and practice can be a helpful learning tool for novice practitioners (200). The recognition of the gap between theory and reality stimulates an awareness of the importance of continuing education. For this reason, interest in engaging in continuing education often rises after qualification (200).

Although there is evidence that newly qualified midwives might be interested in on-going education, the Heads of Midwifery described how they tried to give these midwives space to complete their preceptorship. The Heads of Midwifery admitted they do not get the newly qualified midwives involved in additional activities. Specifically, newly qualified midwives are not encouraged to participate in activities at the Trust that would reinforce the broader context of midwifery. As a result, once their preceptorship is over, midwives may not get involved in further opportunities. At which point, the foundation of interprofessional competencies laid during their pre-qualification training will not be fresh in their minds. Plus, they will have worked for a period of time in a workplace that does not make collaboration a priority. Therefore, this act of protecting the newly qualified midwives from involvement in Trust activities means the window of opportunity to promote the continuum of IPE will have passed.

The protection of newly qualified midwives also stems from the belief that they cannot be agents of change. However, Pollard *et al.*, found that although graduates with IPE training did not implement organisational change in their first year of practice, they did continue to have an awareness of interprofessional issues and they did use their IPE training to impact service users (181). It is possible that the lack of systemic support for IPE discussed earlier in this chapter is a significant barrier preventing newly qualified midwives from helping bring about organisational change. Regardless, the awareness of IPP and the application of their IPE training

with service users are critical aspects in beginning the process of changing practice. If practice can change at the patient level and at the level of the individual, then organisational change may soon follow.

6.3.3 Evolving Professions

The results of this study indicated an evolution within the clinical workplace and within the role of the midwife. This process of role evolution has been influenced by two key elements. First, there have been changes in the concepts of professions, and second, there has been an increasing demand for minimising the silo effect that separates professions. The historical concept of professions was shaped by control over a distinct body of knowledge, authority over entry into the profession, and self-monitoring of those within the profession (167). As a result, those outside of the profession are restricted from engaging in this sphere of practice. This exclusivity awards power and status to professions and reinforces distinct boundaries between different knowledge bases (162). It has also been noted that there was an inherent conflict within professions between altruism and self-interest (162;167).

Yet, in the last thirty years, the traditional framework of professions has come under greater scrutiny and, in conjunction with increasing consumer lobbying, it has been re-interpreted to include a greater focus on the interests of the patient and the community (162). However, despite this shift to greater altruism, the health professions continued to work separately with little interaction and with rigidly defined barriers. These traditional silos separating professions have prevented collaboration. Subsequently, there has been increasing advocacy for minimising these barriers between professions and for looking at ways in which the roles of different professions can overlap and complement each other.

The driving force behind this desire to minimise the territorial nature of health care roles is multi-factorial. Many key government documents have outlined ways in which Trusts and professions need to adapt to ensure consistent and high quality care for patients (160). The growing workforce demands, the increasing service demands, and the extension of primary health care have resulted in changing and evolving roles for several health professions (160). Rutherford *et al.*, assert that the "traditional boundaries between professional groups are being constantly rethought and redrawn in response to these developments" (160 pg 98). In fact, the

DH document entitled 'A Health Service of All the Talents' recommends doing away with barriers that dictate which particular staff are able to provide certain types of care (14;160). In this way, the evolution of professional roles is not unique to maternity care. Changes within the role of traditional professions, such as nurses and midwives, and the advent of new professions, such as health care assistants and advanced nurse practitioners, are a few examples of this evolution.

However, issues, such as lack of role evaluation, lack of support, lack of preparation for new roles and role ambiguity may impact the development of new roles (160). For example, the 'Agenda for Change' document by the DH identifies the need for well-defined career progression pathways for new professions (206). This document asserts that clear job descriptions, career progression and lines of authority will help to minimise role ambiguity (160).

A clearer understanding of new and evolving roles may come from recognising the social construction of knowledge in the professions (103). The process of becoming a professional involves being socialised into the patterns of thinking and behaving that reflect the ontological and epistemological views of the professional group (103). This reflects a socially constructed process generated through a shared worldview within a professional group. Interprofessional working helps professionals to understand and experience a worldview that is different than their own (103). This socially constructed standpoint will be an essential step for new professions arising from the new collaborative workplace.

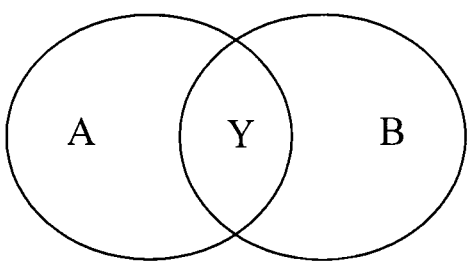
This understanding of the social construction of professional knowledge has further application for the evolving workplace. For example, in addition to the creation of new roles, such as health care assistants, the evolution of professional practice in response to IPE and the demands for collaboration may result in the advent and creation of an 'interprofessional worker.' This would be an individual from any professional background who incorporates the principles and practices of collaboration into their daily work. Accordingly, professional socialization can be a tool for creating a new, shared worldview among different professions that reflects the knowledge and beliefs of collaboration, rather than the historical, divisive professional ideologies.

McNair develops this idea further by arguing that the elements of professionalism are required by all professions and can act as a set of shared values used to unite professions and promote collaboration (162). She states, "the elements of professionalism form the basis of this joint value system for interprofessional practice" (pg 458). The central elements of professionalism, according to McNair, include altruism, accountability, excellence, duty and advocacy, service, honour, integrity, respect for others and ethical standards. These central elements can then be seen as a shared worldview and way of practice for all professionals.

As a result of a shared worldview and a shared set of professional values, new cognitive and normative maps representing the knowledge and values of collaboration can be developed. As a result, professionals and students will be socialised into two worldviews – their own profession-specific role and their role as an interprofessional worker (103).

The role of the interprofessional worker will integrate, but maintain both profession-specific and interprofessional knowledge and skill. In this way, the role differs from the concept of the generic worker and the blurring of boundaries between professions proposed in earlier literature on collaboration (207). Working collaboratively within clear, negotiated and respected professional boundaries is possible (208). For example, Rushmer proposes a visual metaphor to identify how two professions (A & B) can work collaboratively through shared tasks (Y) (208). Yet, this area of overlap (Y) is clear with distinct boundaries, and at the same time, the circles or professional boundaries of each profession (A & B) remain intact (Figure 6-3).

Figure 6- 3:Collaborative Working (208)



The perspectives from participants describe both the changing role of the midwife and the advent of new professions. Also, greater collaboration between professions was illustrated through examples of better communication and greater

respect for the contribution of others. These perspectives on the evolution of roles and culture highlight some of the processes inherent in organisational change. Although much of what was described by participants was positive and indicated that the principles of interprofessional collaboration are becoming more mainstream within many health care institutions, it is evident that further work is needed to fully entrench interprofessional working and learning within the workplace (209).

Ginsburgh and Tregunno argue that the 'organisational context' can both enable and prevent change (209). The organisational context is determined by both the *climate* and *culture* of an organisation. The *climate* refers to the practices, procedures, policies and routines of members, while the organisational *culture* captures the beliefs and values of the members. Successful organisational change is a complex process involving change within both the climate and culture of an organisation (209). Ginsburgh and Tregunno used organisational change theory to demonstrate the steps necessary during implementation of IPE within an HEI setting. The views from participants presented in this study demonstrate that these same processes of organisational change are also necessary within health care institutions.

When considering the process of *cultural* change within an NHS Trust, it is essential that attitudes change to embrace the benefits of IPE and IPP. Awareness of, and openness to, collaboration are necessary parts of this change (181;209). Historically, information dissemination was seen as the most important step in raising awareness and changing behaviour by health professionals (210). However, information dissemination alone does not appear to increase knowledge or to change behaviour (210). New models for understanding this process have been developed. The awareness-to-adherence model of clinical practice guideline compliance is one way of illustrating the process of changing beliefs (209;210). This model provides a way of understanding how health care professionals adopt clinical practice guidelines within their daily practice. This model is of relevance here because the process of adhering to clinical practice guidelines mirrors the process of adhering to interprofessional practice. Within an IPE context, this process begins with increased awareness of IPE (Table 6-1). Next, an individual must agree with the concept of IPE. Accordingly, the individual then decides to adopt the principles of IPE and to regularly adhere to the principles of interprofessional collaboration.

Table 6- 1: Modified Awareness to Adherence Model of IPE and IPP Compliance

1.	**Awareness:** Individual becomes more aware of the principles of IPE and IPP
2.	**Agreement:** Individual comes to agree with the principles of IPE and IPP
3.	**Adoption:** Individual decides to adopt the principles and practices of IPE and IPP
4.	**Adherence:** Individual adheres to principles of IPE and IPP in their daily practice

Similarly, Clark describes a process through which it becomes possible for team members to understand and commit to collaboration (103). He modified the four stages of understanding knowledge and values, originally articulated by Perry in 1970: dualism, multiplicity, relativism and commitment to relativism. Clark argues that IPE and IPP provides, "an opportunity for participants to go beyond a belief in the supremacy of their own profession (dualism); to a recognition of the existence and nature of other professions (relativism); and, finally to an acceptance of the variety of professions needed to complement each other in promoting quality patient care (commitment to relativism)" (103 pg 584).

In order to change organisational *climate* certain practices and routines will need to be modified to reflect the new organisational culture and beliefs (209). It is during this stage of change that strong leadership by champions of IPE and redistribution of resources will help to bring about new practices and policies (211). Clinical staff will be hesitant to bring about change unless they are supported by senior managers (212). The champions of IPE can help to bring about change through research, advocacy and by fostering a community of interprofessional collaboration through their own behaviour (211). Also, in addition to challenging the views and beliefs of individuals, regulations and policy changes are required in order for the organisational change to become fully embedded (209). Regulations and policies should permeate all levels of staffing, create an infrastructure to support new ways of practicing, and provide incentives for collaborative practice (211). Further, practices that demonstrate the positive outcomes of interprofessional collaboration will help to bring about change at both a climate and culture level (209).

Although the organisational context is shaped by both culture and climate it is also influenced by external factors. Within the NHS Trust setting, the funding for student placements, the costs of releasing staff for mentor training, the relationship between the Strategic Health Authority (SHA) and the university are external constraints impeding change (212). In addition, the different planning cycles and funding years between the NHS and academia are influential in the development and

implementation of new initiatives (213). In the same way, a stable source of funding is essential for the sustainability of IPE interventions both within the HEI and the Trust (211). Further, stakeholders can work together to minimise the logistical barriers around staffing, placements, and student numbers that may impede IPE projects (211).

The participants articulated that it will take time before IPE changes the health care institution. Allan *et al.*, also found that it takes time for changes in culture to become embedded in everyday practice (212). This may indicate that an incremental approach is favoured by those within organisations. A clear, consistent vision that is introduced early, and often, and is present at both an individual and systemic level will help to bring about change within the organisational context (212;214).

However, incremental and voluntary approaches to implementing change may not be sufficient to fully embed a culture of interprofessional collaboration within a Trust. Further, short-term funding and unrealistic expectations of what changes can be achieved in one to two years make this process of change problematic (215). For this reason, Ginsburgh and Tregunno argue that coercive mechanisms for change embedded in regulatory and policy level changes are also needed to reinforce the incremental change (209). A sustained effort of change at both the educational and practice domain and at the level of the individual and the organisation is required (209).

Organisational change is a slow and complex process. It may take several years before it is possible to effectively measure the outcomes associated with a certain change (214). The process of change requires a fine balance between bringing about change at an individual level and a systemic level. Broad systemic changes in funding, resource allocation, and accreditation will fail unless individuals at all levels of the institution share the same vision. Also, it is crucial that all stakeholders have a common definition and understanding of the principles and benefits of collaboration (212). Creating a collaborative workplace context will continue to be a challenge for IPE while health professionals are educated in a uni-professional tradition and while collaboration is not integrated into the central systems and structures within the organisation (212;215;216).

6.3.4 Summary of Category: Promoting IPE in the Workplace

The goal of this category was to look beyond the individual and logistical aspects of skill acquisition. Instead the aim was to understand what factors within the workplace helped facilitate a transfer of skills and what barriers prevented the application of IPE. The workplace environment was determined to have a significant influence on how newly qualified midwives apply the IPE theory they acquired in their pre-qualification training.

The promotion of IPE in the workplace is a complex process. The examples provided by participants highlight elements of both commitment to and support for the IPE agenda. Yet, at the same time, elements of resistance and tokenism were also apparent. There were examples of a positive evolution of professions resulting in greater collaboration, yet, there were also indications of a lack of awareness and poor integration of IPE into the workplace. A better understanding of the influence of the workplace is an essential step for creating measures to help sustain the benefits of IPE. Further, the notion of IPE as a continuum that crosses the boundaries of settings, which calls for life-long learning about collaboration, is dependent upon the promotion of IPE beyond the confines of the academic institution.

Although many participants felt that NHS Trusts were supportive of the IPE agenda, when this was deconstructed and contrasted with other Trust sites it was evident that there was often a lack of understanding about the principles of collaboration and a lack of integration into the workplace ethos. University D provided an interesting case example of specific measures instituted by the Trust that demonstrated their commitment to interprofessional working and learning.

The existing literature on IPE has argued that systemic support is a key component of overcoming barriers that impede IPE implementation within the HEI. The findings of the current study reveal that this same support is required within the clinical workplace in order to sustain collaboration in practice. A strong relationship between the academic institution and the clinical institution is one way to encourage commitment to IPE within the workplace. At many of the sites in this project, there was minimal awareness on the part of the clinical staff about the IPE curriculum at the HEI. This disconnect between the goals of the university and the Trust site means that it will be difficult for students to have their IPE competencies appropriately

assessed during practice placements. Likewise, they will be confronted with a context that contradicts the theory of collaboration presented in their IPE curriculum. Further, it will be difficult to create a continuum of learning once they have graduated.

Once again, University D proved the exception by demonstrating a strong connection between the university and the Trust site. The Trust site was actively involved in implementing the university's IPE curriculum while students were in placement and when they participated in clinical audits and service development projects as part of their IPE modules. This partnership between the university and the Trust site provided an optimal learning environment for students, one in which they could see and participate in collaboration in action. Further, from the Trust perspective, their involvement in the IPE curriculum helped to foster a collaborative culture and climate within the workplace. This means that the staff will be better able to encourage students as they develop collaborative competencies. It also means that students, upon graduation, will be able to work in a context that promotes the application of their IPE theory. Therefore, the findings of this study illustrate that a strong relationship between the academic and clinical institutions is essential for promoting both the acquisition and the application of IPE competencies, while at the same time encouraging a collaborative work environment. This is a crucial step in creating a continuum of learning.

The ways in which the Trust supported new graduates during their transition to work was also identified by participants as one of the strategies to promote IPE within the workplace. Graduates with IPE training were seen as being a valuable contribution to the Trust. However, IPE competencies were not included during the preceptorship programme designed for new midwives. Thus, although the Trust may see these graduates as being an asset, they do not provide formal opportunities for these midwives to continue to refine and develop their skills in collaboration. Many of the Heads of Midwifery expressed concern that consolidating and refining clinical 'midwifery skills' was the priority during preceptorship. In this way, it appears that some midwives do not see interprofessional skills as essential for the role of the midwife.

The absence of interprofessional working and learning in the preceptorship programme for newly qualified midwives creates a gap between the spheres of

theory and practice. Just as newly qualified midwives need preceptorship to refine their skills in suturing, so too do they need the opportunity to refine and practice their skills in collaboration. Newly qualified professionals need opportunities to learn and work together. This allows them to develop skills and put them into practice (211). In this way, the research that argues for robust preceptorship programmes can be equally applied to IPE.

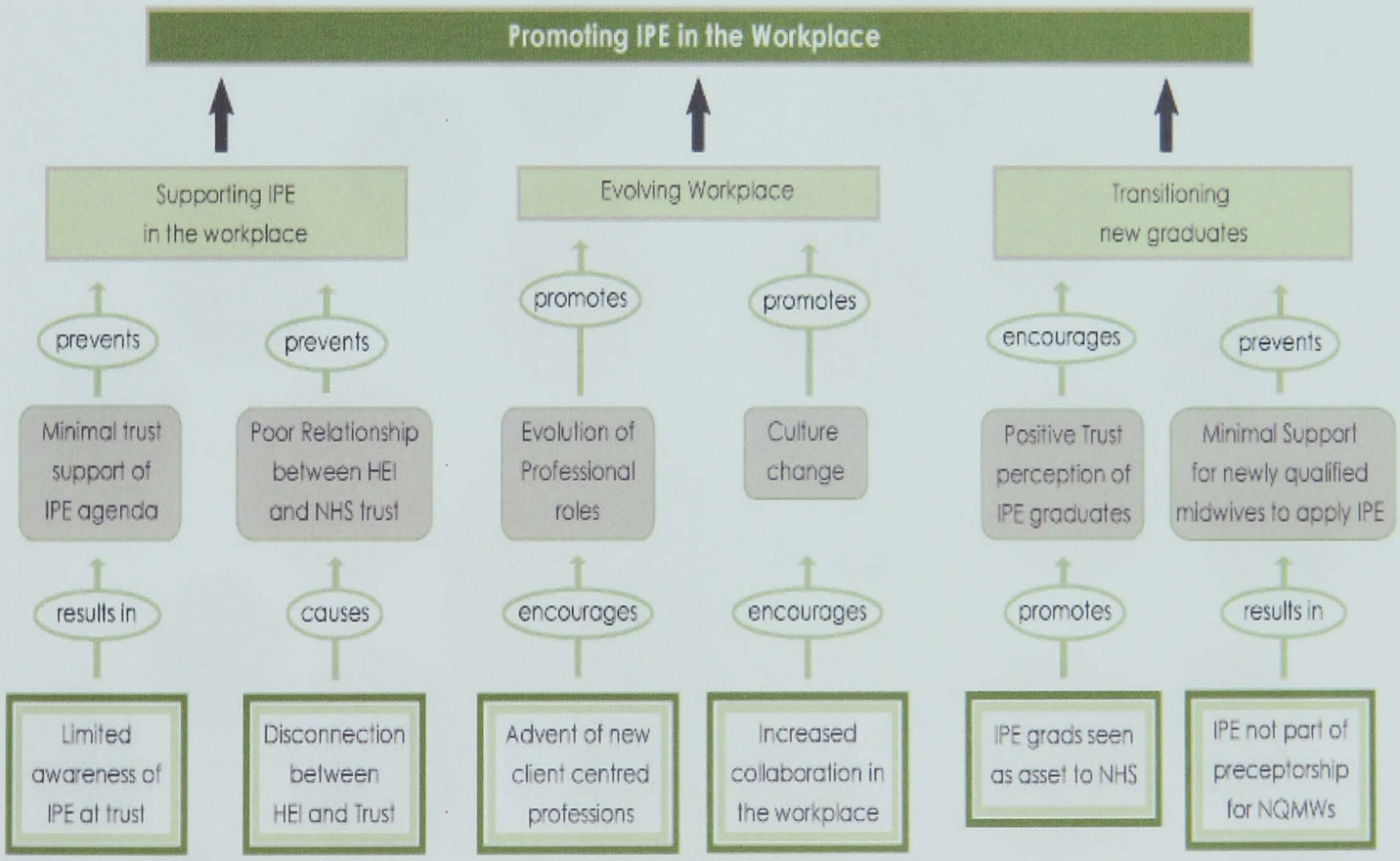
In spite of the lack of support, minimal contact between the HEI and the workplace and the absence of collaboration within the process of transitioning new midwives, participants were able to articulate ways in which professional roles and the workplace context had begun to evolve to be more collaborative. Participants gave examples of how the scope of practice of midwifery had evolved and of the advent of new, more client-centred professions. They described how communication had become less hierarchical and how the respect and recognition of the contributions of others had increased.

