Postgraduate blended learning for NHS Educational Supervisors:

A realist evaluation of impact on professional practice.

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Submitted November 2021

This thesis is submitted for the degree of Doctor of Philosophy
Declaration

I hereby declare that:

- This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the preface and specified in the text.
- It is not substantially the same as any work that has already been submitted before for any degree or other qualification except as declared in the preface and specified in the text.
- It does not exceed the prescribed word limit for the Education Degree Committee.
Abstract

Postgraduate blended learning for NHS Educational Supervisors: A realist evaluation of impact on professional practice.

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This thesis aims to explain the multiple, socially situated influences that shape formal continuing professional development’s (CPD) impact on practice for consultant doctors and dentists holding the role of Educational Supervisor. It does so to better enable CPD curriculum designers, tutors, and students to critically examine these influences on their practice.

Since 2015, in the UK, postgraduate medical educators holding the formal, nationally defined role of Educational Supervisor must engage annually in CPD to remain in role. This is known as educational revalidation. Moreover, role holders must demonstrate how their educational practice meets the Academy of Medical Educators’ formal, national standards. Together revalidation and standardisation have created an ongoing need for formal CPD courses. Given the resource-intense nature of formal CPD, stakeholders are keen to understand if and how CPD has an impact on learners’ practice. However, the literature to date has largely explained formal learning for postgraduate medical educators in psychological terms and practice change as the unproblematic uptake of course content. Causal explanations of formal CPD’s impact on professional practice largely focus on teaching techniques, course content and learners’ reactions. Staff and students’ epistemological assumptions about the nature and goals of formal CPD are mostly overlooked. This leaves learners’ manner of engagement with CPD techniques and content under-explored. Such explanations also overlook the influence of socio-professional influences in the wider practice domain that may shape CPD design, delivery, experiences, and outcomes. Furthermore, at the time of this study, there was no ethnographic research into CPD’s impact on practice taking place in Educational Supervisors’ workplaces. Therefore, little is known about the influence of the practice context on medical educators’ learning processes and any subsequent impact on their teaching or supervisory practice. In this study, I therefore ask what enablements and constraints in the professional domain influence CPD staff and students before, during and after the CPD and how these shape CPD’s impact on practice.

Bhaskarian critical realism, particularly as conceptualised by Elder-Vass, underpins this project. And this permits me to offer a unique conceptualisation of CPD programmes as instances of causally efficacious social structures from which emerge impact on practice. That is, I view the
nature of teaching and learning relations between students, tutors, and materials as one key part of the explanation for any impact on learners’ practice. Equally key, this conceptualisation also enables me to socially situate CPD programmes in the wider professional context. This permits me to examine the causal influences of formal and cultural social structures in the practice domain on CPD staff and students. As a result, this thesis offers a complex explanation of CPD’s impact on practice as multiply shaped by structures and agency and as contextually contingent.

This project was conducted across northwest England and involved 16 participants. I used a two-stage, qualitative, realist evaluation research design to evaluate a university accredited, blended learning module for Educational Supervisors. The first stage of the project involved semi structured interviews with four members of module staff and analysis of the module’s six-page formal curriculum document. From this stage, I set out the curriculum design and tutoring team’s beliefs about how and why the CPD module could impact on students’ practice. In the second stage of the research, I interviewed 12 module students who worked as Educational Supervisors in the NHS, analysed a Learning Agreement they wrote for their module studies and observed their supervision of junior doctors in the workplace. This second stage therefore explored the professional students’ experience of CPD and workplace supervision to explain the nature, extent, and reasons for any impact on their practice or barriers thereto.

I conducted template analysis of curriculum and student documents, of interview and observations transcripts and of field notes taken during observations. Although the template evolved as data analysis progressed, I used the same template for the curriculum and student documents as well as for staff and student interviews. However, I developed a separate template for coding observations of practice. I engaged in abductive and retroductive reasoning to ask why the data might be as they were. This permitted socially situated explanations of formal CPD’s impact on Educational Supervisors’ practice which are largely absent from the postgraduate medical education literature.

This research found that the affordances and normative expectations surrounding the role of consultant clinician and Educational Supervisor positively and negatively influence both CPD learning and its impact on practice. In particular, I suggest the notion of ‘role salience’ to explain how the CPD context may foreground widely held beliefs about learners’ other professional roles. This study found that during group work, on and off campus, role salience prevented learners from engaging actively or meaningfully in CPD. Also, I posit the notion of a role-based ‘sphere of influence’ to explain why some practitioners may be able to implement changes to practice where others cannot. These are social-relational explanations of learning and its impact on practice. They involve the causal influence of the regulatory body, as well as staffing and training structures and enculturated beliefs about supervision in the NHS workplace. This thesis therefore enhances our theoretical understanding of the reasons for and nature of formal CPD’s impact on practice.
Acknowledgements

First and foremost, I wish to sincerely thank my supervisor, Dr. Yongcan Liu in the Faculty of Education. His consistently supportive manner, patience, generosity, and critically insightful questions guided me throughout this journey. Thank you, Dr. Liu for teaching me to chisel the jade. Thank you for all the time and energy you gave to supervise this work.

