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**Exploring the role of  
Interprofessional Working (IPW) as a  
specific form of Interprofessional  
Education (IPE) within acute  
healthcare.**

E J PRICE

MPhil

2022

**Exploring the role of  
Interprofessional Working (IPW) as a  
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healthcare.**

ELEANOR JAYNE PRICE

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the requirements of the University of  
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## **ABSTRACT**

An increasing amount of research explores the adoption of Interprofessional Education (IPE) as an approach to education, training and continuing professional development within the context of healthcare provision. IPE has, to a varying extent, become integrated into agendas surrounding the development of healthcare services; influencing policy, curricula and practice within governmental, organisational and educational spheres. However, there remains conceptual ambiguity surrounding IPE in terms of what the concept of IPE may encompass and how several facets may interact. Additionally, much IPE research takes place within a classroom or 'non-clinical' setting and there is relatively less research on the distinction between this form of IPE and IPE occurring within a practice setting ('Interprofessional Working' or 'IPW'). The current research explored the use of IPW as a vehicle for IPE within a practice setting, or, 'real world' context. It sought to 'unpick' the process of IPW in order to explore the appropriateness of a definition and working model of IPW as a specific form of IPE. Several key themes were identified that supported this conceptualisation of IPW and highlighted factors that might uniquely interact with this process such as engagement, psychological safety and wider contextual factors. The findings were discussed and consideration was given to the applicability of the findings for similar initiatives incorporating IPE in an acute healthcare setting (IPW).

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## **DECLARATION**

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others.

Any ethical clearance for the research presented in this thesis has been approved. Approval has been sought and granted by the Faculty Ethics Committee on 25<sup>th</sup> January 2016.

Name: Eleanor Jayne Price

Signature:

Date: 21/04/2022

## **STUDENT BACKGROUND**

My research background is in Occupational Psychology (Psychology BSc; Occupational Psychology MSc) within which relevant insight was developed surrounding, for example, the evaluation of workplace interventions as well as general organisational development and change (including the development of organisational culture). However, at the onset of the current project I did not have specific formal training or expertise in relation to the healthcare context (e.g., conducting prior research within a healthcare setting or being a qualified healthcare practitioner). This meant, in a study that to a certain extent, concerns preconceived attitudes towards differing professions, I had the advantage of conducting the research with relative impartiality. Conversely, however, it was challenging to become sufficiently familiar with context-specific jargon, infrastructure and professional culture.

The current project was introduced by a local Trust that sought to have research conducted surrounding the implementation of an IPE initiative within an acute healthcare setting. Thus, the general premise of the research was already established prior to the commencement of this project, and the initiatives examined were developed and implemented by staff within the Trust. Further than this general outline, however, decisions regarding the specific design, aims and direction of the research focus were left to me. This allowed for flexibility in regard to the research and for the adaption or development of the research design and methodology to align with my particular philosophical (ontological, epistemological) standpoint.

## INTRODUCTION

### Broad research context

The current healthcare climate is one that faces a number of profound challenges. Issues such as an on-going global shortage of health workers as well as a general increase in both volume and complexity of public health demands placed on local and national public healthcare systems (Frenk et. al., 2010) have led to the prioritisation of strategies to improve the efficiency and effectiveness of healthcare professionals in practice. Collaboration between differing healthcare-related professions forms an integral part of ensuring quality and continuity of patient care (Olson & Bialocerkowski, 2014). Instances where effective collaboration has failed to occur have resulted in increased public pressure for healthcare providers to improve their services (e.g., in cases of child protection; CQC, 2009; collaboration has also been linked to patient safety in acute care e.g., Kohn, Corrigan & Donaldson, 2000; Baggs, Ryan, Phelps, Richeson & Johnson, 1992; Greenberg et. al., 2007; Brock et. al., 2013). Thus, a need to develop the collaborative practice aspect of healthcare delivery with an aim of improving patient outcomes is increasingly highlighted in policy, practice and research.

Interprofessional Education (IPE) has been suggested as an approach to increasing collaboration in healthcare (World Health Organisation, WHO, 2010; Abu-Rish et. al., 2012; Kohn, Corrigan & Donaldson, 2000; Frenk et. al., 2010; Thistlethwaite, 2012; Olson & Bialocerkowski, 2014; IOM, 2015). IPE refers to an educational approach that aims to bring together those from differing professions in order that they learn *“from, with and about each other to improve collaboration”* (Freeth, Hammick, Reeves, Koppel & Barr, 2008, p. 31). It has been defined, from a healthcare perspective, as when *“two or more professions learn about, from and with each other to*

*enable effective collaboration and improve health outcomes” (WHO, 2010, p. 7).*

Though the term ‘IPE’ encompasses a large and diverse range of approaches to education, policy and organisational development (Freeth et. al., 2008; Reeves et. al., 2011), if integrated and perpetuated at a systemic level within learning institutions, healthcare providers and wider governmental policy, this could contribute towards addressing on-going issues surrounding effective collaboration in the provision of care.

### **IPE: drivers and agendas**

IPE has been posited to generate a range of outcomes that are considered to be valuable (e.g., increased communication, self-efficacy, professional confidence and awareness of other’s roles), which in turn contribute towards effective collaboration, thus, from a healthcare perspective, ultimately improving the quality and continuity of patient care (Eccott et. al., 2012; Watters et. al., 2015; Swan, Richardson, & Metcalf, 2008; Olson & Bialocerkowski, 2014; Reeves et. al., 2010; Nørgaard et. al., 2013).

Though a general improvement of patient care in itself is a desirable outcome, there are also a number of specific drivers that have been suggested to influence the development of IPE as a prominent trend in health and social care both in the UK and globally (Lewy, 2010; Thistlethwaite, 2012). Such drivers include, for example:

- Demographic changes in the population, an increase in volume and complexity of care requirements and rising healthcare costs
  
- Global shortage of healthcare workers
  
- High profile incidents in which patient safety was compromised

Demographic changes (such as ‘an ageing population’; e.g., Rechel et. al., 2013) have resulted in an increase in both complex care requirements and duration of stay leading to a shift from individual-based to team-based care as a range of healthcare professionals collaborate to meet patient needs (Thistlethwaite 2012; Frenk et. al., 2010; WHO, 2010; IOM, 2015). With these changes in the organisation of healthcare, new healthcare professional roles have emerged (e.g., in emergency care; Hoskins 2012; Hoskins, 2011). The rising cost of healthcare is frequently cited in the literature as a current challenge to its provision (e.g., Frenk et. al., 2010; World Health Statistics; WHO, 2015 as reported in Gebreiter & Ferry, 2016). An on-going global shortage in healthcare workers compounds these issues (Aluttis, Bishaw & Frank, 2014). Additionally, a number of high-profile incidents have occurred in which “*preventable errors in healthcare*” (linked to poor collaboration between healthcare professions) resulted in negative outcomes (Kohn, Corrigan & Donaldson, 2000; e.g., BRI Inquiry, Kennedy, 2001). These outcomes ranged from, for example, reduced patient satisfaction, to a profound reduction of patient safety (Baggs, Ryan, Phelps, Richeson & Johnson, 1992; Greenberg et. al., 2007; Brock et. al., 2013; van Leijen-Zeelenberg et. al., 2015). Cases outside of the acute care setting (e.g., high-profile child protection cases; CQC, 2009) have also resulted in increased public pressure for healthcare providers to improve their services (Green, 2014).

These factors combine to create a situation in which there appears not only a need to prepare the future healthcare workforce to face these challenges, but also to develop the existing workforce. Internationally, IPE has been proposed in both research and policy as an approach to healthcare education and intervention that can contribute to addressing these issues. There has been a dramatic rise in the amount of IPE research conducted, with a “*threefold increase over the past two decades*” observed (Nestel, Williams & Villanueva, 2010). These include large-scale reviews and

reports surrounding the possibility of implementing IPE within healthcare in an effective and sustainable way. The World Health Organisation published a 'Framework for Action on Interprofessional Education and Collaborative Practice' (WHO, 2010, p. 7) which highlighted IPE as *"a necessary step in preparing a 'collaborative practice-ready' health workforce that is better prepared to respond to local health needs"*. The paper focused on facilitating the integration of IPE at a policy level proposing that healthcare providers embed IPE throughout their system. A USA-based report from the Institute of Medicine presented guidelines for the development and reporting of IPE studies as implemented in the classroom and in clinical practice (IOM, 2015). Canadian, Australian and UK governments have all taken steps in directing policy towards incorporating IPE into the education of healthcare professionals (Bandali, Niblett, Yeung & Gamble, 2011; Leathard, 2004; Green, 2014). However, as in the WHO framework for action, it has been suggested that in much reported IPE implementation, the IPE is offered primarily to pre-licensure students and is not compulsory.

There has been criticism of the extent of adoption and promotion of IPE in healthcare policy. Some still find the evidence base for IPE to be relatively lacking. In a commentary on the WHO framework for action, Barr (2010, p. 239) considers that although the report cites references as evidence for its' recommendations, *"the nature and weight of that evidence ... is not spelt out"*. He suggests that exponents of IPE need an *"accessible, authoritative and comprehensive manual"* in order to effectively advise policymakers. Others concur that collaboration between healthcare professionals is linked to patient outcomes, but warn against using IPE as a panacea for facilitating collaboration until 'fundamental questions' are addressed (McLaughlin, 2013). Namely: 'does IPE actually enhance collaboration?' and 'does IPE actually enhance patient outcomes?' (Day, 2013). These questions are challenging to address due to difficulty in evidencing a direct empirical link between IPE and patient outcomes.

An assumption underpinning IPE is that IPE facilitates effective collaboration, which in turn improves the standard of patient care delivered. Not only are there several elements underlying this causal chain, said elements are also difficult to operationalize in a valid and reliable way (e.g., Thannhauser, Russell-Mayhew & Scott, 2010; Lindqvist, Duncan, Shepstone, Watts & Pearce, 2005). Such challenges hamper the research aiming to explore direct outcomes of IPE interventions (Reeves, Perrier, Goldman, Freeth & Zwarenstein, 2013). Therefore, though IPE appears to be a promising approach to adopt in healthcare education and practice, more “clarity is required around what can realistically be achieved” (Henderson, O’Keefe & Alexander, 2010, p. 225).

Another issue that must be considered by proponents of IPE is that of resources. In order for healthcare providers to follow recommendations given by governing bodies and leading authorities on IPE, not only do the recommendations need to be communicated effectively, but the resources needed to enact them must be available. This may create a somewhat cyclical problem in that there is an increased focus on evidence-based practice in healthcare (thus allocation of resources may be heavily linked to projects supported by an existing evidence base), however, in order to generate an evidence base, initial resources must be spent (Hoffmann, Bennett & Del Mar, 2013). As described by Lewy (2010, p. 10):

*“...if no evidence is found in relation to improved patient outcomes, minimal resources will be allocated to the development of IPW [Interprofessional Working] and supporting the development [of] IPL [Interprofessional Learning] in student placements. IPL and IPW merely become government drives which must be met but, due to lack of resources and value, they merely become incorporated into existing practice with no staff development or evaluation.”*

IPE is considered as somewhat of an 'investment in the future' but there is a lack of studies providing, for example, a cost/benefit analysis that could be used to secure funding (e.g., Reeves, Perrier, Goldman, Freeth & Zwarenstein, 2013). Nestel, Williams and Villanueva (2010) discuss 'obvious' and 'hidden' costs of IPE. Obvious costs include:

- Human resources (i.e., the staff needed to deliver the IPE intervention)
- In the case of classroom-based IPE interventions, education materials and spaces are needed (or specialist equipment and suites in the case of simulation ward interventions)
- The cost of staff to be temporarily removed from patient care or their regular responsibilities (e.g., an IPE intervention taking place in a practice setting)
- Assessment and evaluation

Hidden costs include:

- The development of a new curricula or training structure and periodically reviewing it to reflect advancements in healthcare and IPE research
- Outsourcing assessment and evaluation if the expertise is not available or upskilling existing staff to develop local capacity

These costs can be a large commitment to make, resulting in much initial IPE research being conducted on a pilot basis in order to explore whether IPE could benefit a particular healthcare organisation before more sustainable long-term resource support is provided. This approach has been criticised in the literature, as the resulting small

scale and sample size of the research, to a certain extent, limits transferability and contribution to the evidence base (Lapkin, Levit-Jones & Gilligan, 2013; Reeves, Perrier, Goldman, Freeth & Zwarenstein, 2013). As such, though IPE is being increasingly explored at a conceptual and theoretical level, resources at the practical level must be considered. Interestingly, Burke (2016; doctoral dissertation, p. 222) discussed promised resources to support IPE versus the resources that are actually delivered and the notion of an IPE initiative being “*resourced to fail*”.

In addition to the drivers generally influencing the current trend of IPE in healthcare, there may also be a number of existing or potential underlying political agendas such as:

- Increased collaboration as a method of cost reduction
- Benefit to public image
- Genericism of the healthcare workforce

The notion that the increased collaboration resulting from IPE could be considered as a method of cost reduction has been suggested in the literature. This is because of the potential “*increase [in the] efficiency and productivity of services through reduction in the duplication of services and increased flexibility of staff*” (Rushmer, 2005, p. 383). The idea of reducing costs through creating a ‘multi-skilled flexible workforce’ is attractive from a resource and general management perspective; however, the healthcare workers must perceive a benefit of this change. There is concern that if IPE is implemented using a heavy ‘top-down’ approach and the

healthcare workers are forced to work together in this way, resistance to such a change would be generated (Lewy, 2010).

The government narrative surrounding the changes in UK healthcare emphasizes the idea of patient-centred practice and empowering the patient to have more control over their health (e.g., DoH, 2007). The inclusion of and support for an IPE agenda (that links to patient-centred practice) in policy implementation is fairly widely publicized. This positive portrayal of an ongoing change in the healthcare landscape of the UK (which involved large government cutbacks) can arguably contribute to influencing public opinion in favour of those who introduced such changes (Harrison, 2002). Additionally, the increasing presence of IPE on the national political agenda demonstrates a level of 'buy-in' to the concept of IPE that may prove beneficial in terms of wider awareness of the educational approach and future support and provision of resources.

A concern that has emerged in regard to the introduction of IPE to the healthcare workforce is that it may signify a move towards increased genericism of roles (e.g., King, Nancarrow, Borthwick & Grace, 2015; Hale, 2003; Nancarrow & Borthwick, 2016). Indeed, there has been an increase in those taking generic healthcare foundation degrees (that do not award a professional status) contributing to the generation of more healthcare workers in general (Lewy, 2010). This approach could be considered as more cost-effective and particularly salient when considering the global shortage in healthcare workers. However, this emergence of a 'generic healthcare worker' role, in combination with the slight blurring of professional boundaries arguably inherent to IPE could be considered as a violation of professional identity and threat to professional status (Ellis & Hartley, 2001; Cameron, 2011). This could affect the engagement of healthcare professionals with the IPE agenda, having

implications for the success of the implementation of IPE initiatives and interventions (Lewy, 2010). Accordingly, Barr (2010, p. 240) warns that:

*“we need to guard against the dangers of becoming caught up in a rising tide of support for interprofessional at the expense of professional education. Each of us has an obligation to our own profession to ensure that CPD is available to enhance its particular knowledge and skills in its particular areas of expertise. Lose sight of that and the interprofessional cause loses credibility”*

It is important to maintain an awareness of the wider context of IPE, including the drivers and agendas for IPE as an international healthcare movement as well as the perspectives of a range of IPE stakeholders and how their interaction may influence the IPE process. This is in order to guide the continuing development of IPE research and build an appropriate research base for the practical implementation of IPE in healthcare. As the field of healthcare provision continually changes in response to internal and external pressures, IPE research as a whole, in order to establish sustainable change, must be an iterative process that considers and reacts to these wider contextual factors.

### **IPE: from vision to practice**

Though IPE has been posited in research and policy as a potential approach to education that could help to improve collaborative practice, identifying and communicating the mechanisms whereby the concept of IPE could be applied within practice settings remains challenging. Effective operationalisation, a key consideration in research, is particularly challenging when exploring inferred phenomena such as social processes underlying changes in attitude and behaviour. Thus, in the case of IPE, the complex social processes that may occur across many settings and over long

periods of time create a relatively convoluted relationship between cause and effect. A multitude of potentially confounding contextual factors at the individual, organisational or wider (e.g., national) level can obscure understanding regarding both the process and outcomes of IPE. The degree that IPE research conducted in a practice setting may effectively inform and guide further research or practice outside of the very specific social, organisational and temporal setting in which the original research is conducted is an important consideration (particularly within a healthcare context; e.g., Rycroft-Malone, Burton, Wilkinson, Harvey, McCormack et. al., 2015). Implementations of IPE have been conducted at a local level with individual healthcare providers conducting pilots and exploratory research into the concept of IPE and how it may be operationalised and evaluated at the level of service provision. One such effort at practice-based implementation formed the basis of the current study.

### **The current research**

The present research sought to explore the process of Interprofessional Working (IPW); where Interprofessional Learning (IPL) occurs within an active practice setting. The implementation and on-going development of a 'faculty of IPE' within an NHS Trust (a process that has been adopted in an increasing number of national and international healthcare institutions; e.g., Hall & Zierler, 2015) was considered as a valuable opportunity to do so. The IPE faculty was designed and implemented by a Trust independently of the present research as part of the organisational development of a hospital at which the Trust sought to develop a structured interprofessional training programme within an acute healthcare setting. This was the first introduction of a faculty dedicated to the implementation of interprofessionally-focused initiatives within the education and training department of the hospital. The faculty, at its' outset, consisted of a small number of education-based staff with varied professional healthcare backgrounds and initial aims included the implementation of a number of

IPE based interventions at both pre-qualification (i.e., students of healthcare professions who undertake their training at the hospital) and as part of continuing professional development (i.e., existing staff and teams practicing within the hospital). Faculty-generated IPE interventions were introduced to a variety of cohorts across a variety of hospital training settings including, for example; a series of day-long classroom-based workshops in which pre-qualification students learned about IPE and how interprofessionalism relates to practice, interprofessional simulation training as part of continuing professional development for existing ward teams and the development of an interprofessional preceptorship program. Faculty staff generated initial IPE interventions based on their experience (including direct observations of international acute healthcare settings where IPE forms a well-established part of the education and training of healthcare professionals) as well as through exploring relevant existing IPE research in order to contribute towards 'evidence-based practice' (Nilsen, Neher, Ellström & Gardner, 2017). As the faculty was at an emergent stage in terms of structure and resources, many of these interventions were introduced on an exploratory or trial basis in which potential ideas for IPE were initially explored within the specific context of this hospital and, where they were seen as successful or effective upon review, further development and allocation of resources would then be provided (generating 'practice-based evidence'; Green & Glasgow, 2006).

Data collected for the current research surrounded two specific IPE interventions developed by the Trust's interprofessional faculty that were being implemented for the first time within this particular setting. The first case study examined a 'pilot training ward' in which pre-qualification students from a number of healthcare disciplines (Nursing, Occupational Therapy, Physiotherapy and Medicine) worked in an interprofessional context to gain supervised training experience on a hospital ward. The second case study followed the IPE faculty introduction of one-year 'rotational

posts' for newly qualified nurses. The posts had an interprofessional focus and provided each nurse an opportunity to rotate across three major departments within the hospital whilst receiving support from a mentor as well as taking part in a number of organised interprofessional activities throughout the duration of the year. As both interventions involved the delivery of IPE within a 'live' practice setting (e.g., IPE set in active wards/practice) as opposed to a traditional classroom-based setting (e.g., a workshop or lecture surrounding the use of IPE in a practice setting) they were considered to be illustrative case studies surrounding the process of IPE as it may occur in a live practice setting (IPW). It was also considered as a valuable opportunity to gain insight on the IPW process as it occurs at both a pre and post qualification level. As the Trust's interprofessional faculty was newly developed and relevant data collection began near to the outset of the faculty's establishment, it is important to note from a contextual/organisational perspective that the faculty changed and developed over the course of the research. Such changes and their relation to the current research process are considered at appropriate points in the thesis.

## **Research Aims and Objectives**

### Research Aim

- Explore the use of Interprofessional Working (IPW) as a vehicle for Interprofessional Learning (IPL) within a 'real-world' context.

## Research Question

- Can IPW be considered as a useful conceptual distinction when exploring IPE within a live practice setting? What are some factors that seem to inform the IPW process?

## Research Objective

- Examine individual IPW interventions implemented within an acute care setting and the interaction between IPL and the specific context of active practice. Explore factors that appear to reflect the unique nature of IPW and consider how they may facilitate or inhibit the process of IPL.

## **THESIS STRUCTURE**

### Chapter 1 Summary

Chapter 1 introduces Interprofessional Education (IPE) within the context of the current research project. In order to unpick the nature of IPE, definitions, conceptualisations and underpinning theories in the literature are explored. There is a particular focus on IPE within a healthcare context and potential differences in IPE when delivered in a traditional classroom setting versus a professional practice setting. The concept of Interprofessional Working, or Interprofessional Learning that occurs within a live practice setting, is explored as well as a potential approach to exploring this concept.

## Chapter 2 Summary

Chapter 2 explores relevant existing IPE and IPW literature. This is in order to unpick the IPW process and gain insight into whether there is evidence within the literature for a distinction between IPE that takes place in a classroom setting when compared to a practice or applied setting. Challenges in examining IPW (e.g. the lack of consistency in terminology and the limited inclusion of contextual information in reported research) and potential for the use of approaches such as realist evaluation within this research area are considered.

## Chapter 3 Summary

Chapter 3 provides detail surrounding the design and methodology of the current research. The chapter includes procedural information regarding the process of data collection ranging from participant recruitment to the approach to data analysis. The epistemological standpoint adopted in the current research as well as relevant ethical considerations are discussed.

## Chapter 4 Summary

Chapter 4 presents the main findings of the data analysis. Key themes relating to the IPW process that emerged from the data are identified and defined through the use of thematic analysis with supporting quotes.

## Chapter 5 Summary

In Chapter 5, the findings of the present study are discussed with consideration of relevant theory and research and the initial research aim. Contribution to knowledge and potential implications of the research findings for theory and practice are also discussed. Limitations of the present research are considered and directions for potential future research are suggested.

# CHAPTER 1. INTERPROFESSIONAL EDUCATION (IPE): DEFINITIONS, CONCEPTUALISATIONS AND THEORY

## CHAPTER OVERVIEW

Interprofessional Education (IPE) refers to an educational approach that aims to bring together those from differing professions in order that they learn *“from, with and about each other to improve collaboration”* (Freeth et. al., 2008, p. 31). It has been defined, from a healthcare perspective, as when *“two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes”* (WHO, 2010, p. 7). The term encompasses a large and diverse range of approaches to education, policy and organisational development (Freeth, Hammick, Reeves, Keppel, & Barr, 2008; Reeves et. al., 2011). The aim of this chapter is to explore the definition and conceptualisation of Interprofessional Education (IPE) in existing literature. This focuses particularly on IPE within a healthcare context and potential differences in IPE when delivered in a traditional classroom setting versus a professional practice or workplace setting. In order to unpick an educational approach such as IPE, it is important to consider the role of underpinning theory such as that relating to learning, teaching and training. This chapter will therefore also explore theory surrounding IPE and the concept of Interprofessional Working (IPW). A brief chapter outline is provided:

- 1.1 Defining IPE
- 1.2 Conceptualisations of IPE
- 1.3 IPE research: considering theory
- 1.4 Exploring pedagogy: how theories of learning relate to IPE
- 1.5 Interprofessional Working

## 1.6 Chapter Summary

### 1.1 Defining IPE

A lack of consistency in IPE definition and related terminology has been highlighted within the literature (e.g., Perrier, Adhietty & Soobiah, 2016); thus it is an area of inquiry that has been aptly described as somewhat of a 'terminological quagmire' (Leathard 1994; 2004). Indeed, extant IPE literature makes reference to a multitude of terms, for example, 'interprofessional learning', 'interprofessional practice', 'interprofessional working', 'collaborative practice', 'collaborative education' and 'multi-professional working' (Dimoliatis & Roff, 2007; Perrier, Adhietty & Soobiah 2016). These terms are often used interchangeably, being considered as synonymous to IPE whereas, in some instances it can be argued that there exist key conceptual distinctions (Reeves et. al., 2011). An illustrative example is highlighted by Reeves, Goldman and Zwarenstein (2009), who consider the well-intentioned combination of two related but distinct terms (IPE and 'Interprofessional Collaboration' which were combined to IECPCP, or, 'interprofessional education for collaborative patient-centred practice'). This merging of terms, in their view, though demonstrating the interrelated nature of these concepts somewhat obscured understanding of the individual nature of each term. Accordingly, ambiguity surrounding precisely what the concept of IPE encompasses and how these facets may interact has been cited across the literature as a key challenge in IPE research, obscuring the development of further understanding (e.g., Reeves et. al., 2011; McLaughlin, 2013; Abu-Rish et. al., 2012; Thistlethwaite, 2012; Olson & Bialocerkowski, 2014; IOM, 2015).

There is a relative consensus in the literature, however, that in order for an educational approach to be considered as 'interprofessional' there must be an explicit

inclusion of a specific goal regarding the increase of collaboration and knowledge of other's roles (Carpenter & Dickinson, 2016a). This aspect distinguishes IPE from, for example, 'Multiprofessional Education'; a term used in the literature to refer to a group containing two or more professions that have come together to complete a specific task **without** the goal of increasing collaboration and knowledge of other's roles (e.g., Pirrie et. al., 1998; Rawson, 1994). Though interaction between different professions is inherent to Multiprofessional Education, this exposure does not necessarily increase effective collaboration and thus the terms are not viewed as synonymous (Dickinson & Carpenter, 2005).

Disparate use of IPE terms and definitions in the literature can to a certain extent be attributed to a need for further conceptual clarity. IPE is somewhat of an 'umbrella term' that can reflect a multitude of scenarios. In one instance, IPE could refer to an overall approach to education or organisational development (e.g., organisational structure, policy and resource management, or curriculum development; e.g., Burton, 2015; Davies, Fletcher & Reeves, 2016; Holzemer, 2013). In another, it could refer to a specific intervention itself (e.g., a classroom-based IPE workshop, or a practice-based intervention undertaken as part of continuing professional development; e.g., Reeves, Palaganas & Zierler, 2017). Additional layers of context to be considered include:

- differing settings (e.g., classroom vs. practice, acute vs. community care, private vs. public healthcare organisations)
- differing target groups (e.g., varying combinations of healthcare and related professions)
- temporal factors (e.g., what stage of qualification an IPE intervention may be implemented; e.g., Gould, Day & Barton, 2017)

With such breadth of coverage, blanket use of the term IPE is not necessarily conducive to building understanding of the many potential different aspects of IPE at a conceptual or theoretical level. For example, is the nature of IPE as a finite approach to specific interventions that are implemented in an ‘input-output’ manner, or, is IPE an on-going process in which approaches, or interventions aim to facilitate or encourage the process of IPE to occur?

Distinguishing between differing extant IPE terms may, in some instances provide a certain level of conceptual clarity. For example, the term Interprofessional Learning (IPL) has been treated as a synonym of IPE (e.g., Hood et. al., 2014). A slight distinction, however, could be made between the terms in that IPE may refer to a general approach to the delivery of formal education for those in healthcare whereas IPL may refer to the actual individual learning process that is taking place within an IPE intervention. Thus, the use of IPE as an umbrella term to refer to any educational approach or intervention that is explicitly designed to be interprofessional could continue, with the term IPL instead referring to the specific type of learning that can take place within these instances.

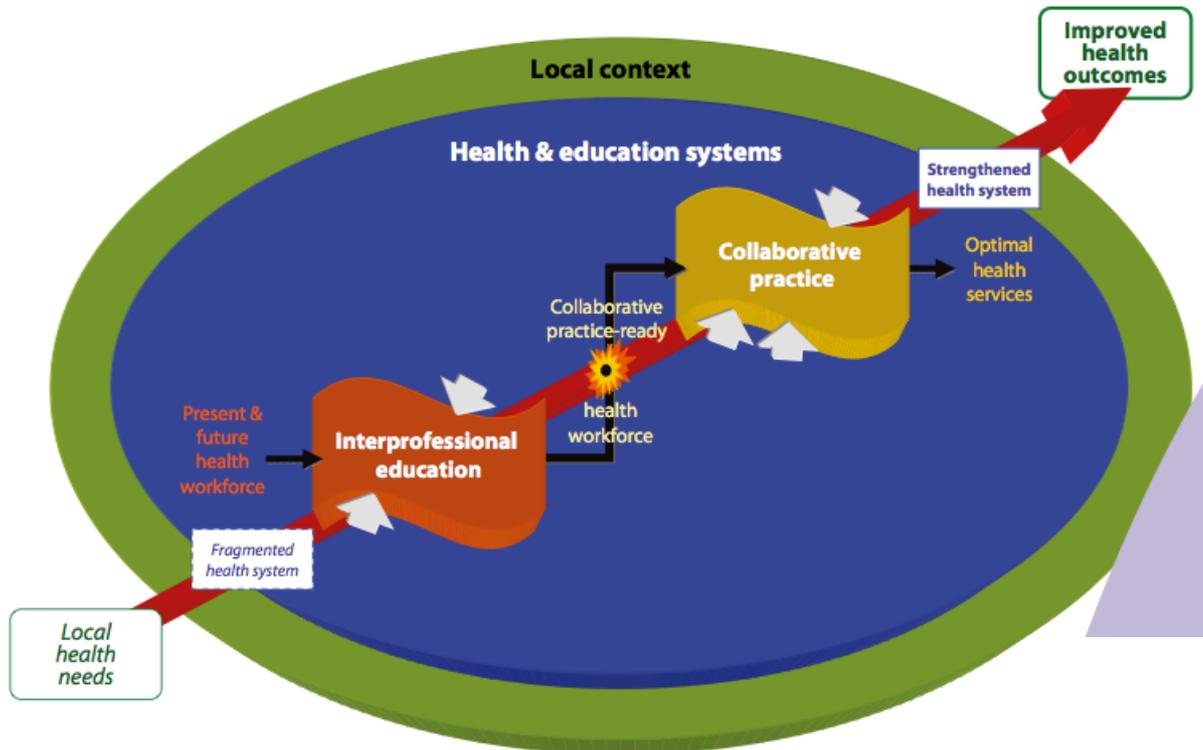
## **1.2 Conceptualisations of IPE**

IPE as an approach to education eschews the traditional and still relatively ubiquitous ‘silo’ model within healthcare in which those from different professions or specialities are, primarily, educated and/or trained separately (Green & Johnson, 2015). It has been suggested that a silo approach may contribute to the generation of an organisational culture in which effective communication and collaboration between those of differing professions is inhibited (Hignett et. al., 2016). With a growing demand

for healthcare organisations to provide integrated services in which varying professions work together to address increasingly complex healthcare needs (Aluttis, Bishaw & Frank, 2014; Frenk et. al., 2010; Gebreiter & Ferry, 2016; Green, 2014; Hoskins, 2011; 2012; Lewy, 2010; Rechel et. al., 2013), IPE has been suggested as an approach to increasing effective collaboration in healthcare (Kohn, Corrigan & Donaldson, 2000; WHO, 2010; Frenk et. al., 2010; Abu-Rish et. al., 2012; Thistlethwaite, 2012; Olson & Bialocerkowski, 2014; IOM, 2015). This is proposed to work through the use of IPE (as opposed to traditional methods of healthcare education and training) to generate outcomes that are considered to be valuable (e.g., increased communication, self-efficacy, professional confidence and awareness of other's roles (Swan, Richardson, & Metcalf, 2008; Eccott et. al., 2012; Nørgaard et. al., 2013; Watters et. al., 2015; Thistlethwaite & Moran, 2010). Logically, these outcomes are assumed to contribute towards effective collaboration, thereby improving the quality and continuity of patient care (Lennox & Anderson, 2012; Shrader, Kern, Zoller & Blue, 2013; Cox, Cuff, Brandt, Reeves & Zierler, 2016; Olson & Bialocerkowski, 2014; Reeves et. al., 2010).

The numerous potential variations in IPE (with additional consideration of spontaneously generated or unintentional processes and outcomes that may be either positive or negative: Freeth, et al., 2008) are reflected to varying degrees in conceptualisations of IPE in healthcare throughout the literature. The model presented in the World Health Organisation's Framework for Action on Interprofessional Education and Collaborative Practice (WHO, 2010; Figure 1) is relatively linear in its conceptual link between IPE and patient outcomes:

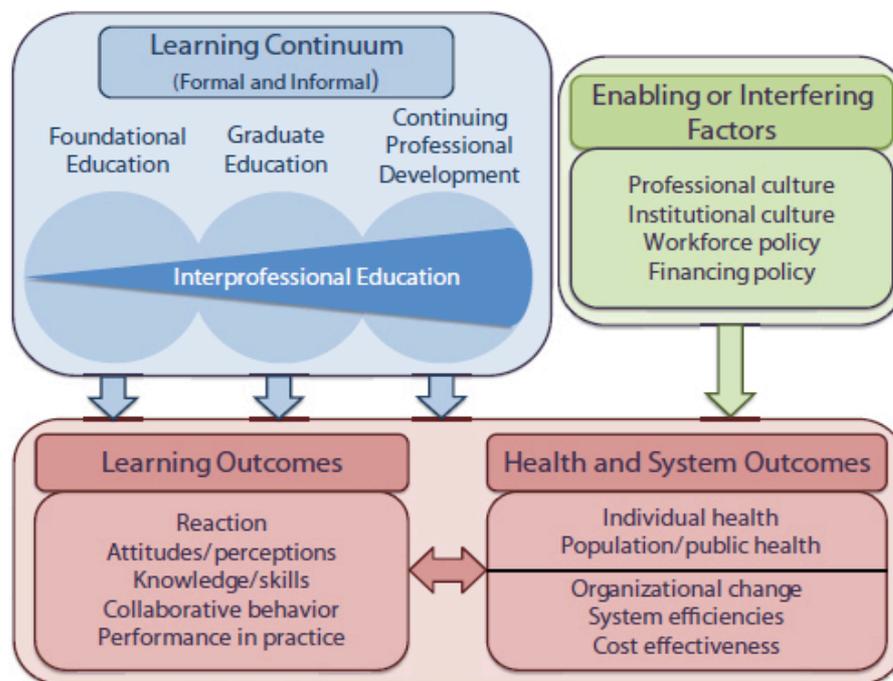
**Figure 1.** Graphic representation of the conceptual link between IPE and health outcomes, taken from the WHO Framework for Action on Interprofessional Education and Collaborative Practice (WHO, 2010).



The WHO (2010) model illustrates a logical path in which effective use of IPE improves collaborative practice and thus positively impacts health outcomes. Although, it has been previously noted that such outcomes are not guaranteed without a “clear sense of the interprofessional objectives of such an arrangement”, suggesting the need for a structured framework to ensure success (Rance, 1996, p.8). The framework provided by the WHO (2010) model is therefore useful for providing an overall conceptual summary of the perceived potential benefits utilising IPE in general in a healthcare setting. However, it does not specify the range of IPE interventions available, contexts they may take place in, or specific internal and external factors that may influence this process. Thus, it assumes a common-sensical linear logic that does not problematize and unpick IPE.

A more detailed model that includes factors such as additional outcomes, mediating factors, environmental and external influences and the consideration of the career stage of IPE recipients is presented by the Institute of Medicine (IOM, 2015; Figure 2).

**Figure 2.** The Interprofessional Learning Continuum Model (IPLC; figure taken from IOM, 2015).



This model provides more detail regarding factors that may interact with IPE (e.g., stage of education, organisational culture and policy) and illustrates the variety of outcome variables that may emerge both for an individual and the organisation/wider system. However, the model could be expanded to indicate the types of IPE and the contexts in which they can be deployed (e.g., practice or classroom/simulation). It is important to consider author intention however, in that there may have been a focus on

providing an overall conceptualisation of IPE within healthcare rather than one that breaks down the components of IPE.

Both models discussed (WHO, 2010; IOM, 2015) are examples that provide a useful overview of the core concept and fundamental assumptions of IPE. However, the consideration of IPE as a whole, in a similar fashion to the use of IPE as an umbrella term (without use of additional terms for further clarification), to some extent prohibits coordination across the literature in the exploration of the many individual facets comprising IPE due to the somewhat overwhelming potential conceptual scope. Additionally, it is important to consider the range of theories that underpin such conceptual models.

### **1.3 IPE research: considering theory**

It is posited that there should not be a separation between theory and practice (or indeed practice and theory) as *“the meaning or value of a theory lies in its practical consequences”* and conversely ‘intelligent practice’ cannot take place without engaging with theory (Reeves & Hean, 2013, p. 2; Dewey, 1923; Eraut, 2003; Glanz, Rimer & Viswanath, 2008). The incorporation of relevant theory into IPE research has been repeatedly stressed in the literature (Barr, 2013; Hean, Craddock & Hammick, 2012; D’Amour, Ferrada-Videla, San Martin Rodriguez & Beaulieu, 2005; Anderson, Smith & Hammick, 2015; Essen, Freshwater & Cahill, 2015). A review ‘to improve the conceptual clarity’ of IPE research, for example, noted a ‘minimal use of theory’ (Reeves et. al., 2011). Some theory surrounding IPE has emerged (Reeves, Palaganas & Zierler, 2017), many of which can be heuristically considered as ‘mid-range theories’, or, theories that *“acknowledge the importance of abstraction, representation and refinement of general principles that apply across multiple*

*situations, whilst also recognising the limitations of such entitative [sic] abstractions in accurately representing emergent, contingent and locally specific reality”* (Thompson, 2011, p. 754; Merton, 1968). This may be due to the practical focus of IPE in that it focuses on the eventual workplace. However, there is still call for the inclusion of broader theory (Thompson, 2011; Thistlewaite, Jackson & Moran, 2013) that is either more abstract (‘grand theory’) or more narrowly focused (‘microtheory’; Merton, 1968). This suggests that perhaps the most appropriate approach to IPE is to ensure a number of theories are drawn upon to inform practice (Colyer, Helm, & Jones, 2005). Such theories can then be applied to the development of a more detailed conceptual mapping of IPE (e.g., the IPE taxonomy presented by Bainbridge and Wood, 2013).

A large amount of theory relating to learning (how we learn) and education (curriculum development and how we teach) can be related to IPE (Hean, Craddock & O’Halloran, 2009). There are several questions that examine IPE at a fundamental level. For example, are those in the process of IPE learning finite things such as knowledge regarding other roles or knowledge/skills regarding effective collaboration (e.g., Burns, 1995) or are they learning how to learn in a practice setting (e.g., metacognitive knowledge that suggests infinite continuing professional development)? Furthermore, is there a distinction to be made within the conceptualization of IPE between knowledge and skills gained? If knowledge is information that can be held in a passive way and skill is an active deployment which may involve the use of that knowledge, then can IPE in a practice setting be considered as conferring both knowledge and skills that may have a positive effect on subsequent collaborative practice? If so, perhaps this further distinguishes practice-based IPE from IPE that takes place in a classroom setting where one gains knowledge of how to be interprofessional rather than the skill of being interprofessional. To use a metaphor, one could gain knowledge of how to build a brick wall (e.g., information surrounding the

materials and procedural steps required) however, this does not necessarily equate to gaining the skill of actually being able to physically build the wall itself.

Questions surrounding the nature of IPE as an approach to the delivery of education such as these are important to consider in order to develop a more holistic theoretical insight. Though IPE is essentially an approach to education (in the formal sense), there are a number of additional domains of theory that may be drawn upon.

The term IPE is, in itself, a useful indication of potentially related domains of theory:



These domains, however, are by no means exhaustive or mutually exclusive.

#### **1.4 Exploring pedagogy: how theories of learning relate to IPE**

“Tell me and I will forget. Show me and I may remember. Involve me and I will understand.” (Confucius, Circa 450 BC)

### **1.4.1 General approaches to facilitating learning**

Fundamentally, the concept of learning concerns the acquisition of knowledge or skills and there exist a number of conventional theories as to how learning occurs. From a behaviourist perspective, Skinner (1988) presents the process of learning as the building of a set of conditioned responses to stimuli. Knowledge consists of a repertoire of behavioural responses to environmental stimuli. The view of the individual as a learner within a teaching or instructional context is that of a relatively passive recipient who is instructed or directly taught certain knowledge and skills with appropriate responses being reinforced. Though behaviourists would posit that the underlying theory can be considered to encompass all learning, there has been criticism regarding the reductionist nature of a purely behaviourist approach to education. The limitations relate to its perceived failure to take into account the social, experiential, cognitive and emotional aspects of learning.

Some of these limitations were addressed through the inclusion of the concept of vicarious learning in 'Social Learning Theory' and 'Social Cognitive Learning Theory' (Bandura, 2006). These introduce the concept of learning through seeing the outcomes of behaviours modelled by others rather than directly experiencing them, or to acquire knowledge or change cognitive structures via observation. Learning how to do something by being able to copy what one sees another do (either directly or via some form of media) would typically be represented by the direct tuition or apprenticeship model of instruction.

Additionally, cognitivist approaches view the process of learning as the continuing building of cognitive structures that are actively constructed by learners based on pre-existing cognitive structures (Piaget 1964; Barrouillet, 2015). Here,

learning involves the reorganization of experiences either by attaining new insights or changing old ones via the processes of assimilation and accommodation. However, though learning by discovery, and self-initiated learning as well as learning via direct instruction is a core element of the process of changing or building cognitive structures or schemata, the organisation of the learning experience linked to these theories is generally directed and structured in a conventional way. Thus, criticism may again be made of this theory of learning and associated instructional/facilitation model as it does not consider the influence of complex socially mediated learning experiences such as those encompassed within IPE.

In the case of IPE, behaviourist and cognitivist theories of learning such as these essentially focus on 'outcomes of learning expressed as behaviour' or changed mental structures/representations and 'interprofessional competencies' (Hean, Craddock & O'Halloran, 2009, p. 4). If used to inform an IPE intervention, such theories of learning would emphasise the importance of observable and measurable outcomes as an indication that learning has occurred (e.g., Cox, Cuff, Brandt, Reeves & Zierler, 2016; Oates & Davidson, 2015; Armitage et. al., 2003). This is reflected in current educational trends with a move towards 'outcome-based education' in both healthcare as well as UK Higher Education in general (e.g., Hean, Craddock & Halloran, 2009; Harden, 2015; Rosenbaum, 2017). Accordingly, research linked to IPE evaluations that focus primarily on outcome measures to the exclusion of process measures, can be considered as somewhat drawing from behaviourist theories of learning (Thistlethwaite & Moran, 2010; Thistlethwaite 2012). Placing emphasis on "what" information is elicited/conveyed (content) over "how" content is elicited/conveyed (process) presents a problem in the case of IPE, (Rosenbaum, 2017; Evans & Pawlina, 2015; Kurtz, Silverman, Benson & Draper, 2003). This is due to the relatively intangible nature of key conceptual outcomes of IPE, in that the primary focus of IPE is not the delivery of

the curriculum content, but rather, to improve collaborative practice via promoting related outcomes such as improved teamwork and communication. These outcomes are somewhat more difficult to measure, limiting the applicability of the traditional learning outcomes of the behaviourist or cognitivist paradigms:

*“Thus, it is not sufficient ... to identify the learning outcomes in terms of mastery of an understanding and knowledge ... and even how the subject contributes to clinical medicine. How [it] contributes to more generic outcomes such as communication and team skills and recognition of the role of other professionals must also be specified”* (Harden, 2015, p. 292).

Constructivist theories of learning instead focus more on the process of learning itself (Hean, Craddock & O'Halloran, 2009). 'Cognitive constructivism' refers more to the technical processes that the learner experiences, for example pedagogical theory surrounding general concepts of learning such as knowledge acquisition, knowledge transfer and transformative learning (Knowles, 1996; Mezirow, 2003; Kaufman & Mann, 2010; Kitto, Chesters, Thistlethwaite & Reeves, 2011; Bainbridge & Wood, 2012). Classic constructivist theories of learning seem to provide a 'best fit' for the concept of IPE. For example, Vygotsky's 'sociocultural theory of learning' highlights the importance of considering contextual processes as mediators of learning (Vygotsky, 1978). Engeström (2001, p. 134) suggests that “the power of Vygotsky's ideas lies in his explanation of the dynamic interdependence of social and individual processes”. Such an interaction is implicit in current conceptualizations and models of IPE that highlight such additional mediating factors (John-Steiner & Mahn, 1996, p. 192; e.g., IOM, 2015).

'Social constructivism' considers learning as a social process and emphasizes the influence of the social environment on the learning process rather than solely considering individual factors (Hean, Craddock & O'Halloran, 2009; Atherson, 2010). Within this paradigm, knowledge is constructed within social contexts through interactions with a knowledge community through activity (Zydney, Hai-Jew, Renninger, & List, 2012). Learning is seen as a social and cultural process, which occurs in the context of people's relationships and activities and emphasises shared meanings generated through joint activity. Though each set of meanings is linked to a specific cultural or workplace context and the interaction of the specific individuals operating within that setting, there are aspects of knowledge, skill, and practice that may be applied to other similar settings with similar social, cultural and interpersonal dynamics. Subsequent theories surrounding learning that have developed, generally support the premise that learning is essentially a social process. For example, 'Activity Theory' (Engeström, 1999) builds upon Vygotsky's model with more recent iterations including aspects such as consideration of social rules and conventions, the history of 'activity systems' and ongoing system transformation.

Theories such as 'situated learning' (Lave & Wenger, 1991), in which communities of practice that facilitate the acquisition of professional skills are formed following 'legitimate peripheral participation', form illustrative examples of the interaction between social, organisational and educational domains. Situated learning (and the wider concepts of communities of practice and social learning systems; Wenger, 2010) has been referenced within IPE literature and supports the conceptualisation of IPE as part of "*ongoing interprofessionalisation socialisation processes within ... health systems*" (Oandasan & Reeves, 2005, p. 46). However, the communities of practice formed in a healthcare environment would not necessarily be interprofessional, but may instead be multiprofessional, in that those involved are

working separately but in parallel with other professions (Thistlethwaite, 2012). Methods for ensuring that the process remains interprofessional, for example through the identification of several 'contact variables' have been suggested (Carpenter & Dickinson, 2016b; Hean & Dickinson, 2005). These models of learning seem to be appropriate paradigms through which to explore the learning process that occurs within IPE.

#### **1.4.2 Learning by doing**

*"For the things we have to learn before we can do them, we learn by doing them"*  
(Aristotle, in The Nicomachean Ethics)

Practice based IPE, as it is within a 'real world' workplace setting, may be situated within the tradition of experiential learning (Kolb, 2014). Kolb proposed a four-stage learning process that is used to describe the experiential learning process (McGill & Beatty 1995). The process can begin at any stage and the cycle is continuous. The stages within the cycle are: 'Active Experimentation' (experimenting to find solutions); 'Concrete Experience' (putting it into practice); 'Reflective Observation' (Objectively analyse the outcome); 'Abstract Conceptualisation' (reviewing one's conceptual understanding). The configuration of IPE also resembles the 'action learning sets' described by McGill & Beatty (1995) where the 'set' in this instance is the staff group working on the ward who work on real life issues with the aim of learning with and from each other.

A distinction may be made between classroom-based IPE and practice-based IPE; the difference essentially being 'learning *about* doing' versus 'learning *by* doing'. 'Practice-based Learning' as an educational concept, similarly to IPE does not have a

universally accepted definition within the literature (Thistlethwaite, 2016). Practice-based learning could be used as a term to refer to any learning activity that takes place within a practice setting. However, in the case of practice-based IPE, this learning must be active in nature (i.e., not merely passive observation) as well as fulfil the requirements for the education to be considered as interprofessional (i.e., with 'explicit inclusion of a specific goal regarding the increase of collaboration and knowledge of other's roles'). 'Action Learning' is a process that seems to have clear conceptual parallels to aspects of practice-based IPE. It is a general approach to education that emphasizes the importance of learning through reflection on experiences of taking action (Revans, 1982). This is through reflecting on these experiences in small groups referred to as 'action learning sets' (Beaty & McGill, 2013) and insight is gained through people learning with and from each other in these sets (Pedler, 2011). Reflection on participation in IPE activities in order to consolidate learning has been recommended in the literature (e.g., Clark, 2009).

There is support in the literature surrounding educational theory for providing practice-based learning opportunities such as in the case of practice-based IPE as "authentic experiences provide depth, strengthen didactic learning and its relevance to clinical practice and foster relationships" (Loversidge & Demb, 2015, p. 303). This experience seems to be considered valuable as learning with simulated patients or in clinical skills laboratories "are only proxies for the complexities of the clinical workplace, which includes patients' homes as well as primary, secondary and tertiary healthcare facilities" (Thistlethwaite, 2016, p. 17). Further research that explicitly explores potential theoretical differences in the process of practice-based IPE and classroom-based IPE would provide additional conceptual clarity (though some research has explored IPE specifically within a practice-setting e.g., Steven, Dickinson & Pearson, 2007).

It is suggested that experiential learning enables learners to experience improvement in action (Kolb, 1984). This is thought to apply to the specific context of healthcare where caring for patients and learning from this process integrates practice-based learning with improvement (Mazmanian, 2003) and leads to changed behaviour in the workplace (Kane, 2007). This is thought to be facilitated by processes of reflection, both in and on the workplace (Wilcock, Janes, & Chambers, 2009). It is argued that, in order to be useful, knowledge needs to be applied in realistic contexts.

One strand of experiential learning, originally proposed by Lave and Wenger (1990), is situated learning. Their model of learning is akin to an apprenticeship approach where people learn through guided practice, gradually becoming confident and competent members of the community of practice. They suggest that in the initial stages learners are 'legitimate peripheral participants' who learn from the established community of practice through observation and guided practice, gradually becoming integrated into the central core of the community of practice. However, situated learning extends beyond the conventional view of apprenticeships which places emphasis on observation and imitation as the main vehicles by which learning takes place. It views the learner as an active participant, learning from and with all of the members of the community of practice (Egan & Jaye, 2009). A distinction is made between a teaching curriculum and a learning curriculum (Lave & Wenger, 1990). A teaching curriculum is described as a structured process of instruction that may serve to limit opportunities for learning and to unhelpfully restrict the range of things that are recognised as learning. A learning curriculum, in contrast, is viewed as "*situated opportunities for development, whereby the community becomes the learning resource and learning occurs in many ways*" (Mann, 2011, p.64).

Besar (2018, p. 49) argues that SLT *“holds that effective education requires learning that is embedded in authentic contexts of practice, wherein students engage in increasingly more complex tasks within social communities.”* This is seen to have particular relevance with the healthcare domain where distinct but interconnected roles and activities are enacted with practitioner communities. Billet (1996, p. 264) explores *“how the circumstances of the acquisition of knowledge influence cognition and, as a consequence, the transfer of knowledge to other situations”*. This transfer has a social as well as a cognitive dimension.

These models of learning deriving from the stable of experiential learning most closely reflect the type, process, and organisation of learning that may be hypothesised to occur within the pilot training wards forming a key element within the current research. Capturing and describing the key elements of such a fluid and evolving process of learning is challenging which suggests the adoption of approaches that inherently aim to capture the essence of such processes and in order to draw relevant abstractions (e.g., critical realism and linked methodology: Pawson & Tilley, 1997).

### **1.4.3 Learning in the workplace**

The context within which learning takes place is an important consideration when exploring the process of ‘learning by doing’ (practice-based IPE). A dynamic organisational setting such as acute healthcare may uniquely interact with or influence the process of practice-based IPE. Complexity theory, for example, is the conceptualization of an organisation as a complex combination of interactions between internal and external forces that cannot be fully controlled (Thompson, Fazio, Kustra, Patrick & Stanley, 2016). Parallels can be drawn with IPE in that both complexity theory and IPE incorporate the idea of uncontrollable and potentially confounding factors. The

focus is on generating an ideal environment for a desired outcome to take place or 'emerge' rather than trying to directly manufacture the outcome (e.g., Sturmberg, Martin & Katerndahl, 2014). In the case of IPE that takes place in a practice setting, though much prior formal planning can be undertaken, in an acute healthcare setting, the environment is much less stable (and therefore 'real') than if the IPE were to take place within a classroom setting. External factors such as a sudden unexpected change or increase in healthcare demands or internal factors such as sudden fluctuations in staffing or resources may impact on the effectiveness of IPE. The 'realities of clinical practice' in which IPE *"is often conducted in circumstances in which time and human resources are limited"* (Hean, Craddock & O'Halloran, 2009, p. 4) make the application of abstract theoretical models challenging. Thus, there is a need to consider the organisational context in which IPE is taking place as a factor that will influence the development and implementation of IPE interventions as well as the IPL process itself. In a similar fashion to the well-worn adage within education, 'learning to read moves to reading to learn', a similar one could be constructed for the process of informal learning that takes place within active settings; 'Learning to work leads to working to learn'. Without wishing to push the analogy too far, the key to using the skill of reading in order to increase learning is to be exposed to the appropriate breadth and depth of reading material. In professional development (particularly in relation to interprofessional learning) the quality and richness of the context (in respect to collaborative working practices) within which the person works will significantly impact on their learning.

There exists a broad range of theoretical paradigms relating to an organisational (and within that social) context that could potentially inform practice-based IPE. For example:

### 1.4.3.1 Curricula

Education can, at one level, be considered as a formal process in which the learning of set knowledge or an explicit 'curriculum' is facilitated. However, additional implicit learning that may be either informal or even hidden can also take place during the education process. For example, Hafferty (1998) within a healthcare context explores the idea of 'formal', 'informal' and 'hidden' curricula (Table 1):

**Table 1.** Hafferty's (1998) suggested dimensions of education; dimension descriptions amended from Bradley, Steven and Ashcroft (2011, p. 1-2).

<b>Formal Curriculum</b>	Education as stated, intended, formally offered, and endorsed
<b>Informal Curriculum</b>	Unscripted, predominately ad hoc, includes the significance of role models, and is a highly interpersonal form of teaching and learning
<b>Hidden Curriculum</b>	A set of influences that function at the level of organizational structure and culture and include customs, rituals, commonly held "understandings," and the "taken for granted" aspects of a profession

In the literature, the 'hidden' curriculum (Hafferty, 1998) is thought to arise from the complex interaction of implicit values transmitted from multiple sources (Gofton & Regehr, 2006). Kashner et. al. (2017), for example, found that one aspect of a potential hidden curriculum which affected the views of the participants in their study in relation to the value they placed on IPE was that trainees may not think that interprofessional

team and patient-centred care would factor heavily in course grades, student evaluations, or licensing and board certification examinations.

A study of the views of medical students in a UK medical school by Lempp and Searle (2004) in relation to teaching quality identified a number of factors emerging from what would be part of the hidden curriculum. Key aspects of the hidden curriculum which impacted on the students' views of the quality of the teaching included the impact of encouragement and positive models provided by staff; negative aspects of inconsistent teaching/guidance from clinical staff; instances of hierarchies being reinforced by the use of humiliation; and the underlying message given that progress through the hierarchy of the profession is dependent on competition rather than cooperation. A similar pattern was found by D'Eon, Lear, Turner, and Jones (2007) who conducted a similar study with medical students in Canada. They suggested that the aspects of the 'hidden curriculum' such as exposure of students to clinical staff presenting poor role models and unresolved ethical issues served to undermine the formal aspects of the education they were receiving. However, other researchers (Ozolins, Hall, & Peterson, 2008; Masella, 2006) have commented on the sometimes positive aspects of the hidden curriculum. Masella compares it to 'extra-curricular' or out of class learning, suggesting that it can provide students with a broader perspective on the wide range of elements, both intellectual and social, associated with professional life. Ozolins and colleagues found that medical students were aware of the informal and hidden aspects and valued them. The students appreciated that they could learn things from this informal and hidden curriculum that could not be covered within the formal curriculum.

Clinically-based IPE could be considered as particularly 'messy' within the context of the hidden curriculum as messages may emanate from multiple and varied

sources. One of these, for example, could be the perceived power or status differentials between doctors in training and other health professionals. This would impact on the respective professionals' views regarding the nature of collaboration within an IPE context and the way that they 'read' the behaviour (including verbal behaviour) of others. This, and other intra and interprofessional patterns of internalised thoughts and views is a difficult element to control for in planning learning opportunities within a clinic-based IPE environment. Whilst one of the key purposes of IPE is to address preconceptions within and between professional groups, the fluid and socially dynamic nature of interactions within a live training environment in particular means that the messages that the exercise is designed to imbue can become distorted by factors that are 'hidden' from the awareness of the facilitators (Gofton & Regehr, 2006).