The participants also spoke about the fact that a culture change within the health care system, incorporating the principles of IPE and IPP, would take time to be actualised. Participants did not articulate the mechanisms and processes that had brought about this change or that would be needed to further embed these principles within the workplace. However, changes within both the organisational culture and climate are necessary to bring about the evolution of interprofessional collaboration. This change needs to be supported by external factors at the level of the SHA and professional agencies. Further, the changes need to be sustained over time and led by champions and stakeholders who share a common vision. Many of the participants of this study held the same vision that the workplace of the future will be a very different place as it will include staff who participated in IPE initiatives. However, the crux of this change relies on instituting measures within the workplace that will encourage these individuals to continue to use their IPE knowledge and competencies. These measures need to occur at all levels of the institution as all staff and decision makers will be more likely to support changes if they've been involved and consulted during change planning (211). A simple step such as improving the liaison between link lecturers on the academic midwifery team and the mentors in the clinical area in relation to IPE will improve student assessment on placement, it will help to facilitate a smoother transition from novice to professional for the newly

qualified, and it will help to promote collaboration by the mentors in their daily practice (200).

The promotion of IPE within the workplace is influenced by the relationship between the academic institution and the Trust, by the mechanisms for helping new graduates with the transition to work and by the evolution of professional roles and culture (Figure 6-4). The views of participants have revealed the complex process of creating a solid, symbiotic and sustainable relationship between the educational institution and the clinical institution and of facilitating cultural change within an organisation. Changes of this magnitude are complex and require time and careful strategy (211).

Figure 6- 4: Factors Influencing the Promotion of IPE in the Workplace



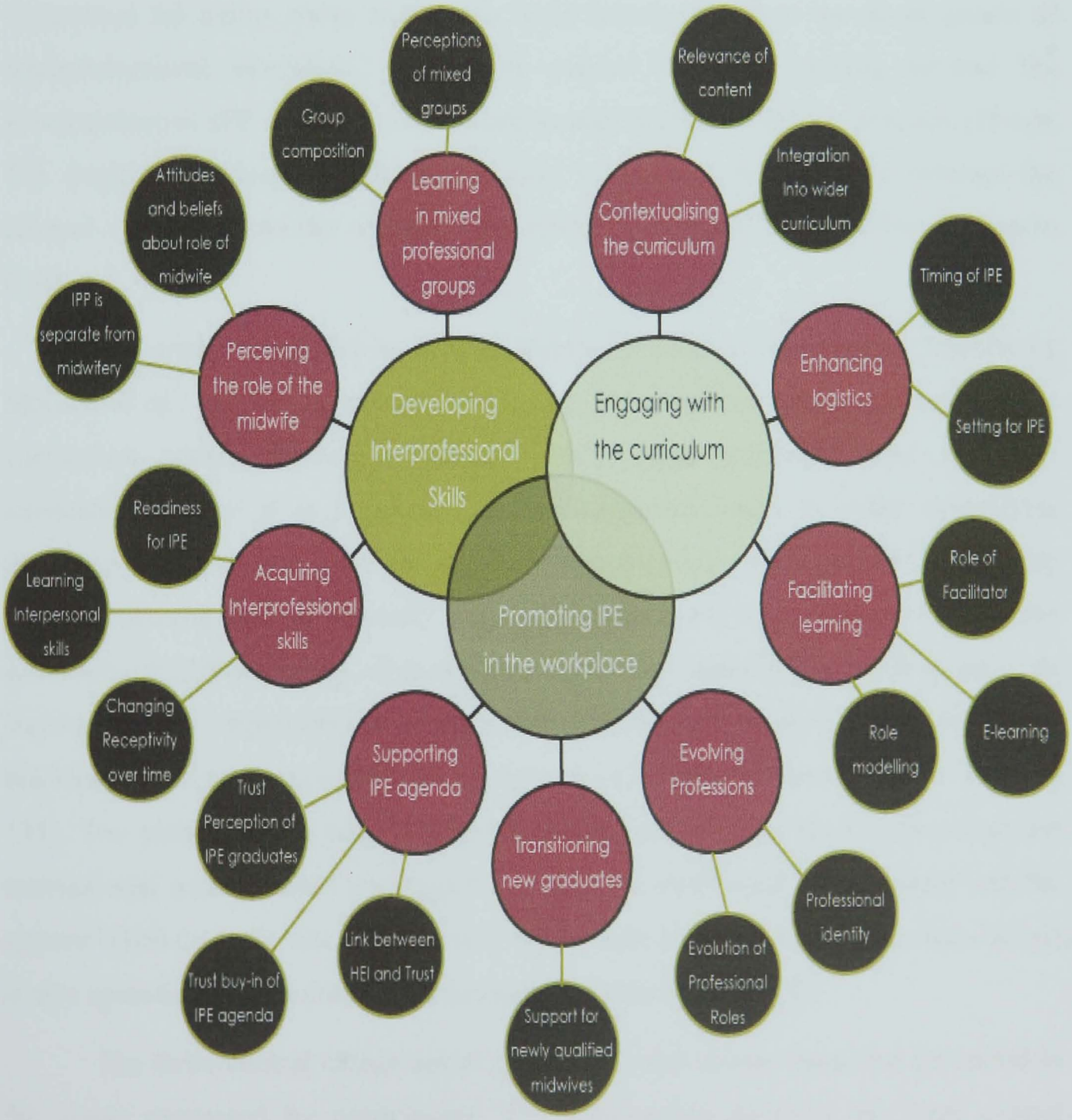
The promotion of IPE in the workplace will have a significant influence on the ability of newly qualified health professionals to transfer and apply their IPE competencies to the context of professional practice. The benefits of a solid foundation for developing interprofessional skills and the creation of an effective learning environment will be lost if students and newly qualified midwives find themselves working in contexts that do not make collaboration a priority. The competencies gained during pre-qualification training are more likely to be sustained

if there is a continuum of IPE bridging across the boundaries of the HEI and the Trust. IPE cannot remain within the confines of the academic institution. Accordingly, NHS institutions need to create an infrastructure that promotes interprofessional working and learning that permeates all levels of the organisation.

6.4 The Three Central Categories

The three categories have captured on-going issues and debates identified in the IPE literature. However, new and unique issues have been identified during this research, which contribute to a growing understanding of the process of applying IPE to professional practice. The central categories are summarised in Figure 6-5.

Figure 6- 5: Three Central Categories and Subcategories



In some ways, the three categories are similar to the micro, meso and macro levels identified by Oandasan and Reeves (18;184). In their model, the 'micro' level represents the process of socialisation and its effect on IPE (184). In this way, the micro level explores issues of professional identity, professional attitudes and stereotypes and their impact on IPE initiatives. The 'meso' level considers administrative and logistical challenges, which may determine the success or failure of IPE initiatives. The authors also include issues of leadership and identifying champions of IPE within this level (184). Finally, the 'macro' level, as described by Oandasan and Reeves, refers to the political and institutional support for IPE (184). The difference between the categories presented in the current study and the three levels described by Oandasan and Reeves lies in the context. Oandasan and Reeves, "examined the micro, meso and macro level factors related to the development of interprofessional education," while the current study is looking beyond the development of IPE to focus on application and transfer of IPE to practice (184 pg 45). Further, Oandasan and Reeves neglect to examine the interface between the clinical workplace and the academic institution as a critical factor within the macro level.

The three categories have also illustrated some of the lessons learned by Steinert *et al.*, in their examination of faculty development for the professionalism curriculum within medical education (166). They articulated that with any curriculum change it is important, at the individual level, to build motivation, minimise resistance and make the implicit explicit (166). At the program level, they suggest focusing both on content, making it relevant and enjoyable, and on faculty development (166). Finally, at a systems level they identify the "need to promote buy-in, address organisational climate and culture, and identify opportunities for teaching and learning, and train the trainers, thus facilitating dissemination" (166 pg 135). The authors argue that, "faculty development activities should move beyond instructional improvement and target 3 levels: the individual, the program and the system" (166 pg 135). The current study has revealed that targeting these three levels is also essential for sustaining a curriculum initiative such as IPE.

The three central categories of this study were drawn from and grounded in the views expressed by participants. The relationship between the three central categories and how they come together to make sense of and explain the

phenomenon of transfer to practice is the final stage of data analysis. It is through understanding these relationships between categories that the core category and emerging theory are generated. This theory will be presented in the next chapter.

CHAPTER 7 DISCUSSION: THE EMERGING THEORY

7.0 Emerging theory: Becoming an Interprofessional Practitioner

The aim of this study was to understand whether the knowledge, skills and attitudes gained through pre-qualification IPE could be transferred and applied to the professional practice of newly qualified midwives and what elements promoted or prevented the application to practice. The responses from participants have been useful to identify key components of this complex process. In keeping with the principles of the grounded theory methodology used in this project, participant's perspectives have been used to generate new theory and a new way of understanding the phenomenon in question. This chapter summarises the key findings and discusses the role of theory. Next, the emerging theory, which attempts to delineate the process of 'Becoming an Interprofessional Practitioner,' will be presented.

7.1 Role of Theory

The development of a theory that makes sense of and explains the studied phenomenon is the goal of grounded theory (145). Charmaz argues that, "the power of grounded theory methods lies in the researcher's piecing together a theoretical narrative that has explanatory and predictive power" (145 pg 327). The narrative Charmaz refers to is the experience and perspectives of participants. Understanding this experience, grounded in the views of participants, allows theory to be generated.

Glaser and Straus assert that generating theory occurs through the iterative process of constantly comparing data and analysis (141). In this way, theory emerges from the data rather than being imposed from previously existing theories and frameworks (141). This makes grounded theory different from other positivistic research in which the goal is to test theory. Rather, in grounded theory the goal is to develop theory, thereby creating a theory that emerges inductively from the data. In this way, there is an understanding in this methodology that there is a theory implicit in the data that simply needs to be discovered and made explicit (141).

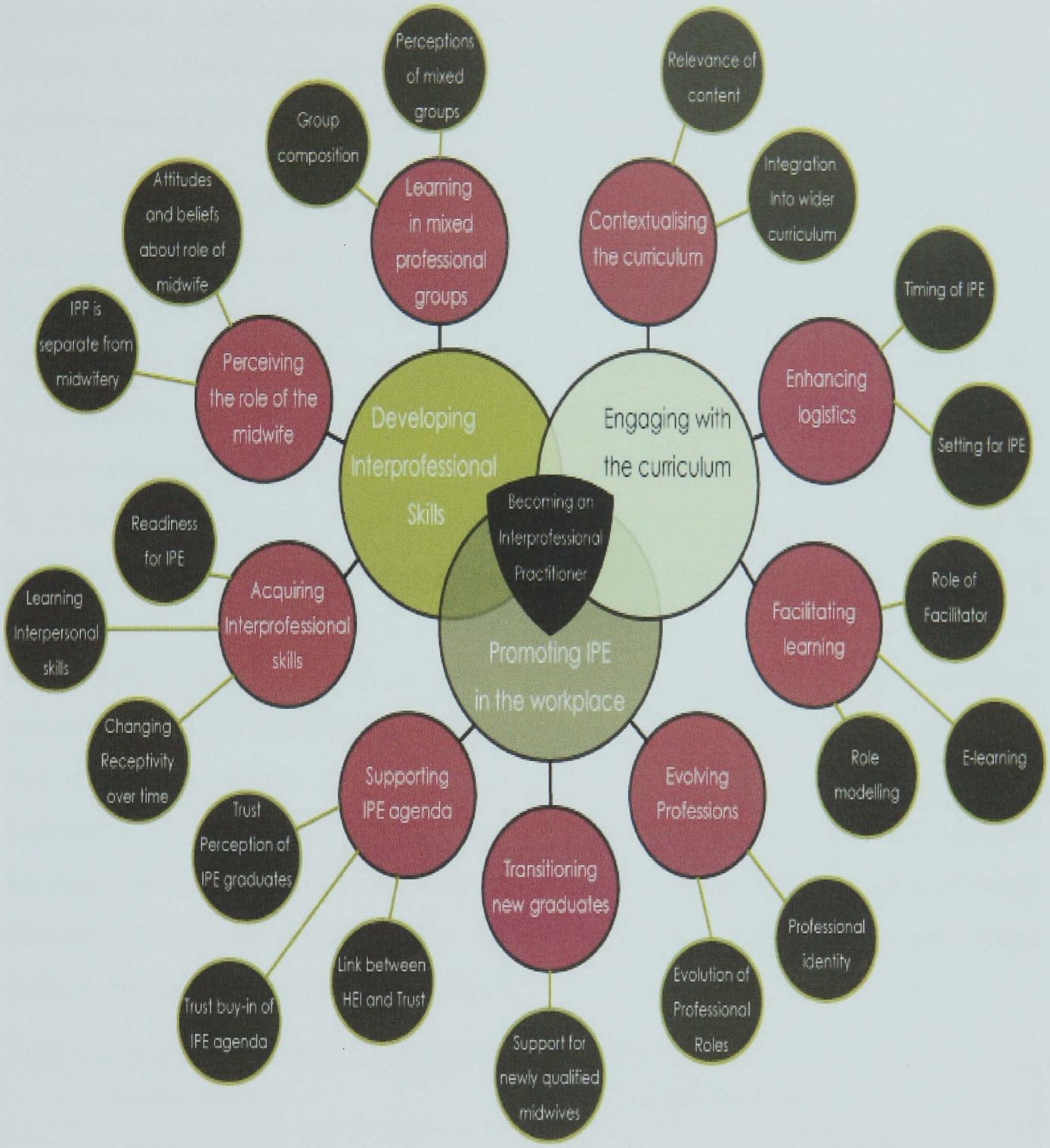
The emerging theory should explain and help make sense of the situation in question. Glaser and Strauss argue that the criteria of fit and understanding are the

measures of quality of grounded theory (141). Specifically, fit denotes the ability of the theory to represent the reality of those involved in the phenomenon and understanding comes from participants when the theory has relevance to their experience (139). Grounded theory is particularly useful when exploring a new phenomenon or an area that has not previously been examined (141). As argued by Barr *et al.*, the development of a new theory can be particularly useful because, "making theory explicit encourages systematic, disciplined and critical thinking. It informs decisions and generates propositions which can be tested" (7 pg 120). Subsequently, theory can be used to facilitate further research on the subject in question (103). Theory also serves an instructional purpose (103). Within the field of IPE, theory can be used to clarify roles, learning objectives or curriculum development. Accordingly, it is hoped that the emerging theory presented in this research project may be used both for instructional purposes and for facilitating further research and for making sense of a process which has historically been poorly understood.

7.2 Becoming an Interprofessional Practitioner

Through the process of constant comparison during data analysis, the perspectives and experiences of participants began to make visible a core category or theme that explains whether newly qualified midwives were able to apply their IPE training to professional practice. In keeping with the principles of grounded theory, this core category emerged due to high frequency of mention in participant responses and due to its connection with the other central categories (139). The three central categories and their subcategories came together to describe the process of 'Becoming an Interprofessional Practitioner.' Accordingly, the original depiction of the categories has been modified to illustrate the area of overlap between the central categories which represents the core category of the emerging theory (Figure 7-1).

Figure 7- 1: Core Category, Central Category and Subcategories



The three central categories of 'developing interprofessional skills,' 'engaging with the curriculum,' and 'promoting IPE in the workplace' describe processes that influence the application of IPE to the context of professional practice. However, the concept of application does not exist in isolation. It is not possible to simply look at the end product of whether or not a newly qualified midwife uses his or her training in practice. Rather, it became necessary to understand the process of how the newly qualified midwife acquired the competencies required for collaborative practice and the influences that determined the process of skill acquisition. These processes and influences appear to play a significant role in the lasting benefit of IPE. The participants presented examples of both positive and

negative influences on the transfer to practice. University D often provided important contradictory examples which challenged the development of the emerging theory. Specifically, University D frequently made visible the effect of creating a climate where graduates are better able to make use of their IPE training in practice.