Next, I wish to express deep appreciation to all my participants who gave generously of their time and energy to willingly share with me their insights and welcome me to their workplaces. Evaluation can be a political activity and I am grateful my participants so wisely understood that I sought not to judge their practice, but to critique my own; and to understand the influences on IoPP in the CPD and professional domains.

I am grateful for the financial support I received from Edge Hill University.

I am so very thankful to my wonderful friend, Dr. Jill Cochrane who so warmly shared her experiences of the doctoral research journey to support my own. Her sagacity and resilience inspired me. Her kind friendship buoyed me. I look forward to Earl Grey moments talking about our new journeys.

And to my husband, Mark who came into my life just as this journey began, I say a heartfelt thanks for all your unending support in a myriad of ways. Thank you for your patience, and encouragement and the sacrifices you made to support this stud. Thank you for being my Felagund ... and for directions to all those hospitals around northwest England!

Finally, I dedicate this thesis to two of our very dear loved ones who always showed such interest in my project, but whose own journeys ended before this one.

In loving memory of Jeoffrey and Paddy
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Part 1: Introduction and Background to the Thesis

1 Rationale, Aims and Objectives

1.1 Rationale for the study

I feel strongly that engagement in continuing professional development (CPD) should enable professional learners to do things differently or feel differently about professional practice. CPD should do more than provide evidence of attendance for managerial purposes; it should lead to more than just learning gains. That is, I believe (formal) CPD should have an impact on professional practice (IoPP). The rationale for this study therefore derives, in part, from my values regarding CPD as well as from my experience. As a senior lecturer in postgraduate medical education at a UK university, I taught CPD modules for National Health Service (NHS) doctors and dentists between 2009 and 2019. Reflecting on this experience, I perceived a difference between learning outcomes and IoPP. Furthermore, I believed it unrealistic to expect IoPP to be uniform for all learners. This is because I noted differences in learners’ prior experiences and workplaces, and differences in their interests or concerns arising from their own practice. I also noticed my learners were testing the applicability of module studies to their professional contexts (Kahn et al., 2012). Therefore, to improve my future practice as CPD curriculum designer and tutor, and to better support my students, I wish to understand whether, how and why formal CPD provision may have an impact on my students’ professional practice. In particular, I wish to understand the influence of CPD processes and the practice domain (Eraut, 2004) in enabling or constraining (Archer, Margaret, 1995) this impact.

The current study focuses on a university based CPD module for National Health Service (NHS) Educational Supervisors. I was an academic member of staff on this module for ten years, as tutor from 2009 to 2011, and as module leader from 2011 to 2019. Educational Supervisors support and appraise trainee doctors’ progress towards independent practitioner status by facilitating juniors’ achievement of the competences set out in a formal curriculum (GMC,
As postgraduate medical educators holding the formally recognised role of Educational Supervisor in the UK NHS, my students are required to revalidate their educational credentials every five years (GMC, 2012). Revalidation shows that a professional is keeping their knowledge up to date and is fit to practice with no concerns raised about them (GMC, 2019). Educational revalidation was introduced in 2015 (GMC, 2012) as part of the gradual implementation of reforms brought in by Modernising Medical Careers (MMC) in 2005. Providing evidence of engaging in continuing professional development (CPD) is a key component of revalidation (GMC, 2015). Revalidation policy then was one of the drivers for the creation of the module which forms the focus of this study.

Given the potential for my students’ formal supervisory role to influence a trainee’s progression towards national requirements positively or negatively (Agius et al., 2008; Black, 2013), I became increasingly keen to understand the ways in which this CPD module might - or might not - be helping Educational Supervisors to enhance their workplace supervision. Yet since my students work in different professional teams and healthcare specialties or in different locations from one another, it seems unreasonable for each learner to need, expect or gain the same outcomes from the module. Differences in social factors such as workplace norms, in human or material resources or in learner’s own roles and experience seem likely to influence the nature of any IoPP learners draw from this CPD. My rationale for this study then, derives partly from an awareness of the complexity of social life.

Furthermore, in empirical studies of formal CPD’s impact on practice, workplace-based influences on IoPP are under-explored and under-theorised. Of note, this study found no ethnographic explorations of postgraduate supervision in NHS workplaces. Although calls in the literature urge PGME researchers to engage with social theory (Leahy et al., 2020) and to explore the influence of the workplace in shaping IoPP (O’Sullivan & Irby, 2011), only one study to date has explored both the CPD and NHS workplace as contexts influencing IoPP (MacVicar et al., 2013). However, this study did so through interviews in the CPD context rather than research in the workplace. Also, only a very small number of studies concentrate on the formal Educational Supervisors’ role in the UK NHS. Consequently, very little is known about the
socio-professional factors which influence NHS Educational Supervisors’ professional learning before or during CPD and shape IoPP in their workplace. In addition, the theoretical framework underpinning CPD for postgraduate medical supervisors remains largely unexplored as a causal factor shaping IoPP (Steinert et al, 2016). That is, little is known about the causal links between CPD staff and students’ epistemological assumptions and IoPP for learners. A more socially situated understanding of IoPP, involving staff and students, and CPD and workplace processes may therefore support more effective formal CPD design and delivery. Indeed, it may also help us articulate what we intend by ‘effective’. The rationale for this study then emerges from an interplay between my values and experience, the socio-professional climate and the extant literature (Ravitch & Riggan, 2017).