Aspects of learning influenced by the hidden curriculum can sometimes only be picked up following the training when facilitators attempt to identify what has been learnt as opposed to what it was planned would be learned (Gaufberg, Badalden, Sands, & Bell, 2010). These unique aspects of unaccounted-for learning are difficult to identify using standardised tools such as pre and/or post-training rating scales or structured questionnaires and tend to emerge from the narrative reflective accounts of participants. A more sophisticated form of analysis such as realist evaluation (Pawson & Tilley, 1997) may be required to identify the specific contexts, mechanisms and outcomes pertaining to fluid and complex learning situations where a specific hidden curriculum may be affecting process and outcomes (Astbury & Leeuw, 2010).

As an inherent aim of IPE is to positively influence perceptions and attitudes, it follows that all three types of curriculum may come into play as part of the IPE process (e.g. Thistlethwaite, 2016). This is an example of the overlap between social, organisational and educational theory in exploring IPE.

### 1.4.3.2 Teamwork

Working within any organisation typically involves an aspect of collaboration, or, 'teamwork' in order to achieve certain objectives or outcomes. A team has been defined as consisting of "two or more individuals, who have specific roles, perform interdependent tasks, are adaptable and share a common goal" (Salas, Dickinson & Tannenbaum, 1992). More specifically, when examining teams within the context of a larger organisation, a team is a group "*with clearly defined membership and shared responsibility for a team product or service*" (often found to range in size from five to twenty people: Edmondson, 2004, p. 33). Theory surrounding the concept of a 'team' is an inherent part of understanding IPW and is an area that is becoming increasingly salient as increasing demand is placed on current healthcare systems. The complexity of current healthcare systems is further illustrated by the call for an update in the consideration and theory of team dynamics in IPE:

*"The conventional concept of teamwork, in which team members meet regularly to discuss and develop patient goals, does not do justice to the complexity of modern health care delivery as it is limited to settings in which health professionals work in well-defined and co-located teams. Collaboration may occur in more flexible, fluid and distributed contexts, such as in networks and across care sectors (including the social, judicial and education sectors), and may involve changing membership and even leadership"* (Thistlethwaite, 2012, p. 67)

This highlights a fundamental change in the traditional concept of a healthcare provision team. Not only is collaboration between multiple professions required, but

also this collaboration may be expected to occur in a potentially unstable environment where the immediate teams that individuals work in may be dynamic and fluid.

#### **1.4.3.3 Professional Identity**

Social identity theory (emerging from Allport's contact hypothesis; 1954; e.g., Tajfel, 1982; Hogg, 2016; Reeves & Hean, 2013; Adams, Hean, Sturgis & Clark, 2006; Carpenter & Dickinson, 2016b) has been referred to relatively frequently within IPE literature. Described within the context of IPE as "*the recognition that one belongs to certain social group and the emotional value and significance of that membership*" (Sargeant, 2009, p. 179). Social identity is theorized to influence how healthcare professionals may see and relate to others. This concept links with the concerns discussed surrounding the potential violation of professional boundaries presented by the implementation of IPE in healthcare settings through the genericism of roles (Best & Williams, 2019; Thomson, Outram, Gilligan, & Levett-Jones, 2015; Powell & Davies, 2012; Baker et al, 2011).

#### **1.4.3.4 Psychological Safety**

The potentially fluid nature of healthcare teams, in which membership may fluctuate significantly on a day-to-day basis, highlights the importance of considering additional factors such as 'psychological safety' (e.g., also emotional safety considered in Steven, Magnusson, Smith & Pearson, 2014) and the implications that they can have on the effectiveness of practice-based IPE as well as collaborative practice in general. The term 'psychological safety' can be simply described as the extent to which 'people are comfortable in being (and expressing) themselves' (Edmondson, 2004). However, it can be useful when examining psychological safety in practice-based IPE to instead consider psychological safety as a group level construct.

This approach focuses on psychological safety as a team environment ('team psychological safety') rather than a characteristic of an individual. The approach would consider an individual's level of psychological safety to vary depending on the psychological safety of their current environment rather than on personal factors. Group perception of psychological safety develops in teams because working together in a team environment can generate shared work experiences and result in a shared exposure to the same set of contextual influences (Edmondson, 1999). Each team has a different belief as a group about the potential interpersonal consequences of their actions within that group. Accordingly;

*"[team psychological safety consists of] individuals' perceptions about the consequences of interpersonal risks in their work environment. It consists of taken-for-granted beliefs about how others will respond when one puts oneself on the line, such as by asking a question, seeking feedback, reporting a mistake, or proposing a new idea" (Edmondson, 2004, p. 4).*

A low level of psychological safety within a team could prevent the disclosure or sharing of key information due to those within the team fearing the potential repercussions of 'speaking up'. This has implications for patient safety. Steven, Magnusson, Smith and Pearson (2014), for example, when investigating the psychological safety of several nursing teams within a hospital found that in teams where the level of psychological safety was low, nurses felt less able to report mistakes (such as medication errors), implying that some errors are not reported by staff (Edmondson, 1996).

High psychological safety could potentially have a positive influence on practice-based IPE as it has been found to promote workplace learning behaviours such as seeking help, seeking feedback and speaking up about errors and concerns through the reduced threat of potential negative interpersonal consequences (e.g. being seen as incompetent; Dollard & Bakker, 2010; Edmondson, 1996; Edmondson, 2004). High psychological safety may also reduce resistance to change, with research showing that teams with high psychological safety adapt to change more swiftly than those who do not (Edmondson, 2004). This effect was particularly strong in cases where the newly formed teams were interdisciplinary as the high psychological safety increased communication (Edmondson, Bohmer & Pisano, 2000; 2001). This has clear implications when considering practice-based IPE as an organisational change. It is important to note however, when considering the role of psychological safety in practice-based IPE within a healthcare setting, that the concept of psychological safety is only particularly salient in smaller groups (e.g., below 20 people; Edmondson, 2004). This is seen to be due to lack of interaction with all relevant members of the group and also a diminished sense that a team members' individual effort is contributing to achieving team goals.

#### **1.4.3.5 Organisational Culture**

Organisational culture, which can be described as “the values, beliefs and hidden assumptions that organisational members have in common”, can have an influence on practice-based IPE (Naranjo-Valencia, Jiménez-Jiménez & Sanz-Valle, 2011; Doherty, Loughrey & Higgins, 2013; Pearson et. al., 2010). The NHS, for example, is traditionally known to have a fairly rigid hierarchy (including a somewhat de facto status quo) and the organisation has been noted as a whole to have a slightly anti-change culture with an often quoted ‘this is how it has always been done’ attitude which is relatively difficult to counteract (Williams, Perillo & Brown, 2015). This, in addition to the

large size of the organisation, makes it challenging to effectively change culture throughout its' entirety. Research has shown that change interventions that threaten established organisational culture can result in a strong emotional backlash from employees contributing towards change resistance (Schraeder, Teards & Jordan, 2005). This resistance could be due to a number of factors such as, for example, a perceived threat to professional identity or a history of change failures within the organisation, lack of 'buy-in' at various levels etc. (Ginsburg & Tregunno, 2005; Lawlis, Anson & Greenfield, 2014). Harden (2015) expressed the possibility of success for an IPE intervention as an equation: " $IPE = (V \times I)/N$  where  $V =$  the IPE vision,  $I =$  the implementation strategy and  $N =$  negative perceptions of the approach". Though simplistic, this equation represents the impact that change resistance may have on the introduction of IPE. It is important to consider broader factors pertaining to change within public health organisations such as the NHS that may impact on both the implementation and sustainability or normalisation of IPW across the organisation.

#### **1.4.3.6 Organisational Change**

The narrative of on-going organisational change in healthcare providers such as the NHS over the last decade is important to take into account when considering practice-based IPE, as the introduction/implementation of IPE can require systemic change on a number of levels. Firstly, the task of physical and policy change is difficult to enact in large healthcare organisations. For example, the size and complexity of the NHS as an organisation is cited as an impediment to the implementation and sustaining of organisational change beyond initial 'exemplar sites' (NHS England, 2011). There are also potential issues if applying IPE research originally conducted in the private sector, in public healthcare organisations due to the differences in context (Kuipers et. al., 2014; Piercy, Phillips & Lewis, 2013) Reduced funding and limited income generation of public healthcare systems and the increasing needs of a diverse

range of clients can make transferability problematic (Cribb, Disney & Sibieta, 2014; Piercy, Phillips & Lewis, 2013).

Changes in economic climate, patient needs and the nature of the workforce and working environment are frequently cited within the literature as triggers for organisational change; leading to the (often reactive) development of models aimed at facilitating the adaptation of an organisation (Todnem By, 2005). However, despite the quantity of research surrounding change management it is estimated that seventy percent of organisational change initiatives fail (Beer & Nohria, 2000). Though the basis for this figure is comprised primarily of anecdotal evidence, it is a statistic that is generally accepted and is frequently utilised in empirical research (Hughes, 2011). This apparent disparity between evidence base and successful practical application perhaps suggests an on-going difficulty in generating rigorous change models that are suitable for addressing the often dynamic need for change, particularly within large organisational structures such as the NHS. It has been highlighted that organisational change models “need to negotiate two hurdles: scholarly quality and practical relevance” (Jacobs, van Witteloostuijn & Christe-Zeyse, 2013, p. 14); an important consideration in the evaluation of such models. The development of such models also contributes towards the pursuit of a best practice approach to implementing organisational change, though due to a number of factors it has been argued that this goal may not be possible to achieve (Hallencreutz & Turner, 2011).

A particularly salient issue when considering best practice and applying theories and models to the management of organisational change is the difference in organisational context between those operating within the private and the public sectors (Kuipers et. al., 2014). Numerous change models applied within the public sector are based on research that occurs within the private sector (Piercy, Phillips &

Lewis, 2013) with models developed within the private sector frequently being directly applied within a public sector context (e.g., 'Just-in-Time', Yasin, Wafa, & Small., 2001; or 'Lean', Radnor & Walley, 2008). It has been suggested that this process fails to consider the distinctiveness of the public sector and the challenges it faces, for example, as a result of the economic and political climate many public organisations face reduced funding and limited income generation whilst still being expected to meet the increasing needs of a diverse range of clients (Cribb, Disney & Sibieta, 2014; Piercy, Phillips & Lewis, 2013). An implication of this could be a certain lack of generalizability of research between profit-focussed private sector organisations and the perhaps more organisationally unstable environment of the public sector.

An organisation within the public sector that is experiencing a period of substantial change is the National Health Service (NHS). Employing approximately 1.7 million people (a large number of whom are professionally qualified clinical staff), the NHS is one of the world's largest organisations (Cribb, Disney & Sibieta, 2014). Factors such as the Health and Social Care Act 2012 (Frazer, 2012) led the NHS to initiate the process of organisation-wide restructuring and the development of an integrated model that ultimately aims to facilitate the implementation of profound and sustainable change. The 'NHS change model' is the product of this process and is recommended for adoption within the NHS as a holistic and evidence-based approach to managing change (NHS England, 2012).

#### **1.4.3.7 The NHS Change Model**

Exploring the NHS Change Model is useful in providing contextual knowledge and highlighting the challenges inherent in planning, implementing and sustaining both small and large scale organisational change within UK public healthcare. It incorporates elements of existing theory and models within organisational literature in

order to provide a bespoke framework for best practice when implementing and managing change within the NHS. Appeal, accessibility and practical utility are key goals of the model as it is intended for the use of all employees involved in implementing change throughout the organisation. A graphic representation of the model (Figure 3) illustrates its non-linear nature and the NHS Change Model contains eight equally-weighted and simultaneous components: 'Spread of innovation', 'Improvement methodology', 'Rigorous delivery', 'Transparent measurement', 'System drivers', 'Engagement to mobilise', 'Leadership for change' and 'Our shared purpose'.

**Figure 3.** The NHS Change Model.



### Change Communication

*Related components: 'Spread of innovation' and 'Engagement to mobilise'.*

Examination of the NHS Change Model revealed the concept of change communication as an important theme. Effective change communication has been highlighted within the literature as an integral part of implementing organisational change (Harp, 2011). This links to both the spread of innovation and encouraging

engagement in change programs (Wittig, 2012). It has been suggested that change communication can be viewed as having two purposes: informing, and creating the feeling of a community (Elving, 2005). The NHS Change Model parallels this research to some extent with a distinction being made between 'spread of innovation' (communication informing employees) and 'engagement to mobilise' (creating an engaged community of stakeholders across the organisation). The effective use of these components when implementing change would theoretically increase the likelihood of successful implementation, reduce barriers and lead to an increase in employee engagement in general (Van Vurren & Elving, 2008; Johansson & Heide, 2008; Bull & Brown, 2012). The 'system drivers' component of the model is aimed at providing systemised incentives for change and financial incentives have been shown to lead to positive organisational outcomes (theoretically including increased innovation and engagement) however only to a certain extent (Roland et. al., 2006). Three years following the introduction of the NHS Change Model however, this effect did not appear to be occurring as studies indicated that the work engagement of NHS employees was 'well below average' (Jevé, Oppenheimer & Konje, 2015). These findings could suggest either that the model is not being widely adopted or that the model is being applied only partially which leaves the model vulnerable to the neglect of certain components (instances of selective application of the model have been confirmed: Martin, Sutton, Willars, & Dixon-Woods, 2013). This draws into question one of the core concepts of the model which emphasises the equal importance of components. If practitioners are selectively applying components of the model, this could suggest that they believe certain components to be more important to consider and apply than others. If consultants were to facilitate the use of the NHS Change Model, a key focus would therefore be preserving the integrity of the model and communicating this need to relevant managers and employees.

An in-depth evaluation of 'spread of innovation' is provided to highlight potential practical and theoretical considerations surrounding change communication within the NHS Change Model. *"Are we designing for the active spread of innovation from the start?"* The 'Spread of innovation' component of the NHS Change Model focuses on creating an environment that facilitates the dissemination of innovation and best practice throughout the organisation through taking into account certain factors that may impact this (Saint Lamont, 2005). Certainly, innovation at both an individual and an organisational level has been widely explored within the literature as a key agent in improving the service and function of an organisation and thus impacting financial organisational outcomes (Mohnen & Hall, 2013). Logic would therefore dictate that instances of innovation are to be encouraged and communicating successful incidences of innovation not only contributes towards the development of a best practice within the organisation, but also encourages further innovation (Buttidgeig & Gauci, 2015). The inclusion of this process of dissemination within the NHS Change Model is particularly appropriate as the complexity of the NHS as an organisation is often an impediment to the successful implementation of innovations beyond the initial 'exemplar sites' (NHS England, 2011). Research within the change management literature supports a focus on creating an environment conducive to innovation. An example is Jacobs et. al.'s (2015) study exploring innovation implementation in healthcare. This study considered the role of implementation climate and organisational implementation policies and practices in predicting the effectiveness of innovation implementation; providing practical suggestions. Studies such as these are particularly useful in supporting not only this component of the NHS Change Model, but the model as a whole as the use of quantitative methodology when exploring change management within the healthcare context is limited (Bowling, 2014). Direct support for the NHS Change model relies heavily on qualitative case studies highlighting a need for more empirical support utilising quantitative or mixed methods approaches in order

for the model to be considered as rigorously evidence-based (Hamer & Collinson, 2014).

When considering the application of the 'spread of innovation' component, a practical tool based on the NHS Change Model has been developed. The interactive 'Spread and Adoption Tool' (NHS England, 2013a) facilitates an insight into what an individual could do within their role to foster an environment of innovation in their specific workplace. Though this tool has potential for use by individuals, managers and consultants to inspire employees to consider change and the role of innovation, any specific development is restricted to that particular site. As discussed, a particular issue the NHS faces is to spread good practice and innovation beyond these initial sites and through considering only the micro perspective the tool becomes limited in achieving the core aim of the 'spread innovation' component of the model. In order to build a more comprehensive set of tools, the NHS Change Model could be used to consider spread of innovation and best practice at the macro level (Kyratsis, Ahmad & Holmes, 2012). An example of an approach that could be adopted to address this is the creation and circulation of 'innovation reports' in which specific examples of successful innovation can be shared across the organisation (as opposed to generic ideas for best practice). Such reports have been presented within the literature as a promising method of speeding up the adoption of best practice and inspiring innovation at an organisation-wide level (Sklar, 2013). Barriers to the implementation of innovation reports include making the reports appealing and deciding who will be responsible for their creation and circulation with the use of current change agents (i.e. the people responsible for directing, organising and facilitating change in organisations) being initially suggested (Burnes, 2004).

## **Evidence base**

*Related components: 'Improvement methodology', 'Rigorous delivery' and 'Transparent measurement'.*

Another observed theme within the NHS Change Model is a focus on evidence base. This encompasses both the adoption of an evidence-based approach to implementing change and also the generation of an evidence base through rigorous evaluation of applications of the model. 'Improvement methodology' relates primarily to the design and planning phase of implementing change as the more reliable and valid a tool, approach or technique is the more systematically it can be applied (Straus, Tetroe & Graham, 2013). Change management literature has supported this view (and therefore the inclusion of this component within the model) establishing a connection between evidence base and the successful implementation of change (e.g., Bradbury, 2014; Kessler & Glasgow, 2011). Tools provided with the model (e.g., 'Bringing lean to life') indicate best practice and provide examples when planning evidence-based change. However, by not fully considering the change practitioner's ability to critically evaluate empirical research, the model may not be accessible to the relevant staff that without training or a background in empirical research may only be able to evaluate on a superficial level. This leads to the risk of change interventions being implemented that aren't empirically sound or only have face validity; adversely impacting the spread of good practice. From a consultancy perspective, this could be addressed to some extent through the introduction of training for relevant staff or providing professional evaluation whilst assisting in change implementation.

Once the change has been appropriately planned based on empirical evidence, the NHS Change Model also uses the 'rigorous delivery' component to emphasise the

importance of maintaining professional and academic rigour during the actual process of change implementation. Again, this component contributes towards the standardisation of applications of the model and tools accompanying the model for the purpose of carefully examining and recording important details surrounding the change delivery are supported as an example of good practice within the literature (Lanning, 2001). More guidance (e.g., in the case of the 'Rigorous delivery framework') could however be provided regarding how to recover from setbacks or stagnation, an occurrence identified within the literature (Weeks, 2014). The adoption of both 'improvement methodology' and 'rigorous delivery' have positive professional implications for consultants within the field of occupational psychology as a core principle is to promote evidence-based practice (Lewis & Zimbarras, 2013).

The generation of an evidence base surrounding the application of the NHS Change Model through thorough evaluation is outlined as a key target of the model namely for the purpose of feedback to stakeholders (linking to the theme of change communication) surrounding the success and potential improvements of the model. The importance of evaluating any organisational intervention on the intervention's success has been consistently highlighted within the literature supporting the inclusion of this crucial stage within any change model (Smith, 2011; Nielsen & Randall, 2013; Dixon-Woods, McNicol & Martin, 2012). Sustainability of change is an implicit aim of several of the model's components with perhaps the most relevant (due to its evaluative nature) 'transparent measurement' failing to explicitly address what could be considered a key demonstration of change implementation success. An appropriate evaluative framework that could be utilised by practitioners to assess sustainability during a number of stages of change implementation has been proposed within a continuous change context (Brännmark & Benn, 2012).

## **Change leadership**

*Related components: 'Leadership for change'.*

Leadership research within a change management context has increased significantly in recent years with different styles and models of leadership being recommended as a best practice approach during the change process ranging from the established (e.g. 'transformational leadership': Oreg & Berson, 2011) to the alternative (e.g. 'Primal leadership': Goleman, Boyatzis & McKee, 2013). Effective leaders are facilitators of change as they are typically responsible for coordinating the implementation of change throughout an organisation; suggesting 'leadership for change' as an important aspect of the change model as it profoundly interacts with almost all other components in that leaders will be directly applying them (Mulla, Hewison & Shapiro, 2014).

The NHS presents the Healthcare Leadership Model (HLM: NHS England, 2013b) as a framework for leadership skills and behaviours that should be displayed throughout the organisation; a framework that is aligned with the change model. The level of detail provided in the HLM highlights it as a particularly useful practical tool for the development of employees within leadership roles promoting a collaborative and role-modelling approach to leadership (Ellis & Abbott, 2014). Though the HLM encourages stability and commitment within the organisation, which are beneficial in times of change, this approach appears to somewhat fundamentally conflict with the 'spread of innovation' component. The encouragement of certain alternative or additional characteristics in the leadership profile which adopt a more dynamic leadership approach to change, for example 'complexity leadership behaviours' such as boundary spanning and risk taking, may compensate for any potential

incompatibility (Weberg, 2013). Research has demonstrated the outcomes of complexity leadership as being increased innovation and ability to adapt (Uhl-Bien, Marion & McKelvey, 2008).

## **Core values**

*Related components: 'Our shared purpose'*

A central theme observed within the NHS Change Model is that of maintaining core values throughout the change process and actively connecting the components of the change model with underlying values held by the community of stakeholders. This is particularly important within the public sector as the primary focus is on service outcomes and stakeholders rather than profit and stockholders and the NHS is, at its core, a service rather than a business (Squires, 2014). The component 'Our shared values' reflects the relationship between the model and the NHS's underlying principles and an evaluation is provided to highlight potential practical and theoretical considerations surrounding connection with core organisational values within the NHS Change Model.

Differing slightly from other components, 'our shared purpose' as opposed to a particular course of action to undertake is instead a reminder of underlying organisational values to take into consideration throughout the implementation of all other components. The adoption of this approach is generally supported by the literature as incongruity between organisational goals and organisational values has been identified as a barrier to the evidence-based implementation of change (Leasure, Stirlen & Thompson, 2008; Golenko, Pager & Holden, 2012; Kenny, Richard, Cenicerros, & Blaize., 2010; Bartelt et. al., 2011). Theoretically, 'Our shared purpose'

also directly facilitates certain components within the model. For example, the component links to the theme of change communication by potentially providing common ground on which to unite employees and enable the initial discussion of change to take place despite any difference in opinion (Martin et. al., 2013). Shared purpose also potentially links to engagement as again, the providing of common ground resulting from a shared purpose would create a stronger sense of community amongst stakeholders facilitating the faster adoption of change. There is however limited evidence directly supporting these connections and the NHS Change Model would benefit from explicit research regarding the interaction between components such as in this case and the consequent outcomes.

A key concept linked to 'shared purpose' is that of organisational culture can be described as "the values, beliefs and hidden assumptions that organisational members have in common" (Naranjo-Valencia, Jiménez-Jiménez & Sanz-Valle, 2011). However due to its intangible nature there is no universally accepted definition (Doherty, Loughrey & Higgins, 2013). Research has shown that change interventions that threaten established organisational culture can result in a strong emotional backlash from employees contributing towards change resistance (Schraeder, Teards & Jordan, 2005). Through the inclusion of the shared purpose component in the NHS Change Model, this potential effect could be mediated as its presence may reassure employees that the organisation is committed to preserving its core values. The use of role-modelling approaches to leadership encouraged by the 'leadership for change component' is reinforced by literature identifying the key role of leaders in gaining the support from employees for cultural change (Schraeder, Teards & Jordan, 2005). It is important to note however that due to the emphasis on the shared purpose component within the NHS Change Model there is a risk of unintentionally having the opposite effect on employees with over emphasising traditional NHS values creating resistance

to change by generating a barrier to innovation. The NHS traditionally has a fairly rigid status quo and has been noted to have a slightly anti-change culture with an often quoted “this is how it has always been done” attitude which if increased would be hard to overcome (Williams, Perillo & Brown, 2015).

A significant limitation of the shared purpose component of the NHS Change Model is the lack of clarity surrounding its implementation or the maintenance of best practice which can be attributed in part to the inherent intangibility of the concept. This difficulty is illustrated when examining studies surrounding the implementation of the change model within its intended setting which have revealed a large variation in interpretation of the both the concept of a shared purpose and how best to practically apply the component (Martin et. al., 2013). This also presents problems from a practitioner standpoint as it is difficult to observe measurable outcomes for evaluative purposes to examine whether the component has been successfully implemented.

#### **1.4.3.8 High-fidelity simulation vs. ‘real-world’ practice**

##### **Is there a difference between high-fidelity simulation and ‘real-life’ learning?**

One might speculate that there is a psychological difference when responsibility for real world outcomes, particularly those affecting the well-being of patients, are an integral part of a learning activity (Brack & Shields 2019). It would seem plausible to suggest that real world training (when compared to high-fidelity simulation) has a number of unique psychological, social and emotional factors affecting the learning experience of participants. However, within the field of IPE there is very little, if any, published research explicitly comparing simulation and ‘live’ or real-world training. Thus discussion of potential differences remain theoretical.

Whilst not empirically explored in a comparative manner, comments from participants involved in real-world IPE training is supportive of this 'unique differences in learning experience' hypothesis. The suggestion is that the real-world element has a unique impact that adds a greater degree of psychological, emotional, social and cognitive potency to the learning experience. Nasir et. al. (2017), for example, found that of the three-hundred and twenty-nine healthcare students who participated in a one-off IPL session within a clinical setting, between ninety-three and ninety-nine percent of the students agreed or strongly agreed with a series of statements supporting the benefits of such IPL. Some of the comments of the students who participated included: "*Make it compulsory for all healthcare professionals*" (p.127); I will "*Liaise more with other healthcare professionals*" (p.127); I will "*Think about everyone's different and overlapping roles within the team*" (p.127).

Whilst realistic simulation can delineate and reproduce to a large extent the conditions under which practitioners may operate when in the real-world environments, the exercise still requires a 'this matters because it may have tangible consequences in another setting' situational leap of cognition. Whilst extremely valuable, it is analogous learning. The sense of responsibility that attaches to learning in an environment where there are direct real-world consequences especially for individual patients is likely to change the psychological and social dynamics. The components of the activity may be recreated in high-fidelity simulation, but the psychological and social dynamic is different. Table 2 outlines some of the potential differences between IPE delivered via high fidelity simulation and IPE delivered within real-world learning contexts. Within the current research we refer to the latter iteration as a distinct form of IPE referred to as IPW (Interprofessional Working).

**Table 2.** Structural differences between simulation and real-world IPE.

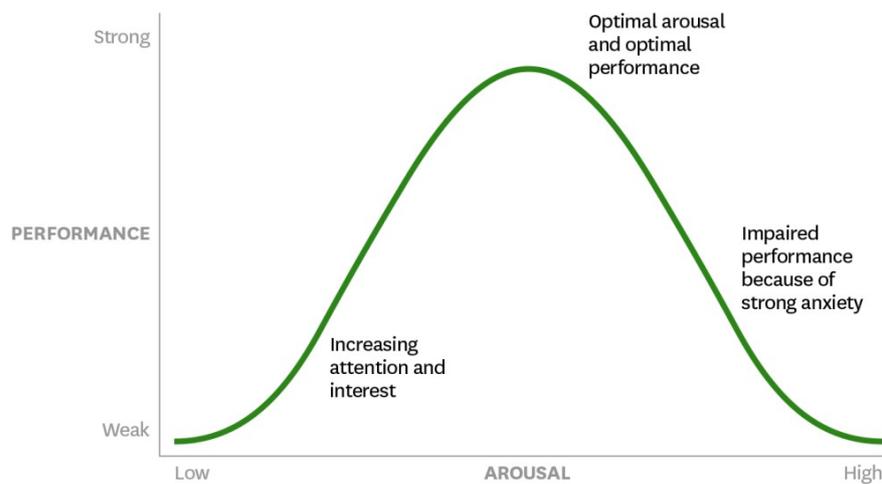
<b>Simulation-based IPE</b>	<b>Real-World IPE (IPW)</b>
Realistic practice scenarios/situations	Real scenarios/situations
'As if' reasoning	'As is' reasoning
Facilitators can tightly control variables	Fluctuating control
Relationships and interactions tightly scripted/organised	Relationships and interactions have a greater degree of spontaneity and fluidity
Safety net	No safety net
Scenarios can be tightly planned and controlled for	Unforeseen events may occur
Predictable staffing and supervision	Variations in staffing and capacity for supervision
The curriculum is overt, planned and known	Greater chance of factors linked to a 'hidden curriculum' emerging from the process

There are also potential differences in levels of stress and/or anxiety where responsibility for real-life outcomes for patients are involved. This can be beneficial to performance and learning if levels are managed successfully to remain within the eustress envelope (Figure 4, Yerkes & Dodson, 1908).

**Figure 4.** Yerkes Dodson Stress Performance Curve.

**The Yerkes-Dodson Law**

How anxiety affects performance.



The supportive and reassuring role of effective facilitators within an IPW scenario may promote psychological safety for the participants in order to prevent their learning being impaired by excessive anxiety. This may particularly apply within high stress scenarios within acute care. The facilitative environment of a specific 'training ward' where regular staff on the ward are primed and supported in hosting training events may also be a factor affecting the participants' learning experience.

The analogous learning experience in simulations (i.e., this is like a situation you will experience in the real-world setting), no matter how closely resembling that situation, for some will remain less potent than learning on the job. Brack and Shields (2019, p. 23) suggest that *"The demand of having to treat a patient safely while 'performing' their role in front of a peer may contribute to students' motivation to meaningfully engage in the activity"*. Within 'real-life' IPE situations (or IPW) there is a greater possibility of the emergence of factors related to a 'hidden' curriculum' influencing the learning process and outcomes (Chapter 1.4.3.1). The term 'hidden curriculum' most typically refers to the complex social occurrences that happen within the educational process that don't belong to either the formal or informal curriculum (Macleod, 2014). Buring et. al. (2009, p. 6) describe the hidden curriculum within IPE as:

*"observed faculty or clinician behaviour, informal interactions and conversations with fellow students and with faculty and practicing professionals, and the overall norms and cultures of the training or practice environment"*.

The Institute of Medicine (IOM, 2005) consider the hidden curriculum to be a major factor influencing the outcomes of IPE, particularly in shaping the values and attitudes

of the students as they progress to become qualified health professionals. Within a live clinical setting the learning is more likely to take on this more fluid, organic, and socially constructed form.

#### **1.4.3.9 Evaluating Practice-Based IPE**

Due to the inherent complexity of IPE, particularly as it occurs in a practice setting, it is important to examine observed IPW behaviours in sufficient depth. Essen, Freshwater and Cahill (2015) make an interesting point regarding the potential for 'unwarranted idealism' in IPE research as something that may influence healthcare management and practitioners. This influence is suggested to be negative as it may lead to those stakeholders making "unrealistic assumptions about professional behaviour (or to be more precise the formal and informal behaviour of professionals as people)" (Essen, Freshwater & Cahill, 2015, p. 217). In some research, what appears to be effective practice-based IPE may actually involve 'dysfunctional consonance' and 'role violation'; terms that describe a situation where professional power differences lead to unbalanced compromise (Essen, Freshwater & Cahill, 2015; Freshwater, Cahill & Essen, 2014). Given this level of complexity, particularly in relation to the contextual and social dynamics affecting IPE as they apply in a practice-based setting, there has been an increase in the use of more sophisticated theory-driven evaluation methods such as realist evaluation (Pawson & Tilley, 1997) that attempt to capture and analyse this complexity.

#### **Realist Evaluation**

The methodology of realist evaluation derives from the theoretical underpinnings of critical realism based on the work of Bhaskar (2008). It reflects the philosophical position taken by critical realism of the existence of a reality that exists outside our perception of it. Hood (2012) talks about this reality being differentiated into

three levels which are labelled as the empirical, the actual, and the real. Hood suggests that: *'the empirical consists of what we experience through our senses; the actual comprises all events, regardless of whether they are observed or experienced; and finally the real, which contains the underlying causal mechanisms that generate events. These mechanisms may not be directly observable on the empirical level, but they are nonetheless real because they cause things to happen.'* (p.7) Some writers have drawn on critical realism to provide the most suitable approach to studying complex social systems (Harvey & Reed, 1996).

Based on the work of Pawson and Tilley (1997), expressed in simplistic terms the realist evaluation approach is an attempt to provide an answer to a series of questions in relation to an intervention or programme; what works, for whom, and in what contexts? An intervention works (or doesn't work) because those involved make certain decisions in response to the intervention. This 'reasoning' of those involved in the intervention is a response to opportunities or resources provided by the intervention. Pawson and Tilley (1997) consider that this is what 'causes' the outcomes. As in many areas of life, easy to say is not necessarily simple to do and the concepts and methodology related to realist evaluation can be challenging to operationalize (Marchal, et. al., 2012; Greenhalgh et. al., 2009). Some theorists have emphasised the role of what they refer to as 'constrained decision-making' as the underlying mechanism that creates all social outcomes, emphasising the complex and dynamic interplay between structural constraints and human intentions (Dalkin et. al., 2015).

The units of analysis within realist evaluation are what are referred to as programme theories, essentially *'the ideas and assumptions underlying how, why, and in what circumstances complex social interventions work'* (Dalkin et al, 2015). These

are communicated as context, mechanism and outcome chains (CMOs) which are tested and refined. Astbury and Leeuw (2010, p. 368) state that mechanisms are; *“underlying entities, processes or structures which operate in particular contexts to generate outcomes of interest”*. Mechanisms can often be deeper non-observable factors including socially and culturally conditioned factors and can produce intended and unintended outcomes. Realist evaluators attempt to consider the main mechanisms generating the main patterns of outcome at a useful level of abstraction. The generative explanation may include context factors such as the resources, programme opportunities and constraints which then work via mechanisms such as the participants’ reasoning, preferences, norms, collective beliefs and so on, to produce an outcome. In line with Pawson & Tilley’s (1997) clarification of the operation of ‘mechanisms’, the evaluator needs to identify *‘what resources, opportunities or constraints were in fact provided, and to whom; and what ‘reasoning’ was prompted in response, generating what changes in behaviour, which in turn generate what outcomes’* (Office of Development Effectiveness, 2012, p.5).

The concept of ‘context’ within realist evaluation can be complex. At a simply stated level it refers to the wider circumstances within which an intervention takes place. However, context can include a wide range of factors ranging from the political, material resources, wider economic, organisational, social and psychological. All of these may, or may not, influence the operation of programme mechanisms. Sayer (2010, p.75) defines context as *“material resources, social structures, including conventions, rules and systems of meaning, in terms of which reasons are formulated”*.

However, in a similar way to the broader literature related to IPE, there are diverging views and interpretations of concepts and methods (Dalkin et. al., 2015; Marchal et. al., 2012). Within the literature there are differing interpretations of the

concepts of mechanisms and contexts and the use and description of CMOs which has led to a call for more clarity in relation to the definitions of mechanisms and context and how Context Mechanism and Outcome chains can be described and assessed (Rameses II Project, 2017; Dalkin et. al., 2015; Marchal et. al., 2012).

The principles of realist evaluation are gaining traction in health systems research as they are seen to be better suited to understanding and communicating the complexity of change dynamics within healthcare systems (Rameses II Project, 2017; Greenhalgh et. al., 2009). The focus on understanding causation and understanding why different outcomes are achieved in different contexts via the programme mechanisms make it appropriate for evaluating new initiatives or pilot programmes. It is a particularly useful approach to use where initiatives seem to work but ‘for whom and how’ is not yet understood. It is also useful for evaluating programmes that will be rolled out on a larger scale, to understand how to adapt the intervention to new contexts.

#### **1.4.3.10 Summary**

There seem to be theoretical considerations relating specifically to IPE that particularly concern the development and implementation of IPE that is practice-based. This perhaps supports a somewhat separate consideration (both conceptually and in research) of practice-based IPE and classroom-based IPE. It may be that different pressures influence the IPE process in each case with the emphasis in practice-based cases of IPE being on flexibility in order to adapt to unforeseen factors.

## **1.5 Interprofessional Working**

As suggested in Section 1.1, Interprofessional Learning (IPL) could be considered as the learning process that takes place within the broader concept of IPE. When examining practice-based IPE, further clarification and theoretical rigour may be facilitated by considering it as IPL that specifically takes place in an active practice setting (e.g. an acute healthcare ward; as opposed to a classroom or simulation setting). This particular type of IPL could be referred to as Interprofessional Working (IPW). Thus, IPW is a form of IPE where the IPL takes place in a practice setting. This conceptualisation is adopted in the present study in order to explore IPW as a specific method of IPE. Though IPE research may differ in use of terminology, it is intended that the description of IPW provided in this instance will avoid confusion regarding conceptual perspective.

## **1.6 Chapter Summary**

The exploration of conceptualisations and theories linked to IPE suggest that the empirical narrative surrounding the examination of IPE within a healthcare context must include a stronger focus on continuing to develop an understanding the concept of IPE itself. The exploration of practice-based IPE (IPW) as a potentially distinct type of IPE can contribute to the collective ‘unpicking’ of the IPE process within the literature, providing insight into the different facets of IPE. For example, do the same factors facilitate or inhibit IPL occurring in a practice setting as those in a classroom setting? Extant literature supports the development of a focus on the process of IPE itself, suggesting that a “more in-depth understanding of IPE interventions beyond outcomes themselves” is needed and stressing that “first and foremost, interdisciplinary

collaboration [IPW] is described as a **process**" (IOM, 2015 and Petri, 2010 respectively).

## **CHAPTER 2. LITERATURE REVIEW**

### **CHAPTER OVERVIEW**

Chapter 2 explores relevant existing IPE research. This is in order to unpick the IPE process and gain insight into whether there is evidence within the literature for a distinction between IPE that takes place in a classroom setting versus a practice or applied setting (IPW). The challenges in examining IPW in research are considered (e.g. the lack of consistency in terminology and the limited inclusion of contextual information in reported research). A brief chapter outline is provided:

- 2.1 Terminology
- 2.2 Literature Search
- 2.3 Reflections on the literature review
- 2.4 Chapter Summary

### **2.1 Terminology**

A lack of consistency in IPE definition and related terminology has been highlighted within the literature (e.g., Perrier, Adhietty & Soobiah, 2016); thus, it is an area of inquiry that has been aptly described as somewhat of a ‘terminological quagmire’ (Leathard 1994; 2004). Extant IPE literature makes reference to a multitude of terms, for example, ‘interprofessional learning’, ‘interprofessional practice’, ‘interprofessional working’, ‘collaborative practice’, ‘collaborative education’ and ‘multi-professional working’ (Dimoliatis & Roff, 2007; Perrier, Adhietty & Soobiah 2016). These terms are often used interchangeably, being considered as synonymous to IPE whereas, in some instances it can be argued that there exist key conceptual distinctions (Reeves et. al., 2011). Ambiguity surrounding precisely what the concept of

IPE encompasses has been cited across the literature as a key challenge in IPE research, obscuring the development of further understanding (e.g., Reeves et. al., 2011; McLaughlin, 2013; Abu-Rish et. al., 2012; Thistlethwaite, 2012; Olson & Bialocerkowski, 2014; IOM, 2015).

There is a relative consensus in the literature, however, that in order for an educational approach to be considered as 'interprofessional' there must be an explicit inclusion of specific goals regarding the increase of collaboration and knowledge of other's roles (Carpenter & Dickinson, 2016a). This aspect distinguishes IPE from, for example, 'Multiprofessional Education'; a term used in the literature to refer to a group containing two or more professions that have come together to complete a specific task **without** the goal of increasing collaboration and knowledge of other's roles (e.g., Pirrie et. al., 1998; Rawson, 1994). Though interaction between different professions is inherent to Multiprofessional Education, this exposure does not necessarily increase effective collaboration and thus the terms are not viewed as synonymous (Dickinson & Carpenter, 2005).

As discussed in Chapter 1, disparate use of IPE terms and definitions in the literature can be attributed to a need for further conceptual clarity. IPE can to a certain extent be considered as an 'umbrella term' that potentially reflects a multitude of scenarios. In one instance, IPE could refer to an overall approach to education or organisational development (e.g., organisational structure, policy and resource management, or curriculum development; e.g., Burton, 2015; Davies, Fletcher & Reeves, 2016; Holzemer, 2013). In another, it could refer to a specific intervention (e.g., a classroom-based IPE workshop, or a practice-based intervention undertaken as part of continuing professional development; e.g., Reeves, Palaganas & Zierler, 2017). Additional layers of context to be considered include:

- Differing settings (e.g., classroom vs. practice, acute vs. community care, private vs. public healthcare organisations)
- Differing target groups (e.g., varying combinations of healthcare and related professions)
- Temporal factors (e.g., what stage of qualification an IPE intervention may be implemented; e.g., Gould, Day & Barton, 2017)

With such breadth of coverage, blanket use of the term IPE is not necessarily conducive to building understanding of the many potential different aspects of IPE at a conceptual or theoretical level.

Distinguishing between differing forms of IPE may contribute towards the further development of conceptual clarity. For example, the term Interprofessional Learning (IPL) has been treated as a synonym of IPE (e.g., Hood et. al., 2014). A slight distinction, however, could be made between the terms in that IPE may refer to a general approach to the delivery of formal education for those in healthcare whereas IPL may refer to the actual individual learning process that is taking place within an IPE intervention. Thus, the use of IPE as an umbrella term to refer to any educational approach or intervention that is explicitly designed to be interprofessional could continue, with the term IPL instead referring to the specific type of learning that can take place within these instances.

As suggested in Chapter 1, Interprofessional Learning (IPL) could be considered as the learning process that takes place within the broader concept of IPE. When

examining practice-based IPE, further clarification and theoretical rigour may be facilitated by considering it as IPL that specifically takes place in an active practice setting (e.g., an acute healthcare ward; as opposed to a classroom or simulation setting). This particular type of IPL could be referred to as Interprofessional Working (IPW). Thus, IPW is a form of IPE where the IPL takes place in a practice setting. This conceptualisation is adopted in the present study in order to explore IPW as a specific method of IPE. Though IPE research may differ in use of terminology, it is intended that the description of IPW provided in this instance will avoid confusion regarding conceptual perspective. However, identifying and exploring relevant literature related to the focus of the current research, interprofessional working (IPW) as a distinct element within interprofessional education (IPE) was significantly affected by the terminological and conceptual ambiguity surrounding IPE.

Challenges to identifying relevant IPW research extended beyond issues linked to the terminology used. It was not unusual for research articles generated from the terms used in the search to lack sufficient detail surrounding context and methodology to determine whether, notwithstanding the terminology, they represented examples of IPW as defined above (i.e., IPL as it occurred within a practice setting). Where sufficient details were available, the researcher could determine whether studies that used differing terminology or had a different focus did in fact reflect IPW as conceptualised in the current research (e.g., Takahashi, Brissette, & Thorstad, 2010).

This issue related to improving the clarity of the terminology used when conducting research in the area of IPE was a key factor emerging from the IOM paper (2015). This is one of the key studies that has informed the focus of the current research. The current research aims to address this gap in the IPE research literature surrounding the lack of terminological rigour and consistency by introducing clear

definitions and robust distinctions between the terms IPE, IPL, and IPW. It is argued that without such terminological precision it will continue to be difficult to conduct meaningful research that can be used to inform future initiatives.

## **2.2 Literature Search**

A search for relevant studies was completed using a number of electronic databases (EBSCO, ERIC, and MEDLINE). Due to the broad terminological range to consider in order to potentially capture 'IPW-relevant' research, the terms used in the literature search were constructed to attempt to minimize the risk of missing potentially relevant research. This entailed a broad related terminology capture, followed by secondary sifting and snowballing.

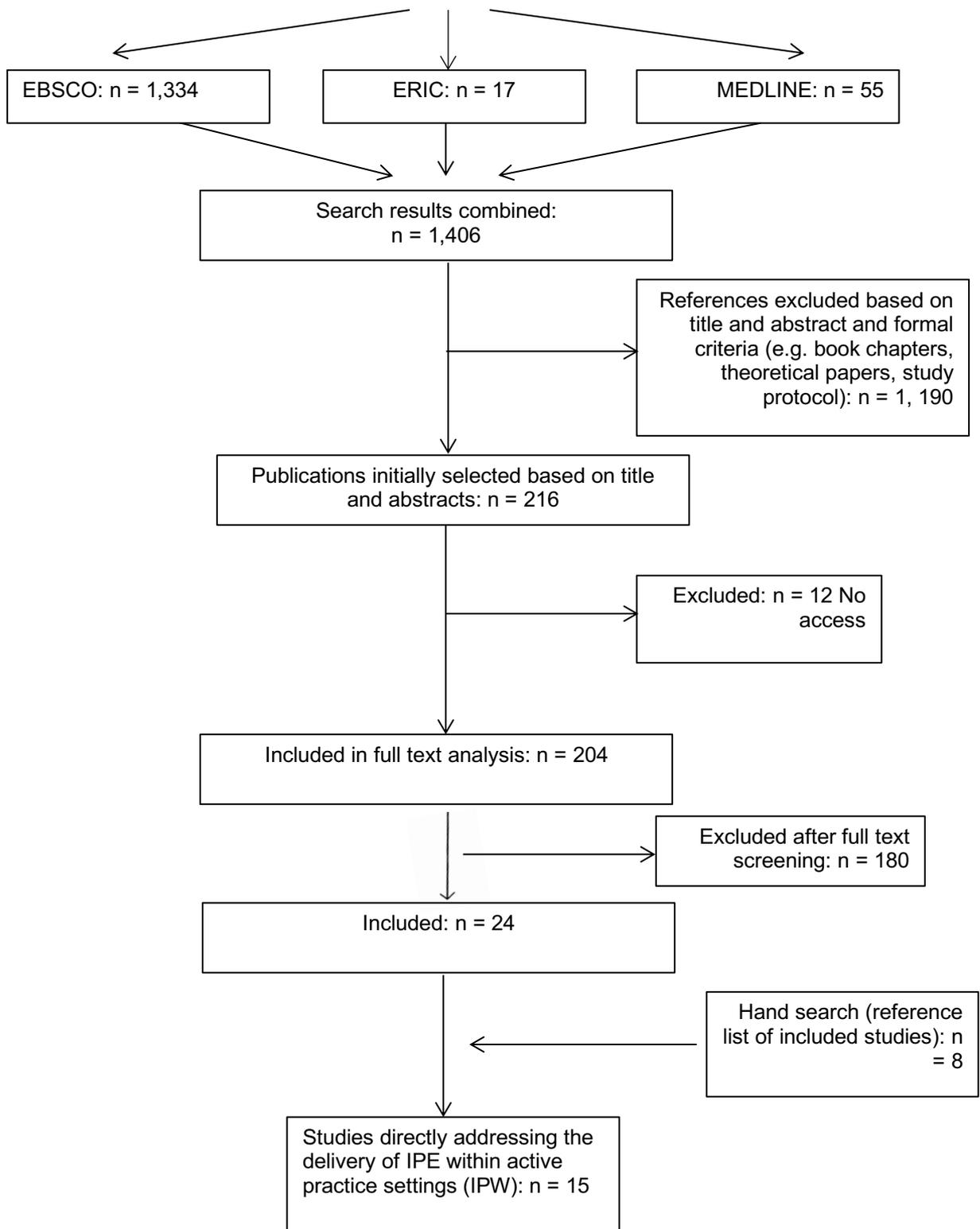
Search terms used were; Interprofessional education (all fields) AND interprofessional working (all fields) AND healthcare (all fields) OR acute healthcare (all fields) OR interprofessional practice (all fields) OR collaborative practice (all fields)

Studies were eligible for inclusion if they (1) included students who were working towards or fully qualified healthcare practitioners; (2) included activities that were based in active clinical or community settings; (3) reflected IPW as conceptualised in the current research; (4) were published in full text and in English.

Due to the inconsistent use of terminology and lack of conceptual clarity, whilst a small number of research articles refer to or focus specifically on IPW, much of the research relevant to IPW has had to be inferred from an exploration of the broader IPE research. Evaluation or outcome measures were predominantly based on student's reports of changes in knowledge, disposition or attitude towards IPE. Whilst several of

the IPW studies used qualitative outcome measures from interviews with participants there were few, to the researcher's knowledge, that explored the broader contextual factors as part of the analysis or made use of realist evaluation methodology (Section 2.2.1).

**Figure 5.** Shows the process of the literature search.



The SQ3R method (Northumbria University, 2013) was applied to filter the literature being reviewed for appropriate quality and relevance. This is described as a key reading technique for developing understanding and retention of information. An initial survey and interrogation of the text is followed by reading it fully, recalling and reviewing the information (Northumbria University 2013). Researchers reading at this level need to have sufficient knowledge about the subject to criticise appraise and draw conclusions from what they have read (critical reasoning, Blaxter, Hughes and Tight, 2006). This was supplemented by the use of the SALSA framework, a concise structured framework designed to assist researchers in searching, appraising, synthesising and analysing literature (Grant & Booth 2009).

### **2.2.1 IPE/IPL Programmes**

One of the first national projects of IPL in practice was the 'Common Learning Project' (DH 2006). This was led and funded by the Department of Health and included undergraduate students from nursing, medicine, physiotherapy, occupational therapy, speech and language therapy and social work. The stated objective was to 'develop, implement and embed innovative interprofessional work-based placements which promote collaborative undergraduate learning and working in health and social care' (DH 2006).

Three universities in the North East of England worked together with local Trusts to deliver practice-based IPL, which involved face-to-face seminars, self-directed study and enquiry-based learning with students from different professional groups. Students worked in small interprofessional groups supported by a facilitator with one or more cases chosen from existing patients, often with complex needs, and

these were used as the focus for IPL (Stephens, Abbott-Brailey & Pearson 2007). The students reported that they valued learning and working together with 'real' patients and 'real' practitioners in a clinical setting, where they were able to appreciate the importance of collaboration. Students gained confidence in their own role as well as an awareness of others. Some of the students reported that the experience led them to establish longer-term professional and personal friendships with students from the other professions they had interacted with.

The skills, confidence and knowledge of the IPL facilitators or practice educators were found to be key in contributing to the success (or not) of IPL initiatives (Department of Health, 2006). Whilst practice educators were positive in relation to their exposure to a variety of roles, many of them initially experienced high levels of anxiety because of a lack of confidence and experience of working with mixed professional groups. The project team attempted to address this by introducing a buddy system where co-facilitation was encouraged.

Stew (2005) provided a detailed overview of shared clinical placements where there was potential for IPL between different groups of pre-registration health students. Implementing a case study research design, a mixed methods approach was taken to data collection via the use of interviews, observations and surveys. A SWOT analysis was undertaken to explore the strengths, opportunities, weaknesses and threats of each of three models of potential IPL educational sessions and for each type of session (student-led, clinician-led and tutor-led). It was recognised that IPE initiatives need to be contextualised to the local setting if they are to be successfully implemented. The importance of flexibility was emphasised so that the wide range of potential opportunities for students and professionals to learn and work together in practice settings could be harvested.

The 'Trent Universities Interprofessional Learning in Practice' (TUILIP) project was tasked with the 'development of sustainable models of IPL to promote and facilitate the professional skills of students through collaborative working within the practice setting' (Armitage, Connolly & Pitt 2008). The pilot sites were chosen due to the existence of an interprofessional team and their established use for student placements. Funding was provided to employ IPL facilitators at each site. Findings of this study (Jinks, Armitage & Pitt 2009) showed that students valued the IPL in practice settings more than IPL within the university setting but were of the view that engaging in IPL was an additional demand to their existing placement activities. The facilitators reported that they sometimes lacked support from practitioners within the pilot sites, particularly if the facilitator was not known to the area (Simpson 2009). Recommendations emerging from the initiative regarding enabling factors e.g., establishing an appropriate learning environment, recruiting or training staff who possess effective facilitation skills, establishing staff engagement, integration of service users in IPL initiatives and enhanced partnerships with higher education providers, remain relevant (Flynn et al, 2019; Lawlis, Anson, & Greenfield, 2014; Nasir et al, 2017). Whilst a key aim of the project was the development of sustainable models of IPL, it was reported that only one of the eight pilot sites agreed on-going funding at the end of the project.

Sustainability is an on-going issue for many change initiatives (Flynn et al, 2019; Lawlis, Anson, & Greenfield, 2014; Nasir et al, 2017). Logistical problems, university placement timetables and curricula and resourcing issues are seen to affect the development and sustainability of practice-based IPL (Pollard 2009; Furness, Armitage & Pitt 2012; Lawlis, Anson, & Greenfield, 2014; Anderson, Ford & Kinnair 2016). Several researchers (Lawlis, Anson, & Greenfield, 2014; Nasir et al, 2017)

suggest that the establishment and sustainability of IPL is dependent on interprofessional champions, who have some responsibility within the organisation for the education of health care students and who are able to challenge the silos of uniprofessional learning and working. In these areas, IPL is more likely to take place and be sustained without project funding.

### **Informal/Unplanned IPL**

There is support in the literature surrounding educational theory for providing practice-based learning opportunities such as in the case of practice-based IPE as “authentic experiences provide depth, strengthen didactic learning and its relevance to clinical practice and foster relationships” (Loversidge & Demb, 2015, p. 303). Of course, it is one thing to plan for certain activities to take place when students are in active ward settings and another for these things to happen in the way that was planned for. The inherent unpredictability of live settings means that learning, or more accurately teaching, can’t be controlled in the same way that it can within classroom or simulation situations. The situation can lead to either helpful or sometimes unhelpful aspects of informal learning occurring (Hafferty, 1998; Lempp & Searle, 2004; Ozolins, Hall, & Peterson, 2008) hence the vital role of the facilitator within such situations (see section 2.2.2)

Sackey, Nguyen & Grabill (2015) describe informal learning as typically unstructured and unplanned, often taking place outside of the typical classroom setting and where the individual has greater ownership of the learning experiences. It tends to happen within workplaces during the day-to-day interactions where the primary focus is on the work task in hand rather than the potential learning opportunities arising from it (Gregory, Hopwood, & Boud, 2014). Collaboration on a daily basis between

professionals within a working environment opens up opportunities for the sharing of knowledge and learning about the knowledge, skills and roles of other professions (CAIPE, 2013). There are also opportunities for constructive conversations or debates with other professionals regarding the needs of patients and for students to observe good professional role models (Kenward & Kenward, 2011).

The element of the development of friendships, or at least the frequent occurrence of informal and friendly interactions between different professionals can lead to the development of positive relationships and can lead individuals to reappraise previous views of different professions that might have been learnt when undergoing profession specific training (Khalili, Orchard, Spence-Laschinger, & Farah, 2013; Lewis, 2012). However, such informal opportunities for learning can lead to potential negative outcomes with students being exposed to inappropriate role models and attitudes, particularly if the student(s) are viewed as 'outsiders' by existing staff in the setting (Newton & Wood, 2009; D'Eon, Lear, Turner, & Jones, 2007). The outcomes of the informal learning experiences will be mediated through the awareness and reflectiveness of the individual student. Being exposed to inappropriate models of behaviour, views and attitudes could lead to a reaction from a student that forms a positive learning experience e.g., they see that it is inappropriate, and it increases their resolve not to behave in that way. This of course depends on the interplay of a number of factors such as the student's confidence, awareness of appropriate behaviour in that situation, their relationship with the person modelling the inappropriate behaviour or views (do they admire them), the presence of countervailing views as seen in other staff, the opportunity to discuss with peers or with the practice educator or facilitator etc.

Pollard (2009) for example, in a study of student engagement in informal interprofessional interactions whilst on placements found that confidence was a mediating factor in student engagement, particularly in the absence of structured support. The study covered a wide range of professions, with final year students representing eight different professional groups supported by members of the interprofessional team. As might have been predicted, student engagement was also affected by the practice environment and the quality of the support provided by the practice educator.

In a study looking at the relationship between nurses and doctors in regard to interprofessional education and socialisation via informal working encounters Burford et al (2013) found that the nurses' contribution to the doctors' interprofessional education was more effective than more formal types of IPL. However, the interactions did serve to reinforce traditional hierarchical relationships between doctors and nurses. Nevertheless, the researchers concluded that a workplace culture that embeds informal learning between professional groups had benefits for patient safety and for the development of positive working relationships and effective collaboration.

However, placing different professions on the same ward will not necessarily lead to increased collaboration or interprofessional awareness and can sometimes lead to the reinforcement of established role demarcations, insularity and professional power dynamics (Thomson, Outram, Gilligan, & Levett-Jones, 2015; Baker, Egan-lee, Martimianakis, & Reeves, 2011). This emphasises the potential importance of the role played by the facilitator within practice settings and the key role played by facilitators is often highlighted within the literature relating to IPL (Lawlis, Anson, & Greenfield, 2014). This aspect of IPE/IPL/IPW is considered in the following section. The use of the

acronym chain 'IPE/IPL/IPW' is used to emphasise the fact that across the literature the meaning and use of these terms is often conflated.

### **2.2.2 Facilitation of IPE**

The skill and enthusiasm of the facilitator(s) is seen as crucial in overcoming barriers to the implementation of IPE, particularly within clinical settings (Thomson et al, 2015; Lawlis et al, 2014). The majority of the research related to the role of facilitation in IPE initiatives has been undertaken in the university setting (Anderson, Cox & Thorpe 2009; Egan-Lee et al 2011; Ruiz, Ezer & Purden 2013; Derbyshire, Machin & Crozier 2015). However, it is feasible to assume a certain degree of generalisation of the issues identified within that context to apply to facilitation in the active practice context.