Each of the three categories will be considered individually to explore the relationship between the central category and the core category. First, when the process for developing interprofessional skills is examined, the lack of relevance of the IPE skills and of learning in mixed groups, and the disconnection between IPE competencies and the core competencies required for midwifery were significant barriers preventing full acquisition of the necessary skills for collaboration (Table 7-1). It follows that poorly developed skills will translate into poorly applied skills in practice. However, when learner motivation increases either from further exposure to IPE or from deeper reflection on personal competence and the necessity for collaboration, and when IPE is seen as being an inherent and highly relevant component of one's professional role, and when learning in mixed groups, from, with and about those whom one will encounter in practice occurs, these influences facilitate a favourable learning environment. Within the context of this favourable learning environment, the newly qualified midwife is more likely to have a strong foundation of interprofessional skills and will therefore be better able to apply these skills to the sphere of professional practice.

Table 7- 1: Influencing Factors: Developing Interprofessional Skills

Positive Influences	Negative Influences
Learner motivation	Perceived lack of relevance of IPE skills
Relevant to professional identity	Disconnect between IPE / perceived competencies for midwifery
Mixed groups reflect practice	Mixed groups lack relevance

Therefore, there is a relationship between the development of inter-professional skills and the ability to apply and sustain these skills in practice (Figure 7-2). This relationship is only possible when steps are taken to promote the positive influences and to minimise the negative influences outlined above. This can be displayed in a linear fashion, although it is recognised that the cause and effect nature of a linear relationship is not fully applicable and relies on assumptions of truth, incongruent with the naturalistic paradigm of the project.

Figure 7- 2: Relationship between First Central Category and Core Category

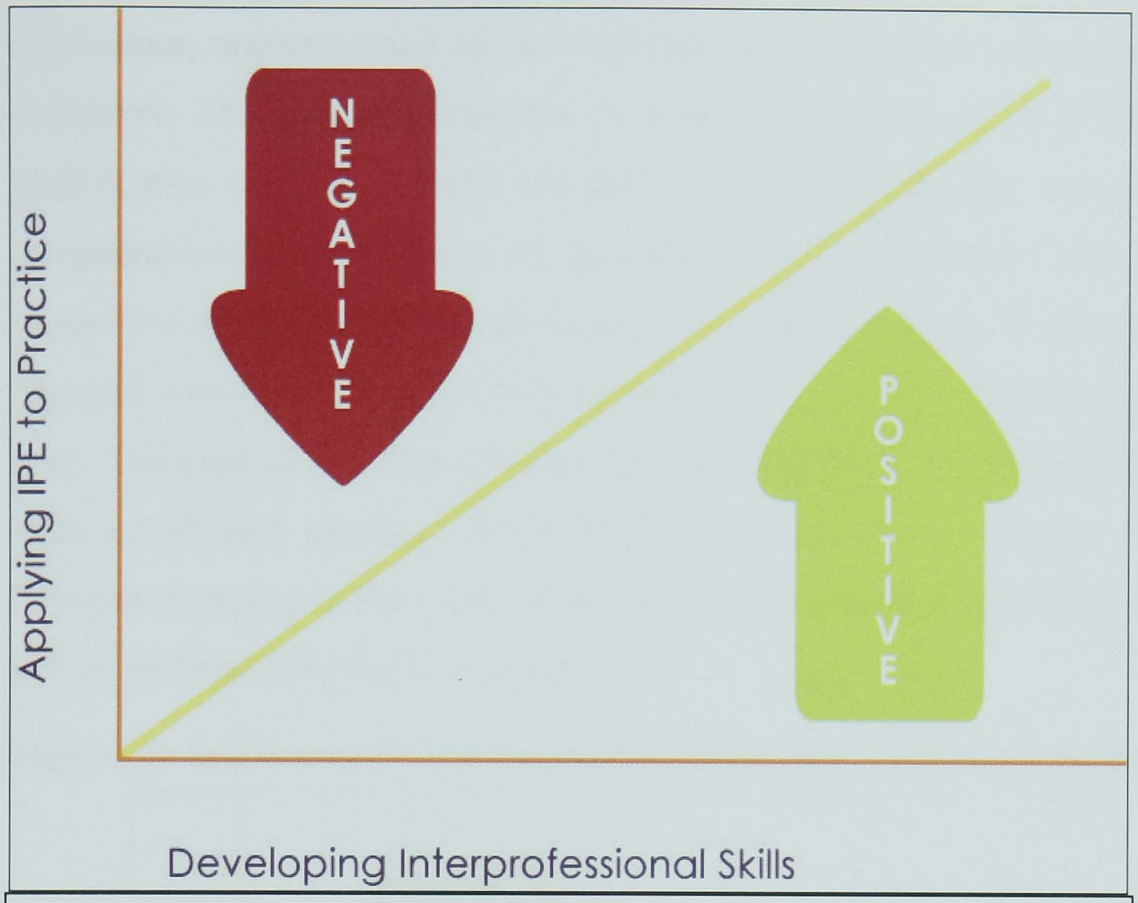


Figure 7-2 illustrates that when negative influences are reduced and positive influences are encouraged, the ability to develop interprofessional skills and apply them to practice is improved.

Similarly, positive and negative influences were identified by participants for the process of engaging with the curriculum (Table 7-2) and the process of promoting IPE in the clinical workplace (Table 7-3).

Table 7- 2: Influencing Factors: Engaging with the Curriculum

Positive Influences	Negative Influences
IPE throughout pre-qualification training	IPE late in pre-qualification training
IPE in both academic and clinical setting	IPE academic setting only
Content relevant and realistic	Content simplistic, not applicable to practice
IPE agenda integrated into uni-profession ed.	IPE marginalised, removed from uni-profession
Academic, clinical role models support IPE	Academics and clinical mentors not supportive of IPE

Table 7- 3: Influencing Factors: Promoting IPE in the Workplace

Positive Influences	Negative Influences
Clinical site supportive of IPE agenda	Clinical site not supportive of IPE agenda
Partnership between HEI and Trust	Poor relationship between HEI and Trust
Positive perception of IPE graduates	Negative perception of IPE graduates
IPE integrated into preceptorship	Minimal support for newly qualified to apply IPE
Evolution of professional roles and culture	Resistance to change

A well designed curriculum will allow students to fully engage with the IPE curriculum, unconstrained by the logistical barriers, which have plagued many IPE initiatives. This curriculum should be based on a continuum of IPE throughout pre-qualification training, in both academic and clinical settings, be relevant and well integrated into profession-specific training, and be facilitated by role models who are supportive of IPE both in the academic and clinical settings. When students are fully engaged with the curriculum they are more likely to learn in a deep and meaningful way. This type of learning is more likely to be applied to new and different contexts such as clinical practice. Accordingly, it is possible to depict the relationship between engaging in the curriculum and a newly qualified midwife's ability to apply IPE to professional practice (Figure 7-3).

Figure 7- 3: Relationship between Second Central Category and Core Category

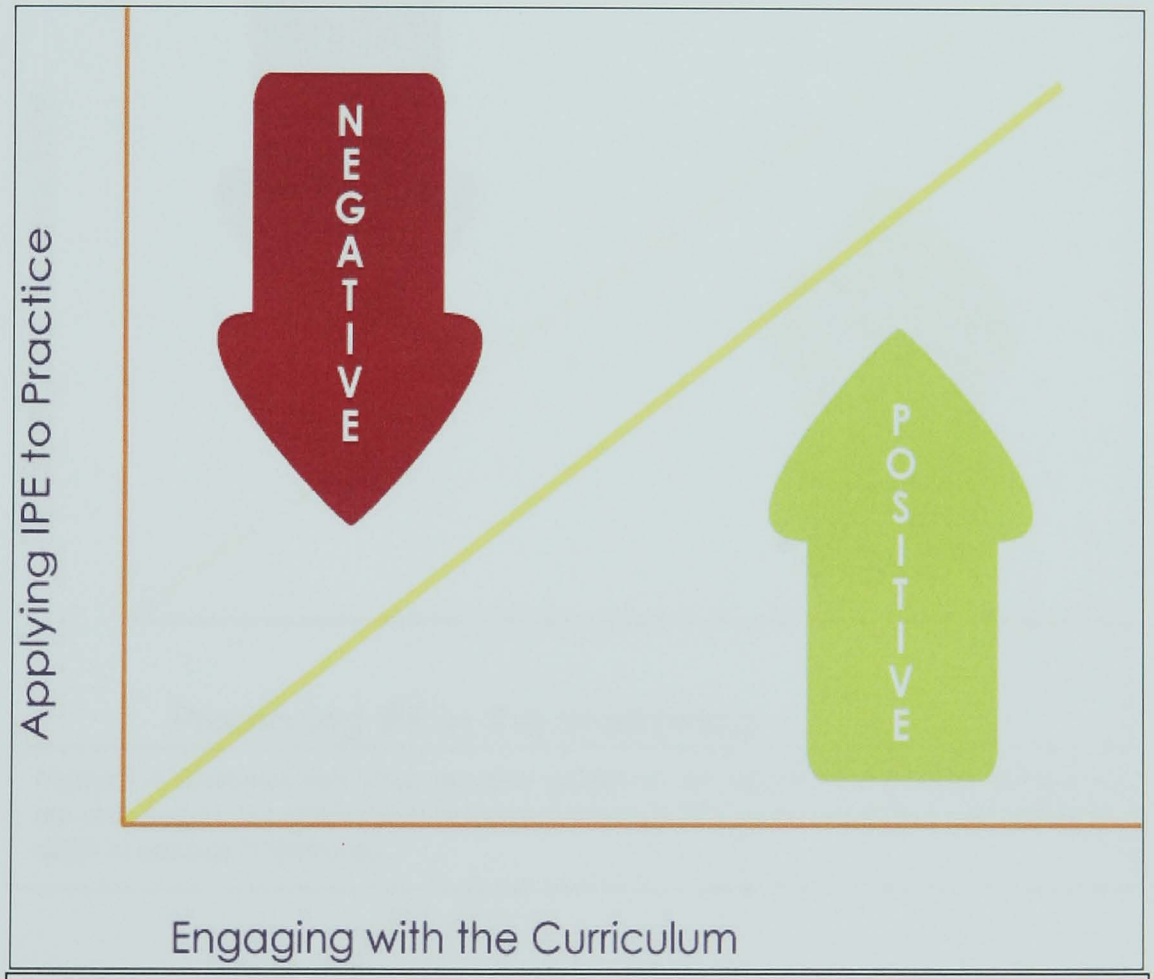


Figure 7-3 illustrates that when negative influences are reduced and positive influences are encouraged, the ability to engage with the curriculum and apply them to practice is improved.

In the same way, when the positive influences that promote IPE in the workplace are maximised, such as buy-in from the Trust site for the IPE agenda, incorporating IPE into the preceptorship program, and creating an infrastructure that supports cultural change for roles and ways of working together, there is a greater

chance that graduates who are employed in that workplace will continue to refine and develop their capabilities in collaboration (Figure 7-4).

The process of becoming an interprofessional practitioner is an acquired state, cultivated through exposure to collaboration in both theory and practice (167). This mirrors the process of proto-professionalism described by Hilton and Slotnick (167). They describe the process of proto-professionalism as, "a product of 2 simultaneous processes: attainment and attrition" (167 pg 62). This is consistent with the process of minimising negative influences and maximising positive influences described above.

Figure 7- 4: Relationship between Third Central Category and Core Category

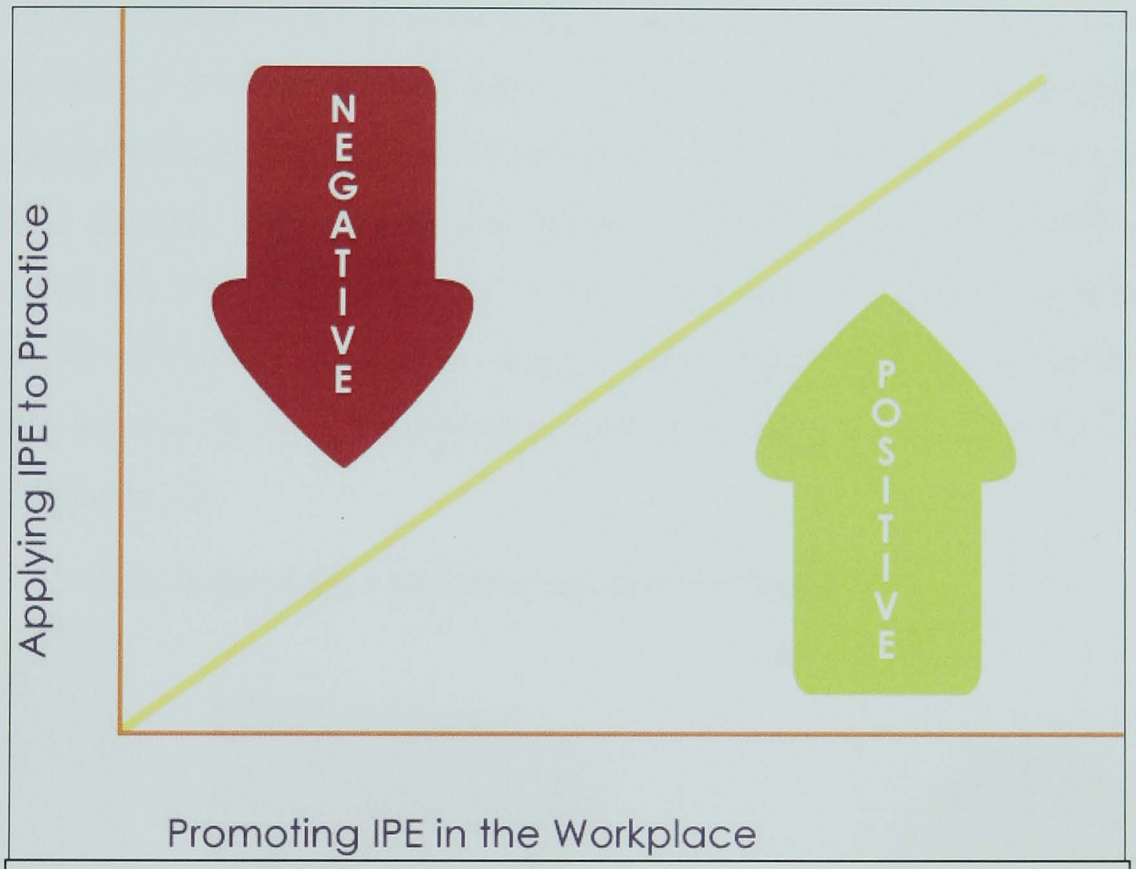


Figure 7-4 illustrates that when negative influences are reduced and positive influences are encouraged, the relationship between promoting IPE in the workplace and applying skills in practice is improved.

Based on their process for facilitating professionalism, Hilton and Slotnick describe three implications for training. They recommend that educators:

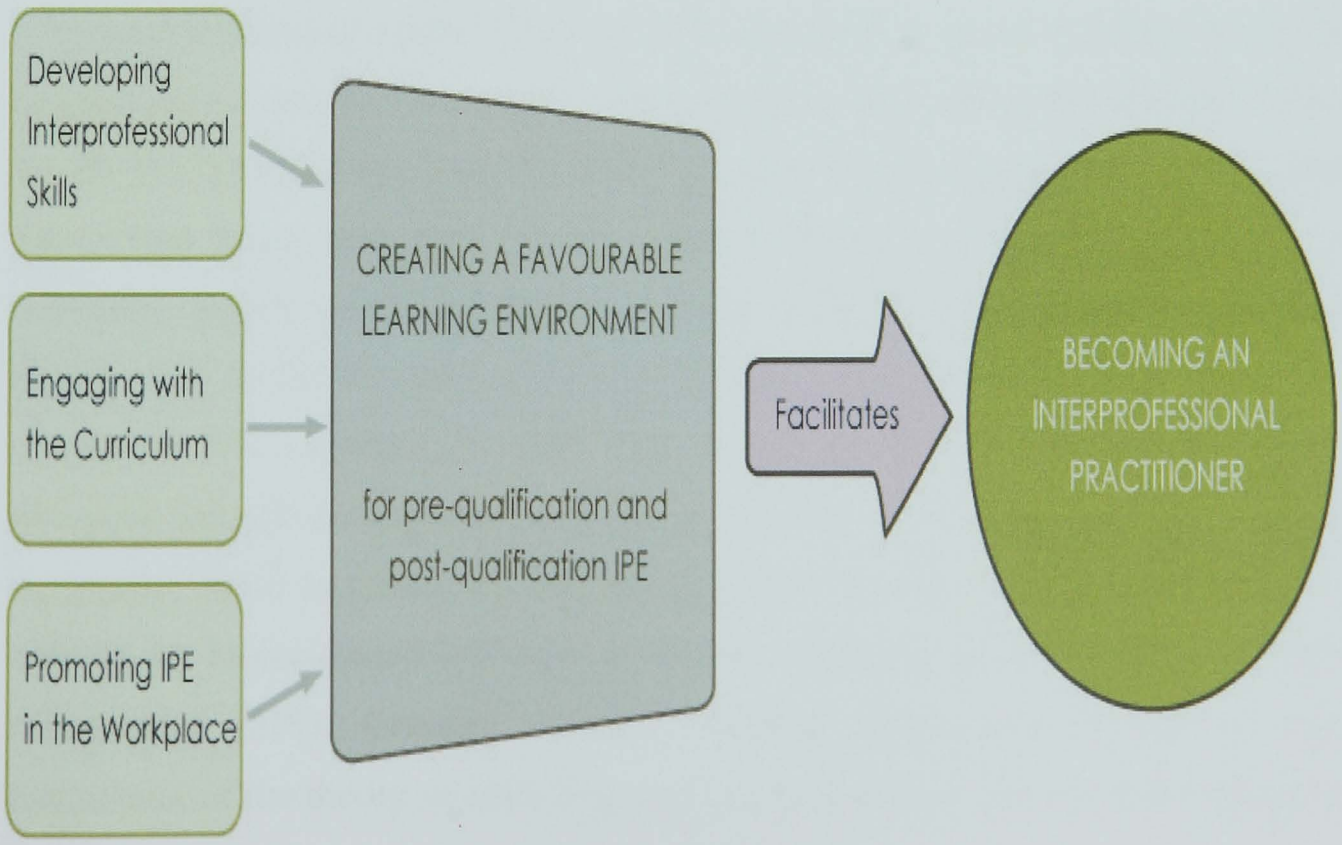
> Recognise that professionalism arises from a long term combination of experience and reflection on experience; provide stage appropriate experiences…and maximise opportunities for attainment and minimise inappropriate attrition. (167).