1.2 Aims and objectives

This thesis aims to explain the nature of and reasons for any impact on the professional practice of NHS Educational Supervisors brought about by their participation in a level-7, blended learning module in educator development at university. I apply Elder-Vass’s (2010) synchronic relational version of emergence theory to propose a unique conceptualisation of IoPP as the emergent property of CPD. Also, I conceptualise CPD courses and professional teams as instances of Elder-Vass’ (2010) organisation – a causally efficacious, power-imbalanced social structure.

Using a realist evaluation research design, this thesis investigates formal continuing professional development’s (CPD’s) impact on professional practice (IoPP) by asking ‘what worked for whom in which circumstances and why?’ (Pawson & Tilley, 1997). Reasons for outcomes are sought at the level of causally efficacious social structures (Elder-Vass, 2010) as well as individual agency and reflexivity (cf. Archer, 1995), within the CPD and workplace contexts.

Therefore, this study first gleans an initial programme theory about the module by interviewing module staff, by analysing module curriculum documents, and by reviewing the
literature. Programme theory is the articulation of a set of beliefs about how a programme may bring about its desired effects and why (Pawson & Tilley, 1997; Rogers, 2008). For a study in education, I believe this is akin to a rich articulation of the curriculum design by staff. Following realist evaluation conventions, this study takes programme theory as the unit of analysis, and next seeks to develop it by involving students concurrently working as Educational Supervisors. Through interviews and observations of their supervision of junior doctors in the NHS workplace, programme theory testing asks what IoPP students gained, in which circumstances and why. That is, student participation helps explain why curriculum design and delivery may or may not achieve its intended goals. Triangulating staff and student data analysis subsequently permits a refined programme theory which can be used to inform curriculum development for future cohorts of students.

At the heart of this thesis lies my belief that individuals and groups can cause effects in the world; and that the nature of a group shapes the nature of effects it can cause. Through a realist evaluation research design underpinned by Elder-Vass’s (2010) theory of synchronic-relational emergence, this study aims to offer complex, socially situated explanations of formal CPD’s IoPP. I contextualise CPD learners and staff by considering the multiple concurrent roles they hold in the CPD and workplace contexts. Such contextualisation can enhance our understanding of IoPP by exploring the influence of socio-professional factors on professional learning and IoPP. This study therefore addresses calls in the literature for medical education research to engage more rigorously with social theory (Rees & Monrouxe, 2010) and to acknowledge complexity (Wong, 2018).

1.3 Overview of the thesis

This thesis is set out in four parts, comprising ten chapters. I begin by setting out the rationale, aims and objectives of the current study. Chapter Two situates this study in the socio-professional climate. It does so through an overview of the national standardisation of training and trainers’ roles. In reviewing the gradual formalisation of postgraduate supervisory roles,
Chapter Two suggests the need for a critical understanding of the nature and goals of formal CPD for medical educators. I therefore show how my experience as university tutor and module leader in this climate prompted my research questions about IoPP.

In Part Two, I situate this study within the relevant educational, philosophical and evaluation literature, by looking to three particular bodies of extant knowledge: evaluations of formal CPD's impact on practice for medical educators and those in cognate fields, position papers and conceptual work on epistemologies for educator development and Bhaskarian critical realist philosophy of causation in social life. In Chapter Three, I present a realist synthesis of the literature and posit a realist theory of formal CPD’s impact on postgraduate medical educators’ practice. Noticing calls in the literature for IoPP research to address CPD processes and workplace influences, in Chapter Four, I develop a critical realist theoretical framework to do so. I apply Elder-Vass’s (2010) synchronic-relational version of realist emergence theory to reconceptualise and understand IoPP. This permits a conceptualisation of CPD programmes and NHS professional teams as instances of Elder-Vass’s (2010) causally efficacious organisations and IoPP as an emergent property (potential outcome) of CPD. That is, the conceptualisation developed here views IoPP as being patterned (not determined) by the role-based interactions of CPD staff and tutors, and by colleagues in the clinical workplace. These “coordinated interactions” (Elder-Vass, 2010:195) are in turn influenced by normative beliefs surrounding roles and by formal social structures such as NHS team hierarchy, the regulatory body and formal training structures. Further, I show how this conceptualisation offers a solution to the oft-noted realist evaluator’s quandary in distinguishing context from mechanism.

In Part Three, Chapter Five, I set out the three-stage, realist evaluation research design (cf. Pawson & Tilley, 1997) deployed for this study. These stages comprise programme theory gleaning, theory development and then refinement. Here, however, I explain how methodological decisions were guided by the critical realist ontological and epistemological assumptions as set out in Chapter Four. This distinguishes my view of causality from that of Pawson and Tilley (1997). I justify my choice of methodology in terms of my research questions.
and aims which seek causal explanations (Healy & Perry, 2000). These underpinning commitments influence ethical considerations and methods used for data collection and analysis. I set out my research methods in Chapters Six and Seven.