As the focus of IPL is on shared learning, those who facilitate IPL should possess appropriate knowledge and skills to perform the role effectively and meet the diverse needs of students from mixed professional groups. Most important is that students receive an effective IPL experience in university that prepares them appropriately for practice. Many healthcare undergraduate courses include an element of what they term interprofessional learning. However, this can quite often be limited to different groups of professionals experiencing the same learning at the same time e.g., sharing a lecture on a topic of joint relevance. This involves students from different professional groups learning passively within a lecture, where the development is on the teaching of core subjects often for efficiencies of scale reasons rather than for the enactment of education principles related to interprofessional learning (Horsburgh, Lamdin & Williamson 2001). This co-location model of interprofessional learning does

not enable interactive learning to take place and students are not encouraged to 'learn, with and from about each other' (Lawlis, Anton, & Greenfield, 2014; CAIPE 2002).

The facilitation of IPL is a more complex and socially dynamic and mediated process when compared with more straightforward multi-professional teaching or uniprofessional teaching. It is unsurprising that, particularly within the university setting, many facilitators feel unprepared for the challenges of this role (Newton & Wood 2009; Anderson, Cox & Thorpe 2009; Freeman, Wright & Lindqvist 2010; Ruiz, Ezer & Purden 2013). Egan-lee et al (2011) describe the facilitation of IPL as a complex and advanced skill. Their study exploring the experiences of lecturers from healthcare courses who were new to the role of facilitating learning across professional groups found that even lecturers who were experienced in facilitating learning for groups of students from their own profession found the challenge of facilitating learning across professional boundaries daunting. Many of the staff experienced challenges working outside of their comfort zone, despite completing a short course to prepare them for their IPL facilitator role. There is a lack of practice-based models which can be used to equip facilitators with the necessary skills and knowledge to deliver IPL training/education (Freeman, Wright & Linqvist, 2010).

Derbyshire, Machin & Crozier (2015) explored university educators' perceptions in relation to their role as IPL facilitators and identified what they described as transformational IPL leadership as a key characteristic affecting their confidence and effectiveness as IPL facilitators. Successful facilitators created a shared interprofessional vision with the students and responded flexibly and respectfully in relation to the complex issues that can arise from cross-professional differences (Thomson et al, 2015; Hall, 2005). The effectiveness of the facilitation activities appeared to be maximised when facilitators used their transformational leadership

skills actively recognising and enacting their role as key drivers of the IPL process. The majority of the facilitators in the study were confident and competent in their role, which they believed was due to repeated exposure to IPL either as an academic, practice educator and/or experienced professional. However, the role did challenge them both professionally and emotionally with several reporting, despite their experience, heightened levels of anxiety in relation to managing the complexity of multi-professional facilitation of IPL. The use of shadowing, team teaching, and coaching were suggested as appropriate in preparing facilitators for an IPL role. Several researchers (Egan-Lee et al 2011; Ruiz, Ezer & Purden 2013) highlighted the need for IPL facilitators to be equipped with the relevant skills and knowledge so that students receive a positive learning experience which is viewed as an essential element for implementation and sustainability of IPE (Flynn et al, 2019; Lewis, Anson, & Greenfield, 2014).

Mulholland et al (2005) suggest that this preparation for the role of facilitator has to extend into the preparation of those who support students' IPL in the practice setting. The role of the practice educator, who must have a sound knowledge base, an awareness of the realities of working within an interprofessional team and appropriate facilitation skills (Camsooksai 2002; Pollard 2009; Ruiz, Ezer & Purden 2013), is seen as influential in this process. The importance of this role is reflected in the guidance from the Nursing & Midwifery Council (NMC (2018) who identified facilitation of learning, including providing IPL opportunities, maintaining professional boundaries and supporting interprofessional care as core roles of a mentor within the healthcare workplace. The body which oversees/monitors the professional standards for healthcare professions (with the exception of doctors) the HCPC (2012) also highlight the importance of IPL in relation to the overall curriculum for the training of healthcare professionals which includes experiencing IPL in the practice setting, although they do

not make it a requirement. Students are required to work with other professionals and the wider team to meet the standards of proficiency for their part of the register, which essentially means that they need to learn and work together with other professionals (HCPC 2008). In a similar fashion the General Medical Council (GMC, 2009) adopted the CAIPE (2012) framework for introducing IPE into undergraduate medical programmes, demonstrating their commitment to IPL within medical education.

Effective facilitation of IPL often requires facilitators to operate outside of their comfort zone and extends beyond the skills required of their profession-specific role. This can be challenging, particularly when the facilitation relates to IPL. Howkins and Bray (2008) suggest that the skills and knowledge needed for facilitating practice-based IPL are different in key aspects to the skills needed for facilitation of any other work-based group. Differences included an awareness of the use of 'self' as a facilitator, dealing with professional differences, group process and relationships, power dimensions and the importance of context. CAIPE (2012) recommends that all tutors, trainers and practice educators be provided with some degree of preparation to understand the principles, purpose and process of IPL. It is suggested that team teaching or working with a 'buddy' are more valuable to facilitators in helping to alleviate some of the initial anxieties and improve confidence than is attending workshops. Other authors believe that the skills for IPL facilitation are no different to facilitation of uni-professional learning; it should be less about the practice educators' status as experts and more about their ability to create opportunities for students to develop interprofessional knowledge (Anderson, Cox & Thorpe 2009). This is possible when practice educators understand the nature of what constitutes an IPL experience (Marshall & Gordon 2006; Ruiz, Ezer & Purden 2013). It is also suggested that the facilitators possess the appropriate personal attributes such as motivation, commitment and confidence suitable for such a demanding role. There still appear to be many

challenges to facilitation of IPL in practice, similarly to those in HE, and this has been recognised in some of the practice initiatives reviewed.

The facilitator can sometimes face challenges in regard to the attitudes and behaviour of existing staff within which the IPL learning activities or experiences are embedded (Simpson, 2009). When reflecting on his experience as a clinical facilitator on a practice-based IPL project, the engagement of the students was good as they saw the relevance of IPL to the potential outcomes for improved patient care. However, existing staff were less enthusiastic, and Simpson experienced a number of professional barriers and challenges in gaining credibility amongst the professional team. They were all experienced and committed professionals, with many of them aware of the principles of IPL. However, they had anxieties about the change process and felt that there was a lack of senior management support and commitment. This role played by context and the complex dynamics of relationships when introducing novel interventions was also explored by Furness, Armitage and Pitt (2012) who identified that the most effective sites for IPL in their project were facilitated by individuals familiar to the clinical area who were able to influence staff and had strong local knowledge. In contrast, facilitators unfamiliar with the site found it more difficult to socialise into the clinical setting and struggled to overcome the scepticism and resistance of established staff.

Other challenges facing the facilitation of IPL within practice settings include contextual factors at the level of government and professional bodies, institutional factors, and individuals (Lawlis, Anson, & Greenfield, 2014). All of these factors will vary depending on the specifics of the setting within which the IPL is occurring. The influence of the practice context on the success of IPL is well recognised (Anderson, Ford & Kinnair, 2016). For this reason, CAIPE (2012) recommend that IPL initiatives

should utilise different strategies, with facilitators taking into account the context, expectations, opportunities and constraints, with collaborative practice as their starting point. This is particularly important as practice environments evolve dynamically alongside the role of the facilitator, particularly as informal encounters of IPL, such as shadowing, team meetings and case conferences, are becoming more valued as IPL experiences for undergraduate health care students. This drive towards an increasingly fluid and integrated approach to team working in clinical settings (IPL leading to IPW) has implications for professional identity and security, particularly for the established staff within the settings (Thomson, Outram, Gilligan, & Levett-Jones. 2015).

The impact of tensions within and across professional groups can have a significant impact on communication between professionals, the response to IPE initiatives within active settings and subsequently to the likelihood of IPW practices becoming normalised within and across elements of healthcare organisations. This will be considered in the following section.

### **2.2.3 Professional Identity dynamics within an IPE context**

Whilst the majority of the research has investigated IPE and interprofessional relations among healthcare students in university settings, Thomson et al (2015) explored the experiences of recent graduates working in a range of clinical care settings across Australia. The graduates came from medicine, nursing and pharmacy. All had recently graduated from university courses and all had experience of IPE during their training. Data was gathered through the use of focus groups, followed by content analysis framed by Social Identity Theory whereby the need for self-esteem motivates individuals to seek to identify themselves as part of a group (Tajfel & Turner, 1979), and Realistic Conflict Theory (Sherif, 1966) whereby the nature of the goals in each

group impact on the likelihood of inter-group conflict. Using these theoretical lenses, the researchers explored the attitudes and experiences of the graduates regarding interprofessional teamwork and communication. They found that whilst the participants acknowledged the importance of interprofessional collaboration and recognised the benefits for patients, their experience in clinical settings was that it was often lacking. Though IPE had existed for some time as part of the curriculum for undergraduate courses for healthcare staff and these professionals had all graduated within the previous two years prior to the study, the researchers found a consistent pattern of profession-focussed rather than team-focussed or patient-focussed goals. They also found consistent evidence of negative stereotyping, hierarchical communication, and competition for time with the patient.

The entrenched nature of some of the hierarchical relationships that exist within the healthcare workforce even within IPE initiatives was highlighted by Baker et al (2011) who found that participation in an IPE programme sometimes serves to reinforce traditional hierarchical relationships amongst the participating professionals. This was played out through the prism of unequal power relations that exist between professions. In the IPE initiative they explored, the engagement of the physicians (doctors) was limited and they were rarely involved in the IPE experiences. Potential reasons for this related to the professional status and power of the doctors within the staffing structure and a perceived threat to this dominant position. Whilst IPE projects the notion that all professions have equally important roles to play in caring for patients this was not enough to address the power imbalances operating in the delivery of the IPE initiative *'as well as the historically entrenched attitudes of whose knowledge and skill 'really' matters'* (p.103). The researchers talk about 'elbowing' behaviour as different professionals attempt to carve out their professional niches in order to defend the uniqueness of their profession.

This difficulty in breaking down professional barriers, even within on-going IPE initiatives or teams requires active management of the integration of different professionals particularly in the context of change (Best & Williams, 2019). They emphasise the need for active consideration of how to manage professional identity within interprofessional teams. They refer to this as the 'mobilisation of professional identity' (p. 178).

*'In practice "turf protection" behaviours are still amongst the most common barriers to interprofessional collaboration'* Khalili, Orchard, Spence Laaschinger, & Farah (2013, p.452). The researchers attempt to address this issue of the development of uniprofessional identities by proposing a three-stage socialization model that faculties could use to support health profession students to develop a positive *'dual identity'*. This involves the use of a three-stage Interprofessional Socialization process (IPS) which includes the use of IPE as a crucial component of the process. This dual identity process operates within a framework of systemic factors such as the professional education programme, professional regulations and health care delivery models and individual/personal factors such as IPE beliefs and behaviours, the person's individualistic versus collectivist orientation, and previous IPE experience. Healthcare professionals initially are socialized into their professional group and then at a relatively early stage via IPE based IPS they come to develop a dual professional identity with a sense of belonging to their own profession and the interprofessional community. Though not empirically tested at the time of publication the model represents a theory-informed model based on concepts related to social identity theory and intergroup contact theory.

A more positive note regarding interprofessional collaboration is sounded by the systematic review carried out by Schot, Tunmes, & Noordegraaf (2019) who explore the ways in which professionals on the ground collaborate and contribute to interprofessional working. The researchers report that much of the available evidence is relatively recent (within the last decade) and it is somewhat limited and fragmented. Nevertheless, examination of the 64 studies explored in the review revealed that professionals will bridge professional, social, physical and task-related gaps by negotiating overlaps in roles and tasks and making the space to do so. However, there were some instances where loosely coupled networks might be preferred over close-knit teams, particularly in relation to complex cases that might require the involvement of outside professionals.

This point regarding more loosely constructed 'networks' as opposed to teams is explored by Reeves, Xyrichis, & Zwarenstein (2018) who argue that there is a need to expand the competency framework created by the Interprofessional Education Collaborative (2016) to include networking so as to better prepare learners for the realities of clinical practice.

#### **2.2.4 IPE Delivered Via Simulation Activities**

Many healthcare educators use simulation activities in an attempt to increase the sense of 'real-world' scenarios, to develop a closer feeling of authenticity and increase the likelihood of the Interprofessional Learning (IPL) deriving from Interprofessional Education (IPE) activities being transferred into clinical settings as collaborative practice. This is not IPL via Interprofessional Working (IPW) as defined within this research, however, it is relevant to explore the impact of IPE via simulation activities, particularly as it applies to collaborative practice within real world clinical settings.

Simulation has been viewed as a potential intervention to address the patient safety agenda particularly with nursing and medical students to increase the likelihood of effective communication and collaboration between these key players happening during critical events. Improved collaboration and communication are seen as vital in reducing patient deaths during sentinel events (Leonard, Graham, & Bonacum, 2004). Given the need for collaboration and teamwork in managing patients with acute healthcare needs, simulation has quickly spread as a strategy for IPL. It has increasingly become an integral part of most UK health care programmes, with initial developments occurring in profession-specific programmes (Abu-Rish et al, 2012). The activities covered within a simulation session might include discussion of real-world cases (particularly those where mistakes were made and case reviews have been carried out), casework discussions, the use of props such as medical models to recreate a typical scene, role-playing etc. Though based on the premise of re-enacting 'real-world' scenarios, simulation is often formal, planned and structured, delivered by experienced educators and has specific outcomes which are prescribed or dictated by curricula (Kelly 2015). (CAIPE 2012) consider it an effective method of IPL to complement other teaching and learning strategies, addressing the many challenges faced by classroom-based IPL, (King, Conrad & Ahmed 2013; Palaganas, Epps & Raemer 2014; Shoemaker, Platko, Cleghorn, & Booht, 2014).

Lewis (2011) reported on an evaluation of IPL in the acute environment for final-year nursing and medical students using a simulation programme known as SMART (student management of acute illness, recognition and treatment). This programme focused on the development of essential core skills for managing the deteriorating patient using simulation. It also included interprofessional skills such as assertive communication, teamworking, critical thinking and decision making. The participants

reported that the simulation activity contributed positively to their educational experience reporting reductions in levels of anxiety in relation to caring for the patient. They also reported increased confidence, improved clinical knowledge greater comfort in working with other disciplines.

Wang et al (2015) conducted a randomised control trial of the impact of an interprofessional simulation activity on nurses' attitudes towards interprofessional working as measured by their responses to the Readiness for Interprofessional Learning Scale (RIPLS). The researchers reported statistically significant responses on four of the questions in the RIPLS, with those who had experienced the IPE simulation being more positive about IPE.

Another study (King, Conrad & Ahmed 2013) reported on the evaluation of simulation-based scenarios to identify the extent to which simulated activity involving students from nursing, medicine and respiratory therapy could improve attitudes to IPL within their respective medical teams in practice. The simulation event involved the assessment of a patient with acute respiratory distress. This required the students to communicate and co-ordinate the care for this patient which was followed by a lengthy debriefing session. Findings showed an improvement in attitudes and values to IPL, with many of the students reporting an increase in confidence to speak up, which is particularly important in ensuring patient safety and preventable errors (King, Conrad & Ahmed 2013 and see section 2.2.9 relating to psychological safety).

Kelly (2015) explored the use of informal learning experienced during health care simulation. The study findings showed the importance of unintentional learning, as facilitators encouraged students to draw on their tacit knowledge and learning to apply learning within a socio-cultural context as they engaged with other disciplines.

Recommendations from CAIPE (2012) acknowledge the importance of different strategies being utilised for IPL, taking into account the context, expectations, opportunities and constraints with collaborative practice as their starting point. This suggests that IPL in practice does not always lend itself to the predictable and intentional nature of formal learning and the value of informal IPL must be acknowledged (Furness, Armitage and Pitt, 2012).

This point was supported by a study conducted by Brown & Ahmed (2018) who emphasised the value of the debrief section of simulation IPE activities. They saw this as a powerful vehicle for mastery learning through dialogue and reflection (informal IPL) as reflected in the responses of the participants in the IPE simulation sessions. The learners who participated in the simulation activities reported the debrief to be the most valuable aspect of the sessions.

As with much of the research on IPE the studies relating to the use of simulation are either fairly light in terms of details of methodology of evaluation or use relatively simplistic measures such as surveys (sometimes constructed by the researchers to suit the particular circumstances of the research) to measure outcomes. Despite much of the research being of an international nature e.g., China, Canada, America, UK, there is rarely any consideration given to context, both macro and micro in mediating outcomes from simulation activities as part of IPE. Again, as with much of the IPE research there is a concern about the potential gap between learning and doing i.e., an increase in knowledge of other professions and an improvement in attitude towards working collaboratively with other professionals does not necessarily lead to behaviour when in real world work settings.

A step closer to 'real world' embedded IPW as a vehicle for delivering IPL is the use of specific 'training wards'. These are considered in the following section.

### **2.2.5 Interprofessional training wards**

There have been a number of interprofessional training wards specifically created to enhance IPL for undergraduate students (Reeves et al 2010; Ponzer et al 2004; Lidskog, Lofmark & Ahlstrom 2009; Wilhelmsson et al 2015; Hood et al 2014; Hallin & Kiessling 2016). Students from different professional groups are placed on these wards, where they work together with their clinical supervisors/tutors to manage the care for patients.

Many of the studies on training wards have been outside of the UK, particularly in the Scandinavian countries where IPE is considered to be much more established than in the UK. Lidskog, Lofmark & Ahlstrom (2009) explored IPL taking place for students within a 'community of practice' on an inpatient interprofessional training ward in Sweden. Students from different disciplines were involved collaboratively in using multiple methods of collecting information regarding patients' needs. The researchers reported that students perceived collaboration with others as valuable and appreciated the IPL opportunities provided, However, there were differences in student access and opportunities offered, and the students were sometimes unsure of what was expected of them. In addition, students felt that some of their experiences did not seem authentic and were not part of their daily work, but more contrived for training purposes.

Further research from Sweden reported improved communication skills and confidence in interprofessional working for students following placements on an interprofessional training ward (Wilhelmsson et al 2009; Hallin & Kiessling 2016).

Some of the elements that were perceived as important to the positive outcomes were related to the authenticity of working with real patients, well composed functioning teams, supportive supervisors and ward structures that promoted IPL. However, they also reported that these wards did not operate in the same way as traditional wards, where hierarchy and power issues were not evident.

Hood et al (2014) explored the views of final-year health care students following a two-week interprofessional clinical placement on a rehabilitation ward, where a team of students from different professions cared for a group of patients. Data was collected using an interprofessional clinical placement learning inventory and a focus group interview. Hood reflected that the students reported increased autonomy and independence, improved professional communication and an improved understanding of their own roles and those of other professional groups. Students reported developing a strong sense of belonging within the team and a reduction in the strength of some of negative stereotyping, a factor known to reduce the quality of interprofessional experiences (Thomson, Outram, Gilligan, & Levett-Jones, 2015). The study concluded that interactive models of clinical IPL that are authentic are valuable to students and should be incorporated into undergraduate curricula. This point is reflected by Lewitt, Cross, Sheward & Bierre (2019) who reflect on the perception of students of the unhelpful gap between university and workplace settings in supporting learning for interprofessional practice. They recommend that educational frameworks acknowledge that *'the interprofessional learning journey is influenced by context and organisational culture'* (p.587). Given that such 'dedicated' training wards are still relatively rare in the UK context, Furness, Armitage and Pitt (2012) argue that a potentially cost-effective and sustainable way of enhancing IPL is to make better use of existing student placements, particularly in clinical areas where collaborative working is already part of the culture of that workforce.

## 2.2.6 IPW as a specific form of IPE

The literature relating to IPW as a specific form of IPE is sparse within the broader field of IPE research. However, though the term IPW is not widely represented in the literature as a linked term to IPE, a number of research articles were identified, via the secondary searching/filtering approach, which explored the implementation of IPE activities within clinical or quasi-clinical working environments. For example, Brack and Shields (2019) conducted a systematic literature review of short-duration clinically based interprofessional collaboration interventions. These were defined by the authors as *'discrete clinical activities which could be completed during a typical working day (e.g., joint patient treatments or assessments, information gathering, shadowing, ward rounds, case conferences).'*' (p. 447). This definition fits with Billet's (1996) definition of 'situated learning' as it involves goal-directed activity occurring in authentic circumstances. The 13 studies that met their criteria for inclusion considered two types of interprofessional activities, shadowing, and patient review. The studies included students from a range of different areas including pharmacy, nursing, medicine, occupational therapy, physiotherapy, dietetics, podiatry, social work, speech pathology and medical imaging. Data from the studies were analysed descriptively using content analysis relating to the criteria outlined in the IPEC (2016) Core Competencies for Interprofessional Collaborative Practice framework (Roles and Responsibilities, Interprofessional Communication, Teams and Teamwork, and Values/Ethics for Interprofessional Practice). The main findings reported by the authors were that (1) short-duration clinically based interprofessional training may be beneficial to trainee health professionals; (2) different types of interprofessional learning appear to link to the development of different competencies, and; (3) the current stage of training of the students should be considered when selecting interprofessional activities.

Differences were found in terms of the reported outcomes related to either the shadowing experience (defined as 'where students observed a student or staff member from another discipline') or the patient review activities (defined as 'where students from at least two disciplines worked together to assess or treat a patient'). Nasir et. al. (2017), for example, reported that following participation in patient review activities, students felt that they were better able to explain the roles and responsibilities of the other professionals and how they contribute to patient care. The students also recognised the value/importance of frequent communication between professionals. Key themes that emerged from Brack and Shields (2019) analysis of studies exploring patient review activities included development of clinical skills and the beneficial experience of 'participating'. Other positive outcomes that emerged from the author's analysis of studies included an increase in the students' views of the importance of effective teamwork for patient outcomes. Whilst the authors reported that the majority of students positively rated the usefulness of participating in patient reviews, some of the students identified a number of negative elements such as time pressure or the lack of diversity of disciplines involved in the patient review activity. The authors reported that the students participating in the patient review activities tended to be further along in their studies (3<sup>rd</sup> to 5<sup>th</sup> year).

The shadowing activities tended to take place within the 1<sup>st</sup> or 2<sup>nd</sup> year of studies. Outcomes of the student ratings from the shadowing opportunities were also reported to be positive (Kusnoor & Stelljes, 2016; Joseph et. al, 2012). The analysis of the quantitative data (Brack & Shields, 2019) showed impact of the shadowing activities in terms of the IPEC competencies of 'Roles and Responsibilities', and 'Teams and Teamwork'. Within the Roles and Responsibilities competency the students' feedback most often related to the sub-competency of 'ability to explain the roles and

responsibilities of other providers'. In the Teams and Teamwork, the feedback most frequently related to the sub-competencies of 'ability to integrate the knowledge and experience of health professionals to inform health decisions' and 'the ability to perform effectively in teams'. Brack and Shields (2019) stated that the most commonly reported outcomes reported by the students who participated in the shadowing experiences was *'an increased interest, insight and understanding of other health disciplines, and an increased respect for the breadth and depth of knowledge of other disciplines.'* (p.450). However, Brack and Shields (2019) highlighted a significant limitation of the review in the poor methodological quality of the studies reviewed. In many of the studies the lack of detail and clarity made it difficult to identify key aspects such as the independence of the assessor, how appropriate the outcome measures were, and the details of the analysis of outcomes. The majority of the outcome measures were self-designed closed questionnaires (i.e., Likert Scale), modified Readiness for Interprofessional Learning Scale (RIPLS), and some open-ended questions along with a small number of reflective narratives. This lack of methodological transparency and rigour is an enduring characteristic of much of the research in this field, most particularly when researching IPE within clinical or 'real-world' settings. The measures utilised and the analysis of outcomes generated can be relatively narrow and, beyond a broad description of the intervention, often the context and mechanisms by which these outcomes are enacted does not form part of the analysis. The nature and quality of the research reviewed by Brack and Shields (2019) is reflected in the following two representative studies:

Cahill et. al. (2013) reviewed a case-based model of interprofessional learning that involved a small number of Occupational Therapy and Physiotherapy students who collaborated (supported by a practice educator) in order to implement a specific case-management process (MAGPIE – Queensland health, 2008) within a community-

based setting. The researchers identified three themes emerging from the intervention; the motivating experience of involvement in IPE, the impact on deepening learning, and adding further clarity to professional roles and expectations. They suggested that the outcomes from the research indicated that IPE can lead to the development of deep learning opportunities regarding professional roles. Though the authors reported that the data from the focus group were thematically analysed, details were limited with the authors reporting that chunks of data from the transcripts were highlighted to form codes and that the codes were '*..grouped together, examined individually and across the data set to generate themes*'. (p. 334).

A study that used more quantitative methodology was carried out by Nasir, et. al. (2017), exploring the views of a large number of healthcare students (n = 329) who, over the period of a year, each experienced an Interprofessional Learning (IPL) activity with a minimum of at least one other student from a different healthcare profession on a ward setting. The IPL activity took the form of a structured process of history-taking from a patient at the bedside followed by a series of prompts asking the students to consider and discuss the roles of the different healthcare professionals at different stages such as while the patient is in hospital during their discharge, and following patient discharge. The impact of the experience was measured via a survey with closed questions (five-point Likert Scale) covering attitudes on interprofessional communication, learning and interaction, and future practice along with two more open-ended questions '*Do you intend to do anything differently as a result of today's session? Please describe:*' '*Do you have any suggestions for improvements to this session?*' (p.127). As with much of the research in this field, the outcomes in terms of the self-reported benefits of the intervention or changes in views or/and attitudes of the students participating was very positive. However, as with much of the research

surrounding IPW, the method of analysis does not necessarily consider the contextual and social dynamics that may have influenced/interacted with measured outcomes.

Joseph, Diack, Garton and Haxton (2012) conducted a study which aimed to examine changes in attitude towards interprofessional working. Thirty-eight undergraduate students from nursing, pharmacy and medicine took part in planned IPE activities within two clinical settings, theatre and primary care. The readiness for interprofessional scale (RIPLS) questionnaires (Parsell & Bligh, 1999) were completed before and after the course activity. The responses to the questionnaires prompted the authors to conclude that '*..being involved in IPE activity while on clinical placement can effect a positive attitudinal change for students, which could encourage positive attitudes towards interprofessional working on qualifying*'. (p.30). This supports the consideration of IPW as an effective form of IPE through the positive implications for future collaborative practice and thus ultimately patient care. However, there is relatively little insight into the process of IPW itself and specific contextual factors (e.g., social, organisational etc.) that may facilitate or inhibit the effectiveness of this type of IPE.

In a larger-scale study using a quasi-experimental methodology, Norgaard et. al. (2013) found that interprofessional training within a clinical setting led to a statistically significant increase in perceptions of self-efficacy for a group of health care students. The intervention group (239 students) and control group (405 students) were recruited from a broad range of medical professions including medicine, physiotherapy, nursing, occupational therapy, radiography, and laboratory technology. The intervention group received training in a specially designed Interprofessional Clinical Study Unit (a quasi-real-world clinical context) whilst the control group followed the traditional clinical

training route. Four questions were used to assess perceived self-efficacy (Parle, Maguire, & Heaven, 1997):

To what extent do you believe that you successfully can...

1. *Collaborate with other professions in planning goals and actions for patient rehabilitation?*
2. *Collaborate with other professions for rehabilitation in an inpatient ward?*
3. *Identify the functions of other professions in relation to inpatient care?*
4. *Clearly assess and describe patients' needs and problems, so that other professions can engage in a dialogue about goals and actions?*

The group who undertook training within the Clinical Study Unit scored higher on all four questions leading the researchers to conclude that, in line with previous studies (Mansouri & Lockyer, 2007), active training methods produce larger effect sizes than passive training. They suggested that further investigation is needed to determine whether changes in perceived self-efficacy occur only in controlled settings and whether it is possible to transfer the results into real-world situations. It was also not clear whether the increases in perceived self-efficacy actually led to more collaborative team behaviour. Again, the focus of the research was exclusively on the input or intervention and outcome rather than the process by which the outcome was achieved.

A study by Takahashi, Brissette and Thorstad (2010), conducted within a hospital for children, explored the impact of integrating IPE into a clinical setting. The initiative was implemented within a spina bifida clinic and the group of children had particularly complex care needs that made a collaborative team approach essential. The clinic team was reported to include a range of different professions such as physicians,

nurses, physiotherapists, occupational therapists, dieticians and social workers. The students' placements in the spina bifida clinic lasted five weeks full time and formed an additional component of the traditional IPE training. Students from different professions (two nursing students, two physiotherapy students, and one occupational therapy student) were in the clinic for each session. The authors reported that responses from the students participating in the initiative were overwhelmingly positive- reflecting an increased understanding of their roles and the roles of other professions along with increased respect for their own and other professions' roles. This is considered to be an important outcome of IPE initiatives (Lidskog, Lofmark & Ahlstrom, 2008). The students demonstrated greater clinical knowledge within their own domain as well as increased awareness of the role of other professions and it was suggested that IPE and clinical learning are not mutually exclusive and that *'it seems likely that students' clinical learning would be deepened when acquired in such a context'* (p.37). Students were asked to keep reflective logs about their interprofessional experiences and informal feedback from students and staff was gathered throughout the initiative. Such insight can be considered as valuable as suggested in the literature; IPE is a complex process that might best be evaluated by exploring the learning processes that take place during an IPE intervention (Steven, Dickinson & Pearson, 2007). However, these were not analysed in detail, but fed into the more generally reported outcomes from feedback. Though the clinic-based IPE initiative was targeted primarily at the participating students, the feedback from clinic staff reflected a positive impact in regard to their interprofessional awareness and working practices. Whilst not an example of IPW as defined in the current research, this initiative highlighted potential benefits of clinic-based IPE learning.

Though using the term Interprofessional Teamwork (IPT) rather than IPW, a review conducted by Korner et. al. (2016) lends support to the potential impact of

developing collaborative practice within 'real-world' settings. The systematic literature review focused on IPT within chronic care settings and aimed to identify the key features of teamwork and interventions and to develop a framework for evaluation of IPT. It was reported that all but one of the evaluation studies covered within the review resulted in better outcomes in relation to teamwork and/or staff-related, patient-related and organisation-related factors. However, as is reflected in much of the literature on IPE-related research, the majority of the interventions reviewed were not experiencing IPE via working within a real-world working environment, but by additional workshops, seminars or other specific training outside of the typical clinical setting. There were a small number of studies included in the review where the intervention was an integral part of, or linked with, an IPE initiative and which shared some features with the current research. McKellar et al (2011), for example, used a series of semi-structured interviews to explore the impact of a two-day IPE intervention on the perceptions of a range of professionals working in community care setting with stroke patients. The interviews were carried out five months after the intervention and the authors reported the participants' positive perceptions concerning improved communication, awareness of others' roles, collaborative practice and improved team functioning. However, a number of potential barriers were identified including the practice of individuals, organisational structure, professional identity and practical constraints such as time pressures. A study by Monaghan et. al. (2005), again related to the care of stroke patients, introduced a multidisciplinary weekly ward round which led to significant improvements in team communication and the understanding of team objectives and the roles of others in the team. The researchers also reported an improvement in the quality of treatment plans. As with the research of McKellar et. al. (2011), one potential barrier was a significant increase in time requirements. Additional studies indicated the potential benefits of professionals working in multidisciplinary teams such as better

communication, improved staff satisfaction and better-quality care plans (Cioffi et al, 2010; Clarke, 2010).

Though the studies discussed identify outcomes to specific interventions or research within clinical settings that are perceived as beneficial, wider influencing factors may profoundly affect the IPW process in different ways and are therefore important to consider if IPW approaches are to be adopted into different contexts and settings. To further understanding, evaluation of outcomes needs a depth of analysis that would enable others to understand why the initiative worked, with whom, and in what contexts. A focus on the measurement of outcomes to the detriment of looking at processes and context makes understanding, transferring and effectively applying learning from IPE research or initiatives into different settings problematic (IOM, 2015). The research outlined in Chapter 2 thus far relates to time-limited initiatives that primarily establish 'proof of concept' (i.e., that delivering IPE initiatives within active practice settings appears to have a positive impact on staff attitudes and potential future IPW and collaborative practice). Though several recommendations relate to exploring how such practices might go beyond one-off initiatives and be embedded and sustained (McKellar et. al., 2011; Korner et. al., 2016), the complexity of such an undertaking makes this a challenging area to consider. The studies which have most closely represented the concept of IPW (see above) have indicated a potentially constructive way forward within the field of IPE. However, the lack of methodological rigour and detail make it difficult to progress this field of enquiry. The current research, inspired and informed by the potential of embedded learning, attempts to address these gaps or deficits by the use of a realist evaluation approach. This, along with much greater clarity in regard to terminology, could provide the rigour and depth of analysis needed to bring the field forward.

In addition to the inherent complexity and challenge of establishing and sustaining IPW within a professional practice setting, there are also significant challenges of embedding and sustaining IPE within the health professional curricula. Lawlis, Anson and Greenfield (2014) for example, in a literature review of higher education institutions and IPE curricula, identified 1570 articles relating to IPE barriers and only 18 on IPE enablers (p.2). They identified a number of factors that were either barriers or enablers to IPE at governmental, professional, institutional and individual levels. At a governmental and professional level the barriers and enablers related primarily to the presence or lack of financial resources, collaboration between institutions and stakeholder commitment. At an institutional level, barriers included, for example, different degree timetables, rigid curriculums, scheduling of IPE within existing programs and differences in assessment requirements. Enablers included funding by the individual institutions and faculty development programs that included IPE. Some of the barriers identified at the individual level included attitudes with the faculties, high workloads, a lack of understanding of the IPE concept, a bias towards one's own profession and a lack of respect towards other health professionals. Enabling factors at the individual level included the skill and enthusiasm of the facilitator, having 'IPE champions', having staff that can act as role models, and showing of equal status regardless of position or background. The five key or fundamental elements identified by the authors as enabling or inhibiting IPE initiatives spread across all three domains of government/professional, institutional, and personal. An emphasis is placed on the importance of considering **context** when exploring outcomes of IPE. However, the researchers state that *'It is difficult to evaluate successful implementation as studies define success in different ways'* (p.5).

The methodological limitations within the research analysing or measuring outcomes of IPE initiatives are covered in the following section.

### 2.2.7 Evaluating IPE

A similar level of complexity and lack of conceptual and terminological exactitude applies to the field of IPE outcome research. There exists much IPE research focused on attempting to measure outcomes using a range of measurement instruments (Thannhauser, Russell-Mayhew, & Scott, 2010; Riskiyana, Claramita, & Rahayu, 2018; IOM, 2015). However, Cox (2015) poses the question as to:

*“whether it is possible to evaluate the impact of any health professions education intervention on improving health or system outcomes given the degree to which confounding variables can obscure the evaluation results. Such variables can be in the form of enabling or interfering factors in such areas as professional or institutional culture and workforce or financing policy.” (Cox, 2015, p. 2)*

Notwithstanding challenges in the effective measurement and evaluation of IPE and the generation of an evidence base that links IPE interventions to eventual patient outcomes, both from an epistemological (what can or should be measured) and methodological (how can it be measured) perspective, there is a growing literature covering the topic of generating outcome measures related to IPE (Lindqvist et. al., 2005; Cox, 2015; Thannhauser, Russell-Mayhew, & Scott, 2010; Riskiyana, Claramita, & Rahayu, 2018; Kerry & Huber, 2018). Lindqvist et. al. (2005) for example, explore and review the validity and reliability of a number of quantitative instruments developed to measure IPE outcomes and evaluate effectiveness. The two primary measures reviewed are the Interdisciplinary Education Perception Scale (Luecht, Madsen, Taugher, & Petterson, 1990) and the Readiness for Interprofessional Learning Scale (Parcell & Bligh, 1998). Lindqvist et. al. (2005) highlight challenges in developing

quantitative research instruments, such as poor conceptualisation of key terminology and a lack of psychometric evaluation of the measurement instruments that are being used. They identify three key potential explanations for the low quality of the research instruments; a lack of consistent vocabulary within the field, the numerous components of IPE that need to be taken into account, and a lack of consensus about what should be measured when exploring the diverse dimensions of IPE. They conclude that it is essential to develop a consensus around the definitions of IPE in order to inform the development of valid and reliable measures.

Kerry and Huber (2018) discuss why it may be that the increased focus on empiricism and linked quantitative measurement within the IPE field has not led to a stronger and more rigorous evidence base. They suggest that this may be due to the wide variation in experimental designs and methodology. Their proposed solution is to move away from the typical measurement paradigm of Classical Test Theory (CTT), which is used to construct and validate scales used in IPE outcome research, to Item Response Theory (IRT), which they feel has better psychometric properties for the measurement of IPE outcomes. They suggest that IRT is more flexible, takes context into account and is more generalizable across different settings. The researchers suggest that the adoption of what they refer to as 'more modern' IRT methodology would better identify key student characteristics such as 'receptivity' and 'motivation for transfer', which purportedly affect the outcomes of IPE. This approach may strengthen the short-term effectiveness of IPE and help 'disentangle the complexities of distal care practice over the complex training pathway'.

Designing reliable and valid objective or empirical measures of IPE outcomes remains a key focus within the field. In a systematic review of studies exploring the effectiveness of IPE programmes (Riskiyana, Claramita, & Rahayu, 2018) it is

suggested that IPE programmes should be evaluated using objective measurement methods in order to generate reliable conclusions concerning the success of the programme. Their review therefore excluded studies with self-report assessment methods and focused exclusively on 'objectively measured' changes in interprofessional collaborative abilities as measured against the learning assessment pyramid (Shumway & Harden, 2003). This is based on Miller's (1990) pyramid which delineates between the student knowing how to perform a professional task or function, the student successfully enacting this knowledge in a practical situation, and what the student, when qualified, does when acting independently in a clinical environment; knowing, knowing how, showing and doing (Thistlethwaite et al, 2014). Riskiyana, Claramita and Rahayu (2018) identified a number of factors that they felt contributed to effective outcomes within IPE programmes. They concluded that:

*“Case-based learning, simulation-based learning, and experiential-based learning through clinical or community practice might be the most beneficial learning methods for interprofessional education”. (p. 75)*

The researchers acknowledge the complexity of what they refer to as the 'learning material' and the need to acknowledge and plan for this complexity in regard to both the curriculum and the media through which such learning takes place. Though the researchers' aim was to identify factors that could have a global reach or application, the majority of the studies covered in the review came from Canada or the USA and refer specifically to the core competencies outlined in the Core Competencies for Interprofessional Practice (IECE, 2011) in the United States and the National Interprofessional Competency Framework in Canada. These differ from the equivalent interprofessional competencies frameworks in other countries such as the UK that may be considering somewhat different healthcare contexts. Indeed, the researchers

recognise the limitations related to lack of access, within the papers reviewed, to details of other factors which may have affected the outcomes of the IPE initiatives explored. The assessment measures used within the papers are accepted somewhat uncritically as valid and reliable measures of IPE outcomes, though the assessment instruments emphasise intra-professional outcomes (the measured changes in individuals' attitudes, knowledge and skills in working with other professionals) with an assumption that this will lead to interprofessional outcomes and subsequent practice. However, the majority of the studies focused on a single professional group, for example, looking at training for doctors.

As with much of the research that focuses on designing effective 'objective' measures of IPE outcomes, examination of the context and process is somewhat overshadowed by the emphasis on outcomes that are accessible to objective measurement using psychometric instruments. In their review of IPE activities that led to the outcomes that were measured, Riskiyana et. al. (2018) reported that, despite their view that simulation-based and experiential-based learning was the most effective, the majority of the IPE interventions reviewed delivered the 'learning' via classroom-based activities. The linked measures could therefore, for example, be unlikely to progress beyond level 2b in Kirkpatrick's outcomes typology (Table 3):

**Table 3.** Kirkpatrick's expanded outcomes typology, adapted from Reeves et al (2015) p.2)

<b>Level 1</b> Reaction	Exploring learner's views on the learning experience and its interprofessional nature
<b>Level 2a</b> Modification of attitudes or 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
<b>Level 2b</b> Acquisition of knowledge/skills	Including knowledge and skills linked to interprofessional collaboration
<b>Level 3</b> Behavioural Change	Identifies individuals' transfer of interprofessional learning to their practice setting and their changed professional practice
<b>Level 4a</b> Change in organisational practice	Wider changes in the organisation and delivery of care
<b>Level 4b</b> Benefits to patients/clients	Improvements in health or wellbeing of patients/clients

Much IPE research, considering the challenges in conceptualising, defining and measuring IPE, does not explore the context within which an IPE initiative is embedded. The main focus is on the curriculum, what skills and knowledge are being taught and the methods by which participants can be assessed in terms of whether or not they have acquired the targeted knowledge and skills. Alongside these measures there are quantitative measures of changes in attitudes or dispositions of professionals towards those from differing professions and towards IPW and wider IPE. Exploring or measuring the impact of context on both the process and outcomes of IPW presents an added layer of challenge which some might argue could limit the feasibility, generalisability or transferability of such research. However, there is a need to consider an approach to methodology that could take context into account in a way that allows for abstraction of features of IPW that may be applied across different settings.

Within the field there is very little attention paid to a consideration of context (as understood within the realist evaluation framework) as a factor in influencing the outcomes of initiatives. They find that something works, as measured by limited outcome criteria, but don't really know why or how. This then limits the understanding and potential application of the learning to other contexts.

### **2.2.8 IPE and Context**

The immediate and wider contexts within which IPE initiatives are embedded have an impact on both the nature of the approach to education (IPE) and the nature of the learning process (IPL) in each instance. IPL that takes place within a classroom-based setting, for example, may have significant differences in process and outcome when compared to IPL that takes place in an active practice setting (i.e., IPW). The spread of research within the IPE literature reflects a substantial preponderance of classroom-based IPE initiatives or activities; with a smaller number making use of a simulation setting and fewer still taking place in active practice settings (Riskiyana, Claramita, & Rahayu, 2018). This may be due to the fact that much of the research is carried out at a pre-qualification stage rather than a post-qualification/continuing professional development stage. There is a relatively more stable opportunity for data collection from classroom-based IPL (which may arguably occur more often during pre-qualification formal education years) in comparison to the challenge of data collection from a live practice setting such as that of acute healthcare. Within the literature, few studies explicitly explore IPW as a specific form of IPE where the learning is embedded within supported interprofessional practice in active 'real-world' settings. There may be a number of reasons for the relative paucity of specific IPW research. Acute healthcare settings are inherently unpredictable and 'live' settings present a far greater range of

logistical challenges. The dynamic nature of a 'real world' context generates a potential multitude of factors that may influence processes and outcomes related to IPW.

Broader contextual economic factors, such as whether the research is carried out in a public or private healthcare setting, are also likely to impact on the process of IPW and related research. There are differences in terms of resources as well as fundamental differences in organisational goals (i.e., profit vs. non-profit). Increased emphasis has been placed on generating evidence of the effectiveness of IPE interventions (including IPW) that take place within the context of healthcare organisations or implementing such interventions as established 'evidence-based practice'. A recommendation highlighted in an Institute of Medicine (2015) review states that:

*"Interprofessional stakeholders, funders and policy makers should commit resources to a coordinated series of well-designed studies of the association between IPE and collaborative behaviour, including teamwork and performance in practice"* (p.4)

However, in a public healthcare setting, such as the NHS in the UK, there are increased financial restrictions and limitations that may not be present in a private sector setting or another publicly funded healthcare system. As discussed in the introduction to this thesis, such restrictions result in much public sector (and some private sector) IPW research occurring at an isolated pilot level (such as in the case of the current research). This perhaps reduces the initial investment of resources required until such a time as which IPW can be 'confirmed to work' within that specific Trust/setting. However, as it is difficult to link IPE and improved collaborative practice (and thus eventual patient outcomes) in a direct or linear way, such outcomes cannot be observed immediately. Particularly where, as discussed in Chapter One, IPW can

be considered as an on-going social process through which changes in attitude and behaviour must occur and persist- a desired outcome that, again, may not be observed quickly or easily.

The notion of 'context' is typically thought of as the physical setting within which the IPE initiative is located and the organisational structure or factors impacting on the IPE, however, within a critical realist paradigm, context would also include socially mediated factors such as psychological safety which are key to working within and across teams.

### **2.2.9 Psychological Safety**

An example of a factor that may affect the IPW process in particular, due to the live practice setting and professional environment, is psychological safety. The term 'psychological safety' can be used to describe the extent to which "people are comfortable in being (and expressing) themselves" (Edmondson, 2004). It can be useful when examining psychological safety in the workplace to consider psychological safety as a group level construct. This approach focuses on psychological safety as a team environment ('team psychological safety') rather than a characteristic of an individual. The approach would consider an individual's level of psychological safety to vary depending on the psychological safety of their current environment rather than on personal factors. Group perception of psychological safety develops in teams because employees who work closely together in a team environment have shared work experiences and are exposed to the same set of contextual influences (Edmondson, 1999). Each team has a different belief as a group about the potential interpersonal consequences of their actions within that group.

*“[team psychological safety consists of] individuals’ perceptions about the consequences of interpersonal risks in their work environment. It consists of taken-for-granted beliefs about how others will respond when one puts oneself on the line, such as by asking a question, seeking feedback, reporting a mistake, or proposing a new idea.”* (Edmondson, 2004, p. 241)

It describes an environment with a focus on productive discussion in order to prevent problems at an earlier stage and to effectively accomplish the team’s shared goals. This productive discussion is enabled by the fact that members of a team with a high level of psychological safety are less likely to focus on ‘self-protection’ (Edmondson, 2004).

Much work within an organisation involves an aspect of collaboration, or, ‘teamwork’ in order to achieve certain objectives or outcomes. A team has been defined as consisting of “two or more individuals, who have specific roles, perform interdependent tasks, are adaptable and share a common goal” (Salas, Dickinson & Tannenbaum, 1992). More specifically, when examining teams within the context of a larger organisation, a team is a group “with clearly defined membership and shared responsibility for a team product or service” (often found to range in size from five to twenty people: Edmondson, 2004). Effective teamwork is widely known to be an important factor in “achieving positive, cost-effective outcomes” across a variety of organisational settings (Xyrichis & Ream, 2008; Nurmi, 1996).

Due to the high potential positive impact of effective teamwork within an organisational setting, it is important to study factors that affect individual’s behaviour when working as part of a team. This increases our understanding of what distinguishes a ‘good’ team from a ‘bad’ team (Hackman, 1990; 2002). The

psychological safety of a work team has been found not only to affect behaviour within a team, but also has a number of wide-reaching implications for an organisation as a whole (Edmondson, 2004).

### **Psychological safety and IPW**

The immediate importance of exploring psychological safety in IPW is that a key component of efficient, safe and productive teamwork is communication (Smart & Barnum, 2000). Croker, Grotowski, & Croker (2014) report that fear of making mistakes and being blamed is a genuine contributor to workplace stress and interprofessional conflict. A low level of psychological safety within a team could prevent the disclosure or sharing of key information due to employees within the team fearing the potential repercussions of 'speaking up'. This could be damaging for any team as the failure to for example, report an error that occurs, could present a later issue that may be potentially amplified if the issue has increased in severity or if the team is responsible for ensuring the success of a high-risk service that would be majorly impacted by such an error. An example of this in research investigated the psychological safety of several nursing teams within a hospital and found that in teams where the level of psychological safety was low, employees felt less able to report mistakes (such as medication errors) and implied that some errors are not reported by staff (Edmondson, 1996). This suggests that there are serious consequences of a lack of psychological safety in an environment with a high-risk outcome such as acute care. This level of potential outcome is highlighted in the finding that over 70% of 2,000 sentinel events examined were due to poor interprofessional communication, and that 75% of those incidents resulted in patient death (Leonard, Graham, & Bonacum, 2004 – from Thomson et al 2015)

Research suggests many benefits of ensuring that team psychological safety is high. A high level of psychological safety has been found to:

- Promote work engagement. High psychological safety increases the likelihood of staff contribution to and interaction with their team as the threat of negative interpersonal consequences is reduced (Dollard & Bakker, 2010).
- Reduce feedback bias. High psychological safety has been found to increase the accuracy of feedback through reducing the psychological threat that leads to individuals claiming too much or too little credit for their contribution towards a team goal (Behfar, Freidman & Oh, 2013).
- Promote learning behaviour. High psychological safety promotes key workplace learning behaviours such as seeking help, seeking feedback and speaking up about errors and concerns (Edmondson, 2004). Again, this is enabled by the reduced threat of potential negative interpersonal consequences (e.g., being seen as incompetent). High psychological safety also increases the early detection of errors (e.g., Edmondson, 1996).
- Promote innovation. Innovative behaviour is defined as “doing novel or different things intelligently, to produce useful outcomes” (Edmondson, 2004). Psychological safety creates a ‘participative safety’ in teams that allows for the freedom to propose new ideas and experiment with existing ideas and behaviours; again, with the reduced fear of repercussions. This encourages a certain level of constructive risk taking (West, 1990). The quality of the ideas generated also increases as the implied information sharing associated with psychological safety gives team members increased access to information that

they can use to develop new ideas.

- Promote cross-departmental communication. Cross-departmental communication (“external communication with other groups, such as needed to coordinate objectives, schedules or resources”- Edmondson, 2004) can be assumed to increase if teams within an organisation have a high level of psychological safety. Theoretically, if individuals within high psychological safety are used to taking interpersonal risks, they might extend that behaviour increasingly outside of their team in the wider organisation (Edmondson, 1999).
- Reduce resistance to change. Due to the increased communication and reduced psychological fear, teams with high psychological safety have been found to adapt more quickly when a change is introduced (Edmondson, Bohmer and Pisano, 2000; 2001). The ability to maintain or promptly establish a high level of psychological safety within a team can be the key in reducing resistance to change. Teams with high psychological safety adapt to change more swiftly than those who do not (Edmondson, 2004). This effect was particularly strong in cases where the newly formed teams were interdisciplinary as the high psychological safety increased communication (Edmondson, Bohmer, & Pisano., 2000; 2001).

Many of these benefits directly link to inherent aspects of the IPW process and desired outcomes. Additional process outcomes that have been linked to IPW (e.g., increased psychological safety, self-efficacy etc.) could not only further contribute towards improved collaborative practice and patient care but also wider organisational goals such as the attraction and retention of healthcare practitioners (Abu-Rish et. al., 2012; Brock et. al., 2013).

## The use of Realist Evaluation within Healthcare settings

There is increasing evidence of the application of realist evaluation methodologies to explore context, mechanism, and outcome chains within socially complex healthcare settings. Dalkin et al (2015) used a realist evaluation approach to explore the Integrated Care Pathway (ICP) used in a palliative care setting/context. The purpose of the ICP was to improve the care for people in their final year of life. The researchers describe this process as *'identifying individuals approaching end-of-life, assessing and agreeing how needs and preferences of patients could be met, providing support for families and carers and using the Advance Care Planning (ACP) to manage the patients' final illness in order to achieve a 'good' (preference based) death'* (p.4 – online version). The application of a slightly modified version of the CMO structure enabled the researchers describe the context and mechanisms by which patients with an illness other than cancer came to be less likely to be included within palliative care registers (the outcome). However, their analysis, whilst sophisticated in form, was relatively simple in terms of substantive content (e.g., because elderly patients' end of life trajectories are less predictable than those of cancer patients the health professionals were more anxious or hesitant about placing them on the end-of-life Integrated care Pathway). It was difficult to see what might be done to improve the ICP for non-cancer elderly patients (typically in care homes) or how the findings could be transferred to other similar situations. This may have been because the research was used within the context of illustrating a theoretical point regarding the potential value of amending the typical CMO conceptualisation within a more theoretically oriented piece of work.

A more substantive piece of research using realist evaluation methods within complex health care systems was undertaken by Grenhalght, et al. (2009). The researchers describe it as *'one of the first applications of realist evaluation to a large-scale change effort in health care'* (p.391). They explored an attempt to modernise stroke, kidney, and sexual health services spanning across four large health care organisations. The researchers were able to use realist evaluation to identify a number of mechanisms and sub-mechanisms of change and to demonstrate the appropriateness of realist evaluation for this type of investigation. However, despite the distinguished and experienced contributors to the research team (including Ray Pawson) they reflected on the difficulties they experienced in identifying the mechanisms for change which had proven much more difficult than had been anticipated.

Flynn et al (2019) used a realist evaluation approach to explore the contexts and mechanisms that were either hindering or enabling factors in the implementation and sustainability of a Lean intervention in paediatric healthcare within a Canadian healthcare setting. Whilst originating in the car industry (Toyota) as an efficiency model, when applied in the healthcare context the authors describe Lean as a management system that aims to reduce wasted resources or activities in order to better or more effectively focus more time on direct patient care. One of the key factors which they felt promoted sustainability of any implementation and normalisation process was the 'ripple effect' whereby the positive (or not) initial implementation processes and outcomes shape sustainability. The outcomes emerging from the realist evaluation of the programme implementation included resistance, lack of customization to context, and negative perceptions. The factors that were identified as influencing the poor implementation outcomes (and subsequently the sustainability) included the use of an external consultancy company not directly related to healthcare to lead the early

stages of the implementation. This was viewed negatively, particularly by frontline staff. The failure to adapt the programme to local contexts triggered problems in the translation of Lean into what were quite complex and distinct local contexts. One contextual factor, which will be familiar to staff working within the NHS, which emerged from the analysis was the innovation fatigue felt by frontline staff, with Lean being considered another 'flavour of the month' or management fad. This disconnect was further strengthened by a failure to engage all staff with a sense of shared values in relation to the intervention and to support them in sense-making and engagement, essentially a failure to 'win hearts and minds'. A further factor emerging from the realist evaluation was the disconnect between managers and frontline staff in terms of positive versus negative views regarding Lean. The authors suggest that this may be impacted by the silo and hierarchical nature of healthcare professions. Though a little lengthy and complex in construction, it is worthwhile recounting the researchers' narrative description of the CMOs emerging from the study as a way of illustrating the usefulness and application of realist evaluation in making sense of interventions operating within complex social systems:

*'...realist interviews primarily illustrate how implementation outcomes (e.g. resistance, lack of customization to context and negative perceptions), nature of implementation (e.g. training that did not communicate the meaning of Lean to healthcare, external Lean consultants that were not from healthcare), and the implementation approach (e.g. mandated top-down approach) shape the contexts (resistance, lack of customization and negative perceptions and variation in Lean training and exposure); mechanisms (e.g. the degree of sense-making, staff engagement, awareness); and outcomes (e.g. degree of support, continuation and normalization) for the sustainability of Lean efforts' (Flynn et al, 2019)*

This piece of research highlighted the potential usefulness of using an approach such as realist evaluation when exploring interventions within complex and socially dynamic settings such as healthcare and the importance of taking context and mechanisms into account when looking at outcomes.

### **2.3 Reflections on the literature review**

The literature search highlighted a number of issues. In the conducting, reporting and dissemination of IPE research there is generally a considerable lack of contextual information considered or gathered. This makes it hard to build an overall evidence base for IPE as it is hard to transfer findings/approaches (especially in the case of IPW which takes place in a 'real-world' setting) to different contexts if the reader is not aware of the original context and the impact that may have had on the IPE/IPW process.

There are major problems with terminology – who means what by what! Inconsistent definitions and terminology obscures conceptual understanding. Ambiguous terminology wouldn't be such an intrusive issue if there was enough contextual detail available such that researchers could examine the reported research in sufficient depth to see if it matched their definition/conceptual understanding of IPE/IPW regardless of terms used. Unfortunately, the research in the field is lacking in contextual detail. This will be addressed in the thesis by clarifying the terms to be used and providing sufficient detail.

Terminology issues had a significant impact on the literature review in terms of searching for appropriate/relevant research. A multitude of terms needed to be used in order to 'cast a wide a net as possible' in order to include research that was potentially

relevant to this study but had used differing terminology. A study, for example, may focus on what they refer to as 'collaborative' or 'multiprofessional' practice- which as discussed is not necessarily IPW- however upon exploring the details of the research further it seems that the study, though using a different term, actually did explore IPL as it occurred in a practice setting. This meant that the literature search was more time consuming as more studies needed to be sifted through and more detail within each needed to be examined in order to ascertain whether the research aligned conceptually with IPW. This presented an additional problem in that not all of the research reported enough methodological and theoretical detail to establish whether or not the study explored IPW. Increased detail/transparency of methodology and epistemology in research would facilitate transferability as those who may use different terminology to that used by the research author could still unpick relevant reported research and apply the knowledge to their own understanding of IPE. Due to the inconsistent use of terminology and poor conceptual clarity the IPW research reviewed is mostly inferred through an exploration/understanding of the IPE research.