These same implications are applicable to the process of becoming an interprofessional practitioner. The process of minimising and maximising influences

described in relation to the current research is essentially describing the process of creating a favourable learning environment, a learning environment defined beyond the physical trappings of classrooms and books, but rather one that embodies the characteristics, values and context that underpins the experience of learners.

The views from the student midwives, newly qualified midwives, midwifery educators and Heads of Midwifery presented in this research have been critical in explaining how to create the optimal learning environment for both pre- and post-qualification IPE training. This favourable learning environment facilitates the process of becoming an interprofessional practitioner. Newly qualified professionals are able to make use of their IPE training in the realm of professional practice when they have participated in IPE initiatives that reflect these key principles. Further, they are more likely to continue to learn and to refine their capability in collaboration with this learning environment as their foundation. Thus, becoming an interprofessional practitioner requires opportunities for students to develop interprofessional skills, to engage with the IPE curriculum and to have exposure to clinical workplaces that promote IPE. These opportunities create a favourable learning environment for facilitating the transfer of the interprofessional training to the context of professional practice (Figure 7-5).

Figure 7- 5: Model for Becoming an Interprofessional Practitioner.



Other educational theories can be drawn upon to support the creation of this learning environment. First, the notion of a learning environment that is shaped more by the context for learning than by the sequence and content of instruction comes from the theory of constructivist learning environments. This theory asserts that knowledge is constructed through experience and that learning is done by the individual but is informed by social interaction and reflection (217). Learning is seen as an active process of constructing, not a passive process of acquiring (100). Likewise, instruction is a process of supporting this construction, not of passing on or imparting knowledge (217). Specifically, the teacher is more of a facilitator, not a transmitter of knowledge (97). The constructivist learning environment theory recognises that the learning environment is context-specific and therefore cannot be prescriptively re-created. However, basic principles can underpin the process of creating this learning environment (218). There must be negotiation of learning goals and objectives, the promotion of multiple perspectives, and the provision of tools for facilitating knowledge construction. Attention must be paid to creating a meaningful and authentic context, a collaborative relationship between student and teacher, and a negotiated understanding of meaning and reality (218).

Attention to context, collaboration and the construction of knowledge during the creation of a constructivist learning environment is akin to the process of creating a favourable learning environment for IPE, described in the emerging theory of this research. For example, the importance of creating a meaningful and authentic context for the IPE learning environment has been echoed by the participants in this study. There was much discussion of the need for increasing learner motivation and relevancy, and for contextualising the content of the IPE curriculum. An educational theory used in the development of e-learning, 'engagement theory,' can provide clarity for IPE curricula as well. This theory recommends that engagement be enhanced through the processes of relating, creating and donating (219). The authors summarise these processes by emphasising that learning should occur in a group context, be project-based and have an outside, authentic focus in order to promote engagement (219). Creating relevant learning experiences is also a critical component of the theory of adult learning, which has been discussed throughout this thesis (18). Motivation, engagement and depth of learning will all be enhanced with greater relevancy (98).

A collaborative relationship between the student and teacher, as articulated in the constructivist learning environment theory, was also highlighted by participants as a key component in the IPE learning context. IPE calls for a collaborative relationship on many levels: between students of various professions, between student and facilitator, between student and clinical mentor, and between the university and the clinical workplace. The contact hypothesis provides strategies for creating collaborative relationships. This theory proposes that contact between opposing groups structured by equal status, positive expectations, common goals, and cooperation can reduce conflict and minimise stereotypes (100). This may also result in a less threatening learning environment – another pre-requisite for effective adult learning (18).

The last component of the constructivist learning environment theory articulates the need for construction of knowledge, a notion supported theoretically by experiential learning theory and andragogy. Learning is constructed based on the prior experiences and knowledge of the student and through participating and reflecting on current experiences (98;101).

Also, critical theory would suggest that during the process of knowledge construction, it is essential to consider issues of power and oppression. Power relations influence how knowledge is constructed, whose voice is heard and how authority is structured. Attention to power imbalances between professions, between students and role models, and between the university and the clinical site are particularly relevant in shaping the IPE learning environment.

Another theoretical perspective that lends support to the concept of creating a favourable learning environment comes from the literature on 'learning organisations.' A learning organisation encourages questioning, innovation, and change (7). The goal of the organisation is to facilitate learning and to promote continuous change and transformation within the organisation (7). The individuals in the learning organisation are valued for their experience and for their capacity to respond to their learning needs (7). The management of the organisation can create and promote the learning agenda (7). In essence, the theory presented here, of creating a favourable learning environment for IPE is a description of how to create an IPE learning organisation within the HEI and the Trust.

7.3 Summary of Emerging Theory

The emerging theory from this research makes explicit the context for fostering interprofessional workers. The process of creating interprofessional workers who are able to apply their IPE training in practice, to sustain these principles and to continue to learn and refine their capability for collaboration is similar to the evolutionary processes described by participants. As captured by one participant, "it is evolution, not revolution" (University D Participant 1).

The theory of evolution provides an interesting analogy for understanding the theory of becoming an interprofessional worker. It could be argued that becoming an interprofessional practitioner is a process of natural selection whereby mutations of traits, or in our analogy - skills - which promote collaboration become more common in future health professionals. The traits which promote collaboration are 'selected for' while the traits that prevent collaboration are 'selected against.' This analogy can be applied further through incorporating the process of 'heritable variation.' This represents the process of competition between professionals for survival (220). The creation of new professions and the extinction of old professions trapped in professional silos was described by many participants. Within the evolutionary process of becoming an interprofessional worker, professionals with traits (skills for collaboration) that give them advantage over their competitors will succeed to pass these traits on to future professionals, while traits or skills that do not promote collaboration, and therefore, do not confer a professional advantage, are not passed on to the next generation of professionals. The fitness of a trait is not a fixed characteristic (220). For example, if the environment changes, previously neutral or harmful traits may become beneficial. Conversely, previously beneficial traits can become harmful. In this way, as stated by Darwin, "it is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change." This evolution analogy highlights the importance of the learning environment in cultivating advantageous traits and in creating professionals who can adapt to their workplace.

This emergent theory, grounded in data from participants and supported by educational theory, describes the required learning context for becoming an interprofessional practitioner. At its core, this is a process of determining and sustaining best practice for collaboration. The crux of the theory is that fostering an environment that will promote application to practice needs to be an intentional and inherent component of IPE curriculum development.

CHAPTER 8 CONCLUSION

8.0 CONCLUSION

This research began from a desire to explore the assumption that IPE will lead to effective IPP. The aim was to understand how the knowledge, skills and attitudes acquired during pre-qualification IPE could be applied to professional practice. The research focused on one professional group: midwives. Yet, it examined the question from multiple perspectives, including educators, Heads of Midwifery, student midwives and newly qualified midwives. These participant groups were drawn from four universities with similar three-year IPE curricula to allow for multiple perspectives and an in-depth understanding.

The findings offered new insight and highlighted the processes of developing interprofessional skills, engaging with the curriculum and promoting IPE in the workplace as critical components that influence the ability of new graduates to apply IPE theory to practice. There were examples of barriers that prevented these processes from taking place, and created resistance to IPE. At the same time, there were examples of successful initiatives which enhanced the IPE experience for students.

This study identified the key elements necessary for creating an IPE learning environment that would encourage application to practice. This was summarised in the theory of 'Becoming an Interprofessional Practitioner.' From this theory, it is possible to consider strategies for implementation. However, the process of applying academic training to professional practice is complex. The theory generated through this research is not a prescriptive recipe for developing IPE initiatives. Rather, it presents critical issues pertaining to the IPE learning environment. The strategies for managing these issues are dependent on the context and goals of each IPE initiative. In this way, the findings of this project are highly relevant to current and future IPE curriculum development. As such, this final chapter will focus on the implications and contributions of the research. A critique of the research methods and directions for future research are also included.

8.1 Implications and Recommendations

The findings from this research have generated a new theory. The theory asserts that newly qualified midwives are able to integrate their IPE training into professional practice if their pre-qualification training provides a learning environment that supports the acquisition of interprofessional skills, which maximises engagement with the curriculum and which promotes IPE in the clinical practice setting. With this assertion in mind is it necessary to consider the implications for IPE initiatives and to make recommendations for creating a favourable learning environment.

This research does not advocate an absolute or superior model for IPE initiatives. Rather, the theory identifies the important components of the learning context, which should be considered when developing, implementing and evaluating IPE initiatives. It will be up to individual educational institutions to consider how these recommendations can be adapted and applied within their own context. These implications are based on the need to minimise the negative influences and foster the positive influences identified in the previous chapter. These components will be considered in turn based on the original three central categories.

8.1.1 Developing Interprofessional Skills

The data from participants highlighted issues pertaining to learner motivation and receptivity to IPE, the relationship between IPE and professional identity, and the impact of learning in mixed professional groups as key components that influence the development of interprofessional skills. The implications of these findings contribute to the teaching and learning strategies necessary to create a positive learning environment for IPE. The strategies for promoting these influences are addressed below and highlighted in Table 8-1.

Improving student motivation and receptivity to IPE needs to occur both formally and informally. Formal strategies alone will not address the hidden curriculum which plays a significant role in shaping the student experience. Although it can be difficult to target changes within the hidden curriculum, creating a culture and ethos within pre-qualification training that supports IPE is a necessary first step. A formal strategy, such as involving students in planning and implementing an IPE curriculum or forming an IPE student council will create

champions for IPE within the student body and may address informal issues of marginalisation.

Table 8- 1: Strategies for Implementation - Developing Interprofessional Skills

Positive Influences	Strategies for Implementation
Learner motivation	• address issues within hidden curriculum • increase relevance and links to profession-specific training • prevent marginalisation of IPE through mandatory participation for all students, mandatory assessment • incorporate principles of adult learning, experiential learning, reflective learning • highlight interprofessional competencies in professional governing body documents (NMC) • create IPE champions among students – involvement in curriculum planning or IPE student council
Relevant to professional identity	• integrate IPE focus into profession-specific training • make explicit interprofessional competencies in profession-specific assessment – academic and practice • highlight interprofessional competencies in professional governing body documents (NMC) • provide clear evidence of drivers and context for IPE, e.g. clinical cases with poor outcomes
Mixed groups reflect practice	• incorporate professionals who work in maternity care into IPE mixed learning groups involving midwives • attention to size, stability, equal representation of professional groups • create common goals, common group identity

Participants acknowledged that it is important for students to see IPP in action in order to understand its rationale and importance. Also, participants articulated that the motivation to participate in IPE is more favourable after seeing collaboration in practice. This recognises the need for IPE to occur in both the academic and clinical setting. Further, observing IPP and being explicit about what it is, and the drivers behind it encourages an understanding of collaborative practice, which is relevant to the role of the midwife. This can be reinforced by highlighting the interprofessional competencies required by midwives in NMC governing documents and by integrating IPE and the underpinning principles into the profession-specific training. Synchronising validation schedules for profession-specific and IPE curricula is a strategy for unifying learning outcomes and assessments to reinforce a common collaborative agenda. These strategies will help students to see the relevance of IPE in relation to their professional identity as a midwife.

In addition, incorporating teaching and learning methods, such as adult learning, experiential learning, and reflective learning, will foster more accurate

assessment of the competence level related to interprofessional capabilities among students, an improved perception of the relevance of IPE, and a greater motivation to improve their skills in collaboration.

The participants in this study, similar to previous research, discussed concerns with learning in mixed groups. Strategies for overcoming these issues include attention to the pre-requisites of the contact hypothesis, such as sharing a common goal, equal numbers of students, and equal status of participants (2). Further, mandatory attendance, small group sizes, and stable membership are advised (18;179). Most importantly, the professionals represented within the mixed learning groups need to reflect the realities of clinical practice. For midwives, the key professionals that will form the maternity care team in practice are medicine, nursing, social work and occasionally paramedics, health visitors and physiotherapists. The presence of these professional partners will improve the relevance and future application of IPE.

These strategies are a helpful first step in creating a learning environment where students can develop skills for collaboration. These strategies may be adapted and implemented in ways that fit appropriately within a pre-existing IPE curriculum or they may be used for developing new initiatives.

8.1.2 Engaging with the Curriculum

Attention to logistic and curriculum issues will also help create a favourable learning environment for IPE. The issues articulated by participants of this study include the timing and setting of IPE, the relevancy of content included in the curriculum, the integration of IPE and the involvement of academic and clinical role models. Many strategies can be implemented to improve the influence of these issues on the IPE learning context (Table 8-2).

For example, moving beyond the timing and setting debate for IPE and instead conceptualising the IPE curriculum as a continuum that is:

- introduced during pre-qualification training and continued post-qualification,
- based on learning outcomes for collaboration that increase in complexity as student knowledge and skill develops,
- integrated into both classroom-based and practice-based teaching and assessment,

- integrated into uni-profession training through teaching and assessment.

Table 8- 2: Strategies for Implementation - Engaging with the Curriculum

Positive Influences	Strategies for Implementation
IPE throughout pre-qualification training	• introduce IPE early in training and continue throughout • create scaffolding or spiral curriculum with increasing complexity as student progresses • ensure continuum directed by learning outcomes
IPE in both academic and clinical setting	• create partnership between HEI and clinical site to deliver IPE curriculum • provide opportunities for both practical and theoretical IPE • include assessment of collaboration in assessment of practice
Content relevant and realistic	• content based on knowledge, skills and attitudes required for collaboration • include opportunities to learn with, from and about others • involve service users and clinical staff in teaching
IPE agenda integrated into uni-profession education	• include principles of IPE within profession-specific curriculum and assessment • include principles of IPE within assessment of practice • encourage all faculty to participate as facilitators in IPE modules
Role models in academic and clinical setting support IPE	• provide training for academics to include facilitation, appropriate pedagogy, group dynamics • provide training for clinical mentors in principles and assessment of IPE • strengthen role of link lecturer as advocate of IPE • create champions for IPE among academics and clinical staff though involvement in curriculum planning

Minimising the negative influences of logistical barriers which prevent practice-based IPE is possible by creating a partnership between the university and the clinical site. The formal and explicit integration of IPE into the clinical site is an important strategy for targeting the hidden curriculum. If IPE modules exist in the clinical site, if clinical staff are committed to the goals and principles of IPE, and if IPE capabilities are included in the assessment of practice, there is a greater likelihood that student placements will reflect the norms of IPP. These factors will reduce the occurrence of having students learn about IPE in theory and then observe and participate in contradictory practice when in placement. This is a critical step in helping students apply their learning, but also in changing the culture within the clinical site to promote collaboration. In turn, service users, who are the direct recipients of this interprofessional care will also benefit.

Increasing the relevance of the IPE content can be done by involving service users and clinical staff in teaching and assessment. Further, contextualising the content by making the rationale explicit, and providing opportunities to learn how to work together, rather than learning in parallel, are measures to increase content relevance and authenticity.

Finally, creating academic and clinical role models who are champions of IPE is an essential element for helping students fully engage with the curriculum. Appropriate training in the principles of IPE and in assessment of collaborative competencies is essential for educators and clinical mentors. Link lecturers can play a vital role in promoting the IPE agenda in both the academic and clinical settings. Again, the role modelling provided by IPE champions is a way of addressing the hidden curriculum, and it promotes a culture of collaboration within the university and clinical sites.

8.1.3 Promoting IPE in the Workplace

The discussion presented in this research regarding the promotion of IPE in the workplace examined the impact of a supportive clinical site, a strong relationship between the HEI and the Trust, the integration of IPE into the preceptorship program, and the process of changing roles and organisational culture and climate. Strategies for implementation centre on the creation of systemic support for the IPE agenda within the clinical Trust (Table 8-3).

In particular, it is essential to make explicit the partnership between the HEI and the Trust. Shared responsibility and ownership between the university and the Trust for the development and maintenance of the IPE curriculum will promote more practice-based IPE initiatives, which can further embed IPE for students and staff (175).

Commitment to and ownership of the goals of interprofessional working and learning by the NHS Trust sites, where students do their practice placements and where they will be employed following graduation, is an essential component in creating a continuum of IPE. Strengthening this relationship between the university and the clinical site is a key strategy for linking pre-qualification efforts and post-qualification training. The continuum of IPE throughout pre-qualification training and which continues post-qualification is essential because pre-qualification

initiatives alone cannot be expected to change practice and promote a culture of collaboration in the workforce. The development of post-qualification IPE initiatives and IPE facilitation training for clinical mentors, the inclusion of IPE in the preceptorship program for new graduates, and making explicit pre-existing IPE training and performance review for staff are examples of how the efforts of pre-qualification IPE can link with post-qualification measures.