In Part Four, Chapters Eight and Nine, I present the empirical findings from stage one and two of this study. Chapter Eight sets out module staff’s intentions regarding the intended nature of IoPP and how they expected CPD activities to bring this about. This initial programme theory is gleaned from documentary analysis of the module curriculum and semi-structured interviews with module designers and tutors. It presents the important findings that CPD staff may unknowingly hold different epistemological assumptions, masked by common language.

Chapter Nine presents what worked for students in which circumstances and why (cf. Pawson & Tilley, 1997). These programme theory developments are drawn from semi-structured interviews with module students and through observations of their professional practice as Educational Supervisors in the NHS. In addition to planned educational mechanisms, student contributions and the conceptual tools deployed in this study permit me to posit the causal influence of epistemological orientation, role salience and a role-based sphere of influence. These contextually contingent mechanisms shape CPD experiences and outcomes. As answers to my research questions, these empirical findings subsequently permit me to discuss refinements to programme theory.

In Chapter Ten then, I offer a middle range theory of formal CPD’s IoPP which offers a unique, socially situated, critical realist understanding of the complex natures and causes of IoPP. I discuss how the theoretical framework applied and developed here guided the interpretation of findings, permitting me to make an original contribution to knowledge in IoPP research. I show how the interplay between learning context, epistemologies and role salience influence learning experiences and outcomes. I also discuss how formal structures and inter-related role-holders’ normative assumptions in the practice domain shape IoPP. Throughout, I show how the theoretical framework for this study provides a robust framework for application in other medical education settings. Following this, I acknowledge the limitations of this study.
and suggest avenues for further research before finally offering a reflection on my doctoral journey as a conclusion to this thesis.
2 Background to the current study

2.1 Introduction

In this chapter, I situate the current study, the module, and my role as a CPD tutor within the wider socio-political and historical contexts of postgraduate medical education and training (henceforth ‘training’) in the UK. I suggest that doing so permits a critical examination of the relationship between wider national or professional agendas and the purposes and goals of CPD programmes. Such an examination offers questions and choices for those involved in CPD that may otherwise remain uncovered. In brief, this chapter explains how complex, overlapping events over time led to the most recent restructuring of postgraduate medical education. This included first formalising then standardising the roles of postgraduate supervisors and this influenced the commissioning of the module studied here. Recognising the module’s ‘position’ in this complex social context not only offers understanding of its goals but may inform any re-evaluation of them.

2.2 The complex causes of the formal supervisor role

The formal Educational Supervisor role is embedded in a quality assurance agenda which has complex, historical causes. The role was gradually shaped through the most recent and wide-sweeping reforms to postgraduate medical training known as Modernising Medical Careers (MMC). With its inception in 2005, this reformation arose from and perpetuated a quality assurance agenda which views quality as the uniform deployment of evidence (Bleakley, Browne & Ellis, 2014). MMC emerged from overlapping social events, processes and relationships interacting over time. These included much earlier calls for comparable medical qualifications across Europe due to physician mobility and differences in care (Ellis, 1975) and the UK’s long-standing need to more quickly produce competent specialists to serve the country (Tooke, 2008). The latter was because serendipitous training was prone to be lengthy (Donaldson, 2002) and not cost-efficient (Clark, Draper, & Rogers, 2015; Swanwick, 2008). MMC was also partly because junior doctors vociferously voiced concerns about ongoing
deficiencies in the so-called 'Calman' training system of the 1990s (House of Commons Health Committee, 2008). Known as The Lost Tribe, Calman trainees faced unclear career paths and reported infrequent and poor careers advice (Cooper & Forrest, 2009) which compounded their difficulties in securing consultant posts (Elbadrawy, Majoko, & Gasson, 2008). Further, MMC also came in response to calls from government and the public for the medical profession to evidence greater responsibility and accountability vis-à-vis patients' rights and safety (Swanwick, 2008). Arguably then, the (re-) design of any CPD programme should be cognisant of its history and complex, wide-reaching relations.