The review of the literature raises a number of questions of relevance to the present study. How has the relationship between IPE and IPW been conceptualised? What is the nature of the relationship (e.g., distinguishing the concepts, is IPW a specific form of IPE? Or does IPW lead to IPE i.e., an antecedent? Where does it fit?). Unpicking the nature of the process and this relationship is one of the key aims of the present study. Has research generated theories that have been or could be used to underpin a conceptualisation of the relationship between IPE and IPW? Gaps have been found in the literature relating to the specific exploration of IPW within an IPE framework. Overall, across the literature review there were only a few pieces of purely IPW research showing that there is a significant gap in the research.

The vast majority of the research is carried out at a pre-qualification or undergraduate level rather than a post-qualification or continuing professional development level. This may be simply attributed to the relatively more stable opportunity for data collection from classroom based or simulation-based IPL (which may arguably occur more often during pre-qualification formal education years) in comparison to data collection from a live practice setting such as acute healthcare. Given that IPW actually occurs within active practice settings, this presents a problem in terms of ecological validity and potential transferability. This study attempts to address that gap by exploring IPW within real world settings.

There appears to be a gap within the literature related to exploring IPW as a specific form of IPE; how could it be defined (as discussed in Chapter 1) and how could the IPW process itself work? With a focus on the role of context there would be emphasis on different factors that may influence IPW as a socially situated process (e.g., psychological safety, organisational culture, change management etc.) within live ward settings.

The majority of the studies of IPE take a generally positivist and empirical stance and there are very few studies using a more rigorous qualitative approach, particularly from a social constructionist perspective such as realist evaluation. Given the international flavour of the field where IPE as a whole is usually researched in a range of ways, across a wide range of countries and populations, there is a gap in terms of exploring the impact of context on process and outcomes within IPE and IPW in particular.

## 2.4 Chapter Summary

Overall, across the literature reviewed there were only a small number of research papers relating to IPE being delivered within real-world settings. Additionally, much research surrounds outcomes and therefore adopts a methodology and epistemological standpoint that is primarily quantitative and post-positivist. Much research focuses solely on instances of IPW occurring at an undergraduate or pre-qualification level. Though some wider IPE research utilises relevant methodology such as realist evaluation to explore the context, mechanism and outcomes in relation to IPE initiatives, such research does not focus specifically on IPW as conceptualised in the current research. Thus, there appears to be a significant gap in terms of our understanding of the process of IPW as IPE applied in 'real-world' practice settings.

Though the term IPW in relation to a specific form of IPE is not found within the literature, there is justification for considering IPW as a specific form of IPE (IPL that takes place in real life practice setting). One of the key recommendations emerging from the Institute of Medicine review (2015) relates to understanding the complexity of IPE and the systems within which it is delivered and designing improved methodologies for capturing these factors. They highlight the strong contextual dependence that limits the applicability of many studies beyond a single study or small group of studies. The recommendation of the review is that research in the field should aim to identify the 'what' and 'how' of an IPE intervention/activity and its outcomes. This has triggered a progression within the literature in terms of the direction of research now including not only *if* IPE could be effectively used as an approach to education in this way, but now also *how* this may work. Research is starting to 'open the black box' and unpick the nature of IPE as a concept (e.g., is it a targeted intervention? Is it a social process that may be encouraged? etc.). Exploration of IPW could contribute to

this process of increasing the conceptual rigour of IPE research and our understanding of how that may be translated from concept, to vision, to practice. There is a need to establish IPW as a potentially conceptually distinct form of IPE (contributing to the further theoretical development of IPE) and also to pay more attention to the specific context in which IPW interventions (and IPE interventions in general) take place. With a focus on the role of context there would be emphasis on different factors that may influence IPW as a socially situated process (e.g., psychological safety, organisational culture, change management, relationship dynamics etc.). In order to allow for transferability, the research should provide sufficient detail and transparency to mitigate existing problems with varying terminology and lack of methodological rigour. Subsequent researchers would then have enough information to come to their own conclusion as to whether research meets their criteria for IPE or IPW and through the abstraction of general principles would have a clearer picture of what seems to 'work', for whom and in what contextual circumstances.

There were a number of key studies which shaped the course of the current research as reflected in the subsequent sections. The IOM (2015) research paper highlighted the significant barriers to progress presented by the confusion over terminology and the need for clarity. Though not using the term IPW as defined in the current research a number of key research papers (reviewed in Brack & Shields, 2019) illustrated the potential benefit of exploring IPW as a valid and discrete form of IPE and the ambitious research undertaken by Dalkin, et al. (2009) showed that, despite the challenges, the use of a contextual ad process based approach such as realist evaluation has great merit.

## **CHAPTER 3. RESEARCH DESIGN**

### **CHAPTER OVERVIEW**

Chapter 3 provides detail surrounding the design and methodology of the current research. The chapter includes procedural information regarding the process of data collection ranging from participant recruitment to the approach to data analysis. The epistemological standpoint adopted in the current research as well as relevant ethical considerations are discussed. A brief chapter summary is provided:

- 3.1 Epistemology
- 3.2 Research Design
- 3.3 Participants
- 3.4 Data Collection Procedures
- 3.5 Data Handling and Storage Procedures
- 3.6 Ethical Considerations
- 3.7 Approach to Analysis
- 3.8 Analytic Strategy
- 3.9 Chapter Summary

### **3.1 Epistemology**

#### **3.1.1 Introduction**

Epistemology concerns the theory of knowledge (especially in regard to methods, validity and scope) and explores what may distinguish justified belief from opinion (Lyon's, 2001). In order to understand epistemology, it is important to consider

its relationship to ontology and methodology. Guba and Lincoln (1984) suggest that the basic beliefs that define a particular research paradigm can be summarised by the responses given to three key fundamental questions:

1. The *ontological* question (i.e., what is the form and nature of reality)
2. The *epistemological* question (i.e., what is the basic belief about knowledge; what can be known?)
3. The *methodological* question (i.e., how the researcher can find out whatever they believe can be known)

The concept of 'axiology' (i.e., beliefs surrounding what one considers to be valuable; e.g., Lyons, 2016) might also be added to this list. Responses given to these questions are considered in relation to contrasting paradigms that can be broadly split into positivism versus anti-positivism (Cohen, Manion, & Morrison, 2011). For example, if the nature of the known world is believed to be wholly material, and therefore observable (ontological view), then knowledge of the world may be reached by identifying and understanding the interactions between these observable phenomena (epistemological stance), and techniques for gaining such knowledge may typically include systematic observations and experiments (methodology). However, if the nature of the known world is believed to be made up of both observable and non-observable phenomena (ontological view), legitimate knowledge of the world may be reached through interpretation of said phenomena (epistemological stance), and techniques for exploring the validity of these understandings may then include exploring the meanings that individuals place on their experiences through systematic and rigorous analysis of such interpretations (methodology). In the latter example, the

world that is described is “indeterminate, disorderly and constantly in flux and thereby ultimately unknowable in any objective sense” (Moore, 2005, p. 106). Both approaches would be infused with the underlying values and beliefs held by the researcher (axiology). In terms of approach to research practice, the former stance would perhaps explore through the use of precise measurements of attained knowledge or skills and systematic observation of behaviour in response to changes in, or manipulation of variables such as teaching or instructional approaches. The other stance would perhaps explore through attempts to gather the views, feelings and experiences of the participants, and the stance of the researcher along with a consideration of the context within which they occur.

### **3.1.2 Epistemology in research**

There has been a significant increase in the variety of approaches that may be adopted in research and practice. These have in turn expanded the potential methodologies that could be utilised. However, whilst the sophistication of the methodological techniques and terminology have developed greatly over time, a basic philosophical dilemma remains, as described by Russell (1946, p. 635): “Empiricism and idealism alike are faced with a problem to which, so far, philosophy has found no satisfactory solution. This is the problem of showing how we have knowledge of other things than ourself and the operations of our own mind”. Kagan (1998) discusses opposing views regarding this mind-matter issue:

*“Attempts to understand how the human mind is changed by experience have cycled between two extreme positions. At one end stands John Locke, who made sensory experience the actor and the child’s mind a passive recorder of events with the minimal number of transformations necessary to make them assimilable. At the other end stands Immanuel Kant, who made the person the actor and events a passive gallery*

*from which the mind chooses features to dwell upon. The mind imposes serious transformations on targeted events before assigning them to one or more symbolic categories.” (Kagan, 1998, p.117)*

Or, as summarised by Burrell and Morgan (1979; cited in Cohen, Manion, & Morrison., 2011, p. 5):

*“Is social reality external to individuals - imposing itself on their consciousness from without - or is it the product of individual consciousness? Is reality of an objective nature, or the result of individual cognition?”*

There have been attempts to address this dilemma by, for example, including steps to introduce increased rigour to ‘subjectivist’ approaches (Yardley, 2000) or to integrate subjective aspects into positivist approaches (‘post positivism’). However, the challenge remains to avoid ‘solipsism’ (the philosophical theory that the self is all that you know to exist) and balance the need for generalisation and reliability while at the same time avoid becoming too narrow in terms of scope. Such steps have allowed for a more balanced understanding or pragmatism to develop, for example paradigms such as critical theory and realism that place a greater emphasis on the societal structural factors that affect people’s experienced reality. Though the ‘fundamental tensions encapsulated by diametrically opposed ontological stances’ remain.

Salient features of the major broad paradigms used in research and practice are outlined in Table 4:

**Table 4.** 'The four main scientific paradigms and their elements' (Adapted from Healy and Perry, 2000, p. 119).

<b>Paradigm</b>	<b>Ontological View</b>	<b>Epistemological Stance</b>	<b>Typical Methods of Data Collection</b>
<b>Positivism</b>	Reality exists outside of the perceptions of individuals and can be apprehended	Objectivist – finding the 'truth'	Experiments and surveys. Testing and verification of hypotheses. Generally quantitative methods
<b>Critical Theory</b>	Reality is shaped by broad factors such as culture, social, economic, ethnic, gender, political and develops over time	Subjectivist – value mediated findings	Dialogic/dialectical: Researcher is a 'transformative intellectual' who changes the social world within which participants live
<b>Constructivism</b>	Reality is constructed by individuals	Subjectivist: created findings	Hermeneutical and dialectical: the researcher is an interested participant in the world being studied
<b>Realism</b>	The real world exists but can only be imperfectly known	Modified objectivist: Findings probably true	Case studies/ convergent interviews: Triangulation, interpretation of research issues using mixed methods

### Positivism

Positivism (often referred to as empiricism) applies natural science paradigms to the social sphere, thereby suggesting that research methodology may mirror that of

the natural sciences (Cohen, Manion, & Morrison, 2011). Criticisms of the positivist approach to research methodology surround the lack of acknowledgement of the role and value of surrounding subjective factors (e.g. Cohen, Manion & Morrison, 2011). Additionally, it may contribute towards the generation of a narrow or reductionist focus on only phenomena that can be subjected to the 'scientific' approach (Habermas, 2015). Post-positivism addresses this to a certain extent through a suggestion of the continuing existence of an objective reality, whilst also accepting that there may be several co-existing realities rather than a single one. Post-positivists still highlight the importance of objectivity and generalisability, but present outcomes as probability-considering limitations of the scientific reliability of empirical studies within social sciences (e.g. Cook, Campbell & Shadish, 2002).

### Interpretivism

Interpretivism is, fundamentally, diametrically opposed to the positivist approach- sometimes being labelled as 'anti-positivism' (Cohen, Manion, & Morrison, 2011). Interpretivism proposes the concept of a reality that is socially constructed (e.g., as in social constructionism) and suggests that researchers should attempt to understand the 'sense' that individuals make of their world and the impact that this has on their experience of reality. The researcher must consider the role of their own subjective views on their interpretation of events and their impact as researcher 'participants' within the process who are creating meaning through their interactions. Such an approach to research can provide richer/more in-depth insight surrounding phenomena however there is critique regarding the potential impact this may have on validity, reliability and generalisability. These issues may be addressed to some extent through the use of measures or structured approaches with a high degree of rigour to plan and carry out research (Yardley, 2000).

## Critical Theory

Critical theory concerns wider societal context and increasingly reflects the sophistication of types of social relationships within complex societies. It is sometimes referred to as the 'transformative paradigm' due to a focus on changing or affecting the balance of power in some way (Mertens, 2010). Epistemologically, it is similar to an interpretivist paradigm however there is an added focus on the effects of cultural and social power relationships on determining individual experience. For example, some research surrounding differing language use within the home considers the role of socio-economic group (e.g., Bernstein, 1971). As described by Mertens (2010, p.32):

*“that which seems “real” may instead be reified structures that are taken to be real because of historical situations. Thus, what is taken to be real needs to be critically examined via an ideological critique of its role in perpetuating oppressive social structures and policies.”*

Rigour within critical theory depends upon the researcher being able to reflect on the influence that their social position and values may have on the choice of research they make, the hypotheses that are generated and the resultant interpretation of the data (Silverman, 2016, p.138).

## Critical Realism

Critical realists argue that the research process is “likely to be essentially materialist and realist, though of course critically so” (Smail, 2005, p. 86). In this instance, objectivity is an on-going process of attempting to develop a degree of

consensus through sceptical checking in communication with others. Such a world consists of abstract things created by people's minds, but which exists independently of any individual (e.g., Popper's 'world three', Popper, 1968; Magee, 1985, p.61). In case study research, a distinction may also be made between relativism and realism through consideration of 'intrinsic' versus 'instrumental' studies (Stake, 1995). In an intrinsic case study, the case itself is the focus, whereas in an instrumental case study, the case is being used as a vehicle for generating understanding surrounding an abstract concept. Similarly, in constructivist research the perceptions of participants are being studied for their own sake, whereas in realist research participant perceptions are studied in order to gain a view of a 'reality' beyond those perceptions.

Bhaskar (2008) outlines a critical realist ontology that distinguishes three levels of a reality that exists outside of our perception of it. The empirical level refers to things that we experience through our senses. This 'actual' level incorporates all events, including those that are not observed or experienced. At the 'real' level, Bhaskar refers to the causal mechanisms that generate events. However, one causal mechanism can affect the operation of others so that "...the outcomes of any intervention are never predictable: mechanisms produce only "tendencies" that can be counteracted by others" (Hood, 2012, p.7). The complexity of interactions between causal mechanisms is increased within the social world where an individual's agency plays a key role. Danemark et. al. (2002) suggest that understanding such complex social phenomena involves a 'double hermeneutic' of interpreting other people's interpretations. Though their actions and understandings are shaped by pre-existing social structures, people can also actively change their own social world. Critical realism acknowledges that facts are dependent on interpretation but there remains an intransitive object of science that is independent of our interpretation of it. In this way, some theories can hold a greater degree of explanatory power and practical validity than others.

### **3.1.3 Epistemology in IPE research and practice**

Related aspects of ontology, epistemology and methodology underlie all IPE research, though there is relatively little exploration of the role of researchers in informing practice within the literature. A pragmatic approach (James, 1907) which can be summarised simplistically by the phrase 'whatever works, is likely true', reflects IPE research that centres around the usefulness (or vice versa) of specific programs or interventions by objectively 'measuring' aspects of performance in order to produce empirical data. Practitioner emphasis on 'technical-rationality' (Lunt & Majors, 2000) may be reinforced by the current emphasis placed on evidence-based practice where empirical evidence is given greater value (Frederickson, 2002; Fox, 2011) and randomised controlled trials are seen to a certain extent as the 'gold standard' (Frederickson, 2002). However, particularly from a critical realist perspective, this approach may not be appropriate for explaining programme outcomes where there are complex situational, interpersonal and cultural factors at play.

### **3.1.4 The current research**

The nature of the phenomena being explored in the current research involves multiple and diverse strands of influence, and complex layers of social mediation. As discussed, if we are to consider IPE as an example of "ongoing interprofessionalisation socialisation processes within ... health systems" (Oandasan & Reeves, 2005, p.46), the most suitable ontological view to inform or frame the current research is critical realism. A critical realist approach would support such a conceptualisation of IPE as an on-going process within a community of practice. This cannot be observed directly but may be explored through the consideration of 'the real' (potential underlying causal mechanisms, Hood, 2012).

Critical realism suggests that there are elements in the world that exist independently of individuals perceptions, but that our understanding of them is mediated subtly (though sometimes heavily) by subjective interpretative factors. Broadly defined, “entities exist independently of being perceived, or independently of our theories about them” (Phillips, 1987, p. 205). The epistemological stance is relativist in that individuals interpret the world uniquely, constructing their own understanding and these constructions are influenced by their social and historical experiences (Maxwell, 2012a). Over time these constructions can build in order to provide an increasingly accurate interpretation of the ‘real world’. In the context of IPE, this can provide a clearer understanding of how a programme works (Pawson and Tilley, 1997). Pawson suggests that it is necessary to understand the conditions of programme efficacy through the exploration of for whom, in what circumstances, and in what respects interventions work (Pawson, 2006, p. 25).

The approach and methods selected in the current research integrate into an overall study logic that aligns “from an ontological, epistemological and axiological perspective with the overarching aims of the study” (Campbell, Greenwood, Prior, Shearer, Walkem, Young & Walker, 2020, p. 653). However a number of steps (referred to throughout the thesis) were taken to increase the consistency of the research (e.g. benchmarking research design, maintaining transparency and generating an extensive audit trail, triangulation of data collection methods, etc.).

The design/approach adopted in the current research was benchmarked against the six criteria proposed by Healy and Perry (2000; Table 5).

**Table 5.** Quality criteria for realist research (adapted from Healy & Perry, 2000, p.124)

Domain	Ontological appropriateness
Criteria	Research problem deals with complex social science phenomena including reflective people
Appropriate Case Study Techniques	Selection of research problem, for example, is it a 'why' and 'how' problem?
How addressed in current research	The research aimed to unpick the IPW process and explore the interplay between complex contextual factors and the IPW process. Thus the research problem involved complex social processes. Furthermore, a key aspect of IPE concerns individual reflection on interprofessional activities.
Domain	Contingent validity
Criteria	Open 'fuzzy boundary' systems involving generative mechanisms rather than direct cause and effect
Appropriate Case Study Techniques	Theoretical and literal replication, in-depth questions, emphasis on 'why' issues, description of the context of the cases
How addressed in current research	The current research particularly noted the interaction between the contexts in which the case studies took and the IPW process.
Domain	Epistemology
Criteria	Multiple perceptions of participants and of peer researchers- neither value-free or value-laden, but value aware
Appropriate Case Study Techniques	Multiple interviews, supporting evidence, broad questions before probes, triangulation. Self-description and awareness of own values. Published reports for peer review

How addressed in current research	Multiple semi-structured interviews were conducted in order to explore the perspectives of a variety of stakeholders. The researcher also conducted observations and maintained a reflective log in which to discuss the influence in this case of researcher individual differences (e.g. background, personal values etc.) on the research process.
Domain	Methodology
Criteria	Trustworthiness - the research can be audited
Appropriate Case Study Techniques	Case study database. Use in the report of relevant quotations and matrices that summarise data. Descriptions of procedures like case selection and interview procedures
How addressed in current research	Reflected in the detailed methodology section along with transparent and detailed code books and linked thematic analysis maps.
Domain	Analytic generalisation
Criteria	Theory building rather than statistical generation or theory testing
Appropriate Case Study Techniques	Identify research issues before data collection to formulate an interview protocol that will provide data for confirming or disconfirming theory. External validity through the specification of theoretical relationships, from which generalisations can be made
How addressed in current research	The current research considered a range of theories and how further exploration of the IPW process could provide further conceptual clarity for IPE from a theoretical standpoint.
Domain	Construct validity
Criteria	Refers to how well information about the constructs in the theory being built are measured in the research
Appropriate Case Study Techniques	Use of prior theory, case study database, triangulation
How addressed in current research	Focused on unpicking the IPW process and examined data to consider what truly 'is' and 'isn't' IPW as conceptualised in the current research.

Use of such validity procedures (particularly in regard to case study research and 'trustworthiness' in qualitative research: Houghton, Casey, Shaw & Murphy, 2013) has been recommended in the methodological literature. Lub (2015, p. 1) states that:

*"the increased importance given to qualitative information in the evidence-based paradigm in health care and social policy requires a more precise conceptualization of validity criteria that goes beyond just academic reflection".*

However, in the exploration of what a suitable or effective validity criteria may consist of, they conclude that preferred criteria for qualitative research varies in each case and depends on "one's scientific world view" (Lub, 2015; Lewis, 2009). Thus, regarding validity, consideration must be made of the specific purpose and paradigm of the research as well as what type of inquiry or outcomes are most valued by the stakeholders of such research. For example, the adoption of a post positivist paradigm in research would focus on the rigour and systematic nature of the chosen methods, essentially mirroring the pursuit of "the rigid methodological protocols in the quantitative research community" (Lub, 2015; Maxwell, 2012b). Member checking and peer debriefing are commonly utilised as validity checks for such research. Conversely, however, the adoption of a constructivist paradigm in research would contradict the use of such checks. As argued by Rolfe (2006), if universal truth is not assumed (such as in a constructivist paradigm) then it cannot be expected for there to be identical conclusions drawn by different reviewers evaluating the research; thus, affecting the extent to which member checking and peer debriefing could be used to assess validity. Furthermore, within the context of healthcare, certain validity checks may be considered as more valuable than others and such preferences can vary over time. For example, at one point in time a trend may be observed in healthcare research of exploring patient experience (e.g., Manary, Boulding, Staelin & Glickman, 2013). In this

case, as personal individual experience and reality is being explored, qualitative research utilising validity checks that are more compatible with a constructivist paradigm may be considered as more valid or trustworthy. At another point in time a trend may be observed in healthcare research of evaluating the effectiveness of interventions in order to ascertain 'best practice'. In this case, approaches to research may be more traditionally experimental (e.g., trial and error to find out 'what works') and qualitative research utilising validity checks that are more compatible with a positivist paradigm may be considered as more valid or trustworthy.

In addition to the aforementioned benchmarking against criteria for realist research, the current research sought to demonstrate 'trustworthiness' and consider the importance of transparency and detail of approach and methodology in a number of ways (Guba & Lincoln, 1984; Creswell & Miller, 2000; Amankwaa, 2016; Cope, 2014; Leung, 2015). Triangulation was a part of the research process in both method (obtaining different perspectives across multiple data points using both interview and observation) and analysis (utilising a thematic analysis approach to find and develop key themes). An audit trail was generated to demonstrate the research process in this instance and provide as much "thick description" as possible (Lub, 2015). Additional on-going reflection throughout the research process was also considered as important due to the active role that the researcher plays in interpretation when using a qualitative approach. Such researcher reflection is widely considered as best practice (Hibbert et. al., 2014).

### **3.2 Research Design**

The need for the inclusion of qualitative methods in evaluative IPE research to explore social mechanisms and processes has been highlighted (Thistlethwaite, 2012).

Accordingly, a qualitative approach was adopted in the current research. Data collection primarily focused on the implementation of two IPE initiatives for health professions in one NHS Trust; considering them as illustrative case studies of IPW at both a pre and post qualification level. The initiatives formed part of a move towards developing a 'faculty of IPE' within that NHS Trust (a process that has started in an increasing number of national and international healthcare institutions; e.g., Hall & Zierler, 2015). Further contextual data was collected surrounding the IPE faculty in general as well as the wider context in which the case studies took place.

The first cross-sectional case study examined a 'pilot training ward' in which pre-qualification students from a number of healthcare disciplines (Nursing, Occupational Therapy, Physiotherapy and Medicine) worked in an interprofessional context to gain supervised training experience on a hospital ward (described in Section 3.4). As this initiative took place in an active practice setting, it was considered as a potential opportunity to explore how the IPW process may occur and to try and unpick the social processes and behaviours that took place in participants experiences on the ward. The perspectives of both students taking part and staff acting as facilitators were gathered, with additional observations carried out on the pilot training wards by the researcher.

The second case study followed the IPE faculty introduction of one-year 'rotational posts' for newly qualified nurses (Section 3.4). The posts had an interprofessional focus and provided each nurse an opportunity to rotate across three major departments within the hospital whilst receiving support from a mentor as well as taking part in a number of organised interprofessional activities throughout the duration of the year. This provided a potential opportunity to explore IPW from a post-qualification or continuing professional development (CPD) perspective. IPE faculty

rotational nurses as well as staff coordinators/role mentors were interviewed. Additional contextual insight was gained from interviewing a number of newly qualified nurses in traditional non-rotational posts within the same hospital.

General contextual data was also collected from a variety of stakeholders within the trust in order to gain insight surrounding the IPW process from multiple perspectives. This took the form of a series of semi-structured interviews (e.g., of the initiative's project lead or the member of staff who originally envisioned the faculty of IPE).

The IPE faculty itself was initially established shortly before the onset of the current research and over the duration of the research (data was collected across an approximate two-year span), from an organisational perspective, the faculty changed and developed. Though such change and development is a somewhat inherent part of the process of implementing large-scale intervention across an organisation (particularly in the case of a large and complex organisation such as the NHS), it is important to consider the impact that such changes had on the research process in this instance.

The illustrative case studies in the current research were selected based on their explicit relevance in conceptualisation to the exploration of the IPW process. However, both the challenge in translation of vision to practice as well as a number of organisational changes influenced the interventions and thus the research. For example, where initial key stakeholders changed roles as a natural part of their career progression, this in turn influenced the subsequent development of the faculty and its' specific aims and objectives when compared to those established at its' inception. Structural changes to specific interventions occurring in response to typically

encountered organisational pressures (e.g., changes in the nature and availability of resources) may also influence the nature of the interventions themselves in ways that have implications for research (Fraser, 2019; Kozłowska, Lumb, Tan & Rea, 2018; Rotz & Dueñas, 2016).

Throughout the project, the current research developed a specific focus on the process of IPW. This was in response to the exploration of IPE as an area of research and also the opportunity presented by the interprofessional faculty's' implementation of a number of IPE interventions across the hospital. It was seen as a valuable opportunity to examine those interventions that concerned IPW and to use these as illustrative case studies through which to gain insight into the IPW process itself. Furthermore, these examples of IPW allowed for consideration of how IPW may occur at both a pre and post qualification level. However, data collection was affected to a certain extent by the unpredictable nature of acute care and a professional practice context.

Certain factors, such as the sudden closure/restriction of one of the wards (in order to contain an outbreak) during the scheduled pilot training ward observations in the first case study, highlighted the challenge of implementing IPE within a live practice setting. Though this affected the intervention (and thus the research) to a certain extent as the subsequent pilot training wards had to be quickly adapted in order to take place across half of the planned space, the observation of this process and the subsequent IPW experience formed an interesting opportunity to observe the adaptability needed to react to the complexity and unpredictability of a practice setting. It provided insight into the importance of considering wider contextual factors that surround an intervention and how these may influence the IPW process.

Data collection surrounding the interprofessional rotational nursing posts in the second case study was initially planned as longitudinal. However, the intervention ended earlier than planned due to a number of reasons (such as newly qualified nurses participating in the rotational post leaving the post in order to pursue a full position within the hospital based on positive experiences within a particular ward rotation). This was not necessarily considered as a negative outcome due to the trial and error basis of the intervention and the desirable retention of some participating staff, however this meant that the final data collected surrounding the interprofessional rotational post was cross-sectional. This had further implications for the chosen approach to analysis of the data (Sections 3.7 and 3.8) as it was important to consider the subsequent compatibility of potential approaches with the nature of the data that was collected. Some studies, for example, have used an approach such as Grounded Theory, which aims to examine inherent social processes in order to develop theory (GT; Glaser, Strauss & Strutzel, 1968; Charmaz, 2012; e.g. Derbyshire, Machin & Crozier, 2015). However, GT is based on an iterative process of 'constant comparative analysis' which may require multiple opportunities to revisit and collect new data (such as in a longitudinal study).

These examples of on-going change and development in IPW interventions and surrounding research serve to highlight the importance of considering the specific context within which an IPE intervention takes place. This is in order to provide valuable insight into the wider contextual factors that interact with the IPW process in each instance and potential implications for subsequent research findings and applications.

### 3.3 Participants

The participant group consisted of staff members and placement students who worked within a hospital affiliated with a local NHS Trust in Northern England. The research sought to explore the process of IPW whilst considering the role of wider context and thus drew from a range of stakeholder perspectives and experiences (Table 6; Table 7).

**Table 6.** Details of interviewed participants.

Participant (n = 29)	Role	Description
CP1	Project 'Initiator'	The original staff member within the Trust who conceptualised and instigated the development of an IPE faculty from an organisational development perspective.
CP2*	Project Lead	A staff member appointed (full-time) to lead the IPE faculty initiative; exploring potential and implementing possible IPE interventions across the Trust. Some were initially introduced as pilots with a view to permanent inclusion if effective.
CP3	Project Support Staff	Staff members appointed to provide assistance to the Project Lead, specifically with management and organisation surrounding the IPE faculty rotational nursing posts.
CP4		
TF1*	Training Ward Facilitator	

TF2			Staff members who assisted (on a voluntary basis) as facilitators in the IPE faculty pilot training wards.
TF3			
TS1	Training Ward Student	Medicine (Year 5)	Students who participated in the IPE faculty pilot training wards. Local university students undertaking placements at the hospital as part of their course and professional qualification (from Nursing, Medicine, Physiotherapy and Occupational Therapy backgrounds, at different stages of pre-qualification course).
TS2		Medicine (Year 5)	
TS3		Physiotherapy (Year 1)	
FP1	IPE faculty rotational nurse		Nurses employed at the hospital in one of the IPE faculty rotational posts for newly qualified nurses (i.e. first year of post-qualification practice).
FP2			
NFP1	Non-IPE faculty nurse		Newly qualified nurses working at the hospital (i.e. first year of post-qualification practice).
NFP2			
NFP3			
NFP4			
NFP5			

\* TF1 and CP2 both refer to the same participant interviewed on different occasions regarding separate contexts.

**Table 7.** Details of participants who took part in online surveys surrounding the pilot training wards.

Participant	Role	Description
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OFP1	Training Ward Facilitator		Staff members who assisted (on a voluntary basis) as facilitators in the IPE faculty pilot training wards.
OFP2			
OFP3			
OSP1	Training Ward Student	Physiotherapy (3 <sup>rd</sup> Year)	Students who participated in the IPE faculty pilot training wards. Local university students undertaking placements at the hospital as part of their course and professional qualification (from Nursing, Medicine, Physiotherapy and Occupational Therapy backgrounds, at different stages of pre-qualification course).
OSP2		Physiotherapy (3 <sup>rd</sup> Year)	
OSP3		Physiotherapy (3 <sup>rd</sup> Year)	
OSP4		Occupational Therapy (2 <sup>nd</sup> Year)	
OSP5		Occupational Therapy (2 <sup>nd</sup> Year)	
OSP6		Medicine (5 <sup>th</sup> Year)	
OSP7		Occupational Therapy (3 <sup>rd</sup> Year)	
OSP8		Occupational Therapy (2 <sup>nd</sup> Year)	
OSP9		Nursing (1 <sup>st</sup> Year)	

OSP10		Occupational Therapy (2 <sup>nd</sup> Year)	
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The current research adopted a purposive sampling approach in order to recruit participants. This method of sampling chooses “respondents that are most likely to yield appropriate and useful information” (Kelly, Bourgeault & Dingwall, 2010, p. 317). Consideration was given both to the knowledge and experience of the participants and also “the importance of availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner” (Palinkas et. al., 2015, p. 2). This approach aligned with the aims of the research as in order to unpick IPW as a process there needed to be a certain depth of understanding and an in-depth focus on specific individuals and their experiences of IPW (as well as key stakeholders surrounding the IPW interventions) allows for a potentially rich source of data in this regard (Campbell, Greenwood, Prior, Shearer, Walkem, Young & Walker, 2020). The potential richness of data collected through purposive sampling also “[makes] for the most effective use of limited resources”, an important consideration in the current and other research with a smaller sample size (Palinkas et. al., 2015, p. 2).

Within the constraints of the research, as much variation in perspective as possible was sought (e.g., approaching both facilitators of the training wards as well as student placement participants; approaching wider contextual stakeholders such as the ‘project lead’ or newly qualified nurses in traditional posts; Tracy, 2019, p. 134-13). The only inclusion criteria in the current research was that participants were involved in or took part in the IPE faculty and its’ related activities. Though there was a specific focus

on individuals surrounding the pilot training ward and the rotational nursing posts, other stakeholder perspectives were gathered in order to provide a somewhat broader context. The range of participants included in the current study was not intended to be conclusive or comprehensive. The intention was to provide sufficient case study material from which to explore the process of IPW as it occurred in this specific context. Though the pilot training ward dealt with the treatment of real NHS patients and relevant additional staff were present, no data was gathered from these groups. No payment or remuneration was made to participants who took part. In terms of participant attrition, one of the initial participants withdrew from the study before any data other than consent was gathered.

Participants were contacted either face-to-face (on site at the hospital in which the study took place) or via email with initial contact facilitated by relevant Trust staff members. In all cases, participants were given an information sheet prior to giving consent to take part in the study (Appendix A). In regard to the pilot training wards, three weeks prior to the first opportunity for data collection, a recruitment email and information sheet was sent to students and facilitators participating to informing them of the study and ask if they would consent to participate. Participants were given the opportunity to opt out of the ward observations conducted by the researcher with no identifying information (excepting information needed to ensure the researcher may avoid collecting data from them) being collected. Participants were informed that participation was not compulsory and were given the researchers' contact information should they wish to ask any questions regarding the study.

### **3.4 Data Collection Procedures**

Data was collected in the current research primarily via researcher observation and interview:

#### **Researcher Observation**

Observational techniques in qualitative and mixed methods research have been suggested as a way in which the researcher may gain “insight into interactions between dyads and groups; illustrate the whole picture; capture context/process; and inform about the influence of the physical environment” (Mulhall, 2003, p. 307; as quoted in Morgan, Pullon, Macdonald, McKinlay & Gray, 2017). In the current research, direct observation of the IPW intervention that formed the basis of the first research case study was considered to be a valuable opportunity to both gain further understanding of the process of IPW as it occurred within the context of the pilot training wards as well as the complex behaviour and interpersonal interactions that seemed to underlie this process (Copland, 2018). The inclusion of an observational approach to IPW has been suggested as useful within the literature as contributing towards the generation of an evidence base (Morgan, Pullon & McKinlay, 2015). Additionally, the inclusion of multiple methods of data collection such as observation and interview can contribute research rigour (method triangulation: Moon, 2019).

During the period of research, 5 pilot training wards took place (each separate occasion utilized the same initial training ward day-long format). Researcher observations were conducted on 2 of the 5 days. Over the course of a day, approximately 8-10 students undertook a number of IPW activities including: being paired with a student of another profession to assess and treat patients on the ward

and report patient progress to ward staff (including participation in multidisciplinary ward rounds), shadowing a member of staff based on the ward from another profession to gain an understanding of their role and visiting other areas of the hospital in order to gain an understanding of different departments in relation to their role. The training ward was supervised by two 'facilitators' (Trust staff with experience of ward-based healthcare practice) who coordinated and oversaw IPW activities and also identified flexible opportunities for further IPW activities on an ad hoc basis. The pilot training ward concluded with a session in which students and facilitators reflected on and discussed their experiences. All written observation field notes were typed up for analysis (Appendix F).

It is important to note contextual details surrounding the training wards that may have influenced the IPW process in the current research. Namely, this concerns the nature of the specific ward in which the IPW took place and also the prior knowledge of the facilitators. Whilst the ward in which the first intervention took place did not have explicit previous experience of hosting an IPW intervention, it did however have a general history as a training ward (i.e. a ward in which students in healthcare professions are routinely sent to complete their work placements). This meant that the social dynamics of the ward may have been more receptive of a new influx of staff and a new approach to learning in practice. The staff acting as facilitators that supervised the intervention had prior experience in both clinical practice (e.g. previous healthcare roles such as nursing) and delivering education within the hospital. In addition, prior to the commencement of the research and the training wards, facilitators were given the opportunity to attend a training seminar surrounding IPE as a general concept and how it may be implemented in different ways within an acute healthcare setting. This links to the distinction in relevant theory discussed in Chapter 1 that there be explicit conceptual knowledge of IPE as well as maintenance of IPE as an active goal

throughout (and reflection following) any IPW activities in order to distinguish it from simple collaborative or multi-professional practice. In terms of potential impact on the IPW process in the current research, this prior knowledge may have influenced facilitator behaviour throughout the intervention.

Though the approach to observation adopted in the current research aligns slightly more towards a 'complete observer' or 'non-participant' perspective rather than the opposing 'complete participant' perspective (Tracy, 2019), it is acknowledged that the role of the researcher in observation exists on a continuum of interaction between researcher and participants (Walshe, Ewing & Griffiths, 2012; Morgan, Pullon, Macdonald, McKinlay & Gray, 2017). In this instance, the research was completely overt and participants (in addition to general staff on the training ward) were informed of the occurrence and nature of the study prior to observation. The researcher maintained a primarily passive observational role throughout the day, observing the social processes within the clinical setting and the interactions (both formal such as ward rounds and informal such as conversations regarding the training ward in general or roles outside of the training ward) and taking detailed field notes (Appendix F).

The approach to observation was semi-structured in that as much general interaction surrounding the IPW process was noted and recorded as possible, but following a basic observation prompt ensured that specific consideration was given to focusing on examples that provided useful information surrounding context or that illustrated a underlying processes. The literature provides support for this, in many cases encouraging the adoption of a critical realist perspective (in particular when conducting case studies; Easton, 2010) when examining complex social processes such as IPW.

The provision of detailed methodological details or an 'audit trail' (in order to increase rigour) is recommended both within IPE research and wider literature surrounding general qualitative research methods (Cox et. al., 2016; Mulhall, 2003). As part of this process and as recommended in Healy and Perry's (2000) quality criteria for realist research, the researcher maintained an on-going reflective log in which to discuss the influence of the researcher themselves (e.g. researcher bias, individual differences such as researcher background/values etc.; Watson, Booth & Whyte, 2010) on the research process. Several considerations regarding the researchers' role in observation emerged, reflected in related extracts from the researcher log:

- "The knowledge and ability that the facilitators utilised in order to effectively operate within the busy ward environment emphasised the lack of experience in such an environment I have as a researcher from a non-medical background. A learning curve occurred which required me to ascertain where best to observe from, whom to observe and when, how much it was possible to record in this fast-paced environment, etcetera. This process resulted in a number of practical changes and considerations in the observation approach. For example, though there was full access to the ward, when carrying out the observation my presence in the rooms containing the patients themselves felt intrusive. Therefore, since the activity within the rooms could be effectively seen and heard from a respectable distance at the doorway, it was decided to remain there whilst observing the room. This was felt to both lessen any unease the patients may have experienced at the presence of a researcher as well as to prevent the distraction of the students due to being watched so conspicuously when interacting with the patients and each other."

- “I chose to be overt in the role of observer, introducing myself to the participants at the outset and assuring them that I was not conducting any individual assessments, but rather examining the IPE process as a whole. This transparency in purpose and presence challenges the traditional view of the ‘complete observer’ to a certain extent as someone who maintains distance, avoids interaction and covertly observes- sometimes concealing their role (Gold, 1958). In the case of the present study (which focuses on social processes and wider context), such an approach seemed inappropriate. I felt that because of the open approach to collecting observational data, it was easier to build a level of rapport with both the participants and the ward staff who enquired as to my presence as a researcher on the ward. This provided increased opportunity (perhaps in both quantity and quality) to observe the IPW process. Incidental interactions with ward staff, the students and the facilitators provided very useful contextual information regarding e.g. apparent engagement with IPE or interventions in general and the challenges faced by that particular ward. Topics and attitudes (both positive and negative) emerged seemingly due to the openness and respectful attempted unobtrusiveness. I did however ensure that the primary focus was on observation and note taking with any interactions with the students and any relevant ward staff typically being instigated by the individuals themselves.”

## Interviews

A series of interviews (digitally recorded for later transcription) were conducted both face-to-face and over the telephone (n = 17). A semi-structured approach was adopted where the interview followed a schedule comprised of “a blend of closed and open-ended questions, often accompanied by follow-up why or how questions” (Adams, 2015, p. 493). These questions related to participant experience of IPW in each case study and in the case of contextual interviews, questions aimed to explore wider contextual factors that relate to the interventions examined in the case studies. This was seen as an appropriate approach to data collection as a clear interview structure provided a standardised guide to ensure consistency across interviews whilst leaving a certain amount of reactive flexibility to further explore any areas of interest that arise from individual participants responses (Kelly, Bourgeault & Dingwall, 2010). Semi-structured interview is useful for collecting sophisticated or ‘thick/rich’ data which is particularly valuable in exploring complex social processes and in instances where the size of the available sample is limited (Kallio, Pietilä, Johnson & Kangasniemi, 2016). However the process is lengthy and requires a high level of active engagement and alertness on the behalf of the interviewer in order to identify potentially emerging areas of interest (Bryman, 2016, p. 10). Interview schedule questions were influenced by the research aims and objectives as well as relevant literature, and the interviews surrounding the pilot training ward were also informed by an online survey (Kallio, Pietilä, Johnson & Kangasniemi, 2016). The surveys consisted of closed Likert scale questions as well as free-text open questions surrounding expectations of and reflection on the training wards (Appendix D). Survey responses were used to inform further data collection (e.g., highlighting potential areas of inquiry that could be followed up in interview).

Following the completion of the pilot training wards, interviews were conducted with both students and facilitators who participated (Appendix E; Appendix G). This was in order to try and unpick the social processes and behaviours that took place through the exploration of participants' experiences of IPW on the ward. Interviews surrounding the introduction of one-year 'rotational posts' for newly qualified nurses were also conducted (Appendix E; Appendix G). Nurses undertaking the rotational post were interviewed as well as, to gain insight into wider organisational context, newly qualified nurses from the same hospital who were undertaking traditional fixed nursing posts. Staff that were responsible for the management and supervision of the rotational posts were also interviewed. General contextual data was also collected from a variety of stakeholders within the Trust in order to gain insight surrounding the IPW process from multiple perspectives. In the current research, such additional interviews included the 'project initiator', a stakeholder with perspective regarding the translation of the original 'vision' into subsequent practice. Also interviewed was the 'project lead', the person in charge of that translation. All interviews took between approximately 20 - 70 minutes. Face-to-face interviews were conducted in booked rooms on-site (at the hospital where the research was based; a familiar clinical-adjacent setting: Gerrish & Lacey, 2010). At the end of the interview, participants were given a verbal debrief and were emailed a participant debrief sheet (Appendix A). All recorded interviews were transcribed verbatim and then stripped of any personal information (Appendix G).

### **3.5 Data Handling and Storage Procedures**

Procedures and processes relating to the handling and storage of participant data were outlined in participant information sheets given to participants prior to taking part in the research (Appendix A). Any identifying information or data collected (whether electronic or physical) was destroyed where appropriate and any that may not

be destroyed immediately (such as participant consent forms) were stored securely as stated below.

Consent forms and any hard copies of data were stored in a locked storage cabinet within a secure room on University campus. Electronic data gathered was stored on a password-protected computer with identifiable participant information being anonymised where appropriate at the point of electronic storage. No sensitive information was saved using cloud storage and any word or number processing documents with identifying information were individually password protected. Necessary identifying information (both physical and electronic) will be kept for up to 3 years following the completion of the research. After this period of time this information will be destroyed. Electronic recordings of interviews were transcribed verbatim and then permanently deleted. The transcribed interviews were then stripped of any identifying information. Field notes from observations of the pilot training wards were typed-up, checked for identifying information (and if so, stripped of that information) and stored on a password-protected computer.

### **3.6 Ethical Considerations**

Silverman (2016) highlights the contemporary complexity of research ethics, positing that within the field of qualitative research, particularly when informed by constructivist epistemologies, ethical considerations are increasingly complex. Silverman suggests that “the absence of pre-fixed answers adds to the researcher’s continuous moral responsibility” (p. 35). Ethical appropriateness within the current research was addressed via consideration of a number of important ethical principles; informed consent (including the right to withdraw); protecting anonymity and confidentiality and avoiding deceptive practices (Ritchie, Lewis, McNaughton-Nicholls,

& Ormston, 2014). In addition to these 'core' principles a number of further ethical issues specifically related to the present research are discussed.

### **Informed Consent**

Informed consent concerns participants' "right to know they are being researched and the right to be informed about the nature of the research and the right to withdraw at any time" (Silverman, 2016, p.32). In the current research, addressing the issue of informed consent was in some respects relatively straightforward in that no individuals who would be considered 'vulnerable' took part in the study. Participants were all adult staff members or healthcare students who volunteered to take part in the research. Participants were given an information sheet detailing the study (Appendix A) prior to giving their consent to take part. They were also given the researcher's contact details in order to provide a means to contact the researcher if they had any further questions about the study or their involvement. The information sheet included details regarding the right of participants to withdraw from the research at any time. Consent itself was gathered in several ways. Some participants gave written consent through signing a paper consent form (Appendix B). For the majority of telephone interviews conducted, consent was provided via email. The online surveys surrounding the pilot training wards for facilitators and students included an information sheet and an option to select in order to consent to take part in the research; an approach recommended in the literature (Mahon, 2014). The researcher was keenly aware of the need to informally seek continuous consent (Silverman, 2016) rather than relying solely on the completion of the consent form at the outset of the research. As such, a verbal reminder of the right to withdraw was given during interviews and in the case of online surveys participants were informed that if they wished to stop the survey at any point, they could simply close their browser window at which point data collection would cease. If

any participant sought to completely withdraw from the research, they had the necessary information to do so and were reassured that such a withdrawal would be without prejudice. From an institutional and organisational perspective, full ethical approval for the current research was obtained from both Northumbria University and the Trust within which the research took place. Additionally, the hospital wards in which the observations were conducted were informed of the pilot training wards as well as the research surrounding it prior to data collection.

### **Protecting anonymity and confidentiality**

The researcher ensured that participation in the study was as anonymous and confidential as possible. In the case of those participating in the online surveys, participation was anonymous. Internet Protocol (IP) addresses were stripped from the data set prior to subsequent download and analysis (Allen & Roberts, 2010; Benfield & Szlemko, 2006; Roberts & Allen, 2015). Online participants were asked to provide a unique code word in order for the researcher to identify their dataset if they later wished to withdraw from the study, which, though compromising anonymity to a certain extent (as participants would need to contact the researcher via email to do so), was a necessary measure to ensure that they were able to withdraw their participation in the research at any time. The researcher took steps to minimise the collection of sensitive information considered unnecessary for current research purposes (the only personal information gathered was participant age, gender and professional background/year of study as well as participant contact information such as email address or phone number). Any explicit identifying information (e.g., names etc.) in data that was collected via interview, online survey or observation was removed from the data prior to

data analysis. Participants were allocated a participant code- knowledge of which was only available to the researcher.

However, there was a relative compromise to ensuring the anonymity of participant contributions due to the small sample size and the level of familiarity within elements of the participant group. For example, in one case study there were only three training ward facilitators, so if in the research it is reported that “one facilitator said ...” then the speaker may be deduced. This is particularly so for people who know the identity of the participants and may be familiar with their speech patterns (e.g., the participant who commissioned the research and at one point directly managed the facilitators). This raises issues regarding the potential effects of hierarchical relationships and possible concerns of some participants of saying something that may affect their relationship with those involved and with the commissioner of the research. During the data gathering process steps were taken to try and ensure confidentiality such as organising interviews directly with participants (rather than through a manager etc.) and securing private rooms in which to conduct any face-to-face interviews. Any general discussion of the research with stakeholders was kept as broad as possible rather than providing detailed accounts.

The research took place within a hospital with observations undertaken on live wards. The researcher had to be extremely vigilant in protecting the patients' confidentiality as exposure to sensitive information was an inherent part of the observation process. This is because staff were observed carrying out their work on an active hospital ward. Throughout the data collection process, the researcher ensured that nothing was recorded or noted, or reported that related to sensitive patient information. Similar issues regarding confidentiality related to other (non-participant) staff on the ward. Prior to data collection, staff were all informed that research was

taking place on their ward and given details of the times at which observations would occur. In the current research, the pilot training wards took place in an established training ward (i.e., a ward where healthcare students carried out their placements as part of the qualification process) and thus existing staff were familiar with having a regularly changing flow of staff and patients.

### **Avoiding deceptive practices**

The current research was overt in nature. As part of the informed consent process all of the participants were given full information surrounding the purpose of the research, the nature of the data/information that was to be collected and the ways in which it would be processed. In the process of conducting interviews and observations, participants were encouraged to ask questions freely and the researcher adopted an open and transparent approach. The researcher was conscious of avoiding causing participants to feel uncomfortable for the duration of the study while being observed and/or interviewed. The importance of developing and maintaining a trusting and open relationship between researcher and participant informed the researcher's actions through the duration of the study (Guillemin & Gillam, 2004).

### **Further ethical considerations**

As the current research project was primarily funded by the Trust within which the research was taking place (with partial funding contributed by Northumbria University), the issue of impartiality had to be directly addressed. The issue of potential influence or pressure being brought by the commissioning organisation was mitigated to a certain extent through ensuring that an appropriate support structure was in place. In this instance, the researcher had the support of three supervisors; two academic

supervisors employed at Northumbria University and one industrial supervisor employed at the Trust in which the research took place. This allowed for collaborative and individual support to be given with multiple avenues through which to seek assistance should the researcher need. The research project itself was generated in order to build local research capacity in order to inform future practice and development within the Trust (e.g., Gee & Cooke, 2018; internationally e.g., Brownson, Fielding & Green, 2018). However, the researcher did not contribute to and was not associated with the conception, design or implementation of the IPE faculty that the current project surrounds. The research project was introduced with an initial research goal that was broad and evaluative in nature (e.g., what ‘works’ and what does not). Aside from this broad directive, the researcher had full control of the identification of a specific academic focus and the design of subsequent studies.

### **3.7 Approach to Analysis**

The current research aimed to explore the use of Interprofessional Working (IPW) as a vehicle for Interprofessional Learning (IPL) within a ‘real-world’ context. Extant literature supports the development of a focus on the process of IPE itself, suggesting that a “more in-depth understanding of IPE interventions beyond outcomes themselves” is needed and stressing that “first and foremost, interdisciplinary collaboration [IPW] is described as a **process**” (IOM, 2015 and Petri, 2010 respectively). When considering appropriate methods to analyse the data in the current study, the potential for an approach to analysis that drew upon the principles of realist evaluation; unpicking the IPW process by exploring the link between context, mechanism and outcome (C-M-O, Pawson, 2013) was explored.

Pawson suggests that it is necessary to understand the conditions of programme efficacy through the exploration of for whom, in what circumstances, and in what respects interventions work (Pawson, 2006, p. 25). This is through the consideration of mechanisms, contexts, and outcomes.

Context, Mechanism and Outcome Configurations (CMOC<sub>s</sub>):

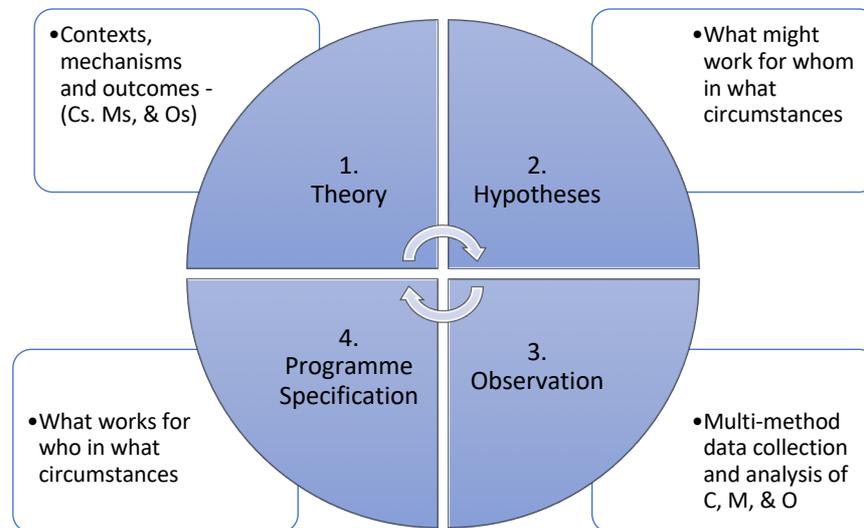
Context (C): social, historical, political “conditions that are likely to enable or constrain programme mechanisms” (Astbury, 2013 p. 386). This includes an individuals’ unique characteristics, interpersonal relationships, the institutional environment and the wider infrastructures relevant to the programme being explored (Pawson and Tilley, 1997).

Mechanism (M): is described as “the response that interaction with a programme activity or resource triggers (or does not trigger) in the reasoning and behaviour of participants” (Astbury, 2013 p. 386). This includes what in particular about the context conditions of a program leads to changes in an individual’s beliefs, values, intentions and meanings.

Outcomes (O): are “the anticipated or unanticipated consequences that are brought about by the interaction of different program mechanisms in different contexts’ (Astbury, 2013 p. 386).

The realist assumption is that regularities in outcomes only occur if the “right” contexts are present and trigger a generative mechanism: Context + (generative) mechanism = regularities in outcomes. An overview of the approach is illustrated below (Figure 6):

**Figure 6.** Overview of the Realist Evaluation framework (Adapted from Pawson and Tilley, 1997 p. 85)



Realist research in this context would ask, ‘What kind of educational interventions will tend to work, for what kinds of learners, in what kinds of contexts, to what degree, and what explains such patterns?’ (Wong, Greenhalgh, Westthorp & Pawson, 2012). This ‘iterative explanation-building process’ has some support within the literature, for example, Richards (2003) suggests that through ‘the systematic understanding of the [underlying] theoretical processes’ knowledge is developed that is ‘specific enough to inform improvements to the curriculum studied, yet generalizable through the theory that evolves’. Research utilising a realist evaluation-based approach gathers data and then analyses it through the lens of realist evaluation in order to identify a number of potential C-M-O configurations (CMOC<sub>s</sub>). The research then examines these configurations for plausible patterns that seem to explain observed outcomes. A ‘mid-range theory’, or, a theory that

*“acknowledge[s] the importance of abstraction, representation and refinement of general principles that apply across multiple situations, whilst also recognising the limitations of such entitative [sic] abstractions in accurately representing emergent, contingent and locally specific reality”*: (Thompson, 2011, p. 754; Merton, 1968)

is then typically generated. This process is then completed repeatedly across a number of studies and contexts refining our knowledge of “in which specific conditions the intervention works (or not)” and building “an accumulation of insights that help decision makers to assess whether interventions that proved successful in one setting may be so (or not) in another setting and how” (Marchal et. al., 2012).

Though an approach such as realist evaluation could be useful to adopt, it was not feasible within the context of the current research when considering the nature and limitations of data collection opportunities throughout the course of the research. It was felt that the iterative process of collecting further data from a wide range of contexts in order to compare and contrast settings and refine theory would make such an approach challenging to implement. Additionally, though a growing amount of research in the healthcare context makes use of realist evaluation, “there is considerable diversity in the way in which the principles [are] applied” (Marchal et. al., 2012). This issue is exacerbated by the relative lack of methodological detail often provided in the dissemination of realist evaluation research as well as a sometimes over-emphasised focus on a particular part of the realist evaluation process such as the mechanisms or the theory (Astbury & Leeuw, 2010).

A thematic analysis was ultimately chosen as an appropriate and accessible method through which to unpick elements of the IPW process and to explore the concept of IPW as a form of IPE where the IPL takes place within an active practice

setting, in accordance with the research aim (Braun & Clarke, 2006; Braun, Clarke, Hayfield & Terry, 2019. Detail of method provided in Section 3.8). As discussed by Nowell, Norris, White and Moules (2017, p. 2) "through its theoretical freedom, thematic analysis provides a highly flexible approach that can be modified for the needs of many studies, providing a rich and detailed, yet complex account of the data". Though the importance of maintaining rigour when utilising thematic analysis through consistency and meeting trustworthiness criteria, as well as placing the research within a clear epistemological position is stressed (Section 3.1).

### **3.8 Analytic Strategy**

The data set collected in the current research was initially separated into 3 groups for the purpose of analysis. One group consisted of interviews surrounding the pre-qualification pilot training wards (i.e., pilot training ward student and facilitator interviews). The group also included researcher observations of the pilot training wards. Another group of data surrounded the post-qualification rotational nursing post for newly qualified nurses (more specifically; rotational nurses, non-rotational nurses and related staff members). A further group of data consisted of contextual interviews conducted in order to gain wider contextual insight into the IPW process in this instance.

The data was explored using an inductive thematic analysis (Braun & Clarke, 2006; Braun, Clarke, Hayfield & Terry, 2019). In order to explore the process of IPW, thematic analysis was considered as a method that was both adaptable and also able to gain a rich level of complex detail that considers multiple perspectives (Nowell, Norris, White & Moules, 2017; Braun & Clarke, 2006). It has been noted within

literature surrounding qualitative research methods that such flexibility can present a challenge in maintaining consistency and coherence throughout the process of generating and developing themes (Holloway & Todres, 2003). However, as suggested by Nowell, Norris, White and Moules (2017, p. 2), “Consistency and cohesion can be promoted by applying and making explicit an epistemological position that can coherently underpin the study’s empirical claims” (Section 3.1).