Table 8- 3: Strategies for Implementation - Promoting IPE in the Workplace

Positive Influences	Strategies for Implementation
Clinical site supportive of IPE agenda	• create awareness of IPE and IPP • develop post-qualification IPE for clinical staff • develop vision and strategy for IPP at Trust • release staff for on-going training in IPE facilitation
Partnership between HEI and Trust	• create system for communication between HEI and Trust re: IPE • ensure joint vision and strategy between HEI and Trust re: IPE • develop assessment of IPE in clinical setting by mentors • develop IPE module executed by clinical site e.g. clinical audit
Positive perception of IPE graduates	• ensure head of service aware of IPE training program • include questions about application of IPE during hiring interviews • encourage new graduates to be involved in committees and decision-making bodies • involve IPE graduates in training clinical staff in IPE
IPE integrated into preceptorship	• create IPE module for preceptorship program • include assessment of interprofessional competencies in preceptorship • encourage reflective learning • make explicit interprofessional aspect of emergency skills and drills
Evolution of professional roles and culture	• develop Trust organisational infrastructure to operationalise evolution of workforce • create education and training for clinical staff for IPE • develop performance review, promotion criteria supporting IPE

Involving Trust staff during each stage of development of the IPE initiative is critical for promoting commitment. Think-tanks and workshops are a way to promote buy-in as they involve large numbers of staff in the creation of a common definition and understanding of the principles of IPP and strategies for implementation (166). These strategies for implementation must also include training for clinical mentors in the teaching and assessment of IPE. Again, the role of the link lecturer is critical for strengthening the partnership between the HEI and the clinical site through training of mentors and through on-going communication between sites. Moreover, the inclusion of IPE in the preceptorship program for newly qualified midwives is an

essential component for helping graduates refine and apply their skill following qualification and will demonstrate Trust support for the IPE agenda.

The promotion of systemic support for a new concept – a concept which no doubt will change the landscape of professional practice, such as interprofessional collaboration - is a critical step in ensuring the success of the initiative. This process should draw upon an organisational infrastructure to support and sustain the changes and must include attention to resource allocation, and a source of stable funding. Rutherford *et al.*, propose an organisational framework for developing and supporting new roles within the profession of nursing (160). They use the systems of business planning, human resources, training and development, organisational culture and clinical governance to form the basis of the framework. This framework can be used for developing and supporting interprofessional working and learning in the workplace, and can also be modified to illustrate the concepts involved in creating systemic support for IPE and IPP in the workplace (Table 8-4).

Table 8- 4: Key Concepts for Supporting IPE in workplace, modified from Rutherford

	Key Questions to Address	Action
Strategic Vision or Plan	How do we incorporate and support interprofessional collaboration in our workplace? How does interprofessional collaboration allow us to respond to the needs of patients?	Working group to answer these questions. Group should include members from Trust Board, HR, Training and Development, Clinical Governance, partner HEI, clinical staff, and service users.
Human Resources	How does interprofessional working add to the existing workforce? How do job descriptions, recruitment, performance evaluation need to be changed to reflect interprofessional working?	Human resource task force to respond to these questions. Representatives from each HR, legal services and professional groups (medics, nursing, midwifery, physio, radiography, occupational therapy, health visitors).
Training and Development	What are the current and future training needs of staff to incorporate interprofessional collaboration in their daily practice? How are these learning needs best met? What supportive infrastructure is needed such as mentorship, supervision, peer support, preceptorship to meet these learning needs?	HR, educators from HEI, clinical staff service managers form task force to create educational pathways for staff.
Culture	How can we promote interprofessional working and learning within the workplace culture? How do we promote buy-in among staff at all levels of organisation?	Communication systems need to be created to link components of strategy. Task force of HR and service managers.
Governance	What quality assurance systems need to be in place to make this strategy work? How will we evaluate this goal?	Process for quality assurance and evaluation created by HR, Clinical Governance and service managers

These implementation strategies to promote IPE in the clinical setting represent a critical step in encouraging application to practice, a step which until now has been significantly overlooked during the development and implementation of pre-qualification IPE.

8.2 Contributions of the Research

This research makes several valuable contributions to the field of IPE and to the profession of midwifery. First, it fills a void in the IPE literature by examining the issue of transfer to practice, a topic that has historically been neglected. Additionally, the findings have shed light on the strengths and weaknesses of current IPE initiatives at several UK universities. Further, based on these findings, the strategies for implementation will help shape future IPE curricula development at both the pre-qualification and post-qualification levels.

The theory generated from this research, the unique perspective into the profession of midwifery and the exploration of teaching and learning issues, are three key areas that highlight the contributions of this project to the understanding of interprofessional working and learning.

8.2.1 Emerging theory: Becoming an Interprofessional Practitioner

The emerging theory has demonstrated that a favourable learning environment creates graduates who are better able to apply their training in practice. Attention to the learning environment is not a new idea. Much of the literature in the field of IPE has attempted to examine components that contribute to the learning environment. For example, training for facilitators, timing of introducing IPE and mixed group composition have been studied as individual areas with an in-depth focus. Indeed, this project is in debt to the work done by previous authors which considered these matters. However, this research builds upon this previous research and offers several unique and important contributions.

First, this project adopted a broader focus, whereby it was possible to look at all of the components that contribute to the learning environment rather than exploring each component individually. Therefore, the research previously done by other authors was used to develop a comprehensive understanding of a broader range of requisite components for creating a favourable learning environment for IPE.

Second, the role of the clinical workplace as an influential component of the learning environment has not been recognised by previous authors. The current research project demonstrated that many clinical Trust sites do not have a supportive infrastructure in place to promote the IPE agenda either pre-qualification or post-qualification. This lack of support and dissonance between the HEI and the Trust is one of the most significant barriers preventing current students and graduates from applying their IPE training to clinical practice. The support for IPE within the clinical workplace and the relationship between the university and the workplace are critical factors that promote a continuum of learning for interprofessional competencies. It is unrealistic to expect pre-qualification IPE to be solely responsible for creating an interprofessional workforce. Rather, similar to skills in communication, professionalism and clinical skills, interprofessional competencies need to be further consolidated and refined once the individual is in clinical practice. It is essential that pre-qualification IPE is well supported by post-licensure opportunities.

Previous research has explored the importance of systemic support from government and professional regulating bodies to the development of IPE projects within the academic setting. Similarly, the importance of clinical governance and leadership in relation to collaborative patient care has been explored. However, previous research has neglected to consider the need for systemic support as a means to facilitate skill acquisition and application to practice. A specific example of the critical interface between the educational institution and the clinical workplace identified in this project was the importance of training for clinical mentors. Training for clinical mentors in teaching and assessment of IPE is an essential step for helping student's sustain their IPE theory in practice. Such training will result in mentors who are champions of collaboration, and will encourage consistency between the theory learned in the classroom and the role modelling seen in practice. Further, the presence of these champions will help promote collaboration within the workplace.

In addition, the theory presented here recognises that becoming an effective interprofessional worker is an important process requiring further consideration. There is an understanding that an explicit process of training and development is necessary to help new graduates consolidate their clinical skills as they transition into the role of the midwife. The current study identified that a similar explicit process of

consolidating interprofessional competencies is beneficial for new graduates transitioning into the role of an interprofessional practitioner.

It is hoped that the theory generated in this research contributes to the field of IPE by raising awareness of the process of applying IPE to practice, by identifying central components of creating a favourable learning environment that facilitate acquisition and application of IPE skills, and by recognising the vital role of the clinical workplace as a shared partner with the HEI for effective interprofessional training.

8.2.2 Midwifery Perception of Interprofessional Working and Learning

Due to the specific focus on the profession of midwifery in this project, unique insight was gained into the perception held by midwifery students, midwifery educators and practicing midwives regarding interprofessional working and learning. The perceptions held by many of the participants made visible sources of resistance that have a significant impact on the participation of midwives in IPE initiatives. For example, student midwives appear to be unreceptive to IPE at the beginning of their pre-qualification training. This seems to be related to a belief that they already posses the necessary skills for collaboration, and that the midwifery-specific training is adequate in addressing competencies for collaboration. The belief that interpersonal skills cannot be formally taught or learned also contributes to this lack of receptivity to IPE.

In addition, the absence of medical students within the mixed profession learning groups proved to be a concern for midwives. This impacted receptivity to IPE and the perceived relevance of the curriculum as it meant the exposure to mixed groups did not reflect the realities of those who will form the interprofessional team in practice.

Finally, there was considerable conflict between the professional identity of midwives and IPP. The midwives in the study articulated that they already practice in a collaborative manner, although, at the same time, they suggested that the competencies for IPP were not inherent in the role of the midwife. These findings illustrate tension within the midwifery profession regarding the role of the midwife and the midwifery scope of practice. Some participants were concerned that although it was important to collaborate, they did not want to lose midwives who were 'just

midwives,' who could do the day-to-day work. Yet, there were other participants who felt just as strongly that IPP is a core component of being a midwife, and an essential skill for providing woman-centred care.

According to social identity theory, the resistance of midwives to IPE is a result of a strong professional identity (71). Resistance to IPE can be a way for members of the midwifery profession to try to maintain their collective professional identity (71;100). However, this very individualised perspective neglects to account for the role of power and status within professional relationships. It could be argued that underpinning the resistance to IPE is a fear of losing professional power and scope of practice. Midwives, as a profession, have a long standing history of negotiating for power, status and the ability to define their own scope of practice (118;221). The impact of power relations on IPP remains poorly understood.

The midwives views of IPP presented here are valuable to the profession of midwifery and to the field of IPE. For example, the lack of receptivity and role conflict impacts the participation of midwifery students, midwifery educators and practicing midwives in current and future IPE initiatives. Also, these negative views are a contributing factor to the hidden curriculum within midwifery education. Further research exploring the professional identity of midwives in relation to interprofessional care is warranted.

8.2.3 Teaching and Learning

In addition to the contribution to the profession of midwifery, the findings of this research lend support to several key matters relating to pedagogy within the field of IPE. The participants confirmed previous contentions that a continuum of IPE is required. Also, similar to other research, participants advocated for a combination of both academic and practice-based IPE. Finally, there was evidence that further attention and research must be paid to faculty training for IPE facilitation.

At present, there is limited information pertaining to the efficacy of e-learning within IPE. The midwifery participants had mixed perceptions regarding the value of this type of learning within the IPE curriculum. Little is known about whether this mode of learning technology fosters skills for collaboration and if so, whether this skill acquisition can be transferred to practice. Therefore, this study has identified a gap in the IPE literature that needs to be addressed.

Another teaching and learning issue identified in this project was the discussion of whether or not the content of IPE is too simplistic. This view was presented by many participants and has not been previously identified in the literature. The IPE literature has devoted much time and attention to logistical issues, and to stereotypes and behaviour modification. However, limited research has examined whether or not IPE curriculum content is actually promoting the capabilities for collaboration. Yet, the efforts of bringing together the right people and minimising stereotypes are futile if the content of the modules does not provide opportunities to learn with, from and about each other.

Finally, this project demonstrated the need for better integration of IPE curricula into profession-specific curricula. The marginalisation of IPE would be greatly reduced if the goals and principles of IPE were underpinning the teaching and assessment of profession-specific curriculum within both the academic and clinical settings. This integration requires effective communication between IPE educators and profession-specific educators.

This study makes a significant contribution to IPE educational theory in the areas of developing and refining both IPE curricula, and profession-specific curricula, and to overseeing educational recommendations for professional regulating bodies.

8.3 Critique of Study

Despite the valuable findings of the current project, it would be remiss not to provide a discussion of the limitations of the research and a critique of the methodology and methods. Specifically, the role of the researcher, the research design, the sampling and recruitment of participants and the process of data collection and analysis will be reviewed. This critique enhances the transparency of the research and acts as a means to improve the rigor of the research and the ability for subsequent readers and researchers to review and perhaps conduct a similar project. A critique such as this is also valuable for indentifying areas for future research. Further discussion of the directions for research identified as a result of this project will be presented later in this chapter.

8.3.1 Reflexivity of the Researcher

During the initial stages of this research it was clear that an exploration of student outcomes following IPE exposure would be the focus of the project. I became intrigued by the idea of how students apply their IPE training to practice. Despite the investments of time, money and resources, does IPE make any difference to how people practice? My personal views of the impact of IPE on practice evolved throughout the research process. My own involvement in education and in IPE, in particular, also evolved and was informed by the process of conducting this research. These thoughts and reflections during the process of conducting this project became a process of reflexivity. I became aware of how my thoughts, actions and decisions about the research influenced and informed my perceptions of the phenomenon in question (157). As a researcher, I was aware that my own ideas and beliefs about IPE shaped the questions I asked of participants, my interpretation and understanding of their experiences, and the response of participants to me. At the same time, I was aware that my thoughts and experiences generated through the research process were changing my views about midwifery education and interprofessional working and learning. The continued exploration of these thoughts then generated new perspectives on the research and the views of participants.

My reflexive thoughts were written in the field diary along with the memos during data collection and analysis. Therefore, a record of these ideas is preserved so that others can trace back throughout the research project and understand how my own thoughts, assumptions and ideas informed the process. Also, acknowledging and being aware of reflexivity recognises the mutual creation of knowledge that can occur between the researcher and participants (3). Therefore, my experience of the research and the participants' experience of the research, together, form the basis of the emergent theory.

8.3.2 Research Design

A qualitative, grounded theory methodology was thought to be highly appropriate for this project, as it was exploring an area about which little was known and because the rich description gained through qualitative methods would be helpful for generating new theory. Further, the researcher and her supervisors had previous

experience conducting qualitative research, in particular, grounded theory methodology.

The research project was confined by the restrictions and realities of Ph.D. research which include issues of duration and scale. The findings of this study could have been enhanced by the inclusion of longitudinal data or by sampling groups of midwives at various points after qualification. However, the length of time required to collect such data would exceed the duration of the Ph.D. course. The effects of this limitation were minimised due to the definition of 'newly qualified' employed in the study. Specifically, the definition included those who had qualified within the last two years. This allowed for sampling of midwives at various times following qualification.

Also, it could be argued that interviews with other newly qualified health professionals who have participated in IPE could have strengthened the contributions of this study. After discussion with the Ph.D. supervisory panel, it was determined that exploring the topic of transfer to practice from the perspective of one professional group would allow a more in-depth understanding of the phenomenon. Also, focusing on one professional group, while including perspectives of various members of the profession, such as educators, supervisors, students and newly qualified midwives, encouraged rich theory generation. The results are certainly midwifery centred, yet they provide opportunity for further research and have contributed to the profession of midwifery.

In addition to questioning the confines of duration and scale involved in this project, some might question the inclusion of a literature review in a grounded theory research project (141). A literature review was required by the university as part of the M.Phil. upgrade. Thus, although this is not standard practice within grounded theory, it was conducted and was used to inform the formation of interview questions. Only a portion of the review is present in this thesis and it has been augmented with additional literature in order to set the scene for the reader as to why this study was necessary and to provide background information to help navigate the research. This is in keeping with the recommendation by Morse that an initial literature review can be beneficial in grounded theory for providing knowledge for clustering categories as they emerge (222).

8.3.3 Sampling Issues

The initial decisions regarding the selection of the four university sites represent purposive and convenience sampling. The sampling of participants can also be considered as purposive since the groups of participants were identified because of their experience with IPE. In the midst of the project, a new group of participants was added as well, thus representing theoretical sampling.

In the beginning, four universities, which were known to have similar, three-year IPE curriculum that included midwifery students were approached regarding participation in the study. The IPE projects at the four sites were known to the Ph.D. supervisors, due to their contacts in the field. Therefore, there was not an exhaustive search of all IPE programs in the UK. Rather, it was decided to approach sites with similar curricula and where gate-keepers were known to be supportive. As a result, three universities (B, C and D) agreed to participate.

Similarly, Heads of Midwifery and midwifery educators from University A were included in the research by convenience of proximity to the researcher. It was thought that although University A did not yet have any midwifery graduates who had participated in IPE, it would add helpful background about the anticipated effects of IPE on practice and further insight into the perceptions of midwives regarding IPE. Originally, it was thought that these would be the only participants from this site to participate in the research. However, following discussion with the Ph.D. supervision panel and based on the emerging theory generated from the data, it was decided to add student midwives from this site. The student midwives were important additions to the project because of their insight into anticipated outcomes of IPE and because their perspective was from those who were actually experiencing the phenomenon in question rather than from third party observers.

It is possible that the research findings would have been different if the selection of sites had been based on a random process involving all the IPE programs in the country. However, the goal was to have sites where the IPE curriculum was similar and where the involvement of midwifery students could be ensured. This goal aimed to minimise the weaknesses associated with previous research which compared IPE projects at different sites despite significant variations in duration,

timing, content and participants. Also, it was thought that participation rates would be greater at sites with known gate-keepers.

8.3.4 Recruitment of Participants

The recruitment of the Heads of Midwifery and midwifery educator groups was dictated by the number of possible participants from each site. For example, only one focus group could be done at each university site and only one Head of Midwifery was present at each Trust. The recruitment for student midwives and newly qualified midwives occurred on a first come, first served basis until saturation was reached (140). According to grounded theory, the researcher should continue to add participants to the original sample in order to fill gaps in the data. The emerging theory is refined through further data collection. In this way, the sampling of participants also emerges from the data (140). The addition of the student midwives at University A is an example of when this took place.

The poor recruitment response from the newly qualified midwives was an on-going issue in this project. It was originally anticipated that at least five and up to 50 face-to-face interviews would be conducted with newly qualified midwives. Many steps were taken to try to ensure participation from this group. The Heads of Midwifery at each Trust were identified as gate-keepers controlling access to the newly qualified midwives. It was not possible to identify the location of the newly qualified midwives through the educational institutions as they did not necessarily have accurate contact information for these midwives. Also, they were not at liberty to release the information about these former students without their consent. Therefore, it was decided that the Heads of Midwifery would deliver letters requesting participation to the newly qualified midwives at their Trust. However, factors beyond the control of the researcher may have prevented the Head of Midwifery from passing on the request letter, such as, a heavy workload and limited contact with newly qualified midwives. Two reminder letters were sent to Heads of Midwifery, again to be dispersed to the newly qualified midwives. In the second reminder letter, a poster was included to be placed in a visible location at the Trust site and a change was made within the request letter suggesting a telephone interview or a face-to-face interview. Also, the researcher made herself available to attend in-house training days for newly qualified midwives at the relevant Trust sites.

However, although the Heads of Midwifery were in agreement with this proposal, there was an absence of suitable training days offered during the time of data collection.