2.3 Supervisors as key roles in the quality assurance of training

With MMC, formally named supervisors began to play a key role in the quality assurance of workplace-based training and junior doctor’s practice. This is because the medical profession addressed the various calls for quality assurance outlined above by shifting to nationally uniform, competency-based training supported by named, qualified supervisors (Julyan, 2009). For the first time, training programmes followed formal, national curricula and juniors’ progression was formally assessed at all stages of training (Keighley, 2005). This central formalisation of training and trainers aimed to ensure all doctors acquire a set of core competences for safe, effective practice (GMC, 2009; McGowan, 2006). Formalisation also intended that any struggling trainees were identified and supported sooner rather than later (Long, 2009; Mitchell, Bhat, Herbert, & Baker, 2013). For purposes of quality assurance, it was now compulsory for every trainee to have named supervisors as a key part of facilitating their progression (Cooper & Forrest, 2009; Swanwick, 2015), as shown in Figure 1.
Formalisation of the Educational Supervisor role and its connection to quality assurance continued when, in 2007, the regulatory body provided a formal role definition emphasising supervisors should be “appropriately trained” (GMC, 2007). Firstly, this centralised remit formally distinguished role-holders from other healthcare professionals whose practice may also influence doctors in training (GMC, 2012). The serendipitous training experiences with 1990s workplace-based trainers (Donaldson, 2002) and the localised practices of apprenticeship within a ‘firm’ (Dornan, 2005) that had endured for hundreds of years (Taylor, 1969) were replaced by formally defined supervisor-trainee interactions. MMC as a structure for training then, changed role-based relations between supervisor and junior. It formalised
their mutual connections to trainee progression as well as to patient-safe, cost-effective, and nationally standardised practice in both clinical and educational domains.

Secondly, the requirement for supervisors to be trained showed that consultant status and clinical qualifications alone were no longer sufficient to hold educator positions. Postgraduate training was de-emphasising intuitive or habitual teaching and shifting towards a view of education as a discipline or skill set in its own right which required training. That is, it was now recognised that doctors were clinical experts, but that most “had little or no training in how to teach” (Sorinola, Thistlethwaite, Davies, & Peile, 2015:386) Role formalisation therefore created a need for courses in educator development (Tsouroufli & Payne, 2008). Such CPD courses then are not context free but are embedded in wide reaching social relationships. My role in this context was in delivering university accredited CPD in educator development to consultant doctors (and latterly dentists also) who hold formal supervisor roles, as shown in Figure 2.

**Figure 2 : Locating my role within the current structure of medical education**

Based on Swanwick (2014)
Figure 2 indicates that my CPD students hold at least three roles concurrently. Beyond the CPD context, they are registered consultant clinicians working in the NHS. They also hold the formally recognised ‘teacher’ role of Educational Supervisor to junior doctors.

The need for CPD was further sustained between 2009 and 2016, as the GMC gradually phased in further, new arrangements to standardise supervisory practices. In 2012, the GMC adopted Academy of Medical Educator (AoME) standards and supervisors had to demonstrate their practice aligned with these. Beyond standardisation, I argue that the introduction of revalidation eventually *professionalised* the role in 2015, as shown in Figure 3.

**Figure 3 : A gradual shift towards professionalisation of the role**

As shown in Figure 3, the GMC began easing in mandatory compliance with AoME standards. From 2014 onwards, any supervisors who could evidence their practice met these standards could have it noted on their medical register that they were recognised as a trainer by the GMC (GMC, 2012). Practicing supervisors who could not yet evidence compliance with standards were permitted to continue in their role, categorised as ‘provisionally registered’ until 2016. Since 2016 however, doctors as supervisors must be ‘fully recognised’ by submitting evidence to their Postgraduate Deans that they have the required competences, “especially educational appraisal and feedback” (GMC, 2016). The requirement to attain standards to be fully registered, and to be fully registered for practice was again born out of and contributes to a
quality assurance agenda (cf. Bleakley, Browne & Ellis, 2014). In turn, this regulates access to roles or positions in the workplace. Viewed positively, the standardisation of *educational* practice could position supervisors as a key component in the drive for quality assurance (cf. Hodkinson, 1998) as called for by governments, the public and junior members. Viewed negatively, it could evidence mistrust in individual judgement and practice (cf. Guyatt et al., 1992) with a central body’s preference for uniformity over originality (cf. Bleakley, Browne & Ellis, 2014). Either way, the GMC's adoption of AoME standards created a vested interest in AoME accredited CPD for purposes of maintaining roles at work.

Finally, I believe the role was professionalised in 2015 with the introduction of mandatory revalidation. Every five years, supervisors must evidence ongoing development as educators to revalidate their educational credentials and remain in role (GMC, 2012). Viewing professionalisation as the steps and measures an occupation sets for its members to ensure they offer high quality services (Pederson, 2005), revalidation can be seen as a process for the continual monitoring of performance. While revalidation may also contribute to quality improvement, at its base, it aims to ensure medical educators meet minimal standards for practice (and exclude those who do not). Consequently, this professionalisation through revalidation sustains a need for CPD provision. Indeed, since 2005 in the UK, there has been a growing number of postgraduate qualifications in medical education offered by universities, with a substantial component focusing on teaching skills (Sethi et al., 2016; Sethi et al., 2018).

The module studied here is one such example enabling doctors and dentists to become, or revalidate as, an Educational Supervisor.

In realist terms, I view MMC as a *causally efficacious structure*¹ (cf. Elder-Vass, 2010) requiring changes to the ways in which Educational Supervision is enacted in the NHS workplace. MMC

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¹ As this study is underpinned by critical realist ontological commitments, I immediately adopt Elder-Vass (2010) notion of *causally efficacious social structures* to set out the background. Briefly, this
reforms created and sustain a need for CPD in educator development. In Archer’s (1995) critical realist terms, MMC and the events leading up to it, were the morphogenesis of and provide the morphostasis for the module studied here. This re-structured context for practice prompted the partnership between the regional Deanery and the university. This socially situated nature of CPD within wider professional structures therefore merits critical understanding of how they may influence each other. Specifically, how the goals or purpose of CPD are shaped by, and shape professional practices.