The process of thematic analysis in the current research followed the multiple-phase guidelines established by Braun and Clarke (2006, Figure 7; Nowell, Norris, White & Moules, 2017).

**Figure 7.** Summary of Braun and Clark’s (2006) approach to inductive thematic analysis.

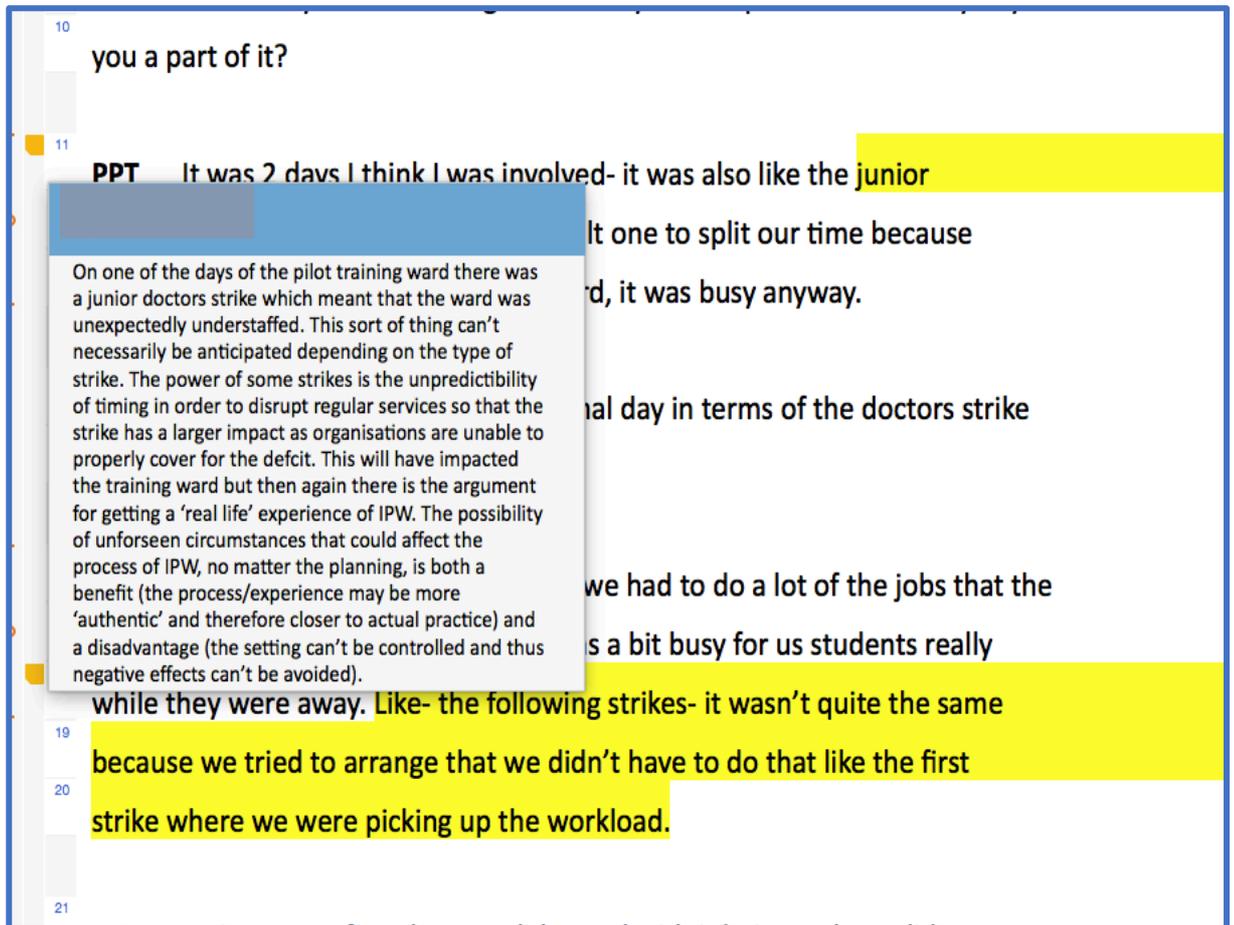
- Phase 1: ‘Familiarising yourself with your data’
- Phase 2: ‘Generating initial codes’
- Phase 3: ‘Searching for themes’
- Phase 4: ‘reviewing themes’
- Phase 5: ‘defining and naming themes’
- Phase 6: ‘Producing the report’

Phase 1 (‘familiarizing yourself with your data’) is completed by repeatedly reading transcripts both to cross check them for errors and to start building a general idea of what has been said. Following this, Phase 2 (‘generating initial codes’) involves working systematically through each transcript and identifying ‘interesting aspect[s] in the data items that may form the basis of repeated patterns [themes]’. Phase 3 (‘searching for themes’) involves collating the codes generated in Phase 2 and

assessing each code as a potential theme or sub theme either individually or as part of a combination. Phases 4 and 5 ('reviewing themes' and 'defining and naming themes') can be carried out through the production of a 'thematic map'. These phases of inquiry each raise the analytic level of the work progressing from describing the data to interpreting and analysing it with a goal of ultimately exhausting the dataset and producing a series of themes. These phases were completed for each data point (interview or researcher observation). A specific example, an interview with a student that participated in the interprofessional pilot training ward (TS1) is provided:

The transcript was read and as the researcher familiarised themselves with the interview, initial researcher notes were generated (Figure 8).

**Figure 8.** Screenshot illustrating the process of generating initial researcher notes through highlighting and annotating sections of the interview transcript (TS1).



The interview transcript was then coded in small chunks (on a roughly sentence-by-sentence basis) with supporting data being selected and linked to an initial code (Figure 9; Figure 10). This was considered as appropriate in the current research as using these smaller units of data (as opposed to, for example, paragraph-by-paragraph coding) may add a certain amount of depth to analysis (Willig, 2013).

**Figure 9.** Visual representation of all initial codes generated (TS1).



**Figure 10.** Screenshot illustrating initial codes being linked to relevant quotes from the interview transcript (TS1).

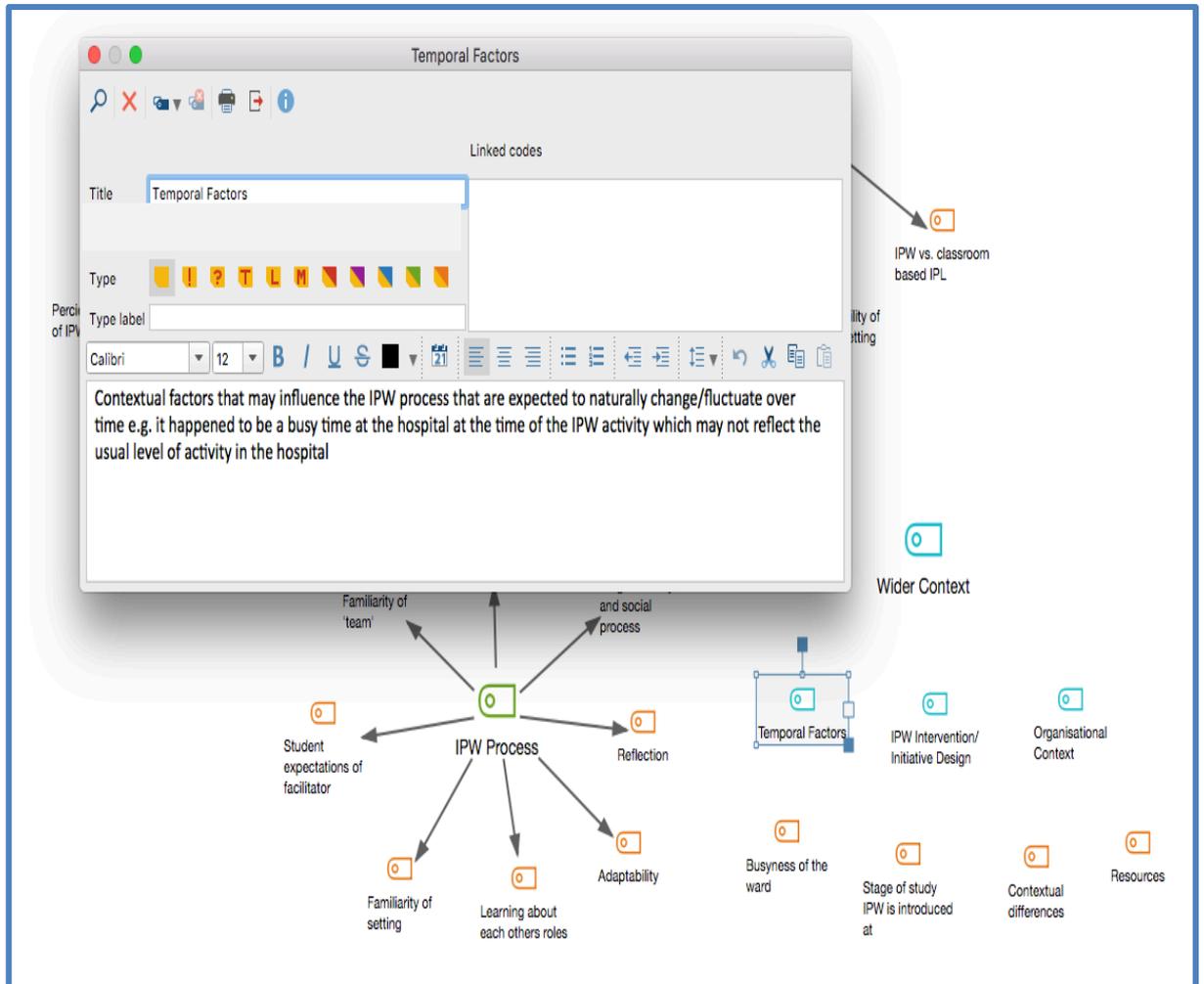
Code: Busyness of the ward

it was a sort of difficult one to split our time because  
we were really the only ones on the ward, it was busy anyway.

	Beginning	End	Weight score	Preview
ss of th...	16	18	0	It just meant th...
ss of th...	27	28	0	because we we...
ss of th...	12	13	0	it was a sort of ...
ss of th...	108	110	0	Yeah that tend...

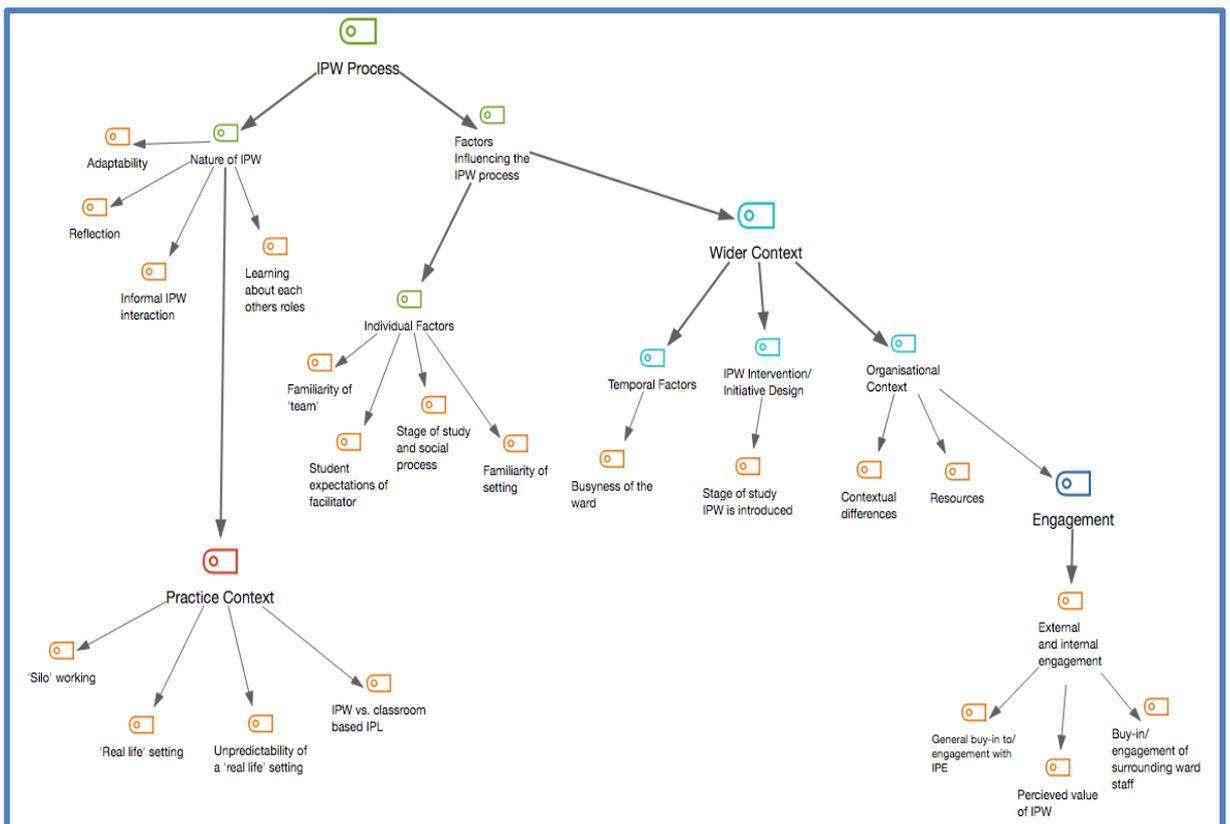
The initial codes generated were then considered and grouped together based on similarity and relatedness with these new higher-level codes being labelled, described and paired with quoted evidence from the data for support (Figure 11).

**Figure 11.** Screenshot illustrating the process of labelling and describing higher-level codes.



Phases 3 - 5 were then repeated a number of times until the method was exhausted and several central higher-level codes supported by the data were finally presented (Appendix H).

**Figure 12.** Screenshot of the final thematic map for the data point (TS1).



The complete process was then detailed in one of a series of codebooks (Appendix H). Once the thematic analysis was completed for all data points in a group (in this case ‘interviews surrounding the pre-qualification pilot training wards’) the group was considered as a whole. Similar or overlapping higher-level codes generated across the group set were merged where appropriate and a set of overarching themes and sub-themes were identified, labelled and described (appropriately presented in a thematic map as in Figure 12). This process was completed for each group of data and then the groups of data were combined, and the complete data set was explored as a whole generating a final set of interacting themes surrounding the process of IPW as observed in the current research.

### **3.9 Chapter Summary**

As discussed, detail and transparency of methodology forms an important part of IPE research in order to mitigate, to a degree, issues surrounding conceptual ambiguity and varying use of terminology. Thus, detail surrounding epistemology, methodology and consideration of ethics as well as data collection was presented. A general approach of critical realism was adopted in order to explore the research aim, with thematic analysis used to analyse the data and explore the process of IPW. This approach was well suited to the exploration of a complex social process such as IPW.

## **CHAPTER 4. RESULTS**

### **CHAPTER OVERVIEW**

Chapter 4 presents the findings of the current research based on a thematic analysis of the data collected. Emerging key themes (and subthemes) relating to the IPW process are presented and discussed, supported by verbatim quotes and observation notes.

- 4.1 Treatment of data
- 4.2 Key themes emerging from the data
  - 4.2.1 'IPW as a specific form of IPE'
  - 4.2.2 'IPW as a social process'
  - 4.2.3 'IPW: consideration of wider context'
  - 4.2.4 'Psychological safety'
  - 4.2.5 'Resources'
  - 4.2.6 'Communication'
  - 4.2.7 'Engagement'
- 4.3 Chapter Summary

#### **4.1 Treatment of data**

Following data collection, the researcher treated the data to prepare it for analysis. This process included typing up and collating field notes surrounding the observation of the pilot training wards. Also interviews surrounding both IPW interventions (the pilot training wards and the rotational nursing post, in addition to contextual interviews) were transcribed. This initial process is suggested as particularly important when conducting qualitative research as it provides an opportunity for the researcher to familiarise and fully 'immerse themselves' in the data' as well as generate

initial notes that inform the analysis as it progresses (Spencer, Ritchie, Ormston, O'Connor & Barnard, 2013; Tuckett, 2005).

As described (Section 3.8), the data set was initially separated into 3 groups for the purpose of analysis: interviews and observation surrounding the pilot training wards (facilitators and students who took part in one or more of the pilot training wards; n = 6), interviews surrounding the rotational nursing post (stakeholders surrounding the specific implementation of the rotational post; n = 9) and wider contextual interviews (in-depth interviews with wider organisational stakeholders of the IPW initiatives and wider IPE faculty; n = 2). Where supporting quotes from the data were referred to throughout the presentation of the research findings, labelled participant codes indicated more information regarding that specific participants area of involvement within the current research and their specific profession (e.g. the participant code 'TS1' indicates that the participant was a medicine student who took part in a pilot training ward). This is linked to the information provided in Table 6 (repeated here):

**Table 6.** Details of interviewed participants.

Participant (n = 29)	Role	Description
CP1	Project 'Initiator'	The original staff member within the Trust who conceptualised and instigated the development of an IPE faculty from an organisational development perspective.
CP2*	Project Lead	A staff member appointed (full-time) to lead the IPE faculty initiative; exploring potential and implementing possible IPE interventions across the Trust.

			Some were initially introduced as pilots with a view to permanent inclusion if effective.
CP3	Project Support Staff		Staff members appointed to provide assistance to the Project Lead, specifically with management and organisation surrounding the IPE faculty rotational nursing posts.
CP4			
TF1*	Training Ward Facilitator		Staff members who assisted (on a voluntary basis) as facilitators in the IPE faculty pilot training wards.
TF2			
TF3			
TS1	Training Ward Student	Medicine (Year 5)	Students who participated in the IPE faculty pilot training wards. Local university students undertaking placements at the hospital as part of their course and professional qualification (from Nursing, Medicine, Physiotherapy and Occupational Therapy backgrounds, at different stages of pre-qualification course).
TS2		Medicine (Year 5)	
TS3		Physiotherapy (Year 1)	
FP1	IPE faculty rotational nurse		Nurses employed at the hospital in one of the IPE faculty rotational posts for newly qualified nurses (i.e. first year of post-qualification practice).
FP2			
NFP1	Non-IPE faculty nurse		Newly qualified nurses working at the hospital (i.e. first year of post-qualification practice).
NFP2			
NFP3			
NFP4			
NFP5			

\* TF1 and CP2 both refer to the same participant interviewed on different occasions regarding separate contexts.

## **4.2 Key themes emerging from the data**

Key themes that emerged from the data collected from the IPW interventions formed two broad areas: those that surrounded the nature of IPW as a concept within IPE ('IPW as a specific form of IPE'; 'IPW as a social process') and those that surrounded factors inherent to IPW that seemed to inform this process ('IPW: consideration of wider context'; 'Psychological safety'; 'Resources'; 'Communication'; 'Engagement'). As suggested by Nowell, Norris, White and Moules (2017):

*"Ideally, as researchers engage in the analytic process, they will progress from description, where the data have simply been organized and summarized to show patterns, to interpretation, where researchers attempt to theorize the significance of the patterns and their broader meanings and implications" (p.11).*

Thus, the key themes that form the findings of the current study also to an extent reflect a process of abstraction in which observed themes were also considered in their relation to the broader research aim where they explored/illustrated the process of IPW and highlighted important contextual factors that seemed to uniquely interact with IPL taking place within an active practice setting. Each theme and its' related subthemes are presented with supporting quotes from the data (examples of the detailed codebooks reflecting the process of theme generation and development in the current research, described in section 3.8, are included in Appendix H).

#### 4.2.1 'IPW as a specific form of IPE'

'IPW as a specific form of IPE', a term that can relate to all findings in the current research, here refers specifically to a major theme that related to observed instances within the data that seemed to directly or implicitly support the conceptualisation of IPW as a distinct method of IPE. Repeated distinctions were found between IPW when compared to IPE occurring within a classroom or a simulation setting and a number of participants placed emphasis on the perceived positive value of the opportunity to undertake IPE within the explicit context of direct practice. This suggests that, based on the IPL experienced in the current research, the unique nature of IPW may make it valuable as an approach to exploring IPE where IPL occurs within a live practice setting. Relevant linked subthemes such as 'IPL in a practice setting', 'Unpredictability of a real-life setting' and also 'Perceived value of a practice setting' each illustrated subtly different aspects of IPW that seemed to distinguish it from IPL that may take place within a traditional classroom-based setting.

'IPL in a practice setting'

The data highlighted general challenges surrounding effectively learning while working and showed how even though some of these challenges may be predictable, they can still profoundly affect experience. This is especially true in the case of IPW as theory suggests that an explicit focus on interprofessionalism is a key part of IPL which is something that is easier to disrupt (and harder to mitigate said disruptions) in a live practice setting as opposed to a classroom one. As described by training ward participants, the requirement to undertake the on-going typical work needed for regular duties whilst trying to focus on using such experience as an opportunity for IPL is challenging and at some points not possible:

*“as I say because we were so busy throughout the day we neglected that a bit which is a shame but we had to get through stuff so...” [TS1; Lines 27 - 28]*

*“I think it’s just making it clear that on the ward you are there... you’re not there to sort of just get jobs done as we end up doing the jobs and...” [TS1; Lines 140-142]*

*“Yeah. You’ve got to have a certain amount of structure but you’ve got to be flexible and go with the flow because it’s actually a real live training environment.*

*TF2: 214 - 216”*

Further comparisons were made between IPE activities in an active practice setting versus in previous classroom or simulation-based experiences:

*“I think the differences are when you’re doing it in the classroom environment you’re learning more about the topic and what your role is within that topic as opposed to in the clinical are you’re learning about each others’ roles and it’s real time you’re out on the ward in real time so you’re seeing actually what’s really happening with the interruptions and the considerations and everything else that another professional gets in the clinical setting.*

*TF3: 41 - 47”*

*“I’ve run simulated scenarios inter-professionally but not clinical ward, not actually learning alongside each other as opposed to learning with each other in the classroom.*

*TF3: 36 - 38”*

*"I think you have to have an open mind really when it's a live...  
if you're doing this sort of exercise in a simulated area you have a lot  
more control whereas on a live ward you don't have that level of control. TF1: 244-246"*

'Unpredictability of a real-life setting'

Interestingly, the data showed clear examples of where external factors that can't be predicted (and are outside of regular roles and circumstances) can profoundly affect IPL in a way that is relatively unique to IPW. For example, on one of the days of the pilot training ward there was a junior doctors strike, which meant that the ward was unexpectedly understaffed. This is an instance that can't necessarily be anticipated as the power of striking can be the unpredictability of timing in order to disrupt regular services so that the strike has a larger impact as organisations are unable to properly cover for the deficit. This directly impacted the training ward in that the typical workload the participants would have undertaken was increased due to demand- as described by participants:

*"It was also like the junior doctors strike and it was a sort of difficult one to split our time because we were really the only ones on the ward, it was busy anyway." [TS1; Lines 11-13]*

*"It just meant that we ended up- we had to do a lot of the jobs that the junior doctors would have done so it was a bit busy for us students really while they were away." [TS1; Lines 16-18]*

*"the first strike we were picking up the workload" [TS2; Lines 18-20]*

Similarly, on another day, one of the two wards that the IPW activity was due to take place on closed due to an outbreak- affecting both the workload and the availability of potential space and patients. There is an argument, however, that unpredictable factors such as these reflect a 'real life' experience of IPE. The possibility of unforeseen circumstances that could affect the process of IPW, no matter the planning, could be considered as both a potential benefit (the process/experience may be more 'authentic' and therefore closer to actual practice) and a disadvantage (the setting can't be controlled and thus negative effects can't be avoided).

#### 'Perceived value of a practice setting'

It is important to note that across most participants there was a high perceived value of IPW when compared to classroom or simulation-based IPL. On several occasions data showed that healthcare practitioners perception of 'real-world' practice experience was high with opportunities such as IPW considered as valuable due to the increased similarity in experience to future collaborative practice when compared to classroom-based IPE:

*"it's closer to the reality of what they're going to be doing when they qualify.*

*[TF2: 408 - 409]"*

*"I think it's really important that it is run in a live clinical area.*

*I think one of the best assets to the training ward is the students being able to talk to the real patients because I think there was time factored into the sessions where they could actually sit and talk to the real patients who were experiencing hospital stay for whatever reason and I*

*think the patients in all this are the most vital resource really because they can talk to you and tell you how it is and their experiences.*

*[TF1: 295 - 301]"*

*"I think one of the other things as well was, students from various professions having a real lack of understanding of other professions and that became apparent, and again I think that's something that would only come out in a real clinical area watching somebody do the job they do, working alongside them and learning from them.*

*[TF1: 308 - 312]"*

*"Rather than, yes interacting in a way that gives added value, sort of being another professional group there and you are developing a deeper understanding of better care for your patients and understanding what they do and you know, blah, blah, blah."*

*[CP1: 556 - 569]"*

*"So I think it really does help bridge the theory and practice gap doing this type of inter-professional project and again because it's on the ward it's only ever a good thing. Whereas in the classroom you're taught very different again so.....*

*[TF3: 426 - 430]"*

*"But until you actually see it in real life and you're actually living through that person's eyes if you like really you can't really empathise until you've done that I don't think.*

*[TF3: 334 - 336]"*

*"Yeah I think- so we get a lot of classroom stuff where it all kind of blends in really whereas when you see it actually applied it's much more useful." [TS1; Lines 80-82]*

*"I think the comfort blanket of a classroom is quite nice so maybe I'm a bit more that way inclined but the things that have stuck with me more tend to be the things that I've seen when it's been on a ward or when you're meeting a person or something like that. I do think actually I probably learn- even if the comfort of the classroom is sometimes quite nice- I probably learn more on the wards yeah." [TS1; Lines 85-90]*

*"Yeah- I think so- it's the practicality. The things like- say you were doing exams, I know people have to do them but like you really realise the importance of communicating with people and developing those kind of team relationships and things when you're actually doing it and seeing it." [TS1; Lines 198-201]*

This suggests that not only is there a distinction to be made between IPW and classroom-based IPE, but that IPW may (though more challenging) be considered as more valuable.

#### **4.2.2 'IPW as a social process'**

Given the interactive and collaborative nature of experiencing IPE within an active practice setting there are key social processes that impact uniquely on the IPW experience. Whilst these are present to some extent more generally within IPE activities, they seemed to be accentuated within an active practice setting. A key theme, 'IPW as a social process' and the related subthemes of 'Social dynamics', 'Role of facilitator' and 'Informal IPW interaction' relate to this conceptualisation of IPW as a social interactive process. In terms of social dynamics, the interplay of status and

engagement of the different professions during the sessions was noted (e.g. a number of nursing students and facilitators commented on the perceived reluctance of the medical students to engage with the IPW activities). In terms of the role of the facilitator, the facilitator seemed to need to be able to, as the one 'managing' the IPW activities and trying to provide opportunities for IPL to occur, quickly adapt in response to uncontrollable factors inherent to the practice environment. For example, though the sessions were pre-planned, on the day of the project one of the wards was shut due to an infection and so all of the students had to be accommodated in the other training ward. This required a great deal of adaptability and resilience. The facilitators were constantly on the lookout for naturally occurring opportunities for IPE to occur.

Supporting quotes:

*“students were working together and were looking at the patient notes they were talking to the patients they were looking at the observation charts, they were gathering information to get a holistic view of what was that patient’s position where were they going next and talking around that. It was almost like, ‘right well here’s the patient’s notes, where are they on our pathway, how many days are they after admission, are we looking to get them home, if we’re not getting them home what interventions and what are the professionals that we need to bring in to get them on the pathway to where they need to be?’. So it was more like collaborating and problem solving as opposed to, I think it was much more useful than, just watching hands on direct patient care but really getting into it and discussing it too because it was needing to learn...*

*TF2: 370 - 382”*

*“For example, one of the physio students reported to me on the day that he’d worked alongside a ward pharmacist and up until that point he’d had real limited knowledge of the actual role of a pharmacist and how it related to his own role. I think in terms of working together in the future there would be that much better working relationship having that understanding of each others’ role.*

*-TF1: 312 - 317”*

*“Yeah and for them to understand the benefits of this as well I suppose. With the medical profession they’ve got a lot of historical kind of blinkers to a different pattern. I’m not saying that negatively, but it’s a traditional set up.*

*TF2: 304 - 307”*

*“I think one of the things that really, really helped was to meet the students prior to the day, which was something I did, I went and found them on their current placements and just tried to a bit of a five minute you know, this is what you’re going to be involved in. Because I think they got the information second-hand from... I initially communicated with their managers who told them you have to go and do this day. And I think the fact that I was able to, firstly put a face to my name, secondly be told first hand what was going to be expected of them, what it was all about, and I was also able to leave a bit of a of handbook with them for additional information.*

*-TF1: 79 - 88”*

#### 4.2.3 'IPW: consideration of wider context'

A key theme that emerged in the current research was the importance of considering relevant wider context when exploring IPW. This includes factors observed in the research reflected in related subthemes such as 'Unpredictability of real-life settings', 'organisational factors' and 'national context'.

Supporting quotes:

*"Then I think you've got to have a little bit more sort of this is real life this is what happens exposing them to the fact that everything's not scheduled and structured and that's it.*

*TF2: 228 - 230"*

*"it's a real struggle and it's a massive change and it's really threatening*

*CP1: 870 - 871"*

*"I do think this Trust probably understands inter-professional education a bit better*

*CP1: 648 - 649"*

*"I think that...I mean I do think this is a really lovely friendly Trust and actually, people want to help so, you know, if you want to try something out you can always find someone that goes, "Yes, alright I'll give it a go." So, I think that culture in the organisation for me is really important; that it's a supportive culture and it's quite a stable population of staff.*

CP1: 518 - 523”

*“So, I think it’s about trying to have a framework that people can then look at and see how it applies to their own area.*

CP1: 789 - 790”

*“Because of course it will with some enthusiasts actually but it is, what are the conditions that we have or don’t have in the Trust or in areas of the Trust, so what actually is making a difference to that?*

CP1: 940 - 942”

*“I would only say that a barrier may have been the fact that the doctors [medicine pilot training ward students] had to do the ward rounds so we kind of had to work around them so they couldn’t actually often really join the student nurses and student physios to get to see their angle on things.*

TF2: 265 - 269”

*“It’s all to do with people living longer*

CP2: 808 - 808”

*“An aging population*

CP2: 810 - 810”

*“Yes and now we’re saving people that would have previously not been saved and spending more money on more expensive treatments and more complex treatments and most of our money gets spent on staff, because we don’t have*

*enough, so we pay extortionate agency rates for staff*

*CP2: 812 - 815”*

*“There’s always, and I don’t think it’s this particular hospital but with the NHS in general, if they want to make something successful they need to put some financial investment in place*

*TF2: 291 - 293”*

#### **4.2.4 ‘Psychological safety’**

From the perspective of individual participants experience of the IPW process, it was suggested that ‘psychological safety’ was a key factor that influenced the perceived effectiveness and general accessibility of the IPW interventions. Value was placed by practitioners on IPW taking place within a social climate in which there was a level of safety from criticism.

Supporting quotes:

*“Yeah, you’d feel a bit stupid if you were trying to refer someone and you’re not totally sure who’s going to do something. Do you know what I mean?*

*NFP4: 165 - 167”*

*“all the nurses on the ward have been brilliant and the doctors, if I’ve had to query anything they’ve been like really supportive.*

*NFP4: 55 - 57”*

*“So, probably  
like being more prepared having gone from being a student where nothing’s  
your responsibility to being a staff nurse where everything’s your  
responsibility.*

*NFP4: 75 - 78”*

#### **4.2.5 ‘Resources’**

The issue of appropriate availability of resources was often found across the dataset as a factor that underpinned concerns of participants relating both to perceived barriers to the IPW process as well as their confidence in the implementation and sustainability of specific IPW interventions.

Supporting quotes:

*“When you go to people’s houses you’re always wanting to do the best  
job for them, but when you’re so stretched for time then sometimes you feel  
like you’re not doing the best that you*

*NFP3: 302 - 304”*

*“I suppose support-wise I would just expect to be able, if I got  
stuck on anything or I’d need anything that I would expect like a mentor to  
be able to ring, which I do have, but she only works part-time, so when  
she’s not on I just have to like, try and find anybody.*

*NFP3: 100 - 103”*

*“It’s quite difficult sometimes to be able to find support when you’re just out on your  
own.*

*NFP3: 107 - 109*

#### **4.2.6 'Communication'**

Communication and its' relation to the effectiveness of interpersonal interaction within the process of IPW was seen as a key theme that intersected with many others in the current research. This supports the idea of IPW as a fundamentally social process as communication specifically relates to interpersonal interaction and communication issues were frequently cited as a major barrier to the perceived 'success' of the IPW interventions.

Supporting quotes:

*"So everyone's got their own little point for the patients but I don't always feel like I've had a good conversation with the other professionals you know to know exactly what's going on  
NFP4: 144 - 146"*

*"But on EAU now we do huddles. So on a morning and evening the doctors and nurses go in the doctors office and we kind of huddle and we'll discuss like the poorly patients and plans for the patients.  
NFP4: 152 - 154"*

*"One thing that I think would be really helpful is if all of the professions used the same computer system like the hospital. This is what I could never understand throughout all of my training and through being qualified is why the hospital, GPs, district nurses, the walk-in centre all uses different computer systems.*

NFP3: 213 - 217”

#### 4.2.7 ‘Engagement’

Engagement emerged as a theme that was prevalent across a number of varying contexts, from a micro/individual level where participants reflected on their own individual engagement and perceived value of IPW (4.2.1) or the perceived engagement of other participants or stakeholders to a macro/organisational level where contextual participants highlighted the key role of organisational ‘buy-in’

Supporting quotes:

*“so initially the ward managers of the two wards we used were on board. But I think again getting in early and having those discussions with them about why we’re coming to their wards, and what we’re trying to achieve. I was quite surprised really that it was a new concept and they hadn’t done it before and they really were on-board with it.*

*-TF1: 179 - 183”*

*“I was thinking at a much strategic level, so sort of me and you know, potentially the HR director, the director of medical education has had training just to make sure...and the head of OD just to make sure actually there was overall steering groups.*

*CP1: 736 - 739”*

*“who is Head of Transformation and I can’t remember what his other titles are this week, but I mean I’m slightly picking the people that I know have vision.*

*CP1: 813 - 815”*

*“I think it’s mainly that you learn most of the inter-professional things when you’re out on placements.*

*NFP3: 120 - 121”*

*“Yes, because you see them working and then you see how your mentor works with them, so that’s how you learn really.*

*NFP3: 124 - 125”*

*“Yeah, definitely. People like that you’re finding out about their role and like that you’re interested because they’d rather that you know now than you just carrying on without knowing and then like later there’s problems. And then you know them so it’s easier to ask them stuff later or help them because you know what they might need help with.*

*NFP1: 109 - 112”*

### **4.3 Chapter Summary**

Chapter 4 presented the study's research findings as a series of key themes surrounding the IPW process that were generated based on the data gathered from two IPW initiatives. These findings and their implications for theory and practice are discussed in Chapter 5.

## **CHAPTER 5. DISCUSSION**

### **CHAPTER OVERVIEW**

In Chapter 5, the findings of the present study are discussed within the context of the research aims and objectives and with consideration of relevant theory and research. Limitations of the present research and potential implications of the research findings for theory and practice are also discussed. Directions are suggested for potential future research.

5.1 Discussion: results and research aims

5.2 Research contribution to existing knowledge

5.3 Limitations of the research

5.4 Directions for future research

5.5 Conclusions

#### **5.1 Discussion: results and research aims and literature**

In the current research, the overarching aim was to:

- Explore the use of Interprofessional Working (IPW) as a vehicle for Interprofessional Learning (IPL) within a 'real-world' context.

This broad aim was successfully addressed through the application of a thorough exploration of IPW within a live ward using well-documented and detailed methodology. Conceptual rigour was enhanced by the use of clearly defined terminology which set

out precise definitions of the terms IPE, IPL, and IPW. This enabled the researcher to address the research question and objective:

#### Research Question

- Can IPW be considered as a useful conceptual distinction when exploring IPE within a live practice setting? What are some factors that seem to inform the IPW process?

#### Research Objective

- Examine individual IPW interventions implemented within an acute care setting and the interaction between IPL and the specific context of active practice. Explore factors that appear to reflect the unique nature of IPW and consider how they may facilitate or inhibit the process of IPL.

#### **5.1.1 IPW as a distinct form of IPE**

The training ward initiative was an example of IPE being delivered within a working environment. The exploration of the processes involved in this IPL experience appears to support the concept of IPW as a distinct form of IPE. Morison, Boohan, Jenkins, & Moutray (2003) suggest that a combination of classroom and clinically-based IPE activities creates the best sustained results in terms of improving student's understanding of shared learning and its relevance to their future practice. This view is echoed by Fraher & Brandt (2019) who propose that *'IPE must develop new models of learning that are delivered in the context of practice'*(abstract), and the suggestion of Brack & Shields (2019) that discussion of what are the most effective methods of delivering IPE programmes during clinical practice needs to take place. The themes

surrounding classroom vs. simulation vs. practice setting, each one a degree closer in similarity to actual collaborative practice, support the conceptualisation of IPW as a specific form of IPE that comes with its' own unique considerations in terms of real life setting etc. Almost all of the participants placed a high value on practice experience in relation to present patient needs over traditional classroom-based training, and by extension prefer IPW to classroom-based IPL. Though it comes with particular challenges because of the inherently unpredictable nature of the settings and the group dynamics, the potential influence of the learning experience on subsequent behaviour is likely to be more potent. The unique contextual factors which operate when delivering an IPL experience within a live setting such as an acute care ward create a specific set of circumstances pertaining to the IPW process. These factors are considered in the following paragraphs.

Several of the factors which appeared to operate as facilitators in the IPW process operating in this context related to the theory and literature explored in earlier chapters. For example, several facilitative factors related to what might loosely be termed 'the nature of the personnel involved' such as the experience, personalities, motivations, status and quality of facilitation of the key staff driving the initiative.

### **5.1.2 Champions**

The initiator of both the project and the wider faculty of IPE was both knowledgeable and enthusiastic. She championed the initiative across the Trust pushing the initiative at the highest level within the organisation and across different contexts, including university undergraduate courses. This notion of having an IPE champion(s) was cited by Lawlis, Anton, & Geenfield (2014) as a key factor enabling IPE. Agreeing with this, Nasir et al (2017) suggestion that, these champions could

*'work across the different stakeholder boundaries to overcome timetabling, funding, staffing and other barriers'. (p.127)*

However, how long do champions need to champion a cause for? Or can the champion baton be passed on and the impetus maintained? This leads to an issue that commonly affects initiatives, the washout effect. Typically, a novel initiative may produce a powerful initial impact, but then the impact fades over time. When the champions or key drivers of a project move on or take on other responsibilities does the impetus diminish? Does a large part of the success reside in the motivation, enthusiasm and influence of these individuals? If the original champion of a cause moves on or shifts focus before the practice is embedded within the culture there is a danger of the behaviour fading before it becomes established custom and practice. This was mentioned by the project initiator (CP1) who spoke about 'taking her eye off the ball'. It is generally acknowledged that it is easier to develop a novel behaviour than it is to change and replace an existing one that has become entrenched. This is illustrated in the Scandinavian model where inflexible silo type attitudes, thoughts and behaviour are avoided by teaching collaboration and interprofessional practices from the outset of training. It is also the premise of the interprofessional socialisation dual professional identity model proposed by Khalili, Orchard, Spence-Laschinger, & Farah (2013).

### **5.1.3 Clarity of purpose and vision**

Linked to the theme of sustainability beyond the individual 'champions' is the communication to the wide variety of stakeholders in a way that engages their support and understanding. The training ward initiative was planned by the programme initiator who had a very clear strategic overview of the concept of IPE and how it might become embedded or normalised (part of everyday practice) across the Trust along with the

project lead. They both had a longer-term vision and appeared highly motivated to achieve this vision. As well as being upwardly focused in their communication, they were also focused downward in terms of giving clear guidance to the facilitators of the training ward in terms of what it was that they wanted to happen during the sessions and what the intended outcome was. This was communicated very clearly to the facilitators who then enacted this vision on the ground as best they could, given the restrictions they encountered. It helped that the project lead was also involved in the facilitation on the ward. This well-communicated clarity of purpose and vision enabled the facilitators to be flexible in their enactment in order to adjust to changing circumstances on the ground (e.g., the doctor's strike and the closure of one of the wards). If one understands the principles involved and the intended outcome, then the route to that outcome can adjust to emerging circumstances.

This clarity of purpose and vision was less evident in the rotational posts initiative where the project support staff were less clear about the IPE/IPW aspects of the initiative. One of the difficulties was that the participants were not in training, they were working as qualified nurses. Whilst the broader range of experiences may equip them to be more broadly educated as nurses and incidentally work with (or alongside) a greater range of professionals than would be the case if they were on a static placement, the prospect of IPE/IPW occurring was probably no greater than if they were permanently placed on the ward. Location does not necessarily lead to collaboration. Whilst there was an additional educational element to the rotational wards initiative, this appeared to be linked to the learning of skills or knowledge specific to the nursing role within the particular ward they were placed on e.g. learning how to read electrocardiograms.

#### **5.1.4 Role of the facilitator in the IPW process**

As discussed in chapter 2, the skill and enthusiasm of the facilitator(s) is seen as crucial in overcoming barriers to the implementation of IPE, particularly within clinical settings (Thomson et al, 2015; Lawlis, Anton, & Greenfield, 2014). The facilitators supporting the training ward initiative were enthusiastic and well-informed regarding the nature of IPE and so were well suited to supporting the initiative. The inherent complexity of the task that the facilitators faced in terms of coordinating the session was noted. An active ward is a dynamic and sometimes chaotic environment, which the facilitators had to navigate effectively in order to provide opportunities for the students to experience occasions of IPE. These opportunities could be considered “critical junctures” (a term presented by Johnson, Lynch, Lockeman and Dow, 2015) in the IPE process at which facilitator input is key. In the literature it is suggested that “recognising predictable and emerging critical junctures” is a primary responsibility of those facilitating the IPE process (Johnson et. al., 2015). Indeed communication, adaptability and proactivity seemed to be key criteria for the effective facilitation of IPE in a practice setting (as opposed to a classroom or simulation setting e.g., Shields et. al, 2015; Herrmann, Woermann & Schlegel, 2015). It was observed that the facilitators’ previous experience may have contributed to the effective identification of IPE opportunities. Both facilitators came from a nursing background and had years of experience working on a ward to provide acute medical care. This was reflected in their sophisticated operational and practical knowledge of the ward, which was demonstrated when they were able to quickly source a variety of IPE opportunities for the participating students.

The fact that the facilitators worked within the same Trust and were therefore part of the broader staff group, along with their personal characteristics appeared to support the development of constructive relationships with ward staff and the students. This role played by context and the complex dynamics of relationships when introducing

novel interventions was explored by Furness, Armitage and Pitt (2012) who identified that the most effective sites for IPL in their project were facilitated by individuals familiar to the clinical area who were able to influence staff and had strong local knowledge.

The unstable nature of a 'real world' setting such as a live ward used for training links to complexity theory i.e., the idea that there are so many complex factors interacting throughout the IPW process can you ever properly predict or manage them? Perhaps all you can do is work to create an environment that is conducive to the occurrence of IPW? This ties in with themes surrounding promotion of IPW and all of the legwork that the project lead and facilitators did beforehand. It doesn't guarantee subsequent successful IPW but it does increase the likelihood of IPW occurring and the quality of that learning/IPW. This emphasises the importance of the facilitators within the IPW process. As was shown during the initiative, they had to think on their feet when quite major issues occurred e.g., the closure of one of the wards, the doctor's strike, or to quickly adapt and respond to situations where unplanned opportunities for IPL emerged during the course of the initiative. From the interview feedback, this flexibility and adaptability appeared to be a major element in the success of the initiative.

### **5.1.5 Communication**

A strong and consistent theme spanning across the responses of the staff and participants involved in the IPW interventions explored was the benefit of direct face to face communication over more remote communication via email, written notes etc. Both of the facilitators for the training ward reported that a key aspect of what they thought contributed to the success of the project was speaking directly with staff and engaging their support for the intervention. They felt that the personal relationship that was built via such direct communication was essential to engaging the support of key

staff, particularly the ward managers. This direct approach can sometimes be difficult to establish and sustain within large organisations where the ubiquitous email is often the main system of communication between those who are not working in the same immediate setting. However, the facilitators' belief in the power of direct face to face communication in getting the support of others is in line with the research suggesting that face to face requests are up to 34 times more effective than emailed ones (Roghanizad & Bohns, 2017; Bohns et al, 2011). The researchers found that the nonverbal cues conveyed by the requesters had a significant impact on how people viewed the legitimacy of their requests, though the requesters were unaware of this fact. (Bohns et al (2011) found that the person making the request would be more likely to correctly anticipate its effectiveness in regard to a positive response from the recipient if they were from what they described as a 'collectivist culture' (in this case China) versus those in an individualistic culture (USA). This finding was also borne out when they looked at individual differences in collectivistic and individualistic orientations within the cultures. Though it could be argued that contemporary British society is more individualistic and culturally narcissistic than it is collectivist (Vater, Moritz, & Roepke, 2018), the NHS retains a collectivist culture within this broader individualistic national culture. The belief of the facilitators in the effectiveness of face-to-face communication and the assumption of cooperation may be a reflection of the collectivist cultural zeitgeist operating within the NHS.

Face to face communication also positively impacts on the quality of the relationship built between the people communicating when compared to communication via email or other internet-based methods (Lee, Leung, Lo, & Xiong, 2011). Face to face communication is more likely to be perceived as credible, to build more rapport, and to engender trust. As one of the facilitators stated *"but I also think doing the face to face method has been where people can get to know us as a team*

*and are able to sort of relate to us a bit more, rather than just...*"(CP2: 468 – 470). This relational aspect of face-to-face communication can also be influenced by the perceptions by the receiver of the credibility of the person communicating with them. In this respect, the experience and previous roles of the facilitators (both from a nursing background) may well have influenced the degree of receptiveness of the nursing staff on the ward. Several of the facilitators commented that felt that they were friendly and easy to get along with and found it relatively easy to build up a rapport with the ward staff. Their credibility was further enhanced by the fact that they were able to provide practical assistance on the busy ward whilst the initiative was being implemented.

These factors chime with the features of enablers to IPE reviewed by Lawlis, Anson and Greenfield (2014), though their focus was higher education institutions rather than clinical settings. They identified that the skills and enthusiasm of the facilitator/staff were key individual factors enabling IPE. The role of the facilitator, particularly within an active clinical setting appears key to the success of the experience, for both the students and for the ward staff themselves. This positive initial experience of IPW can create a ripple effect as highlighted by Flynn et al, (2019). This is seen as key to the sustainability of an initiative. All of the student participants in the training ward reported that they had enjoyed the experience and that it was helpful to them. This positive experience is likely to dispose them more favourably to interprofessional working as they progress through to qualification.

Participants also spoke of the benefits of speaking directly with the other professionals. The multi-professional 'huddle' for example, was referred to by many of the participants as a positive element of the day.

Within the rotational post intervention, the responses of the participants suggested that poor communication to ward staff of the purpose of the project and their roles and responsibilities in supporting it was a contributory factor in the perceived lack of success of the initiative.

It appears that the communication regarding the study time element of the placements was either miscommunicated or misinterpreted by at least one of the participants and ward managers. This appears to have created tension between the participant, the ward manager and the project support worker.

#### **5.1.6 Informal IPL**

In line with the theories surrounding informal learning discussed in Chapter 2 there was emergent informal IPW interaction that wasn't planned or mandated for by the IPW activity but consistently occurred due to the explicit focus on improving collaborative practice and increasing knowledge of others roles and how they relate to yours. Such interaction was encouraged by the facilitators and is to some degree inherent within a live working relationship dynamic. This is arguably more likely to occur in IPW rather than general collaborative/multi-professional practice because of the explicit aims and focus facilitating interprofessional interpersonal interaction etc. whilst practicing/working within a live environment. This flexible approach allowed for the incorporation of additional relevant social theory to inform the interpretation of the data collected. Theories such as the 'intergroup contact theory' in which positive group outcomes are suggested to rely on several conditions such as 'external support from the system' and 'common goals' (Allport, 1954; for recent application to IPE see Bridges & Tomkowiak, 2010) related to a critical realist perspective.

The current research did not aim to provide a complete and comprehensive experimental-design style evaluation of the 'successfulness' of a specific IPW intervention, but rather to examine illustrative IPW interventions in order to unpick elements of the process itself and to explore the concept of IPW as a form of IPE where the IPL takes place within an active practice setting. The generation of themes in this instance was to provide useful insight into what seemed to influence this process (thus contributing towards the evidence base) and to demonstrate the potential usefulness of considering IPW as a complex socially-embedded phenomenon that is in many ways distinct from classroom-based IPE. Furthermore, from a practical research perspective, the flexibility of such an approach allows for researchers to use an analytic technique that may be more accessible to them based on their research experience on the condition that the chosen technique is compatible in terms of, for example, epistemology and ontology.

#### **5.1.7 Stakeholder Investment**

One of the key context factors identified as operating in the training wards was the engagement of key stakeholders. The context of the mutually respectful relationships built by the champion and the facilitators with the training ward staff triggered a mechanism whereby the staff on the wards were invested in supporting the initiative and the outcome was that there were a greater number of supported opportunities created for interprofessional activities to take place. Within the themes emerging from the analysis, face to face communication was thought to operate as a key triggering contextual factor when considering outcomes of the training ward intervention in terms of stakeholder commitment.

Stakeholders (individuals or groups whose support would be essential to the success of the IPE initiatives) resided at multiple levels within the organisation(s). They

included those within the Trust who were responsible for setting the agenda for medium and longer-term strategic development plans, those responsible for setting and delivering the training curriculum for health care students, the managers within the Trust such as the ward managers, and the staff working directly on the wards. This is an important point to consider as negative perceptions of IPE have been highlighted within the literature as a barrier to its' effective implementation. An interesting theoretical equation reflecting this is presented by Harden (2015) in which the likelihood of successful implementation of IPE is considered as  $(V \text{ ['the IPE vision']} \times I \text{ ['the implementation strategy']}) / N \text{ ['negative perceptions of the approach']}$ . This provides support for the consideration of organisational culture in the data collection process and how it may have an effect on individual and group perception of IPE and the IPE training ward sessions.

The project initiator was placed at a high level within the management structure of the Trust. This meant that, as well as the more formal means of communicating and promoting the IPE initiatives across the Trust and with external organisations (particularly the local universities who provided the training for the doctors and the nurses), she was able to speak directly and informally with key stakeholders within the Trust such as the director and deputy director. The professional status of the project initiator, who attended high level national and regional committees and had extensive experience both as a clinician (doctor) and in project promotion and management and the project lead who had a great deal of experience within the midwife profession and the education of staff are likely to have had a great deal of professional credibility with both those colleagues within the management structure and with practitioners. The project initiator (CP1) specifically referred to this factor when she talked of the advantage of having people within the higher management structure of the Trust who had started in a clinical capacity within the Trust. Though not explicitly stated by the

project initiator, sometimes referred to in the literature as a 'local champion' (Thomson et al, 2015), sitting on the board of the Trust possibly enabled the project initiator to 'champion' IPE and to use this influence to get the promotion and development of IPE practices included within the organisations' programme of development. This lent organisational weight to the initiatives, though was not necessarily accompanied by appropriate resources.

The project initiator was also very influential in communicating the vision and principles to the project lead and training ward facilitators who in turn became very enthused and committed to the project. This was enhanced by one of the facilitators and the project lead seeing IPE in action in a Scandinavian system and by attending training. Getting their commitment was seen as vital as they in turn would be the people who would affect buy-in from ward staff and the participating students without whose commitment the initiative was unlikely to be successful. They reported that they visited ward staff before the initiative started to explain the purpose and to engage them on a personal, relationship level. This taking the time to consult before the event both enabled the facilitators to connect on a personal level with the ward staff and to explain the initiative clearly, but also acted as a signal of professional respectfulness. All of the facilitators reported that this appeared to be very helpful in getting the commitment of the ward staff.

This element appeared to be lacking in the rotational posts initiative where the level of communication appeared much less proactive. To a certain extent there was a lack of clarity and emphasis on the IPW aspect of the post and a lack of engagement from ward staff. This translated into a situation whereby the participants had different expectations of their roles and responsibilities within the initiative and the outcome was that the opportunities for IPW-related activities were restricted. An unintended outcome

of this was the early exit of the nurse from the initiative as she pursued an area of specialism which was one element of the rotational structure. The reports from the project support workers, the students, along with the views of the ward staff recounted by the project support workers, suggested that there was much less awareness of the IEP/IPW element of the initiative and much less commitment in general. No mention of IPE or IPW was made during either of the interviews. Particularly in respect to the rotational posts project, it appears that there was a lack of clarity on the purpose of the project. For example, one of the project support workers felt that the purpose of the project was to entice post-graduate nursing applicants to the Trust and to increase the likelihood that the nurses on the project would be retained within the Trust (i.e., they would apply for permanent posts on specific wards). From her perspective the fact that none of the three nurses completed the series of rotations was not problematic as it was the result of them applying for permanent positions within the Trust. Whilst the concept of nurses on the placements learning about the roles of other professionals (IPE) was considered to be a potential outcome of the rotational post project, this was not planned in any way. The likelihood of IPW happening as part of this particular aspect of the project was no higher than if they had been permanent nurses on the wards.

This may have been affected by both the way the project support workers were recruited (e.g., one of them was recruited because she needed to make up her hours of work and this role fitted well with that). This is not to question their commitment, but to query their capacity to support the project given their other work commitments. It may have also been affected by the changing role of the original project lead who had to pass the baton on to another member of staff.

The temporary nature of the rotational posts created a specific dynamic for both the individual participants and the ward staff where they were temporarily placed. The impact on levels of motivation to invest psychological, emotional and practical support need to be considered. Both parties were aware that the posts were time-limited and so this may have acted as a disincentive for full engagement. This was recognised by the project support staff who referred to it directly on a number of occasions.

#### **5.1.8 Engagement of Wider Stakeholders**

Additional key stakeholders in relation to the IPE initiative were the teaching and placement support staff at the universities that the students attended. The problem of different health professional degree calendars and placement timetables is one of the institutional level factors identified as barriers to IPE (Lawlis, Anson, & Greenfield, 2014; Lapkin, Levett-Jones, & Gilligan, 2012). The facilitators of the training ward initiative felt that this was a significant barrier to organising joint IPE activities for students from different health professions. The fact that, in this particular location, the undergraduate nursing and medical courses ran at different universities added an extra level of difficulty in terms of coordination. The staff who visited the Scandinavian system reported that the medical and nursing students are educated in an integrated fashion as undergraduates and that therefore the silo mentality does not develop. However, that is not the current system of training in the UK. This means that the timing of the students' placements are determined by the university course timetables. This was problematic during the training ward initiative as the medical students were coming towards the end of their courses and therefore had significant demands on their time, and types of activity whilst on placement. The Trust's IPE drive has been promoted in the local universities and is reported to be well received by both staff and students, in fact it is viewed as an effective recruitment pull factor. Staff from the Trust reported that the educational staff at the universities were positively disposed towards

both supporting IPE and including it more substantively within the undergraduate curriculum. Lawlis, Anson & Greenfield (2014) suggest that this is one of the five key factors (staff ownership and commitment across all disciplines involved in IPE programs) influencing IPE success within university settings. The other factors being government funding, Higher Education Institutional (HEI) funding, faculty development programs, and HEI organisational structures to support the embedding of IPE into health professional curricula.

The majority of the participants from the training ward project spoke about the timing of the IPE initiative in relation to the stage of their training. Medical students, because of the increasingly directed and crammed nature of their course/training requirements during the final year of training, felt that they would have been able to participate more effectively had the experience been introduced during an earlier stage in their training e.g., the third year of training. It was felt that, because of the demands on their time and activities within the clinical placements as they approached the point of qualification, engagement in the IPE activities within the training ward was problematic. This situation also led to a dynamic where the medical students were the most experienced or advanced in their training in comparison to the nursing students and so there was an unequal relationship between the two groups with the medical students often taking on the role of doctors and leading or dominating discussions mirroring the conventional hierarchical doctor/nurse relationship patterns. One of the facilitators was of the view that the placement and the IPE activities would have been beneficial to the nursing students slightly later in their training trajectory once they had established a degree of professional identity and confidence. The students reported that they preferred it if there was another student from the same profession there as they felt that it was easier to discuss their thoughts and experiences with them.