Strategies for improving participation, such as placing an advertisement in the Royal College of Midwives publication were considered, but it was recognised that this could yield responses from midwives who had participated in IPE at any UK university, instead of those who had attended the three selected sites. It was decided that the consistency of IPE curriculum between the three sites and the ability for comparison was more important than numbers of participants.

After several months of no response, a request for a substantial amendment was made to the NHS Research Ethics Committee to allow for the inclusion of a research questionnaire in lieu of an interview. This was submitted in January 2008. It was thought that the time commitment involved in a face-to-face interview may not have been ideal for the newly qualified midwives, who were working long shifts on evenings and weekends and who had preceptorship requirements in addition to their workload. Further, these midwives might have already participated in several research projects during their IPE curriculum and may therefore be disinterested in additional participation in research. It was hoped that a questionnaire would yield a greater response from these participants.

The questionnaire was again submitted to the Head of Midwifery for circulation. At this point in time, a positive relationship existed at each site on account of the interviews conducted with the Heads of Midwifery. Due to this positive relationship and the access to the newly qualified midwives provided through the Head of Midwifery, it was thought that this was likely still the best mechanism for recruitment. It was hoped that the amendment would facilitate the involvement of the newly qualified midwives in the research project. The perceptions of this participant group were considered extremely valuable to the overall project and this was why following poor recruitment, an amendment to the project was seen as a more favourable way forward when compared to proceeding without the inclusion of the newly qualified midwives group.

Despite these extensive efforts, the questionnaire only yielded seven responses, of which, five were from participants willing to participate in telephone

interviews. It is difficult to ascertain the reason for this response. It is possible that these midwives are too busy during their transition from student to midwife to participate in extra activities such as research. It may also be that this group of midwives is not interested in talking about IPE, either due to previous participation in research while at university, or due to their negative view of IPE. The data generated through the questionnaires was minimal and this is a limitation of the study. Fortunately, the telephone interviews conducted with this group yielded rich data, which has contributed to the findings and has helped to strengthen the theory generated.

8.3.5 Generating Data

There were three main methods for generating data: interviews, focus groups and questionnaires. As this research explored a new topic, there were no pre-existing questionnaires or validated tools to use to give shape to the interview and focus group questions. Literature from previous research was used to inform the research questions. Accordingly, the questions used in the interviews and focus groups were created for the purpose of exploring a new phenomenon and for generating theory.

The original research proposal outlined the use of interviews and focus groups as the sole methods of data generation. The decision to add telephone interviews and qualitative questionnaires occurred during the data collection phase of the project. Telephone interviews were conducted for some participants rather than face-to-face interviews. Following a review of the literature regarding telephone interviews and a discussion with the Ph.D. supervision panel, the decision was made to conduct telephone interviews with the Heads of Midwifery and educators if travel funding or scheduling prevented a face-to-face meeting. As the project was self-funded by the Ph.D. student and three of the four university sites in the project were at various ends of the country, therefore requiring overnight accommodation, telephone interviews were necessary on three limited occasions.

Also, the decision was made to offer telephone interviews to the newly qualified midwives as an attempt to increase participation in the research (147). It was thought that due to difficult scheduling on account of shift work and the time commitment required for a face-to-face interview the newly qualified midwives may prefer to participate in telephone interviews. In the end, all of the interviews with the

newly qualified midwives participant group were conducted over the telephone. The current project, and in particular the interviews with the newly qualified midwives, would support the use of telephone interviews as a means to enhance qualitative research.

Qualitative questionnaires were used as a strategy to improve participation from the newly qualified midwives group. A questionnaire was seen to be beneficial due to the low cost and low time commitment for both the researcher and the participant (146). However, it was acknowledged that a self-administered questionnaire may reduce the depth of responses and the ability to expand on issues compared to interviews. For this reason, the questionnaire allowed the participants to provide contact information if they were willing to take part in a telephone interview. The qualitative nature of the questionnaire allowed coding of the data in a similar way as to coding a transcribed interview script. This meant the constant comparative method could be used to compare data generated through the questionnaires with that generated through the interviews and focus groups and could contribute to the process of saturating codes and categories.

The methods of data collection used this project proved to be effective for allowing for rich, in-depth descriptions. The theory that emerged from this data seems to make sense of, and describe, the events and processes the participants reflected on during their interviews. It is possible that the findings of this research would be different if another method of data collection were employed. For example, the inclusion of ethnographic methodology can be useful for comparing and contrasting what people say in interview contexts and what they do when their actions and behaviours are observed.

8.3.6 Data Analysis

After data were collected they were transcribed, verbatim. The researcher personally transcribed all but four of the interviews in an attempt to become fully immersed in the data. The last four interviews were professionally transcribed due to time limitations. The transcripts were sent to participants for member checking. Computer-aided analysis using NVivo was a useful step in helping organise the large amounts of data generated from the interview and focus group transcripts.

During the initial stages of data analysis, the researcher and her primary Ph.D. supervisor both analysed five interviews. Two of the interviews were with Heads of Midwifery, one with a student midwife, one with a newly qualified midwife and one educators' focus group. Each party independently analysed the transcripts to generate initial themes. The themes and categories generated through this open coding process were highly consistent between the researcher and supervisor. This was a helpful first step in the process of data analysis and contributed to the overall rigor of the results (135).

In addition to the act of member checking, and analysis by two independent parties, there were other steps taken to enhance the rigor of this study. There was triangulation of data, as represented by the four groups of participants and by including four university sites, and triangulation of methods using interviews, focus groups and questionnaires. A research diary, which included memos and notes recorded during data generation and analysis, and the supervision process, both act as a form of audit, whereby another researcher could retrace the steps and decisions taken during the project. The reflexivity of the researcher is another step in strengthening the rigor of the study. This reflexivity created a process, whereby thinking about quality and rigor occurred throughout the project rather than as an after-thought when confirming results (155). Verification and decision-making, which occurred throughout, was informed by this reflexivity and by the peer debriefing provided through the Ph.D. supervision process (157).

8.4 Directions for Future Research

The lasting benefit of IPE in practice is a topic that warrants further evaluation. As previously identified, this is an area that has been neglected within the field of IPE research. However, it is likely that more will be published on this topic in the future, as an increasing number of universities, both in the UK and abroad, who are currently conducting IPE curricula will soon have graduates in professional practice.

The limitations of the research presented in the previous section can be used to identify areas for future research. For example, future research could explore the same topic but employing quantitative methods such as randomised controlled trials,

survey methods and case control studies. Research of this nature could validate tools to measure the sustainability and application of IPE in practice. Future longitudinal research exploring the topic of transfer to practice and the inclusion of multiple professional groups would be highly valuable.

Also, in keeping with the same research question, it would be interesting to conduct future research using other qualitative methods. In particular, a deeper understanding of the complexity of this issue could be gained by conducting further in-depth interviews with a greater number of newly qualified professionals. Also, ethnography could be highly appropriate and could eliminate the contradictions between what people say and what people do. Likewise, it would be valuable to conduct a qualitative study using critical theory to explore how relations of power between different professionals and between novice and expert midwives influence a new graduate's ability to use IPE theory in practice. Another area of future research, directly linked to the current study, could entail an ethnographic follow-up study involving the student midwives from University A when they commence professional practice.

Future research should focus on the impact of e-learning as a tool for teaching and learning. Little is known about how this tool influences the application of IPE to practice. Will students who learn IPE in the virtual setting be able to transfer their skills to practice? In addition, when considering the application of IPE within the workplace, there is a need for research that examines this application through the lens of professional practice. For example, patient satisfaction measures, peer appraisal of team-work, external observation and clinical audits could explore whether or not IPE graduates are using their training in practice (162).

At the level of policy and program development, this research has exposed the need for policy development to govern the relationship between the HEI and clinical Trust and to create an infrastructure within the Trust site to promote collaboration. Also, development of a preceptorship program for newly qualified midwives that incorporates IPE would be a logical follow-up to this study.

Finally, exploring this process of application to practice in different cultures and different countries would be intriguing. As a researcher who has been witness to and participated in, interprofessional maternity care in two countries, the idea of

exploring how the impact of the learning environment, and the interface between the educational institution and the clinical workplace varies from one country to the next, and how these variations impact the ability of students to apply their training to practice is fascinating.

Although, the findings of this study should not be generalised to other settings or contexts, the theory presented here will hopefully be the first step in a series of studies exploring the long-term benefits of IPE initiatives.

8.5 Summary

This final chapter has outlined the contributions of the project and directions for future research. A discussion of the limitations of the research has also been included. Finally, the implications of the research findings and recommendations for practice, based on the emergent theory, have been presented. The theory of 'Becoming an Interprofessional Practitioner' calls for the creation of a favourable learning environment for pre-qualification IPE, whereby students are able to develop skills for collaboration, to fully engage with the IPE curriculum and to participate in clinical practice in a setting which supports and promotes the principles of interprofessional working and learning. Such a learning environment is facilitated by improving learner motivation with realistic and relevant curriculum and by strengthening the relevance to professional identity and practice. Also, creating a continuum of IPE present throughout pre-qualification training in both academic and clinical settings, identifying champions of IPE in these settings, and strengthening the partnership between the HEI and the clinical site are key elements of this learning environment which will ensure that collaboration becomes a priority and a cultural ethos in both the academic and clinical sites.

This research was successful in exploring how the knowledge, skills and attitudes gained during pre-qualification IPE are applied to the professional practice of midwives. The research also successfully examined the barriers and enablers that influence the application to professional practice. The data generated from newly qualified midwives, students, educators and Heads of Midwifery has shaped the theory that emerged and has fostered an in-depth understanding of the intersection between IPE theory and practice.

The implications of this research provide specific suggestions for the development, implementation and evaluation of IPE curricula, and explicit acknowledgement of the required partnership between educational and clinical institutions. These recommendations come at a critical time in the evolution of the field of IPE. This is because government policy, health profession regulating bodies and educational institutions have all identified IPE as an educational priority for the health professionals of the future. Yet, despite the policy recommendations, political drivers, incentives and funding for IPE, it is important to understand whether these educational initiatives are having the desired effect. Does IPE create a workforce of health professionals who are able to work collaboratively for the benefit of the patient? The findings from this study indicate that IPE is starting to create a very different work environment. However, further consideration to the optimal learning conditions which help students to become interprofessional workers is needed in order to sustain these changes and to establish a collaborative workforce. The understanding generated through this research, of the elements required for a favourable learning environment which will allow newly qualified professionals to apply their learning in practice will help pave the way to a collaborative workforce, poised to meet the complex needs of patients.

DISSEMINATION LIST

Murray Davis, B. Marshall, M. Gordon, F. Applying pre-qualification IPE to practice: Are newly qualified health professionals able to sustain their IPE skills in practice? A review of the evidence. Submitted for publication

Murray Davis, B. Promoting the Application of Pre-Qualification IPE in the Professional Practice of Midwives. Proceedings of the Collaborating Across Boarders II, May 20-22, 2009, Halifax, Canada.

Murray Davis, B. Does Interprofessional Education Prepare Midwives for the Realities of Professional Practice? Proceedings of the Ontario Interprofessional Education Conference, January 18-20 2008, Toronto, Canada.

Murray Davis, B. Midwives and Interprofessional Education. Proceedings of the Canadian Association of Midwives Conference, November 12-14 2008, Quebec City, Canada.

Murray Davis, B. Closing the Theory/Practice Gap: Ensuring Interprofessional Education Prepares Midwives for the Realities of Professional Practice. Proceedings of the Trinity College School of Nursing and Midwifery Research Conference, November 5-7 2008, Dublin, Ireland.

Murray Davis, B. Does Interprofessional Education Prepare Midwives for Professional Practice? Proceedings of the International Confederation of Midwives, June 1-5 2008, Glasgow, U.K.

Murray Davis, B. Midwives Perspectives on the Transfer of Interprofessional Education to Professional Practice. Proceedings of the Centre for Excellence in Professional Placement Learning Conference, Rethinking Interprofessional Education, October 8-9 2007, Plymouth, U.K.

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Appendix 1: Letter of Ethical Approval, NHS Research Ethics Committee

National Research Ethics Service
Central Manchester Research Ethics Committee
Room 181
Gateway House
Piccadilly South
Manchester
M60 7LP

Telephone: 0161 237 2166
Facsimile: 0161 237 2383

11 May 2007

Ms Beth Murray Davis
PhD student
University of Sheffield
Community Sciences Centre
Northern General Hospital
Herries Road, Sheffield
S5 7AU

Dear Ms Murray Davis

Full title of study: **Interprofessional Education and Midwifery Practice**
REC reference number: **07/Q1407/61**

Thank you for your letter of 04 May 2007, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Vice-Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Ethical review of research sites

The Committee has designated this study as exempt from site-specific assessment (SSA. There is no requirement for [other] Local Research Ethics Committees to be informed or for site-specific assessment to be carried out at each site.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Application	5.3	23 March 2007
Investigator CV	Beth Murray Davis	01 March 2007
Investigator CV	M Marshall	23 March 2007
Protocol	3.0	04 May 2007
Covering Letter	Beth Murray Davis	21 March 2007
Summary/Synopsis	1.0	01 March 2007
Letter from Sponsor	Mrs Greta Pearman	28 February 2007
Statistician Comments		20 March 2007
Statistician Comments	Summary of response to scientific review comments	25 April 2007
Interview Schedules/Topic Guides	Newly Qualified Midwives v3.0	04 May 2007
Interview Schedules/Topic Guides	South Yorkshire Heads of Midwifery v3.0	04 May 2007
Interview Schedules/Topic Guides	Head of Midwifery or Senior Midwife at NHS Trust linked with 3 University Sites v3.0	04 May 2007
Letter of invitation to participant	Head of Midwifery from NHS Trust linked with 3 university sites v2.0	04 May 2007
Letter of invitation to participant	Lead Midwife for Education v2.0	04 May 2007
Letter of invitation to participant	Newly Qualified Midwives v2.0	04 May 2007
Letter of invitation to participant	South Yorkshire Head of Midwifery v2.0	04 May 2007
Participant Information Sheet: South Yorkshire Head of Midwifery	2.0	04 May 2007
Participant Information Sheet: Midwifery Educators	2.0	04 May 2007
Participant Information Sheet: Head Midwifery or Senior Midwife at NHS Trust	2.0	04 May 2007

Participant Information Sheet: Newly Qualified Midwife	2.0	04 May 2007
Participant Consent Form: Head of Midwifery at NHS Trust	2.0	04 May 2007
Participant Consent Form	2.0	04 May 2007
Response to Request for Further Information	Beth Murray Davis	04 May 2007
Telephone Scripts for South Yorkshire Heads of Midwifery	3.0	04 May 2007
Telephone Script for Newly Qualified Midwives	3.0	04 May 2007
Telephone Script for Heads of Midwifery linked with 3 university sites	3.0	04 May 2007
Telephone Script for Lead Midwife for Education at 3 University Sites	3.0	04 May 2007
Draft Focus Group Schedule	Midwifery Educators v3.0	04 May 2007

Research governance approval

All researchers and research collaborators who will be participating in the research at NHS sites should apply for R&D approval from the relevant care organisation, if they have not yet done so. Research governance approval is required, whether or not the study is exempt from SSA. You should advise researchers and local collaborators accordingly.

Further guidance is available from http://www.rdforum.nhs.uk/rdform.htm.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Feedback on the application process

Now that you have completed the application process you are invited to give your view of the service you received from the National Research Ethics Service. If you wish to make your views known please use the feedback form available on the NRES website at:

https://www.nresform.org.uk/AppForm/Modules/Feedback/EthicalReview.aspx

We value your views and comments and will use them to inform the operational process and further improve our service.

07/Q1407/61	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Yours sincerely

Professor N Thakker
Vice-Chair

Email: stephen.tebbutt@northwest.nhs.uk

Appendix 2: Letter of Invitation to Participate, University A, Heads of Midwifery

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear [Head of Midwifery]

Re: Research Project – Perceptions of Interprofessional Education and Midwifery Practice

I am a Senior Lecturer at _____ University and I am also currently completing doctoral studies in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you would agree to participate. This is a qualitative research project that will involve semi-structured interviews and focus groups with Heads of Midwifery, midwifery educators and newly qualified midwives.

The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators. As you know, midwifery students have recently been integrated into the interprofessional education curriculum at _____ University. I would like to invite you to participate in my research, as I would be interested in hearing what influence you think this will have when these midwifery students begin professional practice at NHS Trusts within _____.

Your participation in this study would involve a face-to-face interview scheduled at your convenience, and will last for 60 to 90 minutes. You will be asked open-ended questions regarding what you anticipate will be the influence of interprofessional education on the professional practice of newly qualified midwives. Brief notes may be taken of the interview to assist recollection of the context of the interview.

It is the intention that each interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. The information obtained in the interview will be kept in strict confidence and stored in a secure location. Only the researcher and her supervisors will have access to the data, and all data will be destroyed five years after

completion of the study. Participation in the study is voluntary, and you may withdraw at any time. You are free to decline audio-taping of the interview and to refuse to answer any question asked in the interview. Finally, you are welcome to ask questions about the research and to request a summary of the findings of the study if you wish.

This research has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

If you have any further questions or if you are interested in participating in this research please contact me by telephone or email _____ or _____ and _____@sheffield.ac.uk.

Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 3: Participant Information Sheet, University A, Heads of Midwifery
PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study is being conducted as a requirement for fulfilment of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?
As you may know, midwifery students have recently been integrated into the interprofessional education curriculum at _____University. I would like to invite you to participate in this research, as I would be interested in hearing what influence you think this training will have when these midwifery students begin professional practice at NHS Trusts within_____.

Do I have to take part?
It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason. You will be asked to sign a consent form to show you have agreed to participate.

What will happen to me if I take part?
Your participation in this study would involve a face-to-face interview scheduled at a time and location which is convenient to you, that will last for 60 to 90 minutes. If you agree, your interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview.

Privacy and confidentiality will be protected. Pseudonyms will be used in all written reports and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data. The audio tape and transcripts will be given a code to ensure anonymity.