2.4 Formalised roles risked supervision as an administrative activity

The formalisation of supervisor roles created a division of labour that risked Educational Supervision becoming, or being viewed as, an administrative activity. This is because MMC also formalised a Clinical Supervisor role. Consultants in Clinical Supervisor roles directly oversee a trainee’s care for patients during clinical practice. In contrast, an Educational Supervisor meets their trainee in a non-clinical environment to discuss, oversee and support a trainee doctor’s long term, educational progress against formal curriculum requirements (GMC, 2016). Educational Supervisors therefore collate evidence from other colleagues about a trainee’s progression. They use this to provide feedback to trainees and help agree action plans for further progression (GMC, 2015). However, these action plans are subsequently carried out by trainees in clinical practice with their Clinical Supervisor(s). Moreover, Clinical Supervisors offer immediate guidance or feedback and carry out formal assessments in-situ. This division of duties poses the risk of educational supervision becoming a tick-box and scheduling activity (Cleland et al., 2014). That is, educational supervision risks becoming the retrospective tallying of events and scheduling of future activities without a series of developmental conversations.

assumes groups of people, related by their roles, can cause effects in the world that they could not cause as individuals acting alone. These concepts are discussed in more detail in Chapter Four.
This concern underpinned the Deanery’s decision to commission university accredited continuing professional development (CPD) for named supervisors. The module I researched here aims to provide Educational Supervisors (ES) with substantive educational theories so that they may offer supervision as developmental conversations.

2.5 Overview of the CPD module

Commissioned by a regional Deanery in 2008, the module was co-developed by Deanery and university staff. It is delivered through blended learning over a period of 16 weeks. Students are NHS doctors and dentists, holding or aspiring to the ES role. A team of tutors from both organisations teach on the module. They team-teach face-to-face workshops and support online learning and in particular, online discussion groups.

The module syllabus covers topics relevant to the supervisor role as selected by the joint design team. Throughout the 16 weeks, students and tutors attend four three-hour workshops on campus. Workshops include tutor presentations, group discussions about the literature and practice and role-play. In between workshops, students study asynchronously online. They read compulsory texts selected from the peer reviewed literature. Then, they respond to a minimum of four out of six questions that address the literature and practice. Students work in groups of 15 supported by a tutor, using Blackboard’s discussion board tool. Questions are set by the module leader and are the same for all groups. The module culminates with two formal, written assessments which require engagement with the scholarly literature and reflection on practice.

My initial concerns underpinning this study included questions as to whether the taught content is useful to, or overly ambitious for busy Educational Supervisors. Also, whether and how the same module content may be useful to a wide range of practitioners from different workplaces. And finally, because module intended learning outcomes make no specific mention of ‘impact on practice’ or ‘practice change’, I felt there was the possibility for students to complete assessments solely from a retrospective perspective, discussing how their practice
to date aligns with or challenges ideas in the literature without discussing how or why their practice may subsequently change following module studies. All of these concerns clash with my values for CPD.

2.6 Research questions

Cognisant of the importance of supervisors in postgraduate medical training, I was keen to know whether the module was enabling students to practice differently or feel differently about practice, and if so, in what ways and why. I also wanted to have a better understanding of any potential adjustments I could make to my practice as module leader to better support our students. My research questions arose initially from the realisation that my learners’ work in very varied, complex environments. This complexity suggested that IoPP could not be uniform for everyone. In addition, through my prior and concurrent teaching roles on other modules, I was aware of the theory-practice divide. Knowledge acquired in the classroom may not be easily used in the workplace because of the difference between contexts (Eraut, 2004). This suggested that IoPP may be problematic because the module takes place in physical and virtual classrooms, not in-situ at work. As I lingered to contemplate, I found I was equally influenced by my early, sometimes difficult professional experiences with our students which suggested to me they struggled to envisage feasible connections between module studies and their practice (cf. Kahn, Qualter & Young, 2012). Combined, these concerns suggested the need to explore staff intentions as well as student experiences. My research then is driven by an interest in improving my practice to help support my students’ practice. To do so, I seek complex causal explanations of whether, how and why IoPP emerges from the CPD experience, and is realised or blocked in the workplace. That is, I anticipate that enablers and barriers for IoPP lie within the CPD and the workplace contexts, at the levels of structure and agency. This study therefore asks the following questions:
Of staff:

1. What nature of impact on professional practice (IoPP) did module curriculum designers intend and why?
2. How did staff believe CPD curriculum features could enable this IoPP?
3. Which potential barriers in the workplace, if any, had the staff team aimed to address through module design and why?

Of students:

4. What nature of IoPP (if any) did module students gain from this CPD and why?
5. Which features of the CPD curriculum or workplace environment enabled or contributed to these outcomes and why?
6. What constraints within the module and NHS workplace contexts impeded this IoPP?