### **5.1.9 The Social Context**

IPE is a social process as well as a learning process. This was discussed in chapter two where Khalili et. al. (2013) described it as a professional socialization process. In the case of IPW a wide range of social dynamics and interactions are present in every group and at every level influence the IPW process. A huge part of the context that is so important to include in IPW research surrounds fundamental social paradigms (interpersonal skills, bias and attitudes against or towards others, group social dynamics, hierarchy, tribalism etc.). One example of this that emerged from the responses of the participants on the training ward initiative was the apparent schism between the medical students and the others in terms of engagement with the IPE activities. The medical students were consistently seen to be less engaged with the process and this appeared to reinforce for some of the participants, established views of 'the doctors versus the rest' (i.e., they feel themselves to be superior to the other healthcare practitioners). There may have been other reasons for why the medical students were less engaged such as the stage of their training dictating what types of activity they had to engage in during the clinical placement.

### **5.1.10 Psychological Safety**

This has links to the elements related to psychological safety covered elsewhere in the thesis. Particularly in the rotational post project the expectation of the participants to be proactive in seeking support and accessing additional education required them to have a great feeling of psychological safety. One of the participants expressed the view that she felt that seeking time to study was viewed negatively by the ward manager and this made her feel guilty. Instead, the difficulties that the participants experienced, either in not being proactive in seeking training or support, or experiencing tensions with ward staff, were put down to some form of personal deficit

or inappropriate personality type (i.e., the wrong types or calibre of people were recruited to the posts). The participants in the rotational ward initiative were in uniquely unfamiliar positions being at one and the same time expected to operate as any other qualified nurse would whilst on the ward, but at the same time being expected to have a slightly different experience than a typically newly qualified staff nurse. Negotiating this was primarily left in the hands of the participants themselves who were expected to initiate access to the additional support and training that would be available as part of the post. The impact in terms of psychological safety does not appear to have been a factor that was considered as part of the planning for the initiative.

The psychological safety of the project support staff also needs to be taken into consideration. It is quite psychologically and emotionally challenging when something you have some responsibility for does not go well. This can be taken as a reflection of personal competence rather than a structural or organisational issue and can lead to defensive self-protective reactions. One of the project support workers for the rotational posts project described one of the participants as not being assertive enough, whilst the other was considered too assertive or demanding, with neither using their own initiative appropriately. The judgement was that the rotational posts were suited to confident and outgoing people but who were reasonable, a sort of 'horses for course' approach.

Several of the participants referred specifically to the anxiety that accompanies the wearing of the 'blue uniform' (the visual signal of having become a qualified staff nurse). The pressure of feeling that they should know things that a qualified nurse would be expected to know created a great deal of anxiety. At some level this is common to many professions when practitioners qualify and during the early stages of their careers and may represent Bjork's desirable difficulties (Bjork, Dunlosky & Kornell,

2013). However, the emotional dynamics of dealing with family and relatives and the potential for compromising patient safety and well-being create a more pressured experience. If the newly qualified nurses do not feel comfortable in asking either more experienced nurses or other professionals for guidance in matters which they feel might make them appear “*silly*”, or feel that they should know the answers to the questions of patients or relatives then this can create an atmosphere where potentially crucial communication can fail. The fear of making mistakes or being blamed is a key contributor to workplace stress and interprofessional conflict (Crocker, Grotowski, & Crocker, 2014).

Given the challenging nature of the change in patterns of training and interaction involved in the IPE initiative, particularly when completed on a live ward setting (IPW) psychological safety is crucial. The ability to maintain or promptly establish a high level of psychological safety within a team can be key to reducing resistance to change and increasing communication (Edmondson, 2004), particularly where the newly formed teams are multidisciplinary (Edmondson, Bohmer, & Pisano, 2000; 2001).

The facilitators and the participating students all reported the value of the debrief as a vehicle to consolidate and reflect on what had been learned during the day. This was seen as a key element of the IPE learning process best if a student from the same discipline was available for debrief. It may be that the articulation of thoughts into spoken words within a dialogue deepens and enriches the learning via the production effect (Willingham, 2018). It also serves as a social validation and bonding experience.

### 5.1.11 Organisational resources & risk

There is an increasing emphasis placed on 'evidence-based practice' however in a public healthcare setting there are increased financial restrictions/limitations that may not be present in a private sector setting. Such budget restrictions result in much public sector (and some private sector) research being undertaken on IPE occurring at an isolated pilot level (such as in the case of the current study). Presumably this is to reduce the initial investment of resources required until such a time as which IPE can be 'confirmed to work' within that specific trust/setting. However, as it is difficult to link IPE and improved collaborative practice in a direct/linear fashion such outcomes will not be observed immediately. Additionally, considering the social process of IPL within IPE changes in attitude and behaviour must occur and persist which again may not be observed quickly or easily. IPE at a wide-scale/systemic level may require a large initial investment for an assumed future payoff. Attempts to implement IPE in themselves may have a valuable outcome however in that a willingness to invest in staff development and service delivery may attract new and retain existing staff. Additional process outcomes such as increased psychological safety, self-efficacy etc. could further contribute to the value of IPE (Abu Rish et al., 2012).

One of the consistent issues mentioned was the busyness of the wards and the perception of chronic understaffing which meant that staff were under constant pressure (e.g. the comments from rotational post nurse about not having time to take breaks and working long hours and from the nurse who spent some time in a private medical facility and noted the dramatic difference in staff to patient ratios). The drive to recruit and retain nurses was a major organisational influence driving both the IPE faculty in general as well as and the specific pilot training ward and rotational post IPW initiatives. The staffing resource issue acts as both a driver to establish IPE and as a restriction to the effective enactment of that drive because of lack of staff time capacity.

## **5.2 Research contribution to existing knowledge**

The current study makes a case for the consideration of IPW as a specific form of IPE. It has demonstrated the usefulness of treating IPW as a conceptual and practical/unique/specific form of IPE. IPW is worthy of consideration as a specific form of IPE with its' nature being uniquely different than other forms of IPE in e.g., classroom or simulation scenarios. It encompasses a particularly socially embedded and dynamic form of learning in a fluid and dynamic environment.

The study has contributed some conceptual clarity to the field by constructing a clear definition of IPW and where it fits within IPE. The study has brought a degree of conceptual rigour to a field that is beset by conceptual vagueness. This enables other researchers to clearly understand the use of the terminology used within the study. This will greatly enhance the potential for comparisons when subsequent research is undertaken.

The study has illustrated the importance of considering context when exploring IPE initiatives, particularly those occurring in live settings. The rich picture that emerges from an in-depth and contextually sensitive methodological approach enables a greater understanding of process as well as outcome. This increases the potential for transferability of learning to different settings. There are relatively few studies looking at IPW specifically, possibly because of the complexity of controlling for or analysing the dynamics within live settings.

## **5.3 Limitations of the research**

Data gathered from observation

Considering the notion of observing as an 'outsider' with no previous medical experience, there is a need to consider the impact that this could have had on the current research. The differing experience of the researcher when compared to that of the participants and other stakeholders could potentially yield positive outcomes by introducing new perspectives or approaches to educational research in this context. Indeed, the researcher's background in Occupational Psychology was useful in that she possessed relevant knowledge and experience of conducting empirical research and had specific knowledge related to workplace culture and organisational change, both of which were salient when considering the present research. However, the researcher's limited familiarity with the context being studied may have resulted in barriers to understanding. For example, both the students and staff (though less so in the case of the facilitators) used a considerable amount of healthcare related jargon, some of which the researcher was not familiar with. This may to some extent affect the understanding of the events that occur within the ward. Though this does not significantly impede the researcher's ability to observe the social interactions and processes occurring throughout the session, it could have prevented the gathering of some useful contextual understanding (e.g., how serious a medical situation was when staff were dealing with a patient, whether the jargon used was universally known within healthcare professions or if it was profession-specific, thereby affecting communication). This was resolved to a certain extent by the taking of detailed notes and then consulting the facilitators for clarification where needed. An issue that was harder to address is that the researcher may have been unaware of certain cultural subtleties that have taken place. As described by Berger (2015):

*"Studying the unfamiliar may also be a barrier to identifying disguised and subtle expressions of themes. Each subculture develops its own language and associations. A stranger to the culture may miss clues that are clear to an 'insider'"*

It is hoped that the interview process may have provided this deeper insight into the subtleties of organisational culture that exist at the hospital as they relate to the introduction of an IPE programme due to the level of data gathered being considered as more 'in depth'.

An additional consideration in terms of the impact the researcher may have had on the data gathered (and therefore the research itself) is their particular 'worldview'. This fundamentally affects the way a person might "construct the world, use language, pose questions, and choose the lens for filtering the information gathered from participants and making meaning of it" (Berger, 2015; Kacen & Chaitin, 2006). This may have affected the research in that observations recorded will naturally reflect what the researcher perceives to be valuable information.

Practical considerations following the observation session include that of researcher fatigue, as hours were spent moving throughout the ward taking copious detailed notes. Several breaks in the observation were taken in order to go over notes and ensure that they were both legible and understandable for later processing and analysis. However, there was always an urgency to return to the ward to continue so as not to miss any key opportunities for insight into the IPE process as in this case, it was not possible to predict when opportunities for IPE would arise. Communication with facilitators helped to a certain extent as they could share their thoughts on potential opportunities they were seeking to provide. As the sole researcher collecting data for the present study, fatigue is an issue which needs to be considered for future observational data collection.

The issue of saturation of data is something that must also be considered as during the observation an extremely large amount of information was recorded. It is important to consider that at a certain point saturation may be achieved in that so much data has been recorded that the topic being observed feels exhausted. If the researcher feels like they are repeating themselves in the notes and that their observations are beginning to contribute little value to the existing data collected it may be worthwhile to take a break in observation to review the existing data collected and examine whether there are any areas that may have been neglected in the observation process (e.g., if more dialogue or notes surrounding conversation are needed to provide a more complete picture of the process). This could provide focus for the researcher to return to the observation and prevent potential wasting of resources and researcher disengagement.

Observational data gathered can be considered as “the outcome of what the [researcher] may encompass in his or her gaze... and what the [researcher] omits and overlooks as much as what the [researcher] writes (Atkinson 1992; paraphrased in Mulhall, 2003). It is important to present the reasoning and thought processes surrounding the decisions made through the process of observational data collection. Maintaining awareness within the reporting of factors that could affect data collection such as the researcher’s stance as an ‘outsider’ to those being observed, the researcher’s personal background, epistemological standpoint and the practical challenges surrounding observing in a hospital ward environment will contribute towards maintaining a certain level of rigour. The observation provided a valuable opportunity to identify these considerations prior to the bulk of data collection. Undertaking pieces of reflective writing to form an ‘audit trail’ of sorts (Section 3.4) will provide additional transparency in methodology that will present the opportunity for the

generation of methodological homogeneity across related research and increase replicability and transferability.

The rotational posts, though initially envisioned as a form of IPW, were less comprehensively planned than the pilot training wards. Whilst there were some interprofessional elements to the rotational posts there were a number of limitations. The communication of the vision was not as effective as it might have been. This left those tasked with supervising the posts with too little direction on how to embed IPW activities within the structure. The initiative finished sooner than had been planned and so the intended data to be collected on the 'longer-term' impact on attitudes and behaviour of the participants was not available. Given the less organized nature of this initiative and the lack of focus on IPE and IPW as part of the project, it was difficult to draw any meaning from it in relation to the core purpose of the study, to explore IPW as a potentially distinct from of IPE.

IPE research tends to be small scale pilot-type projects, as was the case in the current study. This means that there is an inevitable restriction in relation to sample size. A number of steps were taken to mitigate any compromises that might result from a relatively small sample size. The use of a transparent methodology supports the extrapolation of abstract general principles where there exists a richness and depth of data. This richness and depth was gained through the use of semi-structured interviews and the use of purposive sampling which meant that the researcher chose respondents most likely to generate insightful and in-depth information and included multiple methods of data collection e.g., interview and observation. Rigour was maximised by ensuring that the methodology was transparent and rigorous enough to enable the research to be applied to other settings. In addition, certain aspects of the research design were benchmarked against standards for critical realist based

research reported in the literature (Healy & Perry, 2000). Transparency was maintained throughout the research process as well as generating an extensive audit trail.

This study, in line with the vast majority of research in this field within the UK setting in particular is not able to say whether the IPE initiative has led to subsequent changes in the behaviour of staff. The participants in the IPW activities reported that they were helpful in developing their awareness of the roles of the other professionals. It is difficult to extrapolate from this change in perception to subsequent sustained changes in behaviour.

#### **5.4 Directions for future research**

As related earlier, almost all of the participants placed a high value on practice experience in relation to understanding and addressing patient needs over traditional classroom-based training, and by extension prefer IPW to classroom-based IPL. Though it comes with particular challenges because of the inherently unpredictable nature of the settings and the group dynamics, the potential influence of the learning experience on subsequent behaviour is likely to be more potent. This indicates that future research in the arena of IPE should specifically include a category of IPE related to IPL within a live setting, which is defined as IPW within this research.

Considering that ultimately, the purpose of all IPE related initiatives is to change the behaviour of the staff on the ground in order to improve patient care, future research surrounding the concept of IPW as a distinct form of IPE leading to effective IPL would need to consider observing the subsequent behaviour of students and staff who experience such training to look for indications of collaborative practice with other professionals. The complexity of this is somewhat daunting, but in order to get a more confident judgement of the value of IPW as a mechanism for changing behaviour this

should be attempted. The insights provided by the current study could be applied to a different setting to test for transferability.

The use of realist evaluation as a potential approach to exploring IPW, though outside the scope of the current research, could be explored in future research. If the themes and the research data itself was for example, expanded on further in order to develop a series of illustrative CMOCs it may provide useful insight into what 'seemed to work, for whom, in what particular contexts and why' (thus contributing towards the evidence base) and to demonstrate the potential usefulness of realist evaluation as an approach to exploring IPW as a complex socially-embedded phenomenon.

## **5.5 Conclusions**

Emerging from the data and analysis, the following factors may be helpful in progressing the process of embedding IPE across the Trust;

- Where possible keep key staff such as the 'champion' the project lead and the facilitators in post and enabled to have the time to engage with the initiative for long enough for the practice to become embedded within the everyday behaviours of staff. This should be viewed not as an initiative, but as a fundamental change of culture which requires a significant investment of resources in terms of time being available for key staff.
- Continue to work vigorously with the educational staff at the respective universities, particularly to explore the possibility of coordinating clinical placements and identifying the most suitable times within the training

programme for these to happen. That may well be different for the different professional groups. It is likely that this will involve the winning of hearts and minds at the upper management levels of universities and conversations with the relevant professional bodies. They are already supportive of IPE, but there needs to be a coordinated approach to the effective delivery of it.

- Consider not just the need to address IPE within the training of undergraduates, but also how IPE could be infused within CPD training for existing staff.
- Consider ways to incentivise and motivate staff so that IPE and IPW remain within their conscious awareness e.g., the reporting of inspirational accounts of effective IPW leading to good outcomes for patients, ward managers and other managers of professional groups being trained on how to 'shape' the behaviour of staff in the direction of IPW.
- A suggestion made by one of the participants regarded the establishment of monthly discussions with other professionals considering any emerging research or methods that would be valuable to share. A form of interprofessional continuous professional development (CPD).

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## APPENDIX A: EXAMPLE PARTICIPANT INFORMATION AND DEBRIEF SHEETS.

A.1: Pilot training ward student participant information sheet.



Faculty of Health & Life Sciences

You are being invited to take part in a research study. Before you decide, it is important for you to read this information sheet so you understand why the study is being carried out and what it will involve.

### Participant Information Sheet

**Study Title:** Investigating the development and implementation of an Interprofessional Education (IPE) initiative for the health professions.

**Researcher:** Eleanor Price

**Supervisor:** Alison Steven

#### What is the purpose of the study?

The aim of this study is to conduct an in-depth investigation into how Interprofessional Education (IPE) is being implemented within the training of health professionals at a hospital. IPE is a type of education that brings different professions together to learn with, from and about each other to increase collaboration. As treating patients within the hospital environment often means that professionals from medicine, nursing and allied health backgrounds must work together as effectively as possible, it's important to explore ways in which collaboration can be increased.

By observing the training ward sessions and gathering insight from a number of different stakeholders (e.g. students, staff that are facilitating the training wards, project coordinators) the research will unpick the IPE process to find out what works, how it works, when it works and for whom it works. Previous research has suggested that IPE can be successful in achieving outcomes that are perceived as beneficial (e.g. collaboration, staff satisfaction). Knowledge obtained from this study (which examines the deeper underlying processes) could inform recommendations of how best to implement IPE within this and other healthcare contexts.

### **Why have I been selected to take part?**

You have been selected to take part in this study because you are a student or qualified health professional who will be participating in one or more of the training wards in [Month] at [Hospital]. This study is exploring the implementation of the training ward and aims to gain insights regarding the process of working on the training ward with people of differing professions from those who take part.

### **What will I have to do if I take part?**

If you choose to take part, you will be sent a link to an anonymous online survey that you will complete before participating in the training ward. This survey will take approximately 20-25 minutes to complete and will first ask for some basic information (e.g. age group and profession). You will then be asked to respond to a series of rating scale style questions surrounding your impression of other health professions. Finally, you'll be asked questions regarding previous knowledge and experience of Interprofessional Education (IPE) and your expectations of the training ward educational process. After you have participated in the training ward, you will be sent a link to a similar anonymous online survey completing the same tasks as described above with the difference being the last section where you will then be asked to reflect on your experiences of the training ward you participated in.

The researcher may also ask to interview you in order to gain more information regarding your thoughts on the training ward and IPE process. Interviews will last approximately 45 minutes and will be recorded using a voice-recording device. Your participation in the interview will remain confidential and your any data you provide will be kept anonymous. All interviews will be conducted on site at [Hospital] at an agreed time and date convenient to both you and the researcher.

### **What happens if I don't want to take part?**

Participation in this research is not mandatory. If you do not want to take part, simply inform the Project Lead or the researcher (researcher contact details provided below) via email and you will not be contacted further regarding the research. The researcher will be conducting observations of the training wards, however, these observations focus on the training ward process as a whole and does not examine individual performance. All those taking part in the training ward will remain anonymous in the observation. If you wish to explicitly opt out of the training ward observation, again please inform the Project Lead or researcher.

### **What if I agree to take part and then change my mind?**

You are free to withdraw from this study at any time during the data collection process.

If you wish to withdraw from an online survey, contact the researcher with your unique participation code and they will be able to remove your data from their records. You can end an online survey at any time by exiting the browser window. Following this, if you do not want your partial response recorded, again contact the researcher who can use your participation code to remove your data.

If you wish to withdraw from an interview, you can let the researcher know either via email (if prior to the interview) or verbally during the interview. Following the interview, if you wish to withdraw your data from the study contact the researcher and they will identify your data set and remove it from their records.

It is important to note that it may not be possible to remove your data after analysis of the data is in process. This may apply to participant data withdrawal requests that occur more than one month following the original collection of data.

### **How will my data be stored?**

Any hard copies of your data will be stored in a locked filing cabinet within a secure room at a university campus. Any electronic data gathered will be stored on a password-protected computer with data being anonymised prior to electronic storage so that no identifiable information is stored electronically. None of the information will be saved using cloud storage.

### **Will my participation in this study be confidential and anonymous?**

Your participation in this study will remain confidential and anonymous.

Any identifying information or data collected (whether electronic or physical) will be destroyed where appropriate and any that may not be destroyed immediately (such as signed participant consent forms) will be stored securely as described above.

All identifying information will be removed from the data prior to data analysis and all participants will be allocated a participant number or code knowledge of which will only be available to the researcher. Pseudonyms will be used in place of participant names on data recorded from observations and interview.

### **Who can I contact if I want to ask more questions about the research?**

If you want further information or have any concerns about the study, please contact the researcher, Eleanor Price, via email ([eleanor.price@northumbria.ac.uk](mailto:eleanor.price@northumbria.ac.uk)). You may also contact the researchers' supervisor, Dr Alison Steven ([alison.steven@northumbria.ac.uk](mailto:alison.steven@northumbria.ac.uk)).

## A.2: Participant debrief sheet.



Faculty of Health & Life Sciences

### Participant Debrief Sheet

**Study Title:** Investigating the development and implementation of an Interprofessional Education (IPE) initiative for the health professions.

**Researcher:** Eleanor Price

**Supervisor:** Alison Steven

#### What was the purpose of the study?

The aim of the study was to conduct an in-depth exploration into the development and implementation of an Interprofessional Education (IPE) initiative (a training ward) for health professions in one NHS Trust. This initiative forms part of a move towards developing a 'faculty of IPE' (including a structured interprofessional training programme) within that NHS Trust. The study examined an IPE pilot training ward in which students from a number of healthcare disciplines (Nursing, Occupational Therapy, Physiotherapy and Medicine) worked in an interprofessional context to gain supervised training experience. The project drew on a range of observational and evaluative techniques in order to deconstruct the IPE process and the linked facilitative and inhibitive factors. This involved considering the perspective of the students participating in the training ward, those responsible for facilitating the training ward and additional key stakeholders.

Based on the data gathered, this study will generate a series of factor combinations (both factors that are part of the IPE process as well as those that are contextual) that appear to lead to outcomes that are perceived as valuable (e.g. increased collaboration or staff satisfaction). These combinations can then be applied in this and other healthcare contexts in order to contribute to the successful implementation of IPE in the health professions.

#### How will I find out about the results of this study?

Feedback of individual data contributions cannot be provided however if you would like to receive a summary of the findings of this research study once they have been generated, please contact the researcher, Eleanor Price, via email ([eleanor.price@northumbria.ac.uk](mailto:eleanor.price@northumbria.ac.uk)).

### **If I change my mind how can I withdraw?**

You are free to withdraw from this study at any time during the data collection process.

If you wish to withdraw from an online survey, contact the researcher with your unique participation code and they will be able to remove your data from their records. If you withdrew from an online survey by exiting the browser window before the completion of the survey and do not want your partial response recorded, again contact the researcher who can use your participation code to remove your data.

If you wish to withdraw interview data, please contact the researcher and they will identify your data set and remove it from their records.

It is important to note that it may not be possible to remove your data after analysis of the data is in process. This may apply to participant data withdrawal requests that occur more than one month following the original collection of data.

### **Who can I contact if I want to ask more questions about the research?**

If you want further information or have any concerns about the study, please contact the researcher, Eleanor Price, via email ([eleanor.price@northumbria.ac.uk](mailto:eleanor.price@northumbria.ac.uk)). You may also contact the researchers' supervisor, Dr Alison Steven ([alison.steven@northumbria.ac.uk](mailto:alison.steven@northumbria.ac.uk)).

N.B. The data collected in this study may also be published in scientific journals or presented at conferences. Information and data gathered during this research study will only be available to the research team identified in the information sheet. Should the research be presented or published in any form, all data will be anonymous (i.e. your personal information or data will not be identifiable).

All information and data gathered during this research will be stored in line with the Data Protection Act and will be destroyed 36 months following the conclusion of the study. If the research is published in a scientific journal it may be kept for longer before being destroyed. During that time the data may be used by members of the research team only for purposes appropriate to the research question, but at no point will your personal information or data be revealed. Insurance companies and employers will not be given any individual's personal information, nor any data provided by them, and nor will we allow access to the police, security services, social services, relatives or lawyers, unless forced to do so by the courts.

This study and its protocol have received full ethical approval from Faculty of Health and Life Sciences Research Ethics Committee. If you require confirmation of this, or if you have any concerns or worries concerning this research, or if you wish to register a complaint, please contact the Chair of this Committee (Pauline Pearson: [pauline.pearson@northumbria.ac.uk](mailto:pauline.pearson@northumbria.ac.uk)), stating the title of the research project and the name of the researcher.

## APPENDIX B: PARTICIPANT CONSENT FORM.

### B.1: Participant consent form.



### PARTICIPANT CONSENT FORM

Project Title: Investigating the development and implementation of an Interprofessional Education (IPE) initiative for the health professions.

Principal Investigator: Eleanor Price

*Please place a cross or tick where applicable:*

I have carefully read and understood the Participant Information Sheet.	<input type="checkbox"/>
I have had an opportunity to ask questions and discuss this study and I have received satisfactory answers.	<input type="checkbox"/>
I understand I am free to withdraw from the study at any time, without having to give a reason for withdrawing, and without prejudice.	<input type="checkbox"/>
I agree to take part in this study.	<input type="checkbox"/>

Signature of participant.....	Date.....
(NAME IN BLOCK LETTERS).....	
Signature of researcher.....	Date.....
(NAME IN BLOCK LETTERS).....	

## APPENDIX C: EXAMPLE RESEARCHER OBSERVATION PROMPT.

### C.1: Example researcher observation prompt

#### RESEARCHER OBSERVATION PROMPT

##### *Practical Notes*

- Who is in attendance? Students/facilitators?
- How busy is the ward? Do the students have time to discuss and collaborate when dealing with real patients? Theory/plan to practice- consider the environmental context
- How does the training ward appear to be structured? Hierarchy? Timetable/activities throughout the day?

##### *Mechanisms*

- What seems to work well/facilitate collaboration? Why?
- What seems to work less well/inhibit collaboration? Why?
- How are the participants responding to the interactive aspect of the huddles/reflection vs. traditional style of teaching
- Social/hierarchical mechanisms at play?
- Engagement from the student and facilitator perspective?

##### Perceived Outcomes

- Are changes observed in the student's interactions with each other (same/different professions), patients and facilitators?
- Are any potential latent outcomes apparent?

##### Other Comments

## **APPENDIX D. DESCRIPTION OF ONLINE SURVEYS.**

D1: Online survey description.

Two online surveys were conducted surrounding the pilot training wards, utilising an online survey tool (Qualtrics; [www.qualtrics.com](http://www.qualtrics.com)). Both surveys could be completed on a computer, laptop, tablet or mobile device. Online survey data was collected from both students and staff facilitators shortly before and shortly after the pilot training wards took place. They consisted of closed Likert scale questions as well as free-text open questions surrounding expectations of and reflection on the training wards. Survey responses were used to inform further data collection (e.g., highlighting potential areas of inquiry that could be followed up in interview).

Upon consenting to take part in the study, participants were sent the link to an online survey (survey 1 of 2) and were asked to complete this survey before they took part in the training ward (n = 11). The survey took approximately 20 minutes. During the survey, participants were presented with an information sheet and were asked to confirm informed consent by selecting the appropriate option. The participants provided a unique code so that the researcher could identify their data if necessary. Participants were then asked to provide demographic details (e.g., age, gender and profession). They were then asked a series of open and closed questions regarding their interaction with IPE (experiences of IPE prior to the pilot training ward and what they anticipated from being on the ward). Responses to these questions were then used to inform the development of interview schedules surrounding the pilot training wards.

They also completed the Attitudes to Health Professionals Questionnaire (AHPQ; Lindqvist, Duncan, Shepstone, Watts & Pearce, 2005). As the IPE process is

conceptually linked to positively changing or developing individuals' attitudes towards other professions (and thus increasing effective collaboration; Kohn, Corrigan & Donaldson, 2000; WHO, 2010; Frenk et. al., 2010; Abu-Rish et. al., 2012; Thistlethwaite, 2012; Olson & Bialocerkowski, 2014; IOM, 2015), the AHPQ was included as a measure that may potentially reflect such a change within participants in the present study. In the current research however, the low rate of participation in the online surveys with regards to completing the AHPQ meant that data from the AHPQ itself could not be effectively used to inform the research.

## APPENDIX E: EXAMPLE INTERVIEW SCHEDULES.

### E.1: Pilot training ward student interview schedule.

#### STUDENT INTERVIEW SCHEDULE

Participant Number:

Interview time/date:

Date of Birth:

Gender:

Profession:

Year of study:

Number of training wards participated in:

First interview? Y/N

- Go over your experience of the ward on the day
- What do you think went well?
- Do you think anything could have been improved?
- How did that style of learning compare to how you've been previously taught?
- Compare current placement to training ward experience (including mentor/supervisor support)
- Have you had any previous experience of IPE? (if they don't know what IPE is, provide definition and ask them to consider the question gain)
- What did you like about the process?
- What didn't you like?
- Do you think the learning style suited you? (discuss the interactive nature of an IPE training ward e.g. the huddle, the reflection session)
- What outcomes (if any) do you think learning/training in this way had?
- What outcomes can you perceive of receiving this training in a more structured way as part of training?
- How much exposure to other professions have you had prior to this?
- Through experiencing the training ward, have your prior perceptions of other professions been contrasted in any way?
- Have you had experience practicing in other settings (e.g. another hospital, a community placement, work experience etc)?
- Do you think this style of learning would work in these other contexts? (discuss why etc.)
- What do you think could affect how well this type of learning/training works? (consider the people, the place, etc.)
- Any interesting discussion points generated by the data from the surveys.

## E.2: Contextual interview schedule.

### CONTEXTUAL INTERVIEW SCHEDULE 1

Participant Number:

Interview Date/Time:

Date of Birth:

Gender:

- Purpose of interview context and background of FINEST (inception, development etc).
- Identify and participation anonymous.
- Withdraw at any time.

#### 1. Professional background (including role when starting FINEST)

-Have you worked in other trusts / private?

#### 2. What did you originally envision FINEST as?

-What prompted the idea?

-How has this idea changed / developed over time?

-What were your long-term plans / goals? Short Vs long term?

-Continuation based on success of pilots?

-Why IPE? Motivations.

-Experience of IPE?

-Has IPE been in the trust before or is FINEST the first?

#### 3. What was the process like?

-Structure?

-Who was involved? (If worked in other Trust / private, differences?)

-Access to resources?

-Buy-in needed?

-Challenges? / in your favour?

-What is the history of organisational change such as this in this Trust specifically?

-Are there frequent changes / pilots etc like this?

-What is the process of idea – implementation like?

-Is it easier / more difficult to introduce ideas like this depending on your role in the Trust? (Difference between Trusts or even departments?)

-What are your general experiences of being a part of or implementing change?

-Have there been any barriers or has there been any resistance to change in the past?

-What challenges or benefits factor into sustainability of change perceived as valuable?

#### 4. Do outside forces influence implementation and development of things such as FINEST?

-e.g. fluctuation in funding / resources available to the Trust in general and perhaps in reaction to specific instances such as a shortage of staff or an increase in service demand.

#### 5. Any other thoughts on FINEST or IPE in the Trust in general?

-e.g. where do we go from here (envisioning the future).

## **APPENDIX F: EXAMPLE INITIAL RESEARCHER WARD OBSERVATION NOTES.**

F.1: Researcher pilot training ward observation notes.

### **DAY 1**

Both days were supposed to consist of 2 facilitators across 2 twin joined wards. On day 1, one of the two wards was closed for quarantine so it was 2 facilitators and all students on one ward. However on day 2 the second facilitator called in sick at unavoidably late notice so 1 facilitator (luckily the Project Lead) had to cover both wards and all students.

Again, because of the junior doctors strike, junior doctors weren't about the wards which is why the consultants were having to do the ward rounds and the more senior medicine students were asked to fill the role of the junior doctors to a certain extent.

These kinds of unforeseen circumstances are somewhat inherent to working on an active Ward. Ecological validity versus control?

Day began with OT sent to do Ward rounds with a medicine student. Another doing the same. So medical students paired with physio and OT to do a Ward round.

When observing physio doing rounds with doctors, doctors were enthusiastic to have a different perspective they were also happy to get extra help because of strike.

Based on feedback from previous session, Project Lead introduced new aspect on day 2 with all students visiting pathology labs to interact with those behind the scenes who are a part of testing and getting results back etc.

Facilitator who participated in previous pilot training ward more confident after having run it before. The day was more scheduled.

Medical students who were post third year said they didn't get an opportunity to learn much because they had their own responsibilities or they already knew much of the information and processes of the ward etc.

Some of the student nurses (in the same way as some of the medicine students) were already doing their general placements on the ward and the facilitator remarked on the difficulty in pulling them away despite them having permission to take the day for the pilot training ward. They weren't expected for their regular duties but if someone on the ward saw and recognised them they would often recruit them to help with various tasks and patients.

Facilitator providing opportunity, students doing something dynamic and new. Outcome = both freedom and direction/support?

Ward seems fuller and also the added challenge of an additional ward and one less facilitator.

So much variation in patients needs can't predict when the ward will be busy at any one time.

They have doubled the consultants on the wards today to make up for the lack of junior doctors.

Facilitator role seems to randomly swing back and forth from fast-paced action to a relative lull for a while. They generally supervised as they didn't want to stalk the Students too closely and pressure them/over-influence the interactions.

Non-medicine or nursing students tended to stand to one side during rounds but sometimes there was not an opportunity for OTs and physios to give direct input as the patient didn't particularly need their specialty or the medicine students had to rush to prepare something for the consultants so didn't have time.

Perhaps a context = having not too much of a gap in hierarchy/having students to be 1 to 1.

This is an acute setting and she's OT so focusing on post discharge and enabling patient to return to work. However she got chances to talk to the patients as part of the team and banter though. So despite difference in acute medical knowledge, there are universal skills like teamwork and putting patients at ease etc.

Patient in need is when they all really work together as patient care is their key value at the end of the day?

Shadowing was sometimes IPW where there was back and forth insight and knowledge/understanding sharing. Busyness of ward/work pressures seemed to hamper this process however as e.g. medicine students at times were too busy to benefit from learning more about other's role. Shadowing isn't IPW but shadowing can be made IPW- what factors influence this/form this difference?

Benefits of open plan style Ward layout meant that lone facilitator could cover both. Interesting to consider from a logistical perspective preparing contingency plans like wards with such a layout or wards that are used to training in case of unforeseen circumstances such as if a facilitator is sick.

As in day 1, facilitators mucking in and doing nursing when free is also a good idea because if there aren't any visible ipw opportunities for the students they could also shadow her.

First hand i.e. practitioner knowledge of the ward and processes/how it operates seemed to be useful for the facilitators for lots of different reasons. However having clinical practice experience wasn't a pre-requisite of being a facilitator (there were some non-practitioners who were invited to the train the trainer workshop- technically they could do it too. What then would be the fundamental differences between practitioner vs. non-practitioner facilitators in this type of IPW?

Again, contingency planning seems to be the name of the game when working on an active dynamic Ward. Flexibility, adaptability and contingency planning.

Seeing the multitude of differences between wards and even on the same wards on different days highlights the particularly key role of the facilitator.

Interesting looking at the process of implementing vision and theory to practice. Taking into account setting e.g. resources and the hospital itself and culture.

Because this intervention's vision isn't just one isolated pilot but a multipronged approach of varying things.

Some changes are more permanent e.g. the creation of the new rotational nursing role- that's permanently fundamentally changing something.

Some aspects of the IPE faculty's initiatives are short term, some trial, some long term.

Look at the role of publicity in staff buy-in/engagement, project lead has been making flyers and circulating posters etc. (taking photos to make it more personal etc.) to promote/inform staff of what the IPE faculty is doing both specifically and more generally.

Are there any differences between [ward] and [other ward]?

They seem the same despite being different wards with different staff and leadership.

They are the same Department, gastroenterology and how they are linked seems to facilitate communication. It doesn't feel like you're leaving [ward] to go to [other ward].

Remember to look at what didn't seem to work e.g. some patients not needing the help of one profession so they feel like a spare part.

This seemed to be mainly students who usually deal with working towards discharge whereas doctors and nurses focus on more acute.

Student feedback supported this- day 1 suggested half the day in Ward half in their practice setting e.g. physio, OT. Medicine and nursing students agreed would be helpful for IPW.

The pilot training wards were spaced out (a few near the start of the year and a few later on in the year)- meant that the facilitators could have time to plan to make changes for the later ones based on feedback from debrief sessions earlier in the year.

New element of visiting pathology lab was introduced. Tighter more detailed schedule planned.

No apparent multi-professional huddle on one of the wards- Ward matron who usually coordinates was on holiday so are they chose to forgo it because of time pressures and under stress = again, unpredictability.

Situation on ward changes so quickly, one second there may be lots of opportunities for IPW the next second everyone is extremely busy.

Difficult for one facilitator to manage everything and check on students and find opportunities. Hands on intense role, need support.

A couple of the staff on the ward already knew about the IPE faculty in general because of circulation of prior marketing/info.

When discussing or explaining the pilot training ward with surrounding ward staff, insight the facilitator had as project lead seemed to increase effectiveness of communication as well as transmit enthusiasm. Everyone the facilitator spoke to about it seemed up for it, some even wanting to get involved- especially once she explains it.

The wards were already previously established traditional training wards so they seemed heavily into training and learning- so buy-in/engagement is there in that regard.

Increased engagement/openness could be commonly shared value across the hospital or could be because they are pre-established training wards.

Facilitating is very tiring process because they have to be so on the ball all the time.

Facilitator interacting with the staff on the ward to see what they think about process e.g. have they seen enough in rounds and should move on etc.

Facilitator interacting with students asking what they want to do, what roles they'd like to know more about.

Some haven't been in a ward before and were excited to get involved and feedback.

Saying they're seeing how other roles fit together. Found it really valuable.

OT mentioned interaction with other profession before had been classroom based so she found IPW very valuable.

Some students are clearly really engaged, others are more quiet but that could just be their personality. Would be good to look at individual differences and how that interacts with the hands on group discussion and practice-based style of IPW.

They got quite a unique/bespoke experience because facilitator asked them what they wanted to do next and gave options.

For one shadowing, [student name] was with [student name] (nurse on a placement at the ward already). Student to student peer- a shadowing middle ground. Potential idea for students taking turns shadowing each other but with the focus being on IPW?

So day 2 = ward rounds – huddle – shadowing – lunch – Pathology

Shift in engagement of ward staff. In pilot training wards earlier in the year they didn't fully know what the pilot training wards were but now they are keen to be involved and Project Lead has circulated the fact that pilot training wards happened and their experience. Now easier for Project Lead to set up opportunities. Some individuals approached Helen themselves. Wanting to be involved. Taking initiative.

To clarify, Day 1 pilot training ward observation was earlier in the year, Day 2 was later in the year.

Consulting with the students about who they want to go with and what they want to do increased engagement and maximised the benefit of the experience (e.g. physio talked to physio student and he was like "oh, I spend loads of time with OTs so would benefit more from working with another profession").

One student said she feels like this kind of interprofessional experience is when she feels she learns the most. She mentioned a previous interprofessional experience and how it benefited her (it involved her working together with other professions on a case).

They really thought it was helpful because the only exposure to the IPW they've had. Prior was usually in a classroom/hypothetical setting. So students all really think it's valuable- particularly those who were at this early stage in training.

Outcome collaboration but also feeling support from the hospital and engagement with concept- potentially helping retention? When students share their positive experiences of IPW at this hospital?

Students were asked if they had seen enough etc. and if they wanted to go to debrief. Timings were flexible- they seemingly needed to be. Rounds can be one hour or three hours can't plan for this.

Debrief

Student feedback essentially that it was a very interesting experience- you never get that closer look at other professions operating at the least it helped them with their job knowing where/how best they would come in.

They could name lots of different roles they'd seen and or interacted with from consultants to bed manager.

Some of them hadn't been on a Ward round before.

Some felt lost when it came to medical or group specific jargon.

They all got to observe and or experience teamwork between professions too e.g. pharmacist and doctors.

They said "everyone knew their role" as a descriptor of good teamwork work they saw.

The huddle was cited as an example of teamwork.

Client-centred care up- a core value universal across healthcare professions, in public healthcare organisational culture is ideally focused more on caring about the patients at the end of the day.

They valued the deep insight into the details of what each profession does (e.g. they didn't know junior pharmacists can't prescribe etc.). These things affected how they perceived the process of collaborative practice and how different roles interacted. For example, a student mentioned that the pharmacist explained lots of things they hadn't thought to question before e.g. why prescriptions could sometimes take a long time- the student didn't know but the pharmacist explained that they can't do prescriptions for 24 hours and why and the student was surprised and considered how it could have affected their role and patient discharge.

Several students talked about an IPE activity they did at [other hospital]. Day of role playing with other health professions on hypothetical situations. They enjoyed it but again preferred on a real ward with real patients.

Visit to the pathology lab with the students- the Department was happy to get recognition.

Students learned all about the different departments within pathology- department tour. Eg Histology, hematology etc.

Although the staff member leading the tour didn't fully know why the students were there/what exactly they'd want from the tour as the pilot training ward is a new thing at this hospital. But again led to flexibility as they asked the students what they wanted to get out of it etc. Perhaps a more thorough handover or the facilitator or project lead personally handing them over herself.

Tour of many of the departments 10 to 15 minutes at each.

Initial woman led us to each Department then someone in Department would give a brief overview of their Department.

Students said they got a good insight into how busy they all are behind the scenes (e.g. one pathology staff member saying how they have to turn loads of things (e.g. tests, results etc.) around quickly, hundreds, some within the hour).

The pathology staff emphasised several times (they were keen to get the point across) that patient care is still a priority here (perhaps they believed it was a misconception of them commonly held by ward staff?). Many stressed that “even though we don't see them we know that there is a patient at the end of each sample”.

Quality care/control is a departmental focus because in the case of some tissues (e.g. a removed appendix) they can't do it again. High-pressure job- increased student empathy? Empathy as an outcome?

Empathy/understanding leading to better teamwork/collaboration? E.g. if a sample/result is late they know the potential reasons and challenges and where to go and who to talk to to discuss. Putting faces to names. They're getting a wider context/a bigger picture. Does that help them realise where they fit within the organisation as a whole? Breaking down silo departments?

Got insight into the complexity and time-consuming nature of the behind the scenes processing.

So IPE at immediate team, Department, cross Department, hospital at a whole - pathology lab visit = cross Department level?

Importance of communication highlighted in tour as there are lots of opportunities for things to go wrong e.g. mislabelling etc.).

Really in-depth insight into job. But a good job/tour was dependent on the staff doing it and engagement with it. Needs to be buy-in at every level of involvement.

Where a staff member didn't appear engaged the students reactions differed and their questions and communication lessened- barrier to IPW process?

The students may value more what they perceive qualified equals/other qualified professions to seem to value (e.g. if the staff aren't into it will the students pick up on that and have reduced engagement because of that? Social cues important?

Unspoken/hidden curriculum coming into play here e.g. well higher-ups say IPE is important but the professionals around don't seem to care/aren't engaged with it so maybe it's not that important in the "real world"/real job?).

Engagement and the appearance of engagement separate thing? They could be engaged but too busy to appear engaged/aren't engaged only because they don't know what was going on initially but as soon as it was clearly explained they are more engaged.

Practically there needs to be enough physical room in the department for the students to comfortably tour (e.g today the woman was upset because there were only supposed to be a certain amount of students). Also there needs to be enough time available, that 15 minutes worked out for a quick overview (which to be fair may be all

that was needed in this case) but they (the staff) mentioned that they usually have a whole day to do a detailed tour.

The students were asking questions and getting engaged however, a few of them looked tired because they had a long day. Session length and activity spacing?

A haematology staff member said this was the first time he'd shown anyone from another Department his Department. But once he got into it he was keen to extend the tour and lead the students over to another Department and facilitate a tour of another Department and they were more than happy to be last minute involved. Again engagement leading to snowball effect?

Good detailed non-jargon explanations. But they could have been briefed more on what the pilot training ward was about (e.g. IPW as opposed to a general tour). They then might have tailored their tours to consider the potential interactions between the professions of the students and the Department. Some briefly did that anyway e.g. some staff gave useful specific advice e.g. to the nursing student a staff member said "it makes it a lot easier for me if you don't take blood from a drip arm because the blood sample obtained is diluted".

Establishing rapport- staff around the Department were like "any questions give us a ring, we don't bite".

Additional observation notes

Again, strike affected things so everyone was really busy and having to take on different roles. Teamwork especially important. Reflecting how things happen in the real world.

Professional identity bought up. Especially with the merging of roles. Shortages of staff leading to people who are usually specialists having to do different profession's roles. Protection of professional knowledge?

Interactions between students and ward staff e.g. "why you having your huddle in the middle of the day in the Ward round e.g. 10:00 AM instead of at the starts like everyone else. Pulls people away from their jobs".

Quote relating to earlier notes- The lead doctor was asked to remind everyone that the pilot training ward was happening today in the ward huddle; he added it as an afterthought and didn't seem engaged; "oh [facilitator] are you doing that thing today".

Ward staff who interact with the students as all being facilitators to a certain extent.

## **APPENDIX G: EXAMPLE INTERVIEW TRANSCRIPTS.**

G.1: Pilot training ward interview transcripts.

**TF1**

### **PARTICIPANT INFO**

**Participant code TF1**

**Female**

**48**

**Nursing/Midwifery background**

**Pilot training ward facilitator (led/present in all training wards)**

### **INTERVIEW TRANSCRIPT**

1 INT Do you think the training that you took part in before the training ward [the  
2 'train the trainer' interprofessional training session for potential training ward facilitators]  
3 was useful?

4

5 PPT Yes, I think that the training was really beneficial and I think the most beneficial  
6 part of it was setting the scene really, and really bringing the concept of  
7 interprofessional education to the forefront of the minds of those that were involved and  
8 I think it really gave purpose to what we were trying to achieve rather than just turning  
9 up on the day and starting. I think it really gave that foundation that the project required  
10 in the initial phases. And to some of the people involved it was one of their first  
11 experiences of interprofessional working so that training was definitely vital to the  
12 project.

13

14 INT How do you think your past experiences may have like factored in to the  
15 delivery of the training wards as a facilitator? That can be experience of  
16 interprofessional education, or just your experience as a nurse/midwife?

17

18 PPT I think having quite a number of years experience with undergraduate students  
19 from various different courses and various different professions, for all that my  
20 experience wasn't wholly interprofessional I think having the experience of working  
21 alongside students definitely set me in good stead to be a facilitator. And I think it was  
22 learning how to communicate to the students, how to interact with them, making sure  
23 that they had adequate support, and I think it was being very, very, aware of when the  
24 students were struggling or needed me to intervene. I think it's having that raised  
25 awareness of students' needs on a clinical area. I think, particularly it was for the  
26 students' being in an area that was unfamiliar to themselves as well and having that  
27 knowledge that students do require a lot of support when they're in a new placement.  
28 Our approach was to be very 'hand-off', but I think it was the experience that I had  
29 previously helped me to be very keyed in to what the students needed and what they  
30 wanted. So for all my interprofessional experience was limited, I think my overall  
31 educational background working with the students set me in good stead.

32

33 INT No, that's great. What kind of interprofessional experiences have you had  
34 before?

35

36 PPT Working as a clinician myself I've been involved as a person who was being  
37 trained initially, so a lot of skills drills and live simulation-type training when I was  
38 working in midwifery. That was something that in 'obs' [sic; observations] and 'gyny'  
39 [sic; gynaecology] were quite strong and we used to have yearly study days where we  
40 had to do live simulations and skills drills working alongside our medical colleagues.

41

42 INT Is live simulations with real people on the wards, or is it a simulation ward?

43

44 PPT This was more with mannequins in a classroom setting re-running obstetric  
45 emergencies and scenarios as part of that team. So I think that was really beneficial  
46 being trained like that myself and I think 'obs' and 'gyny' were a bit of a forerunner for  
47 that type of training. So I think that's helped me see it from the other side of what  
48 participants need, and pairing that together with working in education within the Trust  
49 for the past eight years, I think having the two, clinical background and the educational  
50 background I was able to put them together for the benefit of the students on this  
51 placement.

52

53 INT In terms of your own training and background, reflecting on it, how do you think  
54 the experience of the students would compare if this was to become a standard thing  
55 for students? If this was to become standard type of training for students at the  
56 interprofessional training ward? How do you think it would compare to your own  
57 experience of training?

58

59 PPT Yeah, I think, what I've experienced before has been quite limited- like I said-  
60 often it was only once a year, but I feel it's something that should be embedded into the  
61 way we educate, not only our students but staff once they qualify. I think that should be  
62 across all the specialties not just in obstetrics. So I think it's something that needs to be  
63 the norm really that for all our staff that they have this kind of training made available to  
64 them, and that becomes then part of our culture and it's the normal way to work and  
65 the normal way to be educated. It's across the board really, it's not something that's  
66 just done in isolation or as a one-off. I think it should be available for everybody really.

67

68 INT Are there any factors, just looking at the actual days you facilitated, I know you  
69 facilitated on all of the days, are there any factors that you think helps the process  
70 along and facilitates the process on the days themselves?

71

72 PPT I think one of the things that really, really helped was to meet the students prior  
73 to the day, which was something I did, I went and found them on their current  
74 placements and just tried to a bit of a five minute you know, this is what you're going to  
75 be involved in. Because I think they got the information second-hand from... I initially  
76 communicated with their managers who told them you have to go and do this day. And  
77 I think the fact that I was able to, firstly put a face to my name, secondly be told first  
78 hand what was going to be expected of them, what it was all about, and I was also able  
79 to leave a bit of a of handbook with them for additional information. So it was like a pre-  
80 read prior to them coming so they could read the information, they knew who I was and  
81 they knew who was going to be meeting them on the day. And I think all of that  
82 preparation was vital really with the students. I think that just getting the messages  
83 from their mentors or managers and saying turn up on that day I think, I really feel that  
84 little bit of pre-work was beneficial to getting the students, a) to get them on board, and  
85 b) to make them feel a little bit more relaxed and have a bit more understanding about  
86 what they're going to be involved in and why we're trying to, what we're trying to  
87 achieve on the day so...

88

89 INT So is that in terms of like engagement and getting the students engaged with...

90

91 PPT Yeah, I think it's getting them on-board and I think its communication as well. I  
92 think lack of communication would have been detrimental because I think they would  
93 have thought, you know, well what is this what is it all about and what's happening. So  
94 I think taking that time investing it and just doing a quick meet up with them, giving  
95 them a bit of information. They were given a hand-held piece of information, two sheets  
96 of narrative about what they would be doing. I also sent that electronically as well so  
97 that they could read it at their own leisure and had a full understanding of what they  
98 were getting involved in. That's definitely- for me I would do again

99

100 INT How do you think that affected them on the day? I know you said it was in terms  
101 of getting them to know you and stuff, but how do you think that affected what they'd  
102 taken from the day, the fact that you'd met with them before and gave them this  
103 information and things. Do you think that, what do you think was different than if you  
104 hadn't done that on the actual day in terms of their experience of the wards?

105

106 PPT I think it made- I think it made them sort of look forward to the experience for  
107 one. They knew I was going to be there, and I think a bit of reassurance that there'll be  
108 somebody there to meet them, it'll be, everything was confirmed in terms of the time  
109 that they had to be there, the ward they had to be on, who I was and who they had to  
110 find when they got to the ward. And I think a lot of the students, especially ones who  
111 were only in their first year, because some of them it was only their first few weeks into  
112 their course and their first few weeks in an actual real hospital. So I think giving them  
113 that guidance and support and saying this is where you need to be, this is who will  
114 meet you. I think if I'd just sent them an email via the managers and said just turn up  
115 on this day I think they might have been a bit of reluctance or a bit of apprehension on  
116 behalf of the students. I think that's something we didn't want to happen and I think we  
117 wanted them to feel you know that they were coming to something that was well  
118 organised, well planned, and well communicated to them.

119

120 INT Great. Are there any other things that you think perhaps on the day might have  
121 facilitated the process?

122

123 PPT I think, unforeseen things, I think on one of the days we had an unforeseen  
124 closure of one of the wards we were going to use for the placement and we didn't really  
125 have a back-up plan for that. It was unexpected that the ward would close, so, perhaps  
126 I might have done a bit more in terms of resilience for things like that happening  
127 because another thing that happened was that a member of the facilitation team was

128 off sick and again we didn't have a back-up plan for that. And so on the first day we  
129 had a ward closure which meant we had to put double the amount of students on one  
130 ward which caused a little bit of stress and anxiety. To make sure the students were  
131 going to get an adequate experience with there being the double number on one ward.

132

133 INT How do you think that might have affected their experience of the ward?

134

135 PPT I think it was okay because, well it just took a little bit more in terms of the  
136 facilitators ensuring that the students had someone to work with, someone to mentor  
137 with them and someone to shadow. But I think it was just a little bit more in terms of  
138 making sure the students weren't left with nothing to do or nobody to work with them  
139 because keeping an eye on where it should have been two groups of students split to  
140 facilitate we ended up with all the students in one area which took a little bit more  
141 careful management really. And in terms of being a facilitator down on one of the days,  
142 I think perhaps we might have had somebody on stand-by that could have stepped into  
143 that role in terms of sickness which next time I would probably make sure I had  
144 somebody there available. One facilitator tried to manage two groups of students.  
145 Quite difficult, but I think it was because we had the buy-in from the ward staff we were  
146 able to rely on them to say, you know, could you just take the students while I just go to  
147 the opposite ward and vice-versa. So I think it was using staff that we'd had on-board  
148 previously that were experienced to then step into the role of the facilitator, which they  
149 were happy to do.

150

151 INT OK, so the staff on the wards helped you as well in terms of facilitating the...?

152

153 PPT And I think that's another thing, keeping in terms of preparation to make sure  
154 the staff whose ward you're coming to. Again I took a bit of time making sure that they  
155 knew when we were coming, why we were coming. I went to a couple of their ward

156 meetings to give them information about the project instead of just turning up and  
157 nobody knowing who we were and what we were trying to achieve with the whole  
158 group of new students. I think all that groundwork and preparation in terms of the key  
159 stakeholders is vital for students, staff involved, and also the managers of the areas  
160 and also the education department who is providing the facilitators.

161

162 INT Do you think that, when you approached the stakeholders, not the students but  
163 like the members of staff etc. that would be around, do you feel that they were on  
164 board with it, or was there any resistance? Or maybe- what was the experience of  
165 trying to get them involved in the training wards?

166

167 PPT Okay, so initially the ward managers of the two wards we used were on board.  
168 But I think again getting in early and having those discussions with them about why  
169 we're coming to their wards, and what we're trying to achieve. I was quite surprised  
170 really that it was a new concept and they hadn't done it before and they really were on-  
171 board with it.

172

173 INT What about that ward? Was it specific wards that were, that were more on-  
174 board?

175

176 PPT I think both the wards who were chosen were wards who have got past  
177 experience of having students from various backgrounds, professional backgrounds on  
178 there. So they're used to having medical students, they're used to having nursing  
179 students, and students from other backgrounds. So I think we particularly chose areas  
180 that already were geared up to having some form of education on the wards for us as  
181 it's a different concept I think- we carefully chose the wards we were going to use.  
182 Knowing that they'd had good experience with students in the past. I think because it  
183 was a new concept we'd never tried to do interprofessional education on a live ward I

184 think taking time just to explain what we were trying to achieve, and trying to also get  
185 various members of the team, from consultant level down to the level of the healthcare  
186 assistant really. So looking right across the board because obviously teamwork, teams  
187 are made up of lots of different professions at lots of different levels. I think it was trying  
188 to get the message across to most people and on lots of different levels that we're  
189 coming to your area, you might be asked to work with the students, students might be  
190 asked to shadow you and watch how you work as a team. And because they were  
191 used to having students on the ward I think that was in our favour that they were, it  
192 was...

193

194 INT So they were maybe open to flexibility and to accept a new...?

195

196 PPT Yep, I think the wards are very busy [pause] it's a busy [pause], busy acute area  
197 so I think the way the staff took the students on-board was commendable really.  
198 Because they do obviously still have their day to day job to do with patients as a  
199 priority, and you feel as though you're asking them to do something else as well by  
200 participating in this pilot but I think that the staff they did that really well and they took  
201 that on board and embraced the students really into part of their teams which was of  
202 great benefit for the students to see how a live team works, how the different members  
203 of the team interact with each other. I think the work of the facilitators really was to  
204 make sure the students have an all-round experience and not just working with one  
205 professional- so you might have paired for example a student physio [sic;  
206 physiotherapist] with a member of the medical team, but actually it was about the  
207 facilitators being aware that a team is more than one person, so moving around to work  
208 with different members of the multi-disciplinary team was quite key as well.  
209

210 INT Yeah, so, you said that there has been unforeseen circumstances that kind of  
211 affected how the day works, was there anything else that came up that maybe you  
212 weren't expecting? It could be a good thing or a bad thing?

213

214 PPT I think sometimes the timings of the activities the students were to be involved  
215 in. We had a rough guide to timings, what time they would meet, a rough estimation of  
216 what time they would attend team meetings and a rough time of when they would  
217 finish, but I think that perhaps the students were used to a little bit more structure in  
218 their working day so, after the first group some of the feedback was for a little bit more  
219 structure. Actually hour-by-hour what we expected them to do, when we expected them  
220 to move around. We were doing that off the cuff and just playing it by ear if you like, but  
221 I think the students actually would have preferred a bit more of a schedule like at nine-  
222 o'clock do this, at ten-o clock do this at eleven o'clock do that, so I think that's  
223 something again we could take away and build more into the process if we were to do  
224 it in the future.