What will I have to do?
You will be asked open-ended questions regarding what you anticipate will be the influence of interprofessional education on the professional practice of newly qualified midwives.

Expenses and payment
You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?
It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?
The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____at _____. If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative, _____ in the Academic Unit for Primary Medical Care at_____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities, and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please retain a copy of this information sheet and the consent form for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 4: Consent Form

CONSENT FORM

Research: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

Please initial box:

1. I confirm that I have read and understand the participant information sheet dated May 4, 2007 version 2.0 for the above study. I have had the opportunity to consider the information and ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐

3. I understand that my privacy and confidentiality will be protected, pseudonyms will be used in all written reports and that any details which might potentially identify persons, communities, or institutions will be obscured in the data. The tapes, transcripts and field notes will be given a code to ensure anonymity. ☐

4. I agree to audio taping of my interview. I understand that the tapes will be transcribed in full and that I will be able to review my transcript for accuracy. ☐

5. I agree to take part in the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature

Would you like a summary of the findings of the study upon completion?
Yes[ ] No[ ]

When completed, 1 copy for participant, 1 copy for researcher site file

Appendix 5: Interview Schedule, University A, Heads of Midwifery

The questions asked of you will be somewhat open ended so that you can tell me your experience in your own words. My job is primarily to listen and to ask for clarification and further detail. Please remember that participation is voluntary and you may withdraw at any time. If there are any questions you do not feel comfortable answering please feel free to decline. I assure you that your interview will remain confidential and the data and findings will not contain any information that will identify you as participant. Are you ready to proceed?

Please tell me briefly about your role and what contact you have with student midwives.

Can you tell me about the interprofessional relationships between midwives and other health professionals at your institution.

How do you think health professionals would be best trained in order to work interprofessionals?

Formal interprofessional education is now becoming mainstream within health profession training programmes. How might interprofessional education facilitate effective interprofessional working relationships?

Are you aware that the midwifery students at _____ University now participate in a three year interprofessional education programme during their training?

If so, when did you first hear about the interprofessional education programme?

What were your first impressions upon hearing this news?

Do you think that midwifery students trained in interprofessional education will be different than other midwifery students? If so, how?

Describe how you think this training might influence the professional practice of newly qualified midwives.

Do you think that midwifery students trained in IPE will be a beneficial addition to the workforce at your institution? Why or why not?

Appendix 6: Letter of Invitation to Participate, University A, Midwifery Educators

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear Midwifery Educators,

Re: Research Project – Perceptions of Interprofessional Education and Midwifery Practice

I am a doctoral student in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you and your colleagues would agree to participate. This is a qualitative research project that will involve semi-structured interviews and focus groups with student midwives, Heads of Midwifery, midwifery educators and newly qualified midwives.

The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators. As academic staff at a university which provides interprofessional education for midwives, I would be interested in hearing from the members of the midwifery team about what influence they think this training may have on your midwifery students when they begin professional practice. All midwifery educators with knowledge of the interprofessional education curriculum at your university and who are involved in overseeing students in clinical placements would be invited to participate in the focus group.

Participation in this study would involve a focus group session with up to ten and no less than three members of the midwifery team. The focus group session will be scheduled at your convenience, and will last for 45 to 60 minutes. The focus group will be based on open-ended questions regarding the influence of interprofessional education on the professional practice of newly qualified midwives. Brief notes may be taken to assist the researcher in remembering the context of the focus group.

It is the intention that the focus group will be audio taped and later transcribed to paper. The participants will be asked to review this transcript to ensure that it is an accurate account of the focus group. All participants will be assigned a pseudonym so their identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. The information obtained in the focus group will be kept in strict confidence and stored in a secure

location. Only the researcher and her supervisors will have access to the data, and all data will be destroyed five years after completion of the study. Participation in the study is voluntary. Participants are free to decline audio-taping and to refuse to answer any questions asked in the focus group.

This research has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

If you have any further questions or if you are interested in participating in this research please contact me by email at _____@sheffield.ac.uk.

Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 7: Participant Information Sheet, University A, Midwifery Educators

PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study is being conducted as a requirement for fulfilment of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?
As a member of the academic staff at a university which provides interprofessional education for midwives, I would be interested in hearing from you and other members of the midwifery team about what influence you think this training may have on your midwifery students when they begin professional practice.

Do I have to take part?
It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason. You will be asked to sign a consent form to show you have agreed to participate.

What will happen to me if I take part?
Participation in this study would involve a focus group session with up to ten and no less than three members of the midwifery team. The focus group session will be scheduled at a time that is convenient for the participants, and will last for 45 to 60 minutes. If you agree, your focus group will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your focus group.

Privacy and confidentiality will be protected. Pseudonyms will be used in all written reports and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data. The audio tape and transcripts will be given a code to ensure anonymity.

What will I have to do?
The focus group will be based on open-ended questions regarding the influence of interprofessional education on the professional practice of newly qualified midwives.

Expenses and payment
You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?
It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?
The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____ at _____. If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative, _____ in the Academic Unit for Primary Medical Care at _____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. You will be assigned a pseudonym that will correspond with your focus group and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities,

and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please retain a copy of this information sheet and the consent form for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 8: Focus Group Schedule, University A, Midwifery Educators

The questions asked of you will be somewhat open ended so that you can tell me your experience in your own words. My job is primarily to listen and to ask for clarification and further detail. Please remember that participation is voluntary and you may withdraw at any time. If there are any questions you do not feel comfortable answering please feel free to decline. I assure you that your interview will remain confidential and the data and findings will not contain any information that will identify you as participant. Are you ready to proceed?

Please tell me briefly about the interprofessional education programme at this school. including details of how long you've been involved with this curriculum and which other health profession disciplines are involved.

What are your reflections and observations of this education programme?

What influence has this interprofessional education curriculum had on the midwifery students?

Have you noticed any changes in professional behaviour of the student midwives while involved in their clinical placements? If so please describe them.

How has the interprofessional training influenced the communication skills of the student midwives?

How has the interprofessional training influenced the leadership skills of the student midwives?

How has the interprofessional training influenced the conflict resolution and negotiation skills of the student midwives?

How has the interprofessional education influenced the way the student midwives provide care to women?

How do the newly qualified midwives incorporate this training into their professional practice?

What impact does interprofessional training for health profession students have on the interprofessional relations in the workplace?

What is the best way to foster effective interprofessional relationships between health professions?

Appendix 9: Letter of Invitation to Participate, University A, Student Midwives

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear Student Midwife,

Re: Research Project: Perceptions of Interprofessional Education and Midwifery Practice

I am a registered midwife and a Senior Lecturer at _____University, and I am also currently completing doctoral studies in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you would agree to participate. This is a qualitative research project that will involve semi-structured interviews and focus groups with Heads of Midwifery, midwifery educators, student midwives and newly qualified midwives.

The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators. As a student of a midwifery training program which recently began to include interprofessional education as part of the required curriculum, I would be interested in hearing your perspective about what influence you think this training will have on your professional practice as a midwife.

Your participation in this study would involve a face-to-face interview scheduled at your convenience, and will last for 30 to 60 minutes. You will be asked open-ended questions regarding the anticipated influence of your interprofessional education on your professional practice. Brief notes may be taken of the interview to assist in remembering the context of the interview.

It is the intention that each interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. The information obtained in the interview will be kept in strict confidence and stored in a secure location. Only the researcher and her supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

Participation in the study is voluntary, and you may withdraw at any time. You are free to decline audio-taping of the interview and to refuse to answer any question asked in the interview.

Finally, you are welcome to ask questions about the research and to request a summary of the findings of the study if you wish.

This research has been reviewed and given favourable opinion by the _____Research Ethics Committee.

Please contact me if you are interested in participating in this research, _____or at _____, or if you have any further questions.

Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 10: Participant Information Sheet, University A, Student Midwives

PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study is being conducted as part of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?
As a student in a midwifery training program which recently began to include interprofessional education in the required curriculum, I would be interested in hearing your perspective about what influence you think this training will have on your professional practice as a midwife.

Do I have to take part?
It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason. You will be asked to sign a consent form to show you have agreed to participate.

What will happen to me if I take part?
Your participation in this study would involve a face-to-face interview scheduled at a time and location which is convenient to you, that will last for 30 to 60 minutes. If you agree, your interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview.

Privacy and confidentiality will be protected. Pseudonyms will be used in all written reports and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data. The audio tape and transcripts will be given a code to ensure anonymity.

What will I have to do?
You will be asked open-ended questions regarding the anticipated influence of your interprofessional education on your professional practice.

Expenses and payment
You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?
It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?
The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____ at _____. If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative, _____ in the Academic Unit for Primary Medical Care at _____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities, and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please retain a copy of this information sheet and the consent form for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 11: Interview Schedule, University A, Student Midwives

The questions asked of you will be somewhat open ended so that you can tell me your experience in your own words. My job is primarily to listen and to ask for clarification and further detail. Please remember that participation is voluntary and you may withdraw at any time. If there are any questions you do not feel comfortable answering please feel free to decline. I assure you that your interview will remain confidential and the data and findings will not contain any information that will identify you as participant. Are you ready to proceed?

Please tell me briefly about your training to date as a student midwife.

Please describe for me the interprofessional education curriculum that you have participated in during your training.

What are your impressions and reflections on the interprofessional education programme?

What have you learned from your IPL training?

How do you think this IPL training has influenced your view of professional practice?

How do you think your IPL training has influenced your communication skills? leadership skills/ teamwork skills/ confidence/ conflict resolution skills?

How has your IPL training influenced your views of other professions?

How has your IPL training influenced your views on caring for women?

What kind of interprofessional dynamics have you observed during your clinical placements?

Do you think you will be to apply your IPL training to your workplace after you graduate? Why or why not?

Appendix 12: Letter of Invitation to Participate, University B, C, D, Midwifery Educators

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear [Lead Midwife for Education]

Re: Research Project – Perceptions of Interprofessional Education and Midwifery Practice

I am a Senior Lecturer at _____ University and I am also currently completing doctoral studies in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you and your colleagues would agree to participate. This is a qualitative research project that will involve semi-structured interviews and focus groups with Heads of Midwifery, midwifery educators and newly qualified midwives.

The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators. As academic staff at a university which provides interprofessional education for midwives, I would be interested in hearing from the members of the midwifery team about what influence this training may have had on your midwifery students as they begin professional practice. All midwifery educators with knowledge of the interprofessional education curriculum at your university and who are involved in overseeing students in clinical placements would be invited to participate in the focus group.

Participation in this study would involve a focus group session with up to ten and no less than three members of the midwifery team. The focus group session will be scheduled at your convenience, and will last for 90 to 120 minutes. The focus group will be based on open-ended questions regarding the influence of interprofessional education on the professional practice of newly qualified midwives. Brief notes may be taken to assist the researcher in remembering the context of the focus group.

It is the intention that the focus group will be audio taped and later transcribed to paper. The participants will be asked to review this transcript to ensure that it is an accurate account of the focus group. All participants will be assigned a pseudonym so their identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. The information

obtained in the focus group will be kept in strict confidence and stored in a secure location. Only the researcher and her supervisors will have access to the data, and all data will be destroyed five years after completion of the study. Participation in the study is voluntary. Participants are free to decline audio-taping and to refuse to answer any questions asked in the focus group.

This research has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

If you have any further questions or if you are interested in participating in this research please contact me by telephone or email: _____ or _____. Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 13: Participant Information Sheet, University B, C, D, Midwifery Educators

PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study is being conducted as a requirement for fulfilment of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?
As a member of the academic staff at a university which provides interprofessional education for midwives, I would be interested in hearing from you and other members of the midwifery team about what influence this training may have had on your midwifery students as they began professional practice.

Do I have to take part?
It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason. You will be asked to sign a consent form to show you have agreed to participate.

What will happen to me if I take part?
Participation in this study would involve a focus group session with up to ten and no less than three members of the midwifery team. The focus group session will be scheduled at a time and location that is convenient for the participants, and will last for 90 to 120 minutes. If you agree, your focus group will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your focus group.

Privacy and confidentiality will be protected. Pseudonyms will be used in all written reports and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data. The audio tape and transcripts will be given a code to ensure anonymity.

What will I have to do?
The focus group will be based on open-ended questions regarding the influence of interprofessional education on the professional practice of newly qualified midwives.

Expenses and payment
You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?
It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?
The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____ at _____. If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative, _____ in the Academic Unit for Primary Medical Care at _____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. You will be assigned a pseudonym that will correspond with your focus group and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities,

and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please retain a copy of this information sheet and the consent form for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 14: Focus Group Schedule, University B, C, D, Midwifery Educators

The questions asked of you will be somewhat open ended so that you can tell me your experience in your own words. My job is primarily to listen and to ask for clarification and further detail. Please remember that participation is voluntary and you may withdraw at any time. If there are any questions you do not feel comfortable answering please feel free to decline. I assure you that your interview will remain confidential and the data and findings will not contain any information that will identify you as participant. Are you ready to proceed?

Please tell me briefly about the interprofessional education programme at this school, including details of how long you've been involved with this curriculum and which other health profession disciplines are involved.

What are your reflections and observations of this education programme?

What influence has this interprofessional education curriculum had on the midwifery students?

Have you noticed any changes in professional behaviour of the student midwives while involved in their clinical placements? If so please describe them.

How has the interprofessional training influenced the communication skills of the student midwives?

How has the interprofessional training influenced the leadership skills of the student midwives?

How has the interprofessional training influenced the conflict resolution and negotiation skills of the student midwives?

How has the interprofessional education influenced the way the student midwives provide care to women?

How do the newly qualified midwives incorporate this training into their professional practice?

What impact does interprofessional training for health profession students have on the interprofessional relations in the workplace?

What is the best way to foster effective interprofessional relationships between health professions?

Appendix 15: Letter of Invitation to Participate, University B, C, D, Heads of Midwifery

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear [Head of Midwifery from NHS Trust linked with University Sites]

Re: Research Project – Interprofessional Education and Midwifery Practice

I am a Senior Lecturer at _____ University and I am also currently completing doctoral studies in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you would agree to participate. This is a qualitative research project that will involve semi-structured interviews and focus groups with Heads of Midwifery, midwifery educators and newly qualified midwives.

The purpose of the study is to understand how interprofessional education influences the professional practice of midwives from the perspective of midwives and midwifery educators. As the Head of Midwifery at an NHS Trust linked with a university which provides interprofessional education for midwives I would be interested in hearing from you or from a suitable alternate senior midwife with relevant experience in overseeing newly qualified midwives about what influence this training may have had on newly qualified midwives as they began professional practice.

Participation in this study would include two steps. First, a face to face interview scheduled at your convenience that will last for 60 to 90 minutes. The interview will be based on open-ended questions regarding the influence of interprofessional education on the professional practice of newly qualified midwives. Brief notes may be taken of the interview to assist the researcher in remembering the context of the interview. Second, you will be asked to deliver information letters about the research project to newly qualified midwives at your institution who have been graduates of _____University. Midwives interested in participating will then contact the researcher directly. This ensures that the privacy of the contact information of midwives who are not interested in participating is protected.

It is the intention that the interview will be audio taped and later transcribed to paper. All participants will be assigned a pseudonym so their identity will remain anonymous. All data will be reported in such a way as to prevent identification of

persons, communities or institutions. The information obtained in the interview will be kept in strict confidence and stored in a secure location. Only the researcher and her supervisors will have access to the data, and all data will be destroyed five years after completion of the study. Participation in the study is voluntary, and you may withdraw at any time. You are free to decline audio-taping and to refuse to answer any question asked in the interview. Finally, you are welcome to ask questions about the research and to request a summary of the findings of the study if you wish.

This research has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

If you have any further questions or if you are interested in participating in this research please contact me by telephone or email: _____ or _____.

Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 16: Participant Information Sheet, University B, C, D, Heads of Midwifery

PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study is being conducted as part of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?
As the Head of Midwifery at an NHS Trust linked with a university which provides interprofessional education for midwives, I would be interested in hearing from you or from a suitable alternate senior midwife with relevant experience in overseeing newly qualified midwives about what influence this training may have had on newly qualified midwives as they began professional practice.

Do I have to take part?
It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason. You will be asked to sign a consent form to show you have agreed to participate.

What will happen to me if I take part?
Your participation in this study would involve a telephone interview scheduled at a time and location which is convenient to you, that will last for 30 to 45 minutes. If you agree, your interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview.

Privacy and confidentiality will be protected. Pseudonyms will be used in all written reports and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data. The audio tape and transcripts will be given a code to ensure anonymity.

What will I have to do?
The interview will be based on open-ended questions regarding the influence of interprofessional education on the professional practice of newly qualified midwives.

You will also be asked to deliver questionnaires to newly qualified midwives at your institution. Newly qualified midwives interested in participating will then contact the researcher directly. Information about which newly qualified midwives participate in the research will not be shared with you.

Expenses and payment
You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?
It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?
The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____ at _____. If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative, _____in the Academic Unit for Primary Medical Care at _____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities, and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please retain a copy of this information sheet and the consent form for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 17: Consent Form, University B, C, D, Heads of Midwifery
CONSENT FORM

Research: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

Please initial box:

1. I confirm that I have read and understand the participant information sheet dated May 4, 2007 version 2.0 for the above study. I have had the opportunity to consider the information and ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐

3. I understand that my privacy and confidentiality will be protected, pseudonyms will be used in all written reports and that any details which might potentially identify persons, communities, or institutions will be obscured in the data. The tapes, transcripts and field notes will be given a code to ensure anonymity. ☐

4. I agree to audio taping of my interview. I understand that the tapes will be transcribed in full and that I will be able to review my transcript for accuracy. ☐

5. I agree to deliver questionnaires to newly qualified midwives employed by my institution who are graduates of University of _____, University of _____ and University of _____. ☐

6. I agree to take part in the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature

Would you like a summary of the findings of the study upon completion?
Yes[ ] No[ ]

When completed, 1 copy for participant, 1 copy for researcher site file

Appendix 18: Interview Schedule, University B, C, D, Heads of Midwifery

The questions asked of you will be somewhat open ended so that you can tell me your experience in your own words. My job is primarily to listen and to ask for clarification and further detail. Please remember that participation is voluntary and you may withdraw at any time. If there are any questions you do not feel comfortable answering please feel free to decline. I assure you that your interview will remain confidential and the data and findings will not contain any information that will identify you as participant. Are you ready to proceed?