2.7 Summary

In this section, I have shown that socio-historical and political relations within the medical profession, as well as between it, the government and the public brought about MMC. An agenda of accountability for public service, safety and funding drove quality assurance and improvement measures not only for clinical practice, but also educational practice. Improvement was defined as standardisation. And standardisation was monitored through revalidation. This wider policy context for postgraduate medical training led to the previously informal role of Educational Supervisor being increasingly formalised between 2005 and 2016. MMC shaped the current requirements for educational supervision in the NHS, most recently causing professionalisation of the role with a concomitant need for lifelong CPD in education. MMC therefore influenced the commissioning of the module which forms the focus of this study. A critical awareness of CPD's embeddedness in complex social factors can help stakeholders engage with debates concerning what is meant by quality in practice.
Part 2: Situating the current study in the wider academic literature

3 A realist synthesis of CPD’s impact on professional practice

3.1 Rationale for this review

The extant literature contains many empirical evaluations of formal CPD for postgraduate medical educators, as well as a growing number of reviews of this body of work. However, existing theory on how or why formal CPD brings about impact on educators’ professional practice, for whom and in which circumstances is limited. While single studies have reported ‘successful’ CPD programmes which ‘work’ (cf. Pawson & Tilley, 1997), they have largely overlooked the role of teaching and learning processes and epistemological assumptions in shaping IoPP. Also, although prior research has indicated that logistical factors in the professional context may support or hinder learning and IoPP, studies commonly report these findings descriptively rather than viewing them through the lens of a substantive educational or social theory. Consequently, there is a long-standing call in the literature for further research that can offer theoretically generalisable explanations of why and how programmes achieve their outcomes (Frye & Hemmer, 2012; O’Sullivan & Irby, 2011; Phuong et al., 2018; Steinert et al., 2006; Steinert et al., 2016). In particular, these calls emphasise the need to understand how or why factors in the practice domain may influence CPD’s IoPP. To contribute to understanding of these hitherto under-theorised aspects, this realist synthesis aims to glean a realist theory of formal CPD’s impact on practice, specific to postgraduate medical educators already in post. To do so, I ask what is known about the influence of CPD structure, content, and process on learning and IoPP; and how factors in the workplace context or wider practice domain might support or inhibit CPD’s impact on practice.
3.2 What realist syntheses do

Realist syntheses examine the existing literature to form middle-range theories and testable hypotheses, about how and why a programme may or may not bring about its outcomes (Pawson et al., 2004; Wong et al., 2013b). Of note, this approach acknowledges that what may work well in one context may not work well, or at all, in another and therefore seeks to understand contextual influences on programme processes and outcomes (Pawson, 2006). Different from all other review types, a realist analysis of the literature necessitates a generative view of causation (Wong et al, 2013b). This states that while a programme may have potential to cause certain outcomes, the nature of these is shaped by causal mechanisms which in turn are triggered (or suppressed) by contextual factors (Pawson & Tilley, 1997; Wong et al, 2013b). The precise ontological definition of mechanism is contested (Astbury & Leeuw, 2010; Dalkin et al., 2015; Westhorp, 2018) but they have been conceptualised as individual people’s, psychological or affective reactions to events, experiences, or materials (Sorinola et al, 2015) or as inter-actions between people as they go about their work or life (e.g., Elder-Vass, 2010). Whether at the individual or group level, mechanisms then are invisible processes or forces that cause effects (cf. Bhaskar, 1978). Realist synthesis seeks to elicit these processes from the existing literature to explain how outcomes are produced. That is, rather than answering whether or to what extent a programme ‘works’, realist synthesis posits patterned explanations of how or why it produces the outcomes it does (Pawson et al, 2004). Realist synthesis or review of the literature then is an interpretative approach which translates or codes the extant evidence base according to the key realist concepts of context, mechanism, and outcome (cf. Waldron et al., 2020; Wiese et al., 2017). However, unlike systematic reviews, realist ones aim for theoretical saturation rather than a comprehensive inclusion of every paper published in a specific area (Pawson, 2006). This means a range of papers or paper types from different contexts may be included, to test the contextual influences on the middle range theories under development (Pawson et al, 2004).
3.3 Overview of the current realist theory

The realist theory of formal CPD’s IoPP that I present below highlights the interplay between CPD structure, content and process with the nature and extent of IoPP. From the literature, I identified four educational mechanisms that can lead to deep learning as an interim outcome and IoPP as the ultimate outcome of interest. These are sustained engagement and reinforcement, learning from relevant content, interactive learning, and the epistemological approach(es) to teaching and learning espoused during the CPD. However, these mechanisms can either be triggered or suppressed by features in the CPD or the workplace context. This review also shows that the workplace and wider practice domain comprise social structures whose ‘causal powers’ (cf. Elder-Vass, 2010) can support or hinder the realisation of IoPP. In particular, the literature showed IoPP can be constrained by service delivery pressures which are compounded by a lack of funding. Additionally, interrelated role-holders in the workplace can help to enable IoPP or challenge its realisation through their interactions with the CPD participant (the supervisor) or with the supervisor’s trainee. Finally, the realist theory presented here finds that the goals of CPD as intended by curriculum design, are influenced (but not determined) by overlapping structures in the wider professional domain such as standardisation and quality assurance agendas.