225

226 INT Do you think that could fit in when you said the ward was quite busy and there's  
227 quite a lot on. Do you think that kind of structure and schedule could fit into-

228

229 PPT -I think there's always going to be unforeseen circumstances on the ward which  
230 could be a patient deteriorating or key members of the team being called away to deal  
231 with unforeseen circumstances. So I think that is the job of the facilitator really to be  
232 reactive to those situations and make sure the students are catered for if a member of  
233 the team has to be called away. I think you have to have an open mind really when it's  
234 a live... if you're doing this sort of exercise in a simulated area you have a lot more  
235 control whereas on a live ward you don't have that level of control. I think that's down  
236 to the experience of the different facilitators to keep the day running no matter what's  
237 thrown at them really.

238

239 INT Yeah, so what kind of features do you think, in terms of facilitating do you think  
240 were most helpful, like maybe experience, being adaptable to what was happening and  
241 in case of unforeseen circumstances. Is there anything in particular that you think  
242 facilitators need to...?

243

244 PPT I think it was quite vital that we used our clinical educators as facilitators  
245 because obviously they're from clinical backgrounds. They weren't particularly teaching  
246 anything clinical in their role as facilitators, but I think that because themselves had  
247 come from clinical areas and clinical backgrounds and they'd worked on those kinds of  
248 areas and those kinds of wards I think that was vital. At least they knew how a ward  
249 worked, how a team functioned and how it was in real life.

250

251 INT So having a good knowledge of the actual ward environment that you were  
252 going to be on...?

253

254 PPT Yeah, yeah, having a good knowledge of practice and various... Even  
255 knowledge of who is who on a ward actually, who the dieticians are, who the  
256 physiotherapists are, so having awareness of what the key staff groups are and the  
257 groups they would like the students to work with. I think it was vital that we had clinical  
258 facilitators as opposed to non-clinical facilitators who would probably have the skills in  
259 terms of facilitation, but may not have had that clinical know-how to make the  
260 opportunities happen on the day.

261

262 INT That's great. Is there anything specific to this trust or this hospital that you think  
263 was a factor in doing these kind of training wards?

264

265 PPT I think, perhaps the time of year that we chose to do the training ward pilots had  
266 implications. We did it in the winter months when we often have an escalation in  
267 activity in the trust in terms of the amount of patients and how sick the patients are. So,  
268 we chose to do it at a time of high activity in the Trust and that could potentially have a  
269 knock-on effect because the amount of pressure that the clinical staff are under was  
270 possibly maybe overburdening them with expecting them to take on an extra role as  
271 facilitator as part of the interprofessional training ward. But again, that also could be a  
272 positive thing because it is a live real ward and that's more real, that's exactly  
273 realistically what happens in the winter months we do become really busier, patients  
274 become sicker and the staff are under more pressure. So I think again, the facilitators  
275 being clinical and having the knowledge of that was a bonus really that they could see  
276 that, you know, when the wards were particularly busy. I think having that knowledge  
277 that things can happen that are unforeseen and then the training to carry on. But I think  
278 skills as a facilitator is really, you know, being able to overcome those obstacles and  
279 making sure the students are still getting well-catered for.

280

281 INT Do you think that, in terms of the ward being realistic, because you said that it  
282 could be a good thing that it happens in the winter months when it's busy, or a bad  
283 thing with lack of control, how important do you think it is for the session to be close to  
284 what it would actually be like to work as a professional versus having the control over  
285 the situations?

286

287 PPT I think it's really important that it is run in a live clinical area. I think one of the  
288 best assets to the training ward is the students being able to talk to the real patients  
289 because I think there was time factored into the sessions where they could actually sit  
290 and talk to the real patients who were experiencing hospital stay for whatever reason  
291 and I think the patients in all this are the most vital resource really because they can  
292 talk to you and tell you how it is and their experiences. And I think some of the students

293 spoke to the patients at length about how they were seen by various members of the  
294 team and how the communication was and how it felt to be a patient being looked after  
295 by so many members of a multi-professional team. So I think actually having that, the  
296 resource of a patient to speak to was really essential for the students.

297

298 INT Yeah, in getting the experience of working together...

299

300 PPT I think one of the other things as well was, students from various professions  
301 having a real lack of understanding of other professions and that became apparent,  
302 and again I think that's something that would only come out in a real clinical area  
303 watching somebody do the job they do, working alongside them and learning from  
304 them. For example, one of the physio students reported to me on the day that he'd  
305 worked alongside a ward pharmacist and up until that point he'd had real limited  
306 knowledge of the actual role of a pharmacist and how it related to his own role. I think  
307 in terms of working together in the future there would be that much better working  
308 relationship having that understanding of each others' role. And that seemed to be  
309 replicated throughout the day really, that lots of people said I didn't realise they did  
310 that, or they didn't realise I did that or I couldn't do that. Limitations of all of the  
311 professionals and understanding of each others' professional roles was really key and I  
312 think that's something that would definitely come to the forefront in a live clinical area.  
313 Watching someone undertake the tasks that they need to on a ward gave that clarity  
314 really around roles.

315

316 INT Yeah as opposed to a situation like a simulation where it's an example that is  
317 set up it might not necessarily have shown that...

318

319 PPT That might not have come out from a pre-planned scenario I think real life  
320 definitely was able to showcase the work people did. But it was also just pulling that

321 together so it wasn't just working alongside them and watching what they did, it was  
322 having that further thought of how does that link to what I do, how can we improve  
323 those links to ultimately improve the care we give the patients. I think it was taking the  
324 students through that, sort of full circle of thinking about themselves, about others, but  
325 ultimately how having that knowledge can benefit teamwork and collaboration. It was  
326 quite a strong message to get across really. It wasn't about just seeing what somebody  
327 else did. It was about linking that back to your own role and again I think that's a key  
328 quality of facilitators to be able to highlight that to the students.

329

330 INT Do you think experiencing that and making those connections through your  
331 experience is different than learning about it? Because I suppose you can be taught  
332 that learning about other roles is good for you and beneficial without necessarily  
333 experiencing it in a real life setting. What do you think was different about seeing it and  
334 seeing how-

335

336 PPT -Yeah, I think that what they did that was beneficial was they linked it to one  
337 particular patient. So they would review a patient together and each of the groups of  
338 professionals would give their own set of priorities for that patient. So it was not just  
339 learning to work seeing things from your own point of view it was also learning to see  
340 actually what are the priorities of the other professions and how we can all pull  
341 together. So I think it was like looking at a patient and their whole patient journey  
342 surrounded by the professionals that were involved and then and pulling all that  
343 together seemed, seemed to work really well.

344

345 INT In terms of the facilitators, I know we've talked about their experience having a  
346 huge part to play and the pre-work that's been done to-

347

348 PPT -I think when selecting the facilitators I definitely went for people with a clinical  
349 background and I also looked at communication skills because it was very- because  
350 the students only came for the day it was about building those relationships with the  
351 students really, really, quickly. So having that open personality, the good  
352 communication skills, and I think the only thing in hindsight I might have changed is to  
353 have facilitators from different professional groups, but our pool of clinical educators is  
354 fairly small and at the time we only had clinical educators from a nursing background.

355

356 INT So all the facilitators were nurses- well the primary ones?

357

358 PPT Yeah, they're from a nursing background and I think, you know, in a more ideal  
359 world it would be much more beneficial to have a facilitator from say a physio  
360 background or an OT [sic; occupational therapy] background or a medicines  
361 background because I think that would not only give the interprofessional message  
362 from the teaching side I think it would also, have that- the differing experience of the  
363 facilitators from different backgrounds would bring much more to the programme. We  
364 were very mindful not to look at things from a purely nursing perspective and I think the  
365 facilitators did a good job at that, but I think that could be further enhanced by having  
366 facilitators from a different background.

367

368 INT Do you think that- some of the facilitators responsible for setting up each  
369 opportunity. I know you said that it was on an ad-hoc basis finding people to shadow  
370 etc. Do you think there was any particular approach from the facilitators that was best  
371 to identify situations and to talk with the staff and...?

372

373 PPT Yeah, I think on the actual day I think the facilitators were very good at just  
374 picking an opportunity and being very aware of what was happening on the ward and  
375 being able to sort of zone into who was available; what tasks they were undertaking,

376 what would be suitable for the students. It was very quick thinking on the spot, you  
377 know, identifying very quickly an experience a student may benefit from and asking the  
378 person could the student join them and then making that happen and doing that quite  
379 quickly in a sort of multi-tasking for want of a better word so that while she's doing that  
380 the facilitator's also being aware of what's happening elsewhere on the ward and being  
381 mindful of opportunities that arose for the students on a continuous basis really. I think  
382 that's something that the facilitators did really, really, well. They worked quite quickly  
383 and they were aware of what was going on and able to find opportunities for the  
384 students and get them in there quickly, at the same time having the right approach, so  
385 that the staff were willing to take the students with them and facilitate them. So yes  
386 communication skills, how they asked, how they approached the staff, how they were  
387 quickly able to put students in situations that would be benefit and keeping an eye on  
388 the time as well was vital. We had a few key events going on during the days which  
389 was- for example we had some visits to other parts of the hospital and we had some  
390 multi-disciplinary meetings. So I think the facilitators did well in making sure things did  
391 run to time and that opportunities weren't missed. Being aware of where the students  
392 were and what they were doing and taking the initiative and going and moving them on  
393 if need be as well. So, good time-keeping skills I guess as well.

394

395 INT Each session happened over one day because it's on a pilot basis at the  
396 moment. What do you think- do you think that that was compatible with what you were  
397 trying to do?

398

399 PPT I think in terms of a pilot and one day I think it was a great experience for the  
400 students. I think that probably a longer placement with the same group of students  
401 might be more beneficial. I think in terms of them truly becoming embedded as part of  
402 the team, with the interprofessional approach I think maybe a week or even longer  
403 might have been more beneficial, just so that team members could get to know them,

404 and they could have it a little bit more in-depth. I think this was really just a snapshot of  
405 interprofessional on a ward on one day. I think if you want to really embed that it would  
406 have to be for a longer term.

407

408 INT Yeah. Did different students seem to engage more or less than others? What  
409 was it like interacting with the students?

410

411 PPT One of the problems that we had is that, the nursing students were actually on  
412 placement on that ward, whereas the other students were brought in for the placement  
413 and I think perhaps it was hard for those student nurses to differentiate between what  
414 they'd been doing day to day on their shift and what they needed to do differently on  
415 the training ward day. So, in hindsight we would probably take the student nurses from  
416 a different area, not the ward they were currently on placement on. Because getting  
417 them to identify, and the staff they were working with as well, to see that actually today  
418 they're not here in their capacity as student nurses working on the ward as a part of a  
419 normal team. They're here to experience an interprofessional training ward day. So I  
420 think that perhaps would be something we'd do differently next time- then we wouldn't  
421 have the nurses working on a ward knowing that there were student nurses doing a  
422 training session in that area and quickly jumping in and asking them to switch roles to  
423 help out.

424

425 INT When the students who were on the ward who were actually doing a placement  
426 on that ward were being told to...- was there confusion about carrying out their normal  
427 duties...?

428

429 PPT Yeah, even though we'd said today, you know they're going to work in-  
430 alongside the other students as an interprofessional exercise I think when, I think some  
431 of the staff maybe didn't realise that or wasn't quite sure what she was meant to do on

432 that day and still thought she was part of their shift, part of their team and were calling  
433 her to do duties she would normally do as part of the team. So I think in hindsight it's  
434 better to take a student to an area that they're not currently on placement so that it's  
435 seen as they're there for the interprofessional training ward experience not to be, to  
436 make the numbers of that team up. So it's something we learned from experience.

437

438 INT Do you think the different- Was there any difference between students in terms  
439 of professions or types of students in terms of how well they engaged or...?

440

441 PPT In terms of how they engaged it was quite, there was a vast difference to what  
442 stage in their training the students were at. The students that were in the final few  
443 months of their training, they'd been in lots of clinical areas, they'd also gained lots of  
444 experience throughout their training and they were a lot more confident and  
445 comfortable than the students that were on their very first placements. And I think  
446 perhaps some of the content was more relevant to new students. Especially those who  
447 were in their first and second times in an acute trust, or on ward because, the whole  
448 way a ward works, the whole amount of different professionals on a ward it was all very  
449 new to them, whereas the students who had been around for three and four years, they  
450 already had that basic knowledge of what a ward is, who works on a ward, types of  
451 professional groups. So pitching it really was quite difficult to aim it both at first year  
452 student occupational therapists and the final year medical student whose about to  
453 graduate. Students did work well together and I don't think there was any particular  
454 barrier to them working well together, but it was just about the basic knowledge that  
455 they had already. So I think it's maybe a recommendation for the future would be to  
456 aim it at brand new students on their first placement in order to help with establishing a  
457 baseline.

458

459 INT So you think it's important to get in earlier?

460

461 PPT Yeah, yeah. I think early on in the training it would be great as a first placement  
462 or a second placement. I think if you give a lot of support and reassurance and  
463 explanations, then I think perhaps you could do it further on in the training, but I think  
464 your aims and objectives might be slightly different than with your very junior students.  
465 So it's just looking at where the students are in their training, what they've already  
466 experienced.

467

468 INT So timing-

469

470 PPT -Stage of training is a factor in terms of groupings etc.

471

472 INT Do you think the groups all worked well together then, or...?

473

474 PPT I think some of the more senior students took on a more senior role in the  
475 training ward and shared their knowledge with their juniors- with the junior students.  
476 But that was quite nice that they did encourage- encourage them to work together. In  
477 terms of activities, some of the activities we had planned, shadowing for example,  
478 some of the more senior students who were about to graduate they'd already  
479 experienced similar types of shadowing in- on their own courses. They hadn't  
480 interprofessionally done it, they'd done it in silo in their own professional groups but  
481 some of it they felt they'd already covered. So yes, I think being aware of what stage in  
482 their training the students are at would definitely be something we need to be aware of.

483

484 INT How much do you feel that the students guided you in terms of what they felt  
485 they needed to take from the experience and what they felt they would like to do or  
486 need to do? Was it mainly you identifying things that you think would be beneficial for  
487 them, or helpful for them or was it also them...?

488

489 PPT I think that because it was a pilot, I think we were just able to try quite a few  
490 different initiatives. So hands on working with members of the team, attending multi-  
491 disciplinary meetings, and then work shadowing. I think we thought we'd just try  
492 various kinds of activities and see which ones evaluated the best. Which ones seem to  
493 be more beneficial really.

494

495 INT Was there communication with the students on the day in terms of what they  
496 wanted to do and...?

497

498 PPT Yeah I think, but I think mostly the students were quite open to trying anything  
499 really. And I think even if they'd had previous experience they were willing to, you  
500 know, to try anything. That worked quite well really as the students were willing to be  
501 guided by others.

502

503 INT Yeah, yeah. Do you think that this sort of style or way of learning, so on a ward,  
504 you know, do you think that suits all students? I know it's pre to qualification but I know  
505 that a lot of students, if they've done anything interprofessional it may have been in a  
506 more classroom-based setting. Do you think the style of flexible opportunities finding  
507 different professions- Do you think that would suit all students, or different students in  
508 different ways?

509

510 PPT I think some students found it harder than others. I think there were some  
511 students who were quite quiet and reserved and sort of took on the role of kind of what  
512 they've done in the past which is kind of just being totally observational whereas the  
513 object of this activity was to get involved and work together, not just to observe. So I  
514 think make sure that the facilitators ensured the students were clear on that and also  
515 stepped in when the students didn't seem to be sure or were a bit apprehensive. Some

516 of the students were involved in ward round so that was seeing the patients with the  
517 consultants, and the consultants were used to questioning medical students on their  
518 ward round and so, and I think it was ensuring that the students weren't put under any  
519 pressure to answer questions that they weren't prepared to answer and again I think  
520 that's the role of the facilitator to oversee it, to identify make sure they were getting  
521 appropriately questioned. So again, that's about your pre-communication you know  
522 that these students may be very junior, they may be from a different background to  
523 your own. Just make sure that, you know, you don't put them on the spot too much or  
524 question them too much. Make sure that it's appropriate for the level of training. A lot of  
525 things like that to take into consideration, clarifying to the members of staff involved  
526 what level of training the students are at to make sure they're appropriately taught in  
527 the ward areas.

528

529 INT How well do you think that the interprofessional style of training ward fit in with  
530 the more traditional styles or types of training ward? How well do you think this way of  
531 learning and this way of working fit within the traditional...?

532

533 PPT Well, I think the first thing is that most education aren't just looked after by one  
534 profession and that's very apparent on the wards that it's multi-disciplinary and it's very  
535 much team working. And I think how we educate and how we train our students and  
536 our staff has got to take that approach really for that to become the normal way of  
537 working. I think it's quite vital that everybody sees that they are just one part of the  
538 bigger picture and that most patients actually have the involvement of numerous  
539 professions and numerous disciplines. It's part of their care. So it's about putting the  
540 patient at the centre of that and for our- what we're trying to do is to make sure that all  
541 our staff work with the team and break down barriers that prevent the team working  
542 effectively. Especially communication skills and I think that's something that should

543 start as a student and should go right through to our qualified staff in order for us to  
544 give the best care for the Trust.

545

546 INT Yeah. Do you think this type of learning would work in different wards, or do you  
547 feel there would be a difference between different wards in terms of implementing this  
548 kind of session?

549

550 PPT I think some of the wards have definitely got a more multi-disciplinary input than  
551 other wards. And I think you'd probably choose areas that do have that. Then I think  
552 some of the patients that were on the wards that we chose didn't have as much need  
553 for input from the members of the team than others. So some of the patients might not  
554 have needed a physiotherapist or an occupational therapist so there wasn't as much  
555 opportunity for that kind of work to be as exposed as the nursing and medicine kind of  
556 work.

557

558 INT Was that one of the challenges- that patient needs were going to be unique and  
559 not necessarily set up to have to include each profession?

560

561 PPT Yeah and I think perhaps thinking of areas where there is more of a multi-  
562 disciplinary input. Perhaps in orthopaedics where the majority of the patients have  
563 physiotherapy and occupational therapy as well as their nursing needs attended to. So  
564 I think that might be a future consideration to try and trial the training ward on an  
565 orthopaedic ward where some... Because of the students numbers not all of the  
566 students got to experience hands-on physiotherapy because a lot of the patients on  
567 that particular ward on that day didn't have a physiotherapy need. So perhaps as a  
568 training ward you might want to make sure that the patients did have multi-disciplinary  
569 needs. But that's not always- you're not always able to count on that so I guess it's just  
570 which patients on the ward on that day. Somewhere like the stroke unit where the

571 patients needs are much more geared up to a team approach, multi-disciplinary  
572 approach might give a better overview really of the all the professions involved. I think  
573 patient selection is quite important then as well.

574

575 INT Okay, so do you think it's- that it is an important part of it? Making sure that  
576 there are lots of different opportunities for the different professions to...?

577

578 PPT Yeah, yeah and again the facilitators were reactive to that because they  
579 actually asked if the students could go to another ward on the afternoon to experience  
580 the professions and the work that they weren't able to provide on these two wards. I  
581 think again, it's just being reactive to the student's needs and if there weren't patients  
582 who required physiotherapy then obviously we could contact another ward and say can  
583 the students come and work alongside the physios on your ward. It's about using the  
584 resources you've got as well.

585

586 INT Yeah, within the constraints and you said it's within one day so also it may be to  
587 some extent like limited in terms of what you can do.

588

589 PPT Yeah I think for the second pilot we did put some resilience in place where we  
590 asked the team leaders for the physiotherapy groups to be on call for us if we didn't  
591 have any patients that underwent the criteria of needing physiotherapy so we could  
592 come to a different area. So I think from the first pilot to the second pilot that was  
593 something we put in place to make sure that the students did get that overall  
594 interprofessional experience.

595

596 INT Do you think that from one pilot to the next anything changed in terms of your  
597 experience- like maybe aspects of the day or the student's reactions, or...?

598

599 PPT Yeah I think we definitely gained experience from the first pilot and knew what  
600 to expect because it was new to the team, it was new to the facilitators, it was new to  
601 the wards and the thing we did do was stay on the same wards for the second pilot so  
602 then the ward knew who we were and they were aware that we were back again to  
603 complete the same exercise. So I think that worked quite well going back to the same  
604 area that was familiar with the process that we were trying to achieve and some of the  
605 same staff members who'd assisted in the first pilot were able to help again on the  
606 second pilot and that worked really well.

607

608 INT Was- did staff- was it that the students fit in with what the staff would usually do,  
609 or did the staff change what they did to fit the students, or were staff aware of what  
610 they needed to do?

611

612 PPT I think the staff were aware of the purpose of the exercise so they knew why the  
613 students were there and what they were trying to achieve. I think it was really helpful  
614 on the second part that staff knew they were here to experience interprofessional  
615 working and they helped the facilitators to facilitate that to the students.

616

617 INT Great. In terms of engaging the staff on the wards were there any problems or  
618 were there any things that happened that you didn't expect or... how did you find the  
619 process of engaging them?

620

621 PPT So, in terms of engaging them a lot of the pre-work was quite important, so the  
622 communication is something that I mentioned about going to the team meetings and  
623 meeting with the managers. A couple of the wards did that quite well and even  
624 displayed posters in their area to say we were coming and this is what we were going  
625 to be doing. So the pre-work was done, but on the day the staff, because it was busy  
626 their workload was quite heavy and I think perhaps it was a minority but a couple of the

627 staff members had reported to the facilitators that they were too busy or could we come  
628 back in half an hour or could, they were too busy to take on. Sometimes there was ad-  
629 hoc staff on the ward and specialist nurses who we hadn't done any pre-work with but  
630 they were working as part of the team on the ward visiting patients. And some of those  
631 specialist nurses were really keen to be put on the spot and say can some of the  
632 students work with you. Others were saying that on that particular day they were too  
633 busy which is...

634

635 INT Why do you think they were keen despite having no sort of pre-work? Is it  
636 because of the fact that they're a training ward?

637

638 PPT Yeah, I think some of the professions, some of the specialist nurses and some  
639 of the pharmacists said for them it was actually a good opportunity to showcase their  
640 profession and their work to the members of the team from other backgrounds so I  
641 think they quite enjoyed being able to say how they actually contribute to patient care  
642 and the work they did. And I think that a lot of the staff involved enjoyed being able to  
643 share that with the students. But on occasion some of the staff did seem to report that  
644 they were too busy to take on extra work during their working day. And that is  
645 understandable. But I think that the more we do this kind of work, this kind of live  
646 training, the more it'll become the norm and I think staff will take it on as part of their  
647 normal working duties. But I think when it's new, when they didn't really understand it  
648 the ones we hadn't done the pre-work with, they just happened to be on the ward on  
649 that day they were like, 'I dunno what it is, I'm too busy to be involved.' So that was one  
650 of the issues that came up really.

651

652 INT Was that- it was two wards that the training wards took place across, they were  
653 both gastroenterology. Were there any differences between the two wards? Is it  
654 different sets of staff on each ward and different...?

655

656 PPT Yeah, it's different sets of staff on the wards. Now the first pilot the second ward  
657 was closed due to unforeseen circumstances so when it was time for the second pilot  
658 the first ward had already ran one pilot and was experienced and knew we were  
659 coming and had already experienced what it was like first hand, and the second ward it  
660 was the first time and I think you could see a big difference between first and second  
661 times. So I think it was a bit more difficult for the second ward because on the first  
662 occasion they hadn't taken part. Again, it was just the openness of the manager. The  
663 manager was on-board, that tended to cascade through the staff and that positive  
664 approach to it came from the leader really...

665

666 INT So you think attitude as well played a part in how receptive the wards were?

667

668 PPT Yeah, and again, I think it was possibly they were receptive to it because they  
669 are used to having students in those areas. To them, that's part of their daily working  
670 tasks with students. So I think it's just coming at it in a slightly different angle with the  
671 interprofessional approach and as long as they were guided to know exactly why the  
672 students are here and what we're trying to achieve I think it, the staff were quite on-  
673 board with those.

674

675 INT Yeah. In terms of the process and like structure of the day are there any sort of  
676 final comments or anything relating to different things you did. I know it started off with-  
677 was it shadowing it started off with?

678

679 PPT It started off with preparation for the ward round. So initially the students met us  
680 at nine o'clock in the morning and they were allocated a bay of patients and this was in  
681 conjunction with the ward manager who was in charge of that shift. The patients were  
682 chosen again hopefully those with the most multi-disciplinary input and then in groups-

683 professional groups of one student for each of the different professions. They would  
684 review the patient's case notes, talk to the patients, obtain any results that were  
685 required so that when the consultant came to review the patient on the ward round the  
686 students would then give a brief hand-over of the current situation for that patient.

687

688 INT Okay- so the first stage of the day was preparing for the ward round?

689

690 PPT Preparing for the ward rounds in multidisciplinary teams and that worked really  
691 well with the primary medical student taking a lead on that. Lots of group discussion  
692 that the facilitator could stand back and observe and that session worked really well.  
693 Mid-morning there's usually a pause on the ward where the multi-disciplinary team will  
694 huddle (we call it), get together in the office and do a brief update of the whole ward  
695 patient by patient, room by room with all the members of the multi-disciplinary team  
696 present. And so students were able to experience that, which they found very  
697 beneficial and then following that they would be brought back onto the ward area and  
698 they would be paired up with members somebody from a team of completely different  
699 professions to their own and they would work alongside them for the remainder of the  
700 morning. With facilitators moving them around to give them varied experience. And  
701 again, that seemed to work really well. After lunch the students went back onto the  
702 ward and completed some shadowing. And also involved in shadowing was visits to  
703 different parts of the hospital and one of those was a visit to the pathology department  
704 and the aim of that was to link really how the sample that was obtained from the  
705 student how many different professions are involved from that. How a different  
706 department completely different from your- that of your own is vital to the care of the  
707 patient and how it all pulls together to give the bigger picture. And those visits seemed  
708 to be really, really, well received by the students and was possibly something that  
709 wouldn't be involved in their own course and it was probably something they would  
710 never get to experience as a qualified member of staff either. So that's something

711 that's quite beneficial to them I think. The end of the day the students were brought  
712 away from the clinical areas and taken to the education centre to have a debrief and  
713 reflection in a classroom with the facilitators that had been involved. An overview again  
714 on interprofessional education, interprofessional working, the reasons why it's  
715 important, the benefits it can bring, was discussed and some of the key points during  
716 the day. What the students had achieved. What they liked, what they didn't like, did  
717 they find it beneficial. So an evaluation really but also some time to reflect for the  
718 students. Some of the students offered to write up reflective pieces to add to their  
719 portfolios about their experience which, again was quite beneficial to the students.  
720 They have to do that to reflect on what they've seen, what they've learned, and what  
721 they've learned today that they didn't obviously have knowledge of at the beginning of  
722 the day. And a little bit of thinking about their own roles and how an understanding of  
723 another's' role. And ultimately linking everything back to the patient and how we can  
724 improve patient care by taking this approach to education.

725

726 INT Do you think that made the difference between interprofessional working and  
727 say multi-disciplinary working which is just working together in general? What do you  
728 think are the key points that changed it basically from working together as would be  
729 normal but with different professions versus working together with different professions  
730 but to learn more about each other- basically, what made it interprofessional?

731

732 PPT I think the key thing was almost seeing something from another's perspective.  
733 So instead of working alongside some of your own professional group, working  
734 alongside a different professional group and seeing what their priorities are for a  
735 patient. Because there's a lot of silo working that goes on with people just seeing what  
736 their priorities are for that patient and not really seeing it from the other person's  
737 perspective and that was something we wanted to bring to the forefront really. Yes  
738 you're a nurse and your priorities for the patient are a, b, and c, but actually the physio

739 has also got to see the patient and the pharmacist and what are their priorities and how  
740 can we bring those priorities together really for the benefit of the patient.

741

742 INT Yeah, yeah. You mentioned you gave them information on interprofessional  
743 education previous- prior- before and after. So do you think their awareness of the fact  
744 that this wasn't a normal/typical placement and it was to specifically to promote  
745 interprofessional...?

746

747 PPT Yeah, I think that was the theme that we tried to keep going throughout the day  
748 in that you're not just here to work on a ward, you're here to experience working  
749 interprofessionally and learning interprofessionally. And I think even just bringing the  
750 students together with each other from different courses- because students off of  
751 different education courses, different universities have their own specific courses for  
752 their own profession and they don't often get brought together. Even the students-  
753 have even said you know, that they found it beneficial learning about the different  
754 courses they were on pre-reg [sic; pre-registration]. Just having those discussions over  
755 lunch of what type of things they'd been doing during their training. So I think that was  
756 great, to bring the students together. Because again often with students within their  
757 own professional groups are all having the same experience on the ward they are just  
758 together within their own groups. So to see the students interacting with each other and  
759 communicating with each other, I think that was sort of embedding the interprofessional  
760 way of working. I think it's really key to do that at this early stage in their careers.

761

762 INT Great. Thanks for coming out today.

**TS1**

**PARTICIPANT INFO**

**Participant code TS1**

**Male**

**26**

**Pilot training ward student**

**Medicine 5th Year**

**INTERVIEW TRANSCRIPT**

1 INT How many of the training wards did you take part in- how many days were you  
2 a part of it?

3

4 PPT It was 2 days I think I was involved- it was also like the junior doctors strike and  
5 it was a sort of difficult one to split our time because we were really the only ones on  
6 the ward, it was busy anyway.

7

8 INT So how did that affect your normal day in terms of the doctors strike what did  
9 that mean for you?

10

11 PPT It just meant that we ended up- we had to do a lot of the jobs that the junior  
12 doctors would have done so it was a bit busy for us students really while they were  
13 away. Like- the following strikes- it wasn't quite the same because we tried to arrange  
14 that we didn't have to do that like the first strike where we were picking up the  
15 workload.

16

17 INT So in terms of on the actual day and with it being so busy did you manage to  
18 take part in much stuff or were you mainly focussed on your own..?

19

20 PPT I tried- I think we had a couple of students [pilot training ward students] with us  
21 for both ward rounds and I tried to sort of speak to them a bit but about what we were  
22 doing and the kind of jobs we get throughout the day and as I say because we were so  
23 busy throughout the day we neglected that a bit which is a shame but we had to get  
24 through stuff so...

25

26 INT Considering you were in it as a peer to those students was it- in your opinion  
27 like were you facilitating it or was it more of a 'back-and-forth' dynamic?

28

29 PPT Yeah it was more like- more because we were a little more senior in a sense  
30 that they were like... obviously we were like peers but we try to integrate a lot more now  
31 [5th year] rather than in our 3rd year so it's kind of in our final year so we led more- it's  
32 just we were a couple of years older...

33

34 INT Were you based on that ward in general or was the case like you weren't  
35 typically on that ward so you were taken to that ward for the training?

36

37 PPT So no like we spent like a couple of weeks on each ward so we kind of rotate  
38 around the wards but we are for that period of- we are focussed just on that ward  
39 yeah...

40

41 INT So you had to do your daily or like your regular duties because it was your own  
42 ward along with trying to sort of take part in this?

43

44 PPT Yeah that's right yeah.

45

46 INT So being like-. You've mentioned the timing of the training is one of the key  
47 things in terms of how much you could get involved. When do you reckon would be the  
48 best sort of time for someone in medicine to get this sort of experience?

49

50 PPT I think a couple of us who had a bit of discussion and a chat we think like in the  
51 3rd year would be a good time to do it just because we're not at a- you're not at that  
52 point. Some of the students would be doing it and you're still trying to figure out what  
53 everyone does. Whereas by the 5th year you can have a fair understanding of what  
54 everyone does- yeah actually it would be really useful to have a more formal way of  
55 doing that and I think if it did come in the 3rd year it would have been very useful to as  
56 sort of a learning exercise it would be great to get involved in it at that stage really.

57

58 INT How much do you get to interact with other roles and like other professions  
59 before you qualify and you sort of...

60

61 PPT We do a little bit of it not probably as much as we should really considering how  
62 important everyone is. Some of it is a case that we look at and figure it out later on, but  
63 we do have like teaching sessions and we have joint sort of sessions on the ward and  
64 things like that earlier on. You're taught about what everyone does and about the idea  
65 of a multi-disciplinary team for about 8 weeks of your training in your 3rd year but it's  
66 just not actually getting a chance to formally apply it as such, at least I didn't anyway. It  
67 kind of depends on which hospital you work at, I was based in [hospital in northern  
68 England], so didn't get much chance to do it to be honest.

69

70 INT Have you noticed a big difference between different hospitals or wards in terms  
71 of how much they've focussed on interprofessional working?

72

73 PPT I think it seems to be really important everywhere it was just a case of how  
74 much. Our undergraduate teaching I think it's quite clear and if you go to any hospital  
75 really it's clear. It is made important about like how important everyone is but just-  
76 there's not getting a chance to formally acquire interprofessional training earlier on.

77

78 INT So is that kind of the difference between being taught in a sort of classroom or  
79 lecture basis about interprofessional education and working and seeing it in the actual  
80 ward?

81

82 PPT Yeah I think- so we get a lot of classroom stuff where it all kind of blends in  
83 really whereas when you see it actually applied it's much more useful.

84

85 INT So does that style of learning suit you in particular in terms of practical hand on  
86 learning versus...?

87

88 PPT I think the comfort blanket of a classroom is quite nice so maybe I'm a bit more  
89 that way inclined but the things that have stuck with me more tend to be the things that  
90 I've seen when it's been on a ward or when you're meeting a person or something like  
91 that. I do think actually I probably learn- even if the comfort of the classroom is  
92 sometimes quite nice- I probably learn more on the wards yeah.

93

94 INT Is the comfort of the classroom more like in terms of... there's not as much  
95 pressure like...?

96

97 PPT Yeah there is always that- it's kind of like you sit and think about things... and  
98 there is that element of it of course but you tend to- when you're out in the wards you  
99 tend to learn a lot more stuff.

100

101 INT So on the day I know there was a trip to the pathology lab- I'm not sure you  
102 managed to get across to it because you had to...

103

104 PPT No I didn't unfortunately as I say we were stuck because of the strike.

105

106 INT Yeah, you were pretty much trapped on the day but would a visit like that be the  
107 kind of thing you see as beneficial to you or not at this stage of your course you  
108 know...?

109

110 PPT Again probably in the 3rd year- we do actually do some of that in the 3rd year.  
111 I think that's when it was kind of useful learning- good stuff to do definitely.

112

113 INT On the day then was it a case of you were going around doing your work and  
114 then others would sort of shadow or go along with you? Or did you do other kinds of  
115 activities? How did the day itself work for you?

116

117 PPT Yeah that tended to be the case it was mainly on the ward round, they would  
118 shadow and then in the afternoon there were things going on and I was kind of left... on  
119 the ward.

120

121 INT Because you were having to go and do your work plus pick up the extra...

122

123 PPT Yeah that's it.

124

125 INT Have you had any previous experience of interprofessional education that's  
126 been on the ward or has it mainly been the classroom?

127

128 PPT We have done some shadowing of physiotherapists and occupational therapists  
129 and we've done some classroom based- well quite a lot of classroom based stuff with  
130 pharmacists and that's all kind of trying to simulate and apply the situation where you  
131 need to work with pharmacists... and also all that simulation type stuff yeah that's the  
132 main stuff I've had really kind of shadowing and things like that.

133

134 INT Has there been any opportunities to like, like do a back and forth in terms of you  
135 both learning, I suppose sort of the difference between shadowing and  
136 interprofessional education?

137

138 PPT I don't know if there has been to be honest I don't know if I've ever had it where  
139 it's been like that it's more a case of shadowing really in my experience.

140

141 INT In the case of the training wards say you'd been sort of a 3rd year- I know in  
142 this case there's been a difficulty because as you said you were at a more advanced  
143 stage and also you were having to do your normal duties on the day- what kind of  
144 things do you think would affect how well these kind of things work in terms of you  
145 being a medical student in with students from another profession and learning about  
146 each other in an even-footed way- if that's a term which I don't think it is [laughter]?

147

148 PPT [Laughter] Yeah I guess from our perspective it's more having the time to do it  
149 really, having that kind of dedicated time to spend time with like other students. It's just  
150 us trying to get to see what they're doing because going through the final years we're  
151 constantly being examined and things like that- I know it's more of the same of what  
152 I've said really but at least in the 3rd year you had more time. I think it's just making it  
153 clear that on the ward you are there... you're not there to sort of just get jobs done as  
154 we end up doing the jobs and...

155

156 INT ...getting pulled away

157

158 PPT ...we were actually there for a specific reason

159

160 INT ...specific reason as opposed to being on the wards to work

161

162 PPT That's right yeah.

163

164 INT Do you think being in a different ward rather than the ward you were already

165 placed on would have affected that or would you have been pulled in to work

166 regardless based on your position?

167

168 PPT We'd be pulled in regardless to be honest.

169

170 INT Is that common for...?

171

172 PPT Yeah we'd need being called in and then for people to not allow us to be pulled

173 away from the training to do other stuff.

174

175 INT In terms of the length of time how do you see that fitting in with the 3rd year?

176 Do you think a day session is appropriate or do you think it should be set up in a

177 different way to fit in with...?

178

179 PPT I would say the problem with a day is that it's quite difficult to get to the same

180 people together to get to know people and things like that- I think if you're going to do it

181 a couple of days would be a better thing to get to know people and spend time together

182 as opposed to kind of swopping around a lot so I think personally from my perspective

183 that's what I would say but...

184

185 INT So again to build relationships like with the consistent people in a sort of team?

186

187 PPT Yeah and get a proper idea of what they do... and spend time with each other

188 as well...

189

190 INT Okay so do you think if no one knows one another it can be a barrier or is it just

191 a case of you guys getting stuck in anyway or?

192

193 PPT It's less of a barrier when- see- when you're quite young it's going to take a lot

194 for people to become comfortable. My feeling would be that when you're a bit younger

195 it would take longer to integrate and kind of get to know each other yeah.

196

197 INT Was there anything- how do you usually find communication between medicine

198 and other professions?

199

200 PPT Good question!

201

202 INT I'm talking more about more of a peer level than a post qualification-

203

204 PPT -I think we're quite isolated in a sense. That's probably partly our own doing

205 where we are that- we are partly that way but...

206

207 INT In what way...?

208

209 PPT I think it's just a case of- I don't really know how to describe it- I guess because

210 it's just a long course and during a couple of years all the people... Really I think

211 everyone on an individual level in training like this are pretty nice and friendly and stuff,

212 and if given the time it would probably sort itself out but it can take a while for some of  
213 the medics to break out of that isolation a little bit so maybe more time to get to know  
214 people on the training or... Well anyway that all kind of- that isolation stops as soon  
215 you've stopped being a medical student and you're being a doctor- everyone- that kind  
216 of insular attitude breaks down a bit once you start practice but it does still exist a fair  
217 bit I would say.

218

219 INT Is that in terms of- because you have to focus on patient care you end up sort of  
220 working together more when you've qualified fully?

221

222 PPT I think so... I think you're not an island by yourself- there's so many other people  
223 more important. You're very certain of the bigger picture really where yeah- that sort of  
224 thing breaks down at least a bit as soon as you're qualified and practicing.

225

226 INT So you say practicing- as in because you're actually on the ward rather than  
227 thinking or learning about being on a ward or?

228

229 PPT Yeah- I think so- it's the practicality. The things like- say you were doing exams,  
230 I know people have to do them but like you really realise the importance of  
231 communicating with people and developing those kind of team relationships and things  
232 when you're actually doing it and seeing it.

233

234 INT Yeah. I know at the moment you're qualified already- exams permitting

235

236 PPT Yeah well, I won't speak too soon!

237

238 INT but you know, touch wood...

239

240 PPT Yeah fingers crossed!

241

242 INT Yeah [laughter] I'm sure you worked hard so no need to cross fingers. But do  
243 you think earlier on it would have been useful to have an insight into the ward like this  
244 sort of training or do you get that anyway as part of your course: a sense of what it's  
245 like to work with other professionals and work together?

246

247 PPT We get a bit, I think anything which encourages that kind of thing would be  
248 useful. Now I get more of a chance to facilitate different things myself and afterwards  
249 sometimes I've done something and thought actually that was really useful. The thing  
250 about 3rd year is that it's kind of important to like get people's support in order to do  
251 those sorts of things...

252

253 INT To get them engaged with it or...?

254

255 PPT Yeah, like- exactly yeah.

256

257 INT Okay, so do you think that could happen with more information up front on what  
258 is it that's trying to be done or just more exposure to interprofessional education and  
259 working interprofessionally?

260

261 PPT Maybe a bit more exposure, a bit more like... I think it wouldn't necessarily be a  
262 bad thing to get introduced or to like meet the people that you're going to be working  
263 with before you actually go onto the wards so like a pre-arranged meeting of some  
264 description where you can sort of meet the other people you'd be working with and  
265 then at least you sort of know each other straight off the bat and all that kind of thing.  
266 That might quite useful.

267

268 INT Okay that's great. Just in general, is there anything you think went well or  
269 anything you think could have been improved, I know you've gone over quite a few  
270 things so don't worry if you can't think of anything else...?

271

272 PPT I would say try to avoid strike dates but aside from that... I don't think I have  
273 anything that I haven't mentioned already.

274

275 INT Okay, well thank you very much.

## **APPENDIX H: EXAMPLE ANALYSIS CODE BOOKS.**

H.1: Example analysis codebooks.

**TF2**

**CODEBOOK**

# CODE SYSTEM

## 1. IPW Process

### 1.1 Nature of IPW process

#### Outcomes

Perspective taking

Collaboration and holistic view

Preparing for practice

#### Wider contextual factors

##### Organisational factors

Institutional segregation of training/education

Integrating doctors in IPW process

##### Direct setting/context

Length of IPW initiative

Timing of IPE

Patient-centred practice culture

#### Practice context

##### National context

Historical development of current collaborative practice

External pressure and busyness of the ward

Silo Training

##### Unpredictability of live settings

Availability of different professionals

Resources

Planning and coordination

##### IPW: conceptual distinction

Classroom-based IPE vs. live-setting IPW

Simulation vs. practice

Multi-disciplinary working vs. IPW

The nature of the IPE/IPW activities

Debrief/reflection

Planned IPE/IPW

## 1.2 IPW as a social process

### Role of facilitator

#### Individual characteristics of facilitators

##### Experience of facilitators

Facilitator practitioner experience

Being helpful

Interpersonal skill as a facilitator

Support for facilitators

### Social dynamics

Social as well as professional integration

Collaborative learning

Communication and relationships

Individual characteristics of participants

Group characteristics

### Engagement

#### Perceived value of IPW

Buy-in to IPW/E

Buy-in of key stakeholders

#### Promoting IPE

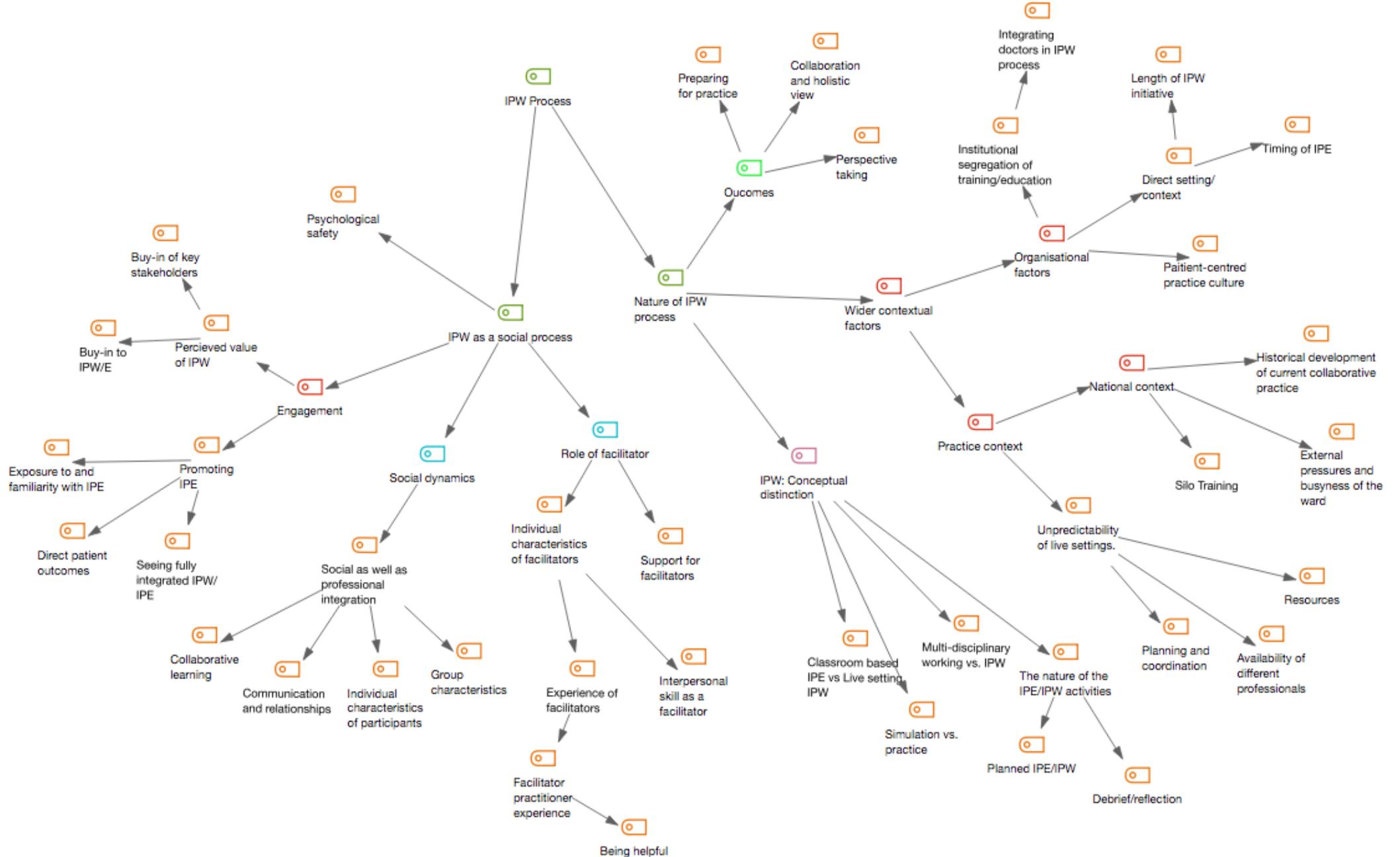
Seeing fully integrated IPW/IPE

Direct patient outcomes

Exposure to and familiarity with IPE

Psychological safety

# THEMATIC MAP



# CODES

## 1. IPW Process

Unpicking the IPW process itself; factors that seemed to have an influence on or form an inherent part of IPW in this case.

### 1.1 Nature of IPW process

Factors that seemed to form an inherent part of the IPW process itself.

#### Outcomes

Potential outcomes of the IPW process, whether intended or emergent.

#### Perspective taking

The potential impact of IPE/IPW on helping participants develop an awareness of other professional's roles and how they fit into the bigger picture.

#### Collaboration and holistic view

The impact of active collaboration on the consideration of a holistic view of patient needs. The impact of students engaging with the training ward and the IPW process and sharing/collaborating with other students enabling a holistic understanding of the patient needs. Holistic understanding/care as an outcome of IPW?

#### Preparing for practice

An integral element of the job on the ground is working with other professionals is required, so IPE/IPW assists students in being ready for that.

#### Wider contextual factors

Wider contextual factors that seemed to interact with the IPW process.

#### Organisational factors

Contextual factors related to the specific organisational setting the IPW is taking place in.

#### Institutional segregation of training/education

The structure within the Trust seems to treat medical students differently/considers them somewhat

separately to other undergraduates.

#### Integrating doctors in IPW process

The difficulty in enabling student doctors to engage with the IPE activities when they have pressing expectations related to the stage of their training (Year 5).

#### Direct setting/context

The direct/literal context e.g. the fact that these pilot training wards took place on a ward that was used to training new students.

#### Length of IPW initiative

The impact/effect of the length of time students were exposed to the IPE initiative. Would more exposure have led to a greater impact in terms of depth and longevity of learning?

#### Timing of IPE

The impact of timing the IPE initiative in terms of the professional development of different groups e.g. postgraduate nurses (preceptorship) with foundation stage student doctors.

#### Patient-centred practice culture

Highlighting a key part of the social and organisational culture of acute healthcare workers- keeping the primary focus on the patient (patient outcomes and experience).

#### Practice context

Factors influencing IPW that related to the fact that the IPL occurs within a practice context.

#### National context

The influence of external contextual pressures that are relatively out of the control of the hospital itself. Considering IPE agendas and drivers at a regional and national level. The constraints placed on individual Trusts by national funding and directives.

#### Historical development of current collaborative practice

Interesting to see how the organisation of healthcare professional training has changed relatively drastically over a short amount of time.

#### External pressure and busyness of the ward

The challenge of introducing an initiative in the midst of an under-resourced/capacity challenged situation.

### Silo Training

In the current structure of training the diverse professionals is largely separated.

### Unpredictability of live settings

Having to manage the impact of unforeseen changes which happen on live wards/real-world settings.

### Availability of different professionals

The challenges in getting the full range of professions available during the course of the participant's engagement with training ward.

### Resources

The availability (or not) of resources to introduce/implement and then perpetuate IPW.

### Planning and coordination

Coordination and planning of IPW activities.

### IPW: conceptual distinction

Data supporting or illustrating insight into the conceptual distinction of IPW as IPL that takes place within a live practice setting.

### Classroom based IPE vs. live-setting IPW

The difference between the current initiative located within a live ward and other forms of IPE based in a classroom setting.

### Simulation vs. practice

Consideration of degrees of similarity to 'real-world' practice- with classroom being furthest from, simulation being closer and IPW being closest.

### Multi-disciplinary working vs. IPW

The difference between working as a member of a multi-disciplinary group versus authentic IPE via IPW.

### The nature of the IPE/IPW activities

The importance of the activities during the placement on the ward carrying interprofessional or IPW content.

### Debrief/reflection

The role of debrief/reflection in IPW. Enhanced both the learning and the potential commitment to IPE?

## Planned IPE/IPW

Making IPE/IPW a specific focus of the training rather than hoping it will emerge from proximity factors.

## 1.2 IPW as a social process

Considering IPW as a social process

### Role of facilitator

How the IPW process was influenced by the presence of facilitators. Exploration of the facilitator role in the pilot training ward.

### Individual characteristics of facilitators

The degree to which the 'flow' of the IPW process was dependent on individual difference/characteristics of facilitators

### Experience of facilitators

How the IPW process was influenced by the previous experience and training of the facilitators.

### Facilitator practitioner experience

The influence of having clinical experience on the IPW process (practically e.g. knowing where things are and how a ward works etc. and socially e.g. having experience of practicing within an acute healthcare setting).

### Being helpful

The potential impact of the facilitators being practically helpful when on the ward in terms of the disposition of ward staff towards running the IPW initiative.

### Interpersonal skill as a facilitator

IPW is inherently a social process and a factor that facilitates this process is the individual interpersonal skill of the facilitators.

### Support for facilitators

What impact did the fact that there was more than one facilitator have on the implementation of the IPW initiative?

## Social dynamics

The social dynamics of the interactions between groups and individuals throughout the IPW process

### Social as well as professional integration

The possible impact of training in the same institutions and mixing socially on IPE and IPW. Informal learning and building interpersonal relationships.

### Collaborative learning

The dynamics of learning alongside, with and from other students/trainees can have an impact on the IPW process.

### Communication and relationships

The impact of direct face-to-face communication and interaction with ward staff and the effect of the quality of relationships built up. Stakeholder buy-in.

### Individual characteristics of participants

The degree to which the 'flow' of the IPE/IPW initiative was dependent on the character of the individual participants.

### Group characteristics

The impact of group characteristics (e.g. group size) on interactions of individual participants.

## Engagement

Engagement of stakeholders with the concept of IPE and more specifically, IPW. Includes the perceived value of IPW intervention. Stakeholders in this case include participating students, facilitators and wider ward staff.

### Perceived value of IPW

Perceived value of IPW by different groups or individuals as a factor influencing the IPW process

### Buy-in to IPW/E

Getting all of the professional groups engaging with and committing to IPW.

### Buy-in of key stakeholders

Importance of getting key players (consultants) to buy-in to IPE/IPW.

## Promoting IPE

The impact of promoting IPE across the Trust and with students at universities.

## Seeing fully integrated IPW/IPE

The benefit in terms of awareness and increase in commitment of the facilitators seeing a fully developed IPE structure.

## Direct patient outcomes

IPW allows for students to consider the direct impact on patient outcomes and impact on needs. Does this direct and tangible factor impact on the quality/impact of IPE delivered via IPW in live settings?

## Exposure to and familiarity with IPE

The degree to which barriers will reduce the more familiar and practiced staff are with IPE/IPW.

## Psychological safety

Psychological safety as a factor influencing IPW

## SUPPORTING QUOTES

Code	Coded segments
IPW Process\Nature of IPW process\Outcomes\Perspective taking	<p>so when they work in this kind of environment like the training ward they're seeing other people's perspective whereas they might do that a lot less in their own individual placements.</p> <p>TF2: 414 - 416 (0)</p> <p>Yeah and they can understand some of the barriers that each multi-professional is facing and trying to work to break those barriers down. Not thinking that, 'well I've done my part I'll move on that's not my problem'.</p> <p>TF2: 420 - 423 (0)</p>
IPW Process\Nature of IPW process\Outcomes\Collaboration and holistic view	<p>What happened that was really quite good is that the junior doctors [medicine pilot training ward students] who were working on the ward rounds, they really brought in a holistic point of view of the patient through doing the ward round and explaining to the others like the OTs and physios about that patient's full package of care and then asking them to chip in like what did they think. So that worked out really well.</p> <p>TF2: 175 - 180 (0)</p> <p>what I think really worked as well was after</p>

the mid-ward round getting the students going into the huddle so they could see how every multi-professional had input into that patients episode of care. Even like how the discharge plan- so how people communicate from the ward clerk to the discharge liaison, physios, OTs, the doctors the consultant led so that collaborative communication

TF2: 186 - 191 (0)

But not only just think on their feet in the- in terms of their own silo but in terms of look we need to solve this together, it's the bigger picture for the patient.

TF2: 235 - 237 (0)

I think what we do in education is we do training in our own professional remit and we don't see the wider picture. Like for example 'alright okay the patient's fit to go home', but what are the implications like not just medically are they socially fit are they psychologically prepared? Can they cope at home? Has an OT assessment been

done?

TF2: 240 - 245 (0)

although they do see patients, they're only exposed to patients within their professional remit they're not necessarily trained to see the bigger picture like 'are they medically fit', 'what happens here', 'are the medications ordered', 'is there someone at home to look after them?' A physio might think well 'oh yeah they can go home they've got a walking frame' but an OT would say 'well yeah they can go home but they can't make a cup of tea' so yes they're medically fit but can they wash and dress themselves do they need the carers in so...

TF2: 249 - 256 (0)

think because we had different year groups of multi-professionals it was nice to see the juniors learning off the more seniors.

TF2: 312 - 313 (0)

the students were working together and were looking at the patient notes they were talking to the patients they were looking at the observation charts, they were gathering information to get a holistic view of what was that patient's position where were they going next and talking around that. It was almost like, 'right well here's the patient's notes, where are they on our pathway, how many days are they after admission, are we looking to

get  
them home, if we're not getting them home what interventions and what  
are  
the professionals that we need to bring in to get them on the pathway to  
where they need to be?'. So it was more like collaborating and problem  
solving as opposed to, I think it was much more useful than, just watching  
hands on direct patient care but really getting into it and discussing it  
too because it was needing to learn...

TF2: 370 - 382 (0)

I do think that you come out of your training you're  
qualified you should be more qualified to work as part of a  
multi-professional team and looking at the patient holistically instead of  
just from a nursing point of view or an OT point of view.

TF2: 402 - 405 (0)

Yeah and they can understand some of the barriers that each  
multi-professional is facing and trying to work to break those barriers  
down. Not thinking that, 'well I've done my part I'll move on that's not my  
problem'.

TF2: 420 - 423 (0)

it should absolutely  
suit all students because they have to work collaboratively- they are part  
of a collaborative team with different professions. You know it's just  
absolutely an inherent part of the job

TF2: 398 - 401 (0)

IPW Process\Nature of IPW  
process\Outcomes\Preparin  
g for practice

I do think that you come out of your training you're  
qualified you should be more qualified to work as part of a  
multi-professional team and looking at the patient holistically instead of  
just from a nursing point of view or an OT point of view.

TF2: 402 - 405 (0)

it's closer to the reality of what they're  
going to be doing when they qualify.