Please tell me briefly about your role and what contact you have with newly qualified midwives.

Can you tell me about the interprofessional relationships between midwives and other health professionals at your institution.

How do you think health professionals would be best trained for effective interprofessional working?

Interprofessional education is now becoming mainstream within health profession training programmes. How might interprofessional education facilitate effective interprofessional working relationships?

Some of the newly qualified midwives who are employed here are graduates of pre-qualification programmes which included interprofessional education. Were you aware that this is part of their training?

Have you noticed any difference between midwives who have graduated with this training and those who have not had interprofessional training? If yes, please describe.

How do you think this training has influenced their transition into professional practice?

Do you think that the newly qualified midwives who have participated in interprofessional education have better skills in:

communication/ leadership/ teamwork/ conflict resolution/ holistic care?

Do you think the newly qualified midwives who have participated in interprofessional education are a beneficial addition to your institution?

Why or why not?

Do you think the newly qualified midwives who have participated in interprofessional education are able to use this training in your workplace?

Please describe factors that might promote or prevent this.

Appendix 19: Letter of Invitation to Participate, Newly Qualified Midwives

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear Midwife,

Re: Research Project: Perceptions of Interprofessional Education and Midwifery Practice

I am a midwife and a Senior Lecturer at _____ University, and I am also currently completing doctoral studies in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you would agree to participate. This is a qualitative research project that will involve semi-structured interviews and focus groups with Heads of Midwifery, midwifery educators and newly qualified midwives.

The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators. A senior midwife responsible for overseeing newly qualified midwives, has given this letter to you at my request because you were a graduate of either University of _____, University of _____ or University of _____. As a recent graduate from a midwifery training program which included interprofessional education, I would be interested in hearing your perspective about what influence you think this training has had on your professional practice as a midwife.

Your participation in this study would involve a ***face-to-face interview*** scheduled at your convenience, and will last for 60 to 90 minutes. You will be asked open-ended questions regarding the influence of your interprofessional education on your professional practice as a newly qualified midwife. Brief notes may be taken of the interview to assist in remembering the context of the interview.

It is the intention that each interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. The senior midwife who delivered this letter to you will have no knowledge of your participation in the study. All data will be reported in such a way as to prevent identification of persons, communities or institutions. The information obtained in the interview will be kept in strict confidence and stored in a secure location. Only

the researcher and her supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

Participation in the study is voluntary, and you may withdraw at any time. You are free to decline audio-taping of the interview and to refuse to answer any question asked in the interview.

Finally, you are welcome to ask questions about the research and to request a summary of the findings of the study if you wish.

This research has been reviewed and given favourable opinion by the _____Research Ethics Committee.

Please contact me if you are interested in participating in this research, at _____ or _____, or if you have any further questions.

Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 20: Participant Information Sheet, Newly Qualified Midwives
PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study is being conducted as part of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?
As a recent graduate from a midwifery training program which included interprofessional education, I would be interested in hearing your perspective about what influence you think this training has had on your professional practice as a midwife.

Do I have to take part?
It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason. You will be asked to sign a consent form to show you have agreed to participate.

What will happen to me if I take part?
Your participation in this study would involve ***a face-to-face interview*** *scheduled at a time and location which is convenient to you, that will last for 60 to 90 minutes. If you agree, your interview will be audio taped and later transcribed to paper. You will be asked to review this transcript to ensure that it is an accurate account of your interview.*

Privacy and confidentiality will be protected. Pseudonyms will be used in all written reports and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data. The audio tape and transcripts will be given a code to ensure anonymity.

What will I have to do?
You will be asked open-ended questions regarding the influence of your interprofessional education on your professional practice as a newly qualified midwife.

Expenses and payment
You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?
It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?
The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____ at _____ If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative, _____ in the Academic Unit for Primary Medical Care at _____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. The senior midwife who delivered this letter to you will not be aware of your participation in the study. You will be assigned a pseudonym that will correspond with your interviews and transcriptions so your identity will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities, and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given favourable opinion by the _____Research Ethics Committee.

Please retain a copy of this information sheet and the consent form for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 21: Letter of Invitation to Participate, Newly Qualified Midwives, Questionnaire

Professor Nigel Mathers
Head of Department

Academic Unit of Primary Medical Care
Beth Murray Davis
Community Sciences Centre
Northern General Hospital
Sheffield S5 7AU

Telephone: +44 (0) 114 271 5916
Fax: +44 (0) 114 222 5341
Email: _____@sheffield.ac.uk

[Date Month Year]

Dear Midwife,

Re: Research Project: Perceptions of Interprofessional Education and Midwifery Practice

I am a midwife and a Senior Lecturer at _____University, and I am also currently completing doctoral studies in the Academic Unit for Primary Medical Care at the University of Sheffield. I am planning a research project, under the supervision of Dr. Michelle Marshall and Professor Frances Gordon and I was hoping you would agree to participate. This is a qualitative research project that will involve questionnaires, semi-structured interviews and focus groups with Heads of Midwifery, midwifery educators and newly qualified midwives.

The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators. A senior midwife responsible for overseeing newly qualified midwives has given this letter to you at my request because you were a graduate of either University of _____, University of _____ or University of _____. As a recent graduate from a midwifery training program which included interprofessional education, I would be interested in hearing your perspective about what influence you think this training has had on your professional practice as a midwife.

Your participation in this study would involve completion of a ***questionnaire***. You will be asked open-ended questions regarding the influence of your interprofessional education on your professional practice as a newly qualified midwife.

Your questionnaire will be anonymous. The senior midwife who delivered this letter to you will have no knowledge of your participation in the study. All data will be reported in such a way as to prevent identification of persons, communities or institutions. The information obtained from the questionnaire will be kept in strict confidence and stored in a secure location. Only the researcher and her supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

Participation in the study is voluntary, and you may withdraw at any time. You are free to refuse to answer any question asked in the questionnaire.

Finally, you are welcome to ask questions about the research and to request a summary of the findings of the study if you wish.

This research has been reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please contact me if you are interested in participating in this research at _____ or _____, or if you have any further questions.

Thank you for your support.

Yours Sincerely,

Beth Murray Davis

Appendix 22: Participant Information Sheet, Newly Qualified Midwives

PARTICIPANT INFORMATION SHEET

Study Title: Perceptions of Interprofessional Education and Midwifery Practice
Name of Researcher: Beth Murray Davis

PART 1: Overview

I would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please feel free to ask questions if anything is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

This study is being conducted as part of a Ph.D. The purpose of the study is to understand whether interprofessional education is transferable to the professional practice of midwives from the perspective of midwives and midwifery educators.

Why have I been invited?

As a recent graduate from a midwifery training program which included interprofessional education, I would be interested in hearing your perspective about what influence you think this training has had on your professional practice as a midwife.

Do I have to take part?

It is up to you to decide. Participation is voluntary, and you may withdraw at any time, without giving a reason.

What will happen to me if I take part?

Your participation in this study would involve completion of a ***questionnaire.*** *Your questionnaire will remain anonymous. Privacy and confidentiality will be protected and any details which might potentially identify persons, communities, and/or institutions will be obscured in the data.*

What will I have to do?

You will be asked open-ended questions regarding the influence of your interprofessional education on your professional practice as a newly qualified midwife.

Expenses and payment

You will not be paid for your participation in this study.

What are the possible disadvantages and risks of taking part?

It is not anticipated that there are any disadvantages or risks for participating in the study.

What are the possible benefits of taking part?

The information from this study will help improve the training of midwives.

What if there is a problem?
Any complaint about the way you have been dealt with during the study will be addressed. The detailed information on this is given in Part 2.

Will my taking part in the study be kept confidential?
Yes, ethical and legal practice will be followed and all information about you will be handled in confidence.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2: Further Information

What will happen if I don't want to carry on with the study?
You are free to withdraw from the study at any time, without giving a reason. All your information will be destroyed and will not be included in the study.

What if there is a problem?
If you have a concern about any aspect of this study you should speak to my academic supervisor, _____ at _____. If you remain unhappy and wish to complain formally you can do this through the University of Sheffield research sponsor representative _____ in the Academic Unit for Primary Medical Care at _____. This project is insured through the University of Sheffield.

Will my taking part in this study be kept confidential?
Your participation will remain confidential. The senior midwife who delivered this letter to you will not be aware of your participation in the study. Your questionnaire will remain anonymous. All data will be reported in such a way as to prevent identification of persons, communities or institutions. All information will be kept in strict confidence and stored in a secure location. Only the researcher and her academic supervisors will have access to the data, and all data will be destroyed five years after completion of the study.

What will happen to the results of the research study?
The results of the research will be used to write the researcher's Ph.D. thesis. The results of the research may be published in peer reviewed journals and presented at conferences. Any details which might potentially identify persons, communities, and/or institutions will be obscured in the results. You are welcome to request a summary of the findings.

Who is organizing and funding the research?
This study is sponsored by the University of Sheffield. This research is not externally funded.

Who has reviewed the study?
This research has been reviewed by the Ph.D. supervision panel and two independent academic reviewers from the University of Sheffield. Also, all research in the NHS is looked at by an independent group of people called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been

reviewed and given favourable opinion by the _____ Research Ethics Committee.

Please retain a copy of this information sheet for your records.

Further information or clarification:

1. General information about research: Please contact the Research & Development office at your NHS Trust
2. Specific information about this research project: Please contact Beth Murray Davis
3. Advice as to whether you should participate: Please contact the Research & Development office at your NHS Trust
4. If you are unhappy with the study: Please contact _____

Appendix 23: Research Questionnaire, Newly Qualified Midwives

RESEARCH QUESTIONNAIRE

Perceptions of Interprofessional Education and Midwifery Practice

Beth Murray Davis, Ph.D. Student

Please take a few moments to think about the Interprofessional Education (IPE or IPL) that was part of your midwifery training and then answer the following questions in the space provided (please continue overleaf if required). When you have finished, please return the questionnaire in the pre paid envelop. Thank you.

Year of Qualification as a midwife: _____

University attended for Midwifery training:

University of _____ ☐
University of _____ ☐
University of _____ ☐

Primary setting for clinical practice:

Community ☐
Hospital ☐

---

1. What is your opinion of the Interprofessional Education curriculum which you participated in during your midwifery training?

2. How has your Interprofessional Education training influenced your professional practice as a qualified midwife?

3. What factors have either promoted or prevented you from applying your Interprofessional Education training within your workplace?

Thank you. If you are willing to be contacted to discuss this issue further, please provide your name and telephone number or email address below:

Name & Contact details:

Appendix 24: Interview Schedule, Newly Qualified Midwives

The questions asked of you will be somewhat open ended so that you can tell me your experience in your own words. My job is primarily to listen and to ask for clarification and further detail. Please remember that participation is voluntary and you may withdraw at any time. If there are any questions you do not feel comfortable answering please feel free to decline. I assure you that your interview will remain confidential and the data and findings will not contain any information that will identify you as participant. Are you ready to proceed?

Please tell me briefly about how long you have been a practicing midwife.

Please tell me briefly about your training to become a midwife.

Please describe for me the interprofessional education curriculum that you participated in during your training.

What are your impressions and reflections on the interprofessional education programme?

What did you learn from your IPL training?

How do you think this IPL training has influenced your professional practice?

Please describe the interprofessional relationships at this institution.

How do you think your IPL training has influenced your communication skills? leadership skills/ teamwork skills/ confidence/ conflict resolution skills?

How did your IPL training influence your views of other professions?

How has your IPL training influenced your views on caring for women?

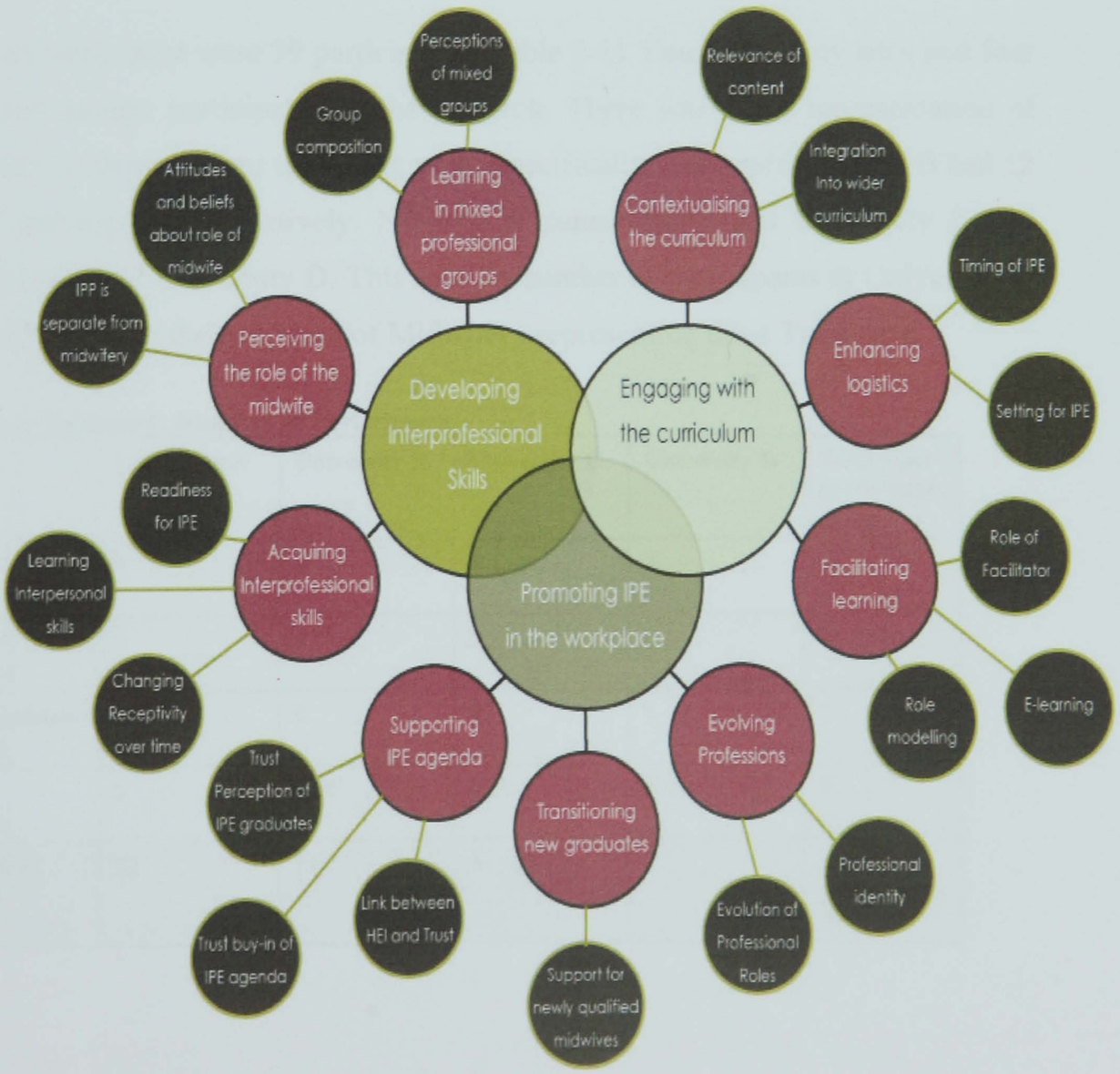
Are you able to apply your IPL training to within your workplace? Why or why not?

CHAPTER 5 RESULTS

5.0 Overview of the Results

This chapter will describe the findings from participants. What follows is a brief description of the participant numbers and then quotations outlining participant perspectives. Quotations from participants will be presented as evidence to support the generation of the categories and the emerging theory. Since the data analysis resulted in the generation of three central categories, the findings will be presented in this chapter according to these categories: i) Developing Interprofessional Skills, ii) Engaging with the Curriculum, and iii) Promoting IPE in the Workplace and their sub-categories. These categories can be represented pictorially (Figure 5-1).

Figure 5- 1: Three Central Categories and Subcategories.



The universities also had associated NHS Trust sites where students participated in clinical placements, and where the midwifery graduates were employed (Table 5-2). A similar number of Trust sites linked with each university contributed to this research.

Table 5- 2: NHS Trusts Participating per University Site

University	# of Trust sites
University A	4 Trust sites
University B	3 Trust sites
University C	4 Trust sites
University D	3 Trust sites
Total	**14 Trust sites**

At University A, all four of the possible Heads of Midwifery participated in the research. Also, one midwifery educator focus group occurred and five interviews were conducted with student midwives. The student midwives were all in their second year of training in the direct-entry midwifery course. None of the student midwives who participated had a prior career as a health professional.

University B had three NHS Trust sites from which to draw participants for the Head of Midwifery group. All three of the midwives in these posts participated in the research. A focus group for midwifery educators also occurred at University B, with five participants attending. Three newly qualified midwives who graduated from University B were included in the study.

Participation from University C was comprised of a focus group with three midwifery educators, three newly qualified midwives and three Heads of Midwifery. Two NHS Trust sites associated with University C declined participation following review by their respective Research and Development boards, due to lack of financial compensation for staff to take part in interviews. Also, one participant who had a staff position at two sites associated with University C participated as a representative from both of the two smaller Trusts. Thus, although seven possible Trust sites were identified as being linked with University C, only four sites ended up participating in the project.

Finally, at University D, five participants attended the midwifery educator focus group, one newly qualified midwife returned the questionnaire, and one Head of Midwifery was interviewed. Similar to University C, one midwife, in a post