TF2: 408 - 409 (0)

IPW Process\Nature of IPW  
process\Wider contextual  
factors\Organisational  
factors\Institutional  
segregation of  
training/education

I also think that the undergraduate  
professionals here [the hospital itself] don't seem to be part of the  
undergraduate department. It tends to be the doctors and they're very  
much  
considered as the undergraduates and they're looked after whereas the  
educational side of it comes from the university.

TF2: 74 - 78 (0)

So it might be something to look at for the future for under the undergraduate wing and that they be more integrated in with the student

doctors

TF2: 81 - 83 (0)

if everybody-

you know without having to sort of like merge the universities it can still work from an undergraduate perspective

TF2: 106 - 108 (0)

I would only say that a barrier may have been the fact that the doctors [medicine pilot training ward students] had to do the ward rounds so we kind of had to work around them so they couldn't actually often really join the student nurses and student physios to get to see their angle on things.

TF2: 265 - 269 (0)

the doctors were really good but I still didn't feel that they were- they were there as part of the Year 5 placement and very much part of the doctor team and it was hard to integrate them as much

TF2: 67 - 69 (0)

it's

a bit difficult with the split universities.

TF2: 70 - 71 (0)

IPW Process\Nature of IPW process\Wider contextual factors\Organisational factors\Institutional segregation of training/education\Integrating doctors in IPW process

It tends to be the doctors and they're very much considered as the undergraduates and they're looked after whereas the educational side of it comes from the university

TF2: 76 - 78 (0)

everybody's got to be like aiming for the same objectives and they need to be more aligned at the moment. I do think it's getting better, because I do think doctors are starting to appreciate interprofessional education but they've still got their own agenda and I just think those need breaking down a little bit

TF2: 101 - 105 (0)

I can see with the post-graduate students from the preceptorship posts tend to link with the foundation doctors a lot more readily. So I can see that working because the way the

new rotational posts would work could fit in with the doctors.

TF2: 108 - 111 (0)

What happened that was really quite good is that the junior doctors [medicine pilot training ward students] who were working on the ward rounds, they really brought in a holistic point of view of the patient through doing the ward round and explaining to the others like the OTs and physios about that patient's full package of care and then asking them to chip in like what did they think. So that worked out really well.

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TF2: 265 - 269 (0)

Yeah if you've got student doctors maybe from Year 3 where they weren't having to fulfil that because they do have objectives to meet in Year 5 and that's very much doing the ward rounds with the doctors so it may work better for a different year group.

TF2: 273 - 276 (0)

Yeah and also I suppose it's sometimes difficult to plan them being on placements at the same time...

TF2: 278 - 279 (0)

You really need their buy in, the consultants- they're the ones that are responsible for each ward, they are the ones that have a lot of power and influence, and if they don't want to do something they won't do it.

TF2: 299 - 302 (0)

Yeah and for them to understand the benefits of this as well I suppose. With the medical profession they've got a lot of historical kind of blinkers to a different pattern. I'm not saying that negatively, but it's a traditional set up.

TF2: 304 - 307 (0)

But as I said earlier the doctors would tend to focus on actually working and completing the ward round so didn't get as much exposure to what the other roles were doing.

TF2: 388 - 390 (0)

<p>IPW Process\Nature of IPW process\Wider contextual factors\Organisational factors\Direct setting/context</p>	<p>I think Ward [X]. I think they were a lot more used to us being about having done different training there before. TF2: 427 - 428 (0)</p>
<p>IPW Process\Nature of IPW process\Wider contextual factors\Organisational factors\Direct setting/context\Length of IPW initiative</p>	<p>It might be interesting in future pilots to get people to work together for a longer time maybe a week. Like I know that in Sweden it goes on for a whole placement so here even to have them work together the next day and the next day and those relationships and getting that open dialogue going, problem solving, so having the opportunities to do different thing because everyday is different isn't it? TF2: 487 - 493 (0)</p>
<p>IPW Process\Nature of IPW process\Wider contextual factors\Organisational factors\Direct setting/context\Timing of IPE</p>	<p>the doctors were really good but I still didn't feel that they were- they were there as part of the Year 5 placement and very much part of the doctor team and it was hard to integrate them as much TF2: 67 - 69 (0)</p> <p>I can see with the post-graduate students from the preceptorship posts tend to link with the foundation doctors a lot more readily. So I can see that working because the way the new rotational posts would work could fit in with the doctors. TF2: 108 - 111 (0)</p>
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qualified but also getting support from people like you or maybe just a year ahead of you. It's a vital resource.

TF2: 321 - 325 (0)

as soon as they got to know what they were doing and they got talking and they didn't feel awkward or intimidated by one another particularly I suppose when you're looking at- if you're a Year 2 OT to be working alongside a Year 5 doctor but what's nice is that nobody's intimidated because you're here to learn.

TF2: 331 - 335 (0)

But as I said earlier the doctors would tend to focus on actually working and completing the ward round so didn't get as much exposure to what the other roles were doing.

TF2: 388 - 390 (0)

IPW Process\Nature of IPW process\Wider contextual factors\Organisational factors\Patient-centred practice culture

I think people work well together for the good of the patient to see why they're doing it so I think that's the actual experience like that they can see the patient at the end and how everyone fits into the jigsaw

TF2: 28 - 31 (0)

But not only just think on their feet in the- in terms of their own silo but in terms of look we need to solve this together, it's the bigger picture for the patient.

TF2: 235 - 237 (0)

IPW Process\Nature of IPW process\Wider contextual factors\Practice context\National context

There's always, and I don't think it's this particular hospital but with the NHS in general, if they want to make something successful they need to put some financial investment in place

TF2: 291 - 293 (0)

Yeah absolutely like going straight to the ward managers- I think that's more where [Project Lead]'s role came into play leading up to all of this and sort of speaking to the senior level people and sort of getting the buy-in communicating what we're doing and why what we're doing is important and talking about things nationally and talking about things internationally like you know what's going on.

TF2: 470 - 475 (0)

IPW Process\Nature of IPW process\Wider contextual factors\Practice context\National

because we actually belonged to the hospital staff they could focus a little bit about how we worked with student doctors in the ward environment. But on the other hand it would have been a little bit more difficult to do it [IPE] in the classroom environment because the education

context\Historical  
development of current  
collaborative practice

centres were separate whereas it's easier now.

TF2: 94 - 98 (0)

everybody's got to be like aiming for the same objectives and they need to be more aligned at the moment. I do think it's getting better, because I do think doctors are starting to appreciate interprofessional education but they've still got their own agenda and I just think those need breaking down a little bit

TF2: 101 - 105 (0)

IPW Process\Nature of IPW  
process\Wider contextual  
factors\Practice  
context\National  
context\External pressure  
and busyness of the ward

well I mean I don't know why I didn't expect that because we're at permanent level of not having enough beds. I suppose that's what it is on a real life ward.

TF2: 206 - 208 (0)

Whereas I think it's- the way the universities are set up here you have your HPs, nurses, in one university and your doctors coming from a different university so to integrate it is quite difficult

TF2: 63 - 65 (0)

the doctors were really good but I still didn't feel that they were- they were there as part of the Year 5 placement and very much part of the doctor team and it was hard to integrate them as much

TF2: 67 - 69 (0)

IPW Process\Nature of IPW  
process\Wider contextual  
factors\Practice  
context\National  
context\Silo Training

it's  
a bit difficult with the split universities.

TF2: 70 - 71 (0)

I also think that the undergraduate professionals here [the hospital itself] don't seem to be part of the undergraduate department. It tends to be the doctors and they're very much considered as the undergraduates and they're looked after whereas the educational side of it comes from the university.

TF2: 74 - 78 (0)

So it might be something to look at for the future for under the undergraduate wing and that they be more integrated in with the student

doctors

TF2: 81 - 83 (0)

if everybody-  
you know without having to sort of like merge the universities it can still  
work from an undergraduate perspective

TF2: 106 - 108 (0)

Yeah and also I suppose it's sometimes difficult to plan them being  
on placements at the same time...

TF2: 278 - 279 (0)

Yeah and for them to understand the benefits of this as well I  
suppose. With the medical profession they've got a lot of historical kind  
of blinkers to a different pattern. I'm not saying that negatively, but  
it's a traditional set up.

TF2: 304 - 307 (0)

Yeah and when they go into traditional placements, for example well  
the physio will go into a physio placement role and be doing physio  
responsibilities

TF2: 412 - 414 (0)

well one of the wards got shut [during the pilot training wards]  
because it had- because of an outbreak.

TF2: 126 - 127 (0)

I think

what really, really helped as well was that myself and [other colleagues]  
we weren't just loitering in the corridors we were actually helping with  
the patient care. They had the benefit because we back-filled a little bit.

TF2: 133 - 136 (0)

IPW Process\Nature of IPW  
process\Wider contextual  
factors\Practice  
context\Unpredictability of  
live settings.

So the pharmacists- the dieticians are a  
little bit more difficult because they're not as constant within the normal  
environment so they were a little bit more difficult to catch.

TF2: 182 - 184 (0)

So as best we could timetable  
for them to go with a certain multi-professional at a certain time but  
obviously it is difficult to pitch and haul.

TF2: 197 - 199 (0)

well I mean I don't know why I didn't expect that  
because we're at permanent level of not having enough beds. I suppose  
that's what it is on a real life ward.

TF2: 206 - 208 (0)

You can't have hard structure you can't timetable it perfectly like you would perform a lesson. Like what you've got to do is sort of like, if somebody appears like the dietician, or something unusual happens you need to embrace that moment and use it for learning.

TF2: 208 - 212 (0)

Yeah. You've got to have a certain amount of structure but you've got to be flexible and go with the flow because it's actually a real live training environment.

TF2: 214 - 216 (0)

But you can't really structure when they come in, they just pop in and out.

TF2: 220 - 221 (0)

Then I think you've got to have a little bit more sort of this is real life this is what happens exposing them to the fact that everything's not scheduled and structured and that's it.

TF2: 228 - 230 (0)

Yeah and you've got to bring in things like emotional intelligence, like situational awareness and also problem solving together

TF2: 232 - 233 (0)

But not only just think on their feet in the- in terms of their own silo but in terms of look we need to solve this together, it's the bigger picture for the patient.

TF2: 235 - 237 (0)

I would only say that a barrier may have been the fact that the doctors [medicine pilot training ward students] had to do the ward rounds so we kind of had to work around them so they couldn't actually often really join the student nurses and student physios to get to see their angle on things.

TF2: 265 - 269 (0)

IPW Process\Nature of IPW process\Wider contextual factors\Practice context\Unpredictability of

So the pharmacists- the dieticians are a little bit more difficult because they're not as constant within the normal environment so they were a little bit more difficult to catch.

TF2: 182 - 184 (0)

live settings.\Availability of different professionals

So as best we could timetable for them to go with a certain multi-professional at a certain time but obviously it is difficult to pitch and haul.

TF2: 197 - 199 (0)

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Yeah if you've got student doctors maybe from Year 3 where they weren't having to fulfil that because they do have objectives to meet in Year 5 and that's very much doing the ward rounds with the doctors so it may work better for a different year group.

TF2: 273 - 276 (0)

The other thing is sometimes there won't be any students available for training wards so you've got to really plan in advance to when the placements are coming in

TF2: 281 - 283 (0)

But as I said earlier the doctors would tend to focus on actually working and completing the ward round so didn't get as much exposure to what the other roles were doing.

TF2: 388 - 390 (0)

IPW Process\Nature of IPW process\Wider contextual factors\Practice context\Unpredictability of live settings.\Resources

But then on the other hand I think when you're piloting something you can't just wait for a full year to put something into place- so it worked as best it could.

TF2: 283 - 285 (0)

There's always, and I don't think it's this particular hospital but with the NHS in general, if they want to make something successful they need to put some financial investment in place

TF2: 291 - 293 (0)

IPW Process\Nature of IPW process\Wider contextual

So got them on board and explained our role absolutely, and so when approached on the day to day and asked if can we have a student

<p>factors\Practice context\Unpredictability of live settings.\Planning and coordination</p>	<p>shadowing</p> <p>they were really helpful. So that really helped, building the relationship before. Just communicating what we were doing and why we were doing it. TF2: 119 - 122 (0)</p> <p>The other thing is sometimes there won't be any students available for training wards so you've got to really plan in advance to when the placements are coming in TF2: 281 - 283 (0)</p>
<p>IPW Process\Nature of IPW process\IPW: conceptual distinction\Classroom based IPE vs Live setting IPW</p>	<p>Have you had previous experience of interprofessional education or?</p> <p><b>PPT</b> Yeah but not actually on physical wards. It was really more classroom based TF2: 16 - 18 (0)</p> <p>I think because people aren't exposed to it as much as they should be within the classroom environment it then seems a little bit abstract from the ward area TF2: 26 - 28 (0)</p> <p>You can't have hard structure you can't timetable it perfectly like you would perform a lesson. Like what you've got to do is sort of like, if somebody appears like the dietician, or something unusual happens you need to embrace that moment and use it for learning. TF2: 208 - 212 (0)</p> <p>Then I think you've got to have a little bit more sort of this is real life this is what happens exposing them to the fact that everything's not scheduled and structured and that's it. TF2: 228 - 230 (0)</p> <p>Yeah and you've got to bring in things like emotional intelligence, like situational awareness and also problem solving together TF2: 232 - 233 (0)</p> <p>But not only just think on their feet in the- in terms of their own silo but in terms of look we need to solve this together, it's the bigger picture for the patient. TF2: 235 - 237 (0)</p> <p>but what are</p>

the implications like not just medically are they socially fit are they psychologically prepared? Can they cope at home? Has an OT assessment been done? I know you would probably simulate that but in a real training ward you can see the real patient at the end of it and it's more realistic.

TF2: 242 - 246 (0)

Do you think that affects the student's experience to what they take from the fact that there's a real patient at the end of it?

**PPT** I think so and although they do see patients, they're only exposed to patients within their professional remit they're not necessarily trained to see the bigger picture like 'are they medically fit', 'what happens here', 'are the medications ordered', 'is there someone at home to look after them?'

TF2: 247 - 253 (0)

Absolutely so learning about each other definitely and I think what's come out of it was learning from your peers and getting the support so you're not just having support from the trained professionals who have qualified but also getting support from people like you or maybe just a year ahead of you. It's a vital resource.

TF2: 321 - 325 (0)

IPW Process\Nature of IPW process\IPW: conceptual distinction\Simulation vs. practice

they can see the patient at the end and how everyone fits into the jigsaw and it might be a little bit less apparent within a setting but in a simulation session, again, you can see how people are working together

TF2: 30 - 33 (0)

I know you would probably simulate that but in a real training ward you can see the real patient at the end of it and it's more realistic.

TF2: 245 - 246 (0)

IPW Process\Nature of IPW process\IPW: conceptual distinction\Multi-disciplinary working vs. IPW

yeah I suppose you worked within teams and they did advocate multi-disciplinary work but not from a training point of view.

TF2: 22 - 23 (0)

I think if I hadn't had a background in education working with different... multi-professionals in that remit I would have probably been a little bit more nurse focussed like than more multi-disciplinary focussed.

TF2: 37 - 39 (0)

IPW Process\Nature of IPW process\IPW: conceptual

the way it was set up, the structure it was very much based on the ward rounds so it was understanding- the

distinction\The nature of the IPE/IPW activities

students were working together and were looking at the patient notes they were talking to the patients they were looking at the observation charts, they were gathering information to get a holistic view of what was that patient's position where were they going next and talking around that

TF2: 369 - 374 (0)

t

was almost like, 'right well here's the patient's notes, where are they on our pathway, how many days are they after admission, are we looking to get them home, if we're not getting them home what interventions and what are

the professionals that we need to bring in to get them on the pathway to where they need to be?'. So it was more like collaborating and problem solving as opposed to, I think it was much more useful than, just watching hands on direct patient care but really getting into it and discussing it too because it was needing to learn...

TF2: 374 - 382 (0)

what the student would do when we found opportunities would be to sort of split off and shadow one of the multi-professional disciplines for a bit. So the OT wouldn't go with an OT but go with the pharmacist or go with the nurse

TF2: 385 - 388 (0)

he reason why this was different is because they were brought together with a purpose of working together, training together and problem solving together. Where these wards accept students on a routine basis, they accept physio students to do physio, nursing students to do nursing, there's not as much of the collaboration going on it's more like silo working. So the big difference with the training ward is that this group of students have been brought together for a purpose of working together as opposed to accidentally working together.

TF2: 438 - 445 (0)

it's also about the debrief and talking about the things that maybe one student noticed that others might not have so that collaboration of experiences and how students from each profession felt from their own individual perspective.

TF2: 478 - 481 (0)

I just think the debrief is really important, I think to do it in isolation without a debrief wouldn't be as

beneficial because it's the discussions afterwards as well. 'What did you notice', 'what went well', 'what didn't go well', 'how does this fit with my role'- just that open discussion between professionals.

TF2: 481 - 485 (0)

the feedback in the afternoon worked really well as well to consolidate what they'd learnt and to talk about the day.

TF2: 201 - 203 (0)

something from the reflection and feedback in the afternoon the way that they fed back and they were encouraged to say did you see something through a different coloured lens was there anything that surprised you about a particular episode of care and they did feed back in from a different professional perspective so...

TF2: 258 - 262 (0)

IPW Process\Nature of IPW process\IPW: conceptual distinction\The nature of the IPE/IPW activities\Debrief/reflection

I think with any training it's not just about the physical element of like the here and now it's also about the debrief and talking about the things that maybe one student noticed that others might not have so that collaboration of experiences and how students from each profession felt from their own individual perspective.

TF2: 477 - 481 (0)

I just think the debrief is really important, I think to do it in isolation without a debrief wouldn't be as beneficial because it's the discussions afterwards as well. 'What did you notice', 'what went well', 'what didn't go well', 'how does this fit with my role'- just that open discussion between professionals. That discussion between professionals at that point as well to have that debrief it was an easy flow because you'd worked with them all in the morning.

TF2: 481 - 487 (0)

IPW Process\Nature of IPW process\IPW: conceptual distinction\The nature of the IPE/IPW activities\Planned IPE/IPW

So the big difference with the training ward is that this group of students have been brought together for a purpose of working together as opposed to accidentally working together.

TF2: 443 - 445 (0)

IPW Process\IPW as a social process\Role of facilitator\Individual characteristics of facilitators

You can't have hard structure you can't timetable it perfectly like you would perform a lesson. Like what you've got to do is sort of like, if somebody appears like the dietician, or something unusual happens you need to embrace that moment and use it for

learning.

TF2: 208 - 212 (0)

You've got to have a certain amount of structure but you've got to be flexible and go with the flow because it's actually a real live training environment

TF2: 214 - 216 (0)

just anything like [e.g.] if

a social worker appeared, grab the social worker and get them to talk about their role in patient care as well so the students can like relate the wider picture to their own role. But you can't really structure when they come in, they just pop in and out.

TF2: 217 - 221 (0)

you've got to bring in things like emotional intelligence, like situational awareness and also problem solving together so those kind of things because problems arise that maybe they weren't expecting and they've got to think on their feet

TF2: 232 - 235 (0)

I think that training was really relevant. I'm just trying to think back because it was a little while ago now but I think it was nice it gave us a background about being partners and really... yeah I really want to do this and I think we really need to drive it forward with the Trust and it gave you a good idea what was expected from you as well.

TF2: 11 - 15 (0)

Have you had previous experience of interprofessional education or?

IPW Process\IPW as a social process\Role of facilitator\Individual characteristics of facilitators\Experience of facilitators

**PPT** Yeah but not actually on physical wards. It was really more classroom based

TF2: 16 - 18 (0)

I think if I hadn't had a background in education working with different... multi-professionals in that remit I would have probably been a little bit more nurse focussed like than more multi-disciplinary focussed.

TF2: 37 - 39 (0)

Yeah definitely and I think me having done interprofessional education in the classroom setting quite a bit before meant that I could look at different sort of role perspectives

TF2: 41 - 43 (0)

Also having the experience of going to Sweden and also having the [IPE organisation] training session and the other bits that I've been involved with in the classroom that helped me to sort of like step outside the box of my nursing role so...

TF2: 43 - 46 (0)

the ones in Sweden were completely set up as training wards, they were fully established. Although they had real live patients in them they were training wards for that purpose [IPW]

TF2: 52 - 54 (0)

and you can see how it works. It worked so well because the university campus is on site [of the hospital itself] and it's multi-disciplinary, you've got your doctors, your physios your OTs [occupational therapists], your health-care side, your nurses, the whole caboodle really.

TF2: 59 - 63 (0)

I think what really, really helped as well was that myself and [other colleagues] we weren't just loitering in the corridors we were actually helping with the patient care. They had the benefit because we back-filled a little bit.

TF2: 133 - 136 (0)

yeah they saw us as you know rather than a hindrance, another pair of hands you know answering buzzers, taking patients to the toilets and feeding patients so they kind of- they got a little bit of a benefit out of it as well rather than say feeling harassed by us saying like 'could you talk to this student' you know, 'can you explain this'.

TF2: 139 - 143 (0)

I think if you're a facilitator you've got to have a- like have a happy disposition. You've got to be able to engage with staff and communicate. You've got to be helpful, you've got to not be intrusive or people's backs up.

TF2: 148 - 151 (0)

So you think your knowledge of practice on wards and and stuff helped you like-

**PPT** -yeah I think so, particularly with the nursing background because quite a bit involved doing nursing activities

TF2: 156 - 159 (0)

Like if a facilitator was an OT or physio or something..?

**PPT** Whether they would feel as confident. I mean maybe they would take on a different remit of helping out in the background?

TF2: 161 - 163 (0)

It was nice actually going in instead of just being a facilitator on your own you have a little bit more confidence of having another one there as well

TF2: 166 - 168 (0)

It was good communication and the fact they knew from experience from what they'd seen before that we were not going to be too much of a hindrance. We're quite happy jolly people and nice to be around.

TF2: 432 - 434 (0)

I think

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TF2: 133 - 136 (0)

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TF2: 139 - 143 (0)

IPW Process\IPW as a social process\Role of facilitator\Individual characteristics of facilitators\Experience of facilitators\Facilitator practitioner experience

I think having the background in nursing and being competent to go and do things like answer buzzers and take patients to the toilet but also recognising my limitation because I've been out of nursing practice for a while and am mainly there to facilitate the students so then I would go and seek another member of staff to do certain things

TF2: 151 - 155 (0)

**NT** So you think your knowledge of practice on wards and and stuff helped you like-

**PPT** -yeah I think so, particularly with the nursing background because quite a bit involved doing nursing activities

TF2: 156 - 159 (0)

It was good communication and the fact they knew from experience from what they'd seen before that we were not going to be too much of a hindrance. We're quite happy jolly people and nice to be around

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TF2: 148 - 151 (0)

IPW Process\IPW as a social process\Role of facilitator\Individual characteristics of facilitators\Experience of facilitators\Facilitator practitioner experience\Being helpful

So you think your knowledge of practice on wards and and stuff helped you like-

**PPT** -yeah I think so, particularly with the nursing background because quite a bit involved doing nursing activities

TF2: 156 - 159 (0)

Like if a facilitator was an OT or physio or something..?

**PPT** Whether they would feel as confident. I mean maybe they would take on a different remit of helping out in the background?

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TF2: 432 - 434 (0)

IPW Process\IPW as a social process\Role of facilitator\Individual characteristics of facilitators\Interpersonal skill as a facilitator

I think if you're a facilitator you've got to have a- like have a happy disposition. You've got to be able to engage with staff and communicate. You've got to be helpful, you've got to not be intrusive or people's backs up.

TF2: 148 - 151 (0)

It was good communication and the fact they knew from experience from what they'd seen before that we were not going to be too much of a

hindrance. We're quite happy jolly people and nice to be around

TF2: 432 - 434 (0)

And

also not understanding the benefits of it and I think that's why most things fail it's because people don't understand the benefits or understand why it's happening.

TF2: 454 - 457 (0)

IPW Process\IPW as a social process\Role of facilitator\Support for facilitators

It was nice actually going in instead of just being a facilitator on your own you have a little bit more confidence of having another one there as well because you could just say to them, 'can I run this by you' or 'am I doing this right' or 'I'm not overstepping the mark am I' and things like that

TF2: 166 - 170 (0)

looking at the Swedish model they're all in classrooms together they're knocking around the university together, then they're in the hospitals together so they almost like socialise together as well so it's more of a natural sort of thing.

TF2: 83 - 86 (0)

IPW Process\IPW as a social process\Social dynamics\Social as well as professional integration

what I think really worked as well was after the mid-ward round getting the students going into the huddle so they could see how every multi-professional had input into that patients episode of care. Even like how the discharge plan- so how people communicate from the ward clerk to the discharge liaison, physios, OTs, the doctors the consultant led so that collaborative communication

TF2: 186 - 191 (0)

IPW Process\IPW as a social process\Social dynamics\Social as well as professional integration\Collaborative learning

-Absolutely so learning about each other definitely and I think what's come out of it was learning from your peers and getting the support so you're not just having support from the trained professionals who have qualified but also getting support from people like you or maybe just a year ahead of you. It's a vital resource.

TF2: 321 - 325 (0)

as soon as they got to know what they were doing and they got talking and they didn't feel awkward or intimidated by one another particularly I suppose when you're looking at- if you're a Year 2 OT to be working alongside a Year 5 doctor but what's nice is that nobody's intimidated because you're here to learn.

TF2: 331 - 335 (0)

For example an OT, this particular OT was really sharing her knowledge back with the doctors. It was good to see that even though the doctors were more used to certain parts of working on the ward that she still had a lot to share.

TF2: 335 - 338 (0)

the way it was set up, the structure it was very much based on the ward rounds so it was understanding- the students were working together and were looking at the patient notes they were talking to the patients they were looking at the observation charts, they were gathering information to get a holistic view of what was that patient's position where were they going next and talking around that

TF2: 369 - 374 (0)

t was almost like, 'right well here's the patient's notes, where are they on our pathway, how many days are they after admission, are we looking to get them home, if we're not getting them home what interventions and what are the professionals that we need to bring in to get them on the pathway to where they need to be?'. So it was more like collaborating and problem solving as opposed to, I think it was much more useful than, just watching hands on direct patient care but really getting into it and discussing it too because it was needing to learn...

TF2: 374 - 382 (0)

Yeah and they can understand some of the barriers that each multi-professional is facing and trying to work to break those barriers down. Not thinking that, 'well I've done my part I'll move on that's not my problem'.

TF2: 420 - 423 (0)

IPW Process\IPW as a social process\Social dynamics\Social as well as professional integration\Communication and relationships

I think what really, really helped was going up and talking to the staff prior to the day so one: they knew who we were and we built up a rapport with them

TF2: 115 - 117 (0)

So got them on board and explained our role absolutely, and so when approached on the day to day and asked if can we have a student shadowing they were really helpful. So that really helped, building the relationship

before. Just communicating what we were doing and why we were doing it.

TF2: 119 - 122 (0)

Ward [X] got shut so we ended up  
with all of the students having to be put on ward [Y] and with the staff  
all being busy or whatever I thought there would be more disengagement  
because they were busy but they were really helpful.

TF2: 127 - 130 (0)

they were really on board with it and I just think it's  
because they understood the reasons for doing it and it was nice.

TF2: 132 - 133 (0)

I think if you're a facilitator you've got to have a- like have a  
happy disposition. You've got to be able to engage with staff and  
communicate. You've got to be helpful, you've got to not be intrusive or  
people's backs up.

TF2: 148 - 151 (0)

It could still be fine doing it with one if you  
had enough rapport with ward staff already.

TF2: 170 - 171 (0)

what helped the flow was us speaking to those  
multi-professionals before

TF2: 185 - 186 (0)

It was good communication and the fact they knew from experience  
from what they'd seen before that we were not going to be too much of a  
hindrance. We're quite happy jolly people and nice to be around

TF2: 432 - 434 (0)

**INT** Yeah. So I think we've talked about how it was to engage the staff to  
help-

**PPT** -I think that's very, very important with anything you want to  
introduce that's new.

TF2: 446 - 449 (0)

I think they'd have been more suspicious like maybe they'd feel they  
were being watched maybe like you know 'what are these people doing on  
my  
ward' and you know 'they're hindering', 'they're getting in the way'. And  
also not understanding the benefits of it and I think that's why most

things fail it's because people don't understand the benefits or understand why it's happening.  
TF2: 452 - 457 (0)

IPW Process\IPW as a social process\Social dynamics\Social as well as professional integration\Individual characteristics of participants

I think it would depend on the personalities involved.  
The junior doctors really didn't have a sort of superiority about them that made people feel intimidated.  
TF2: 351 - 353 (0)

IPW Process\IPW as a social process\Social dynamics\Social as well as professional integration\Group characteristics

I think because we had different year groups of multi-professionals it was nice to see the juniors learning off the more seniors. So having the Year 2 OTs there, their knowledge was far superior and they were sharing the knowledge with the Year 1. And it was the same with the Year 5 doctors,  
the juniors and particularly the therapy assistants were learning lots from them so they were also learning about themselves from learning through one another.  
TF2: 312 - 318 (0)

I think it was like, small groups where you could really interact like there was one junior doctor working with an OT and a nurse so they weren't...  
TF2: 346 - 348 (0)

I think it would depend on the personalities involved.  
The junior doctors really didn't have a sort of superiority about them that made people feel intimidated.  
TF2: 351 - 353 (0)

IPW Process\IPW as a social process\Engagement\Perceived value of IPW

Absolutely so learning about each other definitely and I think what's come out of it was learning from your peers and getting the support so you're not just having support from the trained professionals who have qualified but also getting support from people like you or maybe just a year ahead of you. It's a vital resource.  
TF2: 321 - 325 (0)

I think the more exposure and the more understanding that the professionals do have with interprofessional education they realise they can benefit from one another and know that it's important  
TF2: 353 - 356 (0)

And

also not understanding the benefits of it and I think that's why most things fail it's because people don't understand the benefits or understand why it's happening.

TF2: 454 - 457 (0)

And I think also as well- what's probably crucial as well is the leadership within that environment. Because if the management or the leaders aren't on board then the rest of it is not going to infiltrate down to the rest of the staff.

TF2: 459 - 462 (0)

Yeah absolutely like going straight to the ward managers- I think that's more where [Project Lead]'s role came into play leading up to all of this and sort of speaking to the senior level people and sort of getting the buy-in communicating what we're doing and why what we're doing is important and talking about things nationally and talking about things internationally like you know what's going on.

TF2: 470 - 475 (0)

everybody's got to be like aiming for the same objectives and they need to be more aligned at the moment. I do think it's getting better, because I do think doctors are starting to appreciate interprofessional education but they've still got their own agenda and I just think those need breaking down a little bit

TF2: 101 - 105 (0)

they were really on board with it and I just think it's because they understood the reasons for doing it and it was nice.

TF2: 132 - 133 (0)

IPW Process\IPW as a social process\Engagement\Perceived value of IPW\Buy-in to IPW/E

what helped the flow was us speaking to those multi-professionals before

TF2: 185 - 186 (0)

You really need their buy in, the consultants- they're the ones that are responsible for each ward, they are the ones that have a lot of power and influence, and if they don't want to do something they won't do it.

TF2: 299 - 302 (0)

Yeah and for them to understand the benefits of this as well I suppose. With the medical profession they've got a lot of historical kind

of blinkers to a different pattern. I'm not saying that negatively, but it's a traditional set up.

TF2: 304 - 307 (0)

the reason why this was different is because they were brought together with a purpose of working together, training together and problem

solving together. Where these wards accept students on a routine basis, they accept physio students to do physio, nursing students to do nursing, there's not as much of the collaboration going on it's more like silo working. So the big difference with the training ward is that this group of students have been brought together for a purpose of working together as opposed to accidentally working together.

TF2: 438 - 445 (0)

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TF2: 470 - 475 (0)

So got them on board and explained our role absolutely, and so when approached on the day to day and asked if can we have a student shadowing they were really helpful. So that really helped, building the relationship before. Just communicating what we were doing and why we were doing it.

TF2: 119 - 122 (0)

IPW Process\IPW as a social process\Engagement\Perceived value of IPW\Buy-in of key stakeholders

and you've got to get the senior level buying in which I think this project has

TF2: 294 - 295 (0)

Sometimes you get more senior clinical buy in from Consultants as well, I don't think there's really any opposition but those people really have to be on board to make it work

TF2: 295 - 297 (0)

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leaders aren't on board then the rest of it is not going to infiltrate down  
to the rest of the staff.

TF2: 459 - 462 (0)

Yeah. At senior level to them because if you think you've got the  
ward matron and you need to get them and the next couple of levels up  
like  
get them to know about the pilot so they're like 'yeah we're really going  
to do this. We're lucky to be the pilot site. Lets embrace it lets make  
this work'.

TF2: 464 - 468 (0)

Yeah absolutely like going straight to the ward managers- I think

that's more where [Project Lead]'s role came into play leading up to all of this and sort of speaking to the senior level people and sort of getting the buy-in communicating what we're doing and why what we're doing is important and talking about things nationally and talking about things internationally like you know what's going on.

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TF2: 119 - 122 (0)

I think the more exposure and the more understanding that the professionals do have with interprofessional education they realise they can benefit from one another and know that it's important

TF2: 353 - 356 (0)

yeah that's why we promote it, I know as well that the universities have days when they promote and do interprofessional education

TF2: 360 - 361 (0)

IPW Process\IPW as a social process\Engagement\Promoting IPE

**INT** Yeah. So I think we've talked about how it was to engage the staff to help-

**PPT** -I think that's very, very important with anything you want to introduce that's new.

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TF2: 52 - 54 (0)

IPW Process\IPW as a social process\Engagement\Promoting IPE\Seeing fully integrated IPW/IPE

and you can see how it works. It worked so well because the university campus is on site [of the hospital itself] and it's multi-disciplinary, you've got your doctors, your physios your OTs [occupational therapists], your health-care side, your nurses, the whole caboodle really.

TF2: 59 - 63 (0)

looking at the Swedish model they're all in classrooms together they're knocking around the university together, then they're in the hospitals together so they almost like socialise together as well so it's more of a natural sort of thing.

TF2: 83 - 86 (0)

IPW Process\IPW as a social process\Engagement\Promoting IPE\Direct patient outcomes

But not only just think on their feet in the- in terms of their own silo but in terms of look we need to solve this together, it's the bigger picture for the patient.

TF2: 235 - 237 (0)

Okay so you think it was working with live patients that had that effect on how they could work together interprofessionally then?

**PPT** I do think so because I think what we do in education is we do training in our own professional remit and we don't see the wider picture.

TF2: 238 - 241 (0)

but what are  
the implications like not just medically are they socially fit are they  
psychologically prepared? Can they cope at home? Has an OT assessment  
been  
done? I know you would probably simulate that but in a real training ward  
you can see the real patient at the end of it and it's more realistic.

TF2: 242 - 246 (0)

Do you think that affects the student's experience to what they take  
from the fact that there's a real patient at the end of it?

**PPT** I think so and although they do see patients, they're only exposed to  
patients within their professional remit they're not necessarily trained to  
see the bigger picture like 'are they medically fit', 'what happens here',  
'are the medications ordered', 'is there someone at home to look after  
them?'

TF2: 247 - 253 (0)

the way it was set up, the structure it  
was very much based on the ward rounds so it was understanding- the  
students were working together and were looking at the patient notes they  
were talking to the patients they were looking at the observation charts,  
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hands on direct patient care but really getting into it and discussing it  
too because it was needing to learn...

TF2: 374 - 382 (0)

IPW Process\IPW as a social  
process\Engagement\Promo  
ting IPE\Exposure to and  
familiarity with IPE

I think initially when they first came- because when you think about  
it they wouldn't have had much exposure to a real live training ward, well  
obviously not as much as once you qualify

TF2: 328 - 330 (0)

I think the more exposure and the more understanding that the professionals do have with interprofessional education they realise they can benefit from one another and know that it's important, so, I don't think there'll be as many barriers or people feeling uncomfortable in that situation.

TF2: 353 - 357 (0)

But as soon as they got to know what they were doing and they got talking and they didn't feel awkward or intimidated by one another particularly I suppose when you're looking at- if you're a Year 2 OT to be working alongside a Year 5 doctor but what's nice is that nobody's intimidated because you're here to learn. For example an OT, this particular OT was really sharing her knowledge back with the doctors. It was good to see that even though the doctors were more used to certain parts of working on the ward that she still had a lot to share.

TF2: 331 - 338 (0)

IPW Process\IPW as a social process\Psychological safety

getting engaged and sharing back their background knowledge because what- the OT you thought she would have been intimidated but she

had a lot to share

TF2: 341 - 343 (0)

I think they'd have been more suspicious like maybe they'd feel they were being watched maybe like you know 'what are these people doing on my ward' and you know 'they're hindering', 'they're getting in the way'.

TF2: 452 - 454 (0)

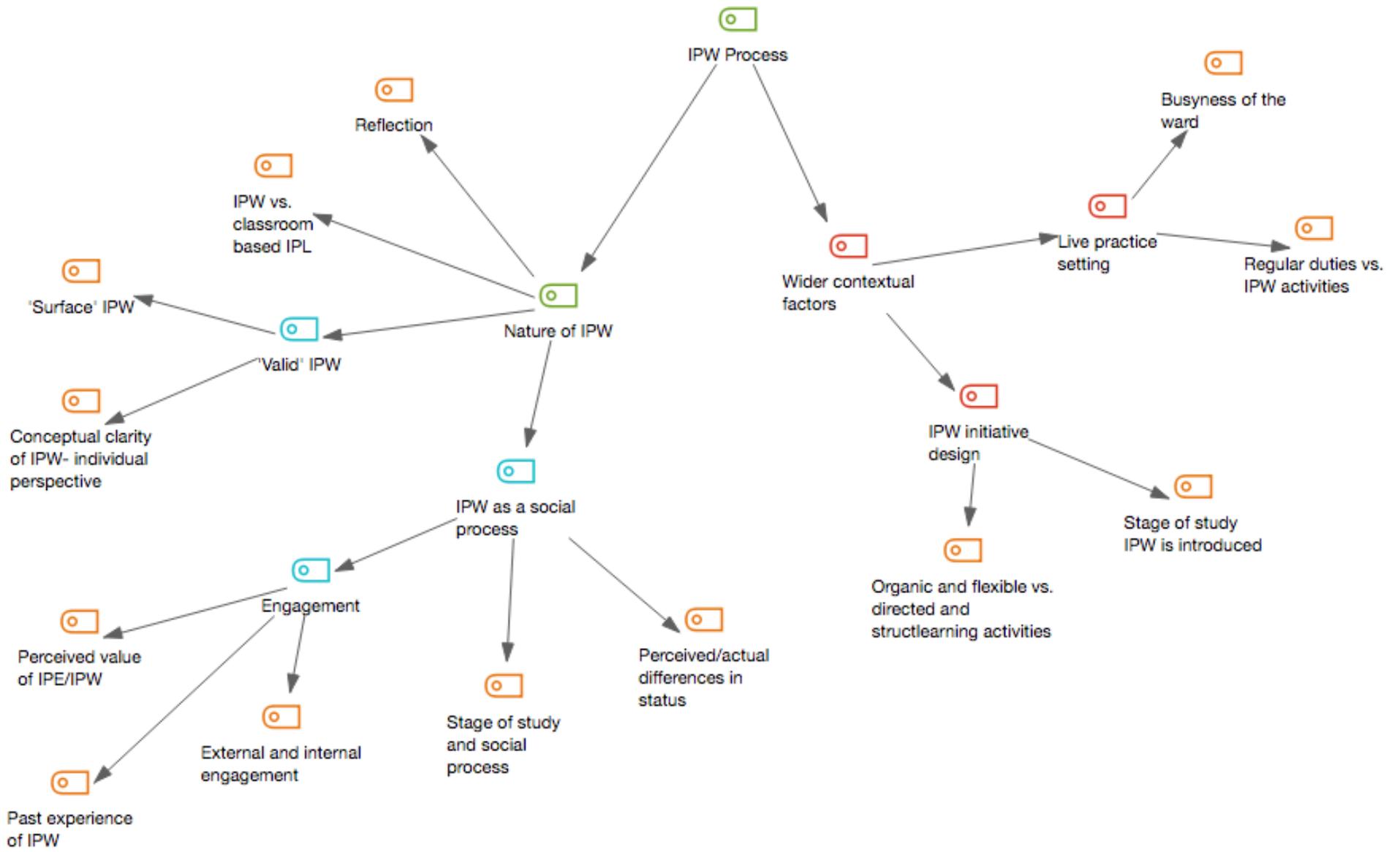
**TS2**

**CODEBOOK**

## CODE SYSTEM

1 IPW Process
1.1 Nature of IPW
1.1.1 'Valid' IPW
1.1.1.1 'Surface' IPW
1.1.1.2 Conceptual clarity of IPW- individual perspective
1.1.2 IPW as a social process
1.1.2.1 Engagement
1.1.2.1.1 External and internal engagement
1.1.2.1.2 Past experience of IPW
1.1.2.1.3 Perceived value of IPE/IPW
1.1.2.2 Perceived/actual differences in status
1.1.2.3 Stage of study and social process
1.1.3 IPW vs. classroom based IPL
1.1.4 Reflection
1.2 Wider contextual factors
1.2.1 IPW initiative design
1.2.1.1 Organic and flexible vs. directed and structured learning activities
1.2.1.2 Stage of study IPW is introduced
1.2.2 Live practice setting
1.2.2.1 Busyness of the ward
1.2.2.2 Regular duties vs. IPW activities

# THEMATIC MAP



# CODES

## 1 IPW Process

Unpicking the IPW process itself; factors that seemed to have an influence on or form an inherent part of IPW in this case.

### 1.1 Nature of IPW

Factors that seemed to form an inherent part of the IPW process itself.

#### 1.1.1 'Valid' IPW

Consideration of what fundamentally and conceptually 'counts' as 'valid' IPW, what factors and distinctions come into play?

##### 1.1.1.1 'Surface' IPW

Where without closely examining interactions and participants perceptions of those interactions, what appears to be the IPW process may in fact not be. For example, on an explicitly interprofessional pilot training ward, if participants from different professions are sent to practice on the ward together for a period of time then IPW (e.g. back and forth sharing of roles etc.) would be assumed to have happened but in fact it may not have happened if the nature of the interaction changed/developed into something else (e.g. TS2 the more senior participant taking charge and it becoming more of a one-way shadowing activity). Everything may be set up for IPW to occur but without direct insight into (and potentially influence on) the process it may not take place as intended. Role of facilitator to manage interactions to ensure IPW focus? May not be feasible in a live practice environment. How to monitor process without overly restricting it? Links to 'conceptual clarity of IPW- individual perspective'

##### 1.1.1.2 Conceptual clarity of IPW- individual perspective

Some participants were unclear as to what the desired 'learning outcomes'/goals form IPW as it relates to IPE are. In this case therefore feeling that they have a more 'tuition' role. Individual interaction with the concept of IPW and how this may enable or inhibit 'valid' or 'true' IPW. e.g. an activity seeming like IPW but from the individuals perspectives it was in fact more of a shadowing style of interaction. IPW is about changing perceptions and attitudes etc. however these must be an explicit focus of the activity- cannot have that explicit focus if participants don't fully understand/engage with the concept of IPW

### 1.1.2 IPW as a social process

Considering IPW as a social process

#### 1.1.2.1 Engagement

Engagement of stakeholders with the concept of IPE and more specifically, IPW.

Includes the perceived value of IPW intervention. Stakeholders in this case include participating students, facilitators and wider ward staff.

#### **1.1.2.1.1 External and internal engagement**

Engagement of surrounding staff as well as the staff and students directly involved with the IPW activity.

#### **1.1.2.1.2 Past experience of IPW**

Differences in amount of prior IPW experience potentially impacting the IPW process.

#### **1.1.2.1.3 Perceived value of IPE/IPW**

Participants' perceptions of the value of IPW/IPE potentially affecting 'buy-in' from students and staff thereby influencing the IPW process.

#### **1.1.2.2 Perceived/actual differences in status**

How perceived/actual differences in status between professions can alter the dynamics of collaborative learning. This also interacts with stage of study of the participating students. Where someone perceives a difference in status between themselves or another, whether only perceived (e.g. a qualified doctor and a qualified nurse with the same amount of years of experience are actually more different roles rather than being actually more or less senior- theoretically they're peers) or actual (e.g. where one individual is literally more senior in either position/role or stage of training)

#### **1.1.2.3 Stage of study and social process**

Stage of study potentially affecting dynamics of students involved as there may be a tendency for more senior students to somewhat 'take the lead'.

#### **1.1.3 IPW vs. classroom based IPL**

Difference between IPW and classroom based IPL.

#### **1.1.4 Reflection**

Reflection as part of the IPW process.

### **1.2 Wider contextual factors**

Wider contextual factors that seemed to interact with the IPW process.

#### **1.2.1 IPW initiative design**

Design/features of the specific IPW initiative (e.g. pilot training ward) and how that interacts with the subsequent process of IPW.

##### **1.2.1.1 Organic and flexible vs. directed and structured learning activities**

How much the IPW experience should be allowed to develop organically from natural interactions as different professions develop familiarity versus a more 'directed' set of

actions and 'curriculum'.

### 1.2.1.2 Stage of study IPW is introduced

At what stage of study is the IPW being introduced? What effect may this have on the IPW process (more in terms of engagement and perceived value rather than social dynamics)?

### 1.2.2 Live practice setting

The effect of a 'real life' setting on the IPL process (distinguishing it as IPW).

#### 1.2.2.1 Busyness of the ward

Busyness of the surrounding ward affecting IPW process.

#### 1.2.2.2 Regular duties vs. IPW activities

In cases where participants were already doing their placements on the ward in which the IPW initiative took place participants needed to balance regular duties with the activities in the pilot training ward.

## SUPPORTING QUOTES

Code	Coded segments
IPW Process\Nature of IPW\Valid IPW\Surface IPW	<p><b>INT</b> So was it mainly you were doing the duties you had to do anyway but it was a case of them coming round with you to learn more about your role?</p> <p><b>PPT</b> Yeah, pretty much. TS2: 86 - 88 (0)</p>
IPW Process\Nature of IPW\Valid IPW\Conceptual clarity of IPW- individual perspective	<p>like all the stuff I was doing to do with being an F1 doctor wasn't really relevant to her. TS2: 48 - 49 (0)</p> <p>I felt a bit more like I was facilitating it a bit like you know I felt a bit more responsible for like ensuring she got something out of it TS2: 60 - 61 (0)</p> <p>because she was just kind of like pushed into following me around... TS2: 62 - 62 (0)</p>

	<p>she was just like following me around like while I was going around doing my duties like with the ward round. TS2: 83 - 85 (0)</p>
<p>IPW Process\Nature of IPW\IPW as a social process\Engagement\External and internal engagement</p>	<p>it kind of depends, I think like a different team of people can have different morale some have a good morale some teams don't. TS2: 119 - 120 (0)</p> <p>I don't know how much depends on the hospital and how much depends on the individual ward or the individual people but... yeah any group of people is going to be different. TS2: 122 - 124 (0)</p>
<p>IPW Process\Nature of IPW\IPW as a social process\Engagement\Past experience of IPW</p>	<p>Not really, we've been- in surgery you do get told what the other professionals do but we didn't get to like meet with any of them. TS2: 96 - 97 (0)</p>
<p>IPW Process\Nature of IPW\IPW as a social process\Engagement\Perceived value of IPE/IPW</p>	<p>Yeah it was just useful to see how it works like how the other roles work. TS2: 111 - 112 (0)</p> <p>I suppose it would be useful for people to know more about the roles that the other professionals do and like a bit more experience of interacting with them and stuff. TS2: 127 - 129 (0)</p> <p>if you could see what the others, especially what they actually do, that would be helpful. TS2: 170 - 171 (0)</p> <p>stuff that we get taught at medical school that we- we think everything is a bit unique to us that actually, you know, other professionals can do. TS2: 178 - 180 (0)</p> <p>I think it's about getting a bit more interaction with each other during the training or something like what you're doing with this [pilot study] TS2: 181 - 183 (0)</p> <p>Were you able to reflect on the session and relate that to what you'd</p>

learned? But I know obviously you were quite busy in this instance...

**PPT** Yeah I think so, yeah I think I was.

TS2: 220 - 222 (0)

Yeah, pretty much, yeah. Basically it- a physio student was a following me around but it wasn't really clear what like I was supposed to do with her like all the stuff I was doing to do with being an F1 doctor wasn't really relevant to her.

TS2: 46 - 49 (0)

I know you're more, there's a difficulty because you were both peers technically in terms that you were both students but at the same time you're further along in your course and you know you've got different responsibilities so you're kind of more senior in terms of your level of responsibilities on the day.

**PPT** Yeah I'd say that was true.

TS2: 51 - 56 (0)

I felt a bit more like I was facilitating it a bit like you know I felt a bit more responsible for like ensuring she got something out of it because she was just kind of like pushed into following me around...

TS2: 60 - 62 (0)

IPW Process\Nature of  
IPW\IPW as a social  
process\Perceived/actual  
differences in status

I'd say I did notice I think that the 1st year physio that I was with was quite- like before I'd even met her she was like defensive about the fact that she was a physiotherapist and I was a medical student and it seemed to be...

TS2: 129 - 132 (0)

I actually felt that she automatically thought that I was very arrogant or that I was quite.... -which I think is quite common for other medical professionals to think about doctors.

TS2: 134 - 136 (0)

I think it makes it difficult even if you're trying to be open and friendly as possible you tend to feel the other people are almost like- not hostile, that's too strong a word- but... it's quite defensive.

TS2: 142 - 144 (0)

and that can obviously have affect how you're able to work together and learn about each other's roles.

TS2: 145 - 146 (0)

stuff that we get taught at medical school that we- we think everything is a bit unique to us that actually, you know, other professionals can do.

TS2: 178 - 180 (0)

a physio student was a following me around but it wasn't really clear what like I was supposed to do with her

TS2: 46 - 48 (0)

like all the stuff I was doing to do with being an F1 doctor wasn't really relevant to her.

TS2: 48 - 49 (0)

I felt a bit more like I was facilitating it a bit like you know I felt a bit more responsible for like ensuring she got something out of it

TS2: 60 - 61 (0)

IPW Process\Nature of IPW\IPW as a social process\Stage of study and social process

Well 3rd year is the other year where it's entirely clinical but the 3rd year medical students are obviously a lot more junior than the 5th years.

TS2: 71 - 73 (0)

she was just like following me around like while I was going around doing my duties like with the ward round.

TS2: 83 - 85 (0)

There was a bit but they were 1st years so

TS2: 91 - 91 (0)

in surgery you do get told what the other professionals do but we didn't get to like meet with any of them.

TS2: 96 - 97 (0)

IPW Process\Nature of IPW\IPW vs. classroom based IPL

I mean a bit of both would probably be useful

TS2: 155 - 155 (0)

if you could see what the others, especially what they actually do, that would be helpful.

TS2: 170 - 171 (0)

stuff that we get taught at medical school that we- we think everything is a bit unique to us that actually, you know, other professionals can do.

TS2: 178 - 180 (0)

like a medical student and a physio student going with the qualified physios for a day maybe something like that or and then the physio student coming with the medical student on the medical team maybe...

things like that.

TS2: 188 - 191 (0)

Not really, we had a couple of like classroom sessions that were actually quite good afterwards but...

TS2: 214 - 215 (0)

IPW Process\Nature of  
IPW\Reflection

Were you able to reflect on the session and relate that to what you'd learned? But I know obviously you were quite busy in this instance...

**PPT** Yeah I think so, yeah I think I was.

TS2: 220 - 222 (0)

IPW Process\Wider  
contextual factors

-It kind of depends when you get it, all the 3rd years are based in different hospitals so it just depends on whoever is running the course in your hospital they decide what you do.

TS2: 107 - 109 (0)

instead of just giving one of each like one physiotherapy student, one OT etc. and letting them just follow you around it needs to be more structured

TS2: 184 - 186 (0)

IPW Process\Wider  
contextual factors\IPW  
initiative design\Organic and  
flexible vs. directed and  
structlearning activities

like a medical student and a physio student going with the qualified physios for a day maybe something like that or and then the physio student coming with the medical student on the medical team maybe...

things like that.

TS2: 188 - 191 (0)

I think a bit more structure would have been useful yeah just... sorting what you'd actually be doing.

TS2: 210 - 211 (0)

IPW Process\Wider  
contextual factors\IPW  
initiative design\Stage of  
study IPW is introduced

You

basically do a week where you have to kind of do the job of junior doctors

TS2: 21 - 22 (0)

Yeah perhaps a different time it's just the assistantship is quite an important part of our course so I kind of had to do that anyway but we only had one week to do it.

TS2: 37 - 39 (0)

So that part of the project [pilot training ward] was at the same time maybe... actually that could have taken away from it because I just wanted to make sure to focus on the assistantship.

TS2: 41 - 43 (0)

I think potentially the 3rd year is a better year for it.

TS2: 69 - 69 (0)

Well 3rd year is the other year where it's entirely clinical but the 3rd year medical students are obviously a lot more junior than the 5th years.

TS2: 71 - 73 (0)

I kind of know more or less what a physio does by now. I can still obviously find out more but it... doesn't seem that relevant when you're trying to work towards finals and to be ready to be a doctor in a few months.

TS2: 75 - 78 (0)

I think that's what you're thinking about more than what do the physiotherapists do- 3rd year is more of a good time for that.

TS2: 78 - 79 (0)

-It kind of depends when you get it, all the 3rd years are based in different hospitals so it just depends on whoever is running the course in your hospital they decide what you do.

TS2: 107 - 109 (0)

I'd say I did notice I think that the 1st year physio that I was with was quite- like before I'd even met her she was like defensive about the fact that she was a physiotherapist and I was a medical student and it seemed to be...

TS2: 129 - 132 (0)

but again I think it was done in the 3rd year and there was a bit more opportunity for... Like 3rd year medical students go around for a while like 1 day or ½ day with physiotherapists and another day with OT's or whatever... and then vice versa.

TS2: 155 - 159 (0)

in 5th year I think it just isn't the focus of what we're trying to do and we're feeling the pressure of finals are coming up, and you're going to be a doctor very soon and that's all you think about. You don't really feel like you've got time to kind of go and watch what the physiotherapists do, I don't think.

TS2: 161 - 165 (0)

except in the 3rd year with maybe

TS2: 183 - 184 (0)

like a medical student and a physio student going with the qualified physios for a day maybe something like that or and then the physio student coming with the medical student on the medical team maybe...

things like that.

TS2: 188 - 191 (0)

if you could dedicate say a week in 3rd year like one day with physios, one day with OTs, one day with nursing, another day in the classroom... or whatever like...

TS2: 201 - 203 (0)

IPW Process\Wider contextual factors\Live practice setting\Busyness of the ward

There was a bit but they were 1st years so- but- I suppose I didn't really have enough time to ask them any questions. But I was really busy anyway, I barely had enough time to do my own stuff.

TS2: 91 - 93 (0)

IPW Process\Wider contextual factors\Live practice setting\Regular duties vs. IPW activities

Yeah pretty much so I was like... basically at the same time as my shift which is where I'm basically supposed to do the job of an F1 and...

TS2: 16 - 17 (0)

You basically do a week where you have to kind of do the job of junior doctors

TS2: 21 - 22 (0)

so I was basically doing that on my placement and then there were like students like for example physio students with me for the ward [pilot training ward].

TS2: 25 - 27 (0)

It was quite difficult I think because well, it's quite difficult anyway doing the F1 stuff and so yeah it was a little bit stressful

TS2: 31 - 32 (0)

it would have been stressful anyway just because of what I was trying to do.

TS2: 33 - 34 (0)

Yeah perhaps a different time it's just the assistantship is quite an important part of our course so I kind of had to do that anyway but we only had one week to do it.

TS2: 37 - 39 (0)

all the stuff I was doing to do with being an F1 doctor wasn't really relevant to her.

TS2: 48 - 49 (0)

I kind of know more or less what a physio does by now. I can still obviously find out more but it... doesn't seem that relevant when you're trying to work towards finals and to be ready to be a doctor in a few months.

TS2: 75 - 78 (0)

she was just like following me around like while I was going around doing my duties like with the ward round.

TS2: 83 - 85 (0)

But I was really busy anyway, I barely had enough time to do my own stuff.

TS2: 92 - 93 (0)

because you had your own priorities were you trapped in the ward really?

TS2: 102 - 103 (0)

Yeah I didn't do that with them

TS2: 104 - 104 (0)

in 5th year I think it

just isn't the focus of what we're trying to do and we're feeling the pressure of finals are coming up, and you're going to be a doctor very soon and that's all you think about. You don't really feel like you've got time to kind of go and watch what the physiotherapists do, I don't think.

TS2: 161 - 165 (0)