3.4 Steps in this realist review

Following RAMESES training materials (Pawson et al, 2004) and guidelines for a realist synthesis (Wong et al, 2013b), I conducted an eight-step literature review which informed my own empirical study. Here I present the steps in a linear fashion, but in reality, I revisited them iteratively as my understanding grew and the literature indicated promising avenues for exploration. The steps are:

1. Use the literature in the first instance to map out the conceptual and theoretical terrain in broad terms (Pawson et al, 2004).
2. Focus the scope of the review and the questions it seeks to answer.
3. Develop an initial explanatory framework or ‘program theory’ of how and why CPD may cause IoPP.

4. Develop a search strategy to find further evidence to ‘populate’ and ‘test’ this framework.

5. Develop and apply an inclusion and exclusion criteria to decide which documents will be analysed.

6. Apply realist principles of analysis to the selected, existing literature.

7. Iteratively refine explanations of how, why and in which conditions CPD may cause IoPP (or not).

8. Draw recommendations from the review findings.

Like systematic reviews, realist reviews should be transparent, enabling others to ‘audit’ the process and understand how it led to the eventual findings or recommendations (Pawson et al, 2004). ‘Auditability’ also helps others to see what the review may have (intentionally or otherwise) overlooked and therefore whether its focus is of use to their purposes. The following sections seek to provide such auditability.

The selection of explanatory accounts responds to my own study focus and questions. Their explanatory ‘power’ is grounded in the wide range of literature I drew upon which enabled theoretical saturation (cf. Pawson et al, 2004). Also, by drawing on literature reviews and substantive theory in the cognate fields of teacher education and vocational lecturer development, I was able to avoid the silo working that has been noted in medical education research (e.g., Steinert et al, 2016). Furthermore, this realist synthesis builds upon earlier reviews which asked different questions of the literature, the answers to which now enable my current focus. Table 1 summarises the focus of these reviews.
### Table 1: Progression of the literature reviews

<table>
<thead>
<tr>
<th>Date of the review</th>
<th>Review type and main review questions</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2015 – 2016</strong></td>
<td><strong>Scoping review</strong></td>
<td></td>
</tr>
<tr>
<td>1. What do we mean by ‘effective CPD’?</td>
<td>● Cost effective: learning gains justify the financial and human resource expenditure.</td>
<td></td>
</tr>
<tr>
<td>2. What do we mean by ‘impact on practice’?</td>
<td>● Modality comparison e.g., online learning is as effective as traditional lectures</td>
<td></td>
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<tr>
<td></td>
<td>● Effective CPD should cause impact on practice (IoPP)</td>
<td></td>
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<tr>
<td></td>
<td>● IoPP as changes in the behavioural, cognitive and affective domains.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Changes at the level of the individual participant, their learners, their teams, or their organisation</td>
<td></td>
</tr>
<tr>
<td><strong>2017 – 2021</strong></td>
<td><strong>Meta-narrative review</strong></td>
<td></td>
</tr>
<tr>
<td>1. How has ‘IoPP’ been conceptualised and researched?</td>
<td>● IoPP as the predictable uptake of course content or as unpredictable changes.</td>
<td></td>
</tr>
<tr>
<td>2. What outcomes have we valued or overlooked?</td>
<td>● IoPP as a direct result of CPD or as individual’s sociallysituated reactions to CPD resources.</td>
<td></td>
</tr>
<tr>
<td>3. What views of causality underpin research; what do they contribute to theory and practice?</td>
<td>● Linear views control for confounding factors showing that CPD works.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Interpretivist and realist views enhance understanding of how, why and for whom.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Realist views offer theoretically generalisable findings applicable beyond the local context.</td>
<td></td>
</tr>
<tr>
<td><strong>2021 – 2022</strong></td>
<td><strong>Realist synthesis</strong></td>
<td></td>
</tr>
<tr>
<td>1. What makes CPD effective in terms of causing IoPP?</td>
<td>● A CPD structure (C) conducive to sustained engagement (M) and cognisant of workplace factors (C)</td>
<td></td>
</tr>
<tr>
<td>2. For whom and in which circumstances?</td>
<td>● Learning from content relevant to role (M) during CPD (C)</td>
<td></td>
</tr>
<tr>
<td>3. What barriers to learning and IoPP exist in the CPD and workplace contexts?</td>
<td>● Interactive learning (M) in a safe learning environment (C)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Epistemological assumptions (M) shape the nature and extent of IoPP (O)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Funding, staffing and healthcare structures (M) in the workplace (C) influence engagement (M) and IoPP (O)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Inter-related role-holders support or impede (M) IoPP (O) at work (C)</td>
<td></td>
</tr>
</tbody>
</table>
3.4.1 Step 1: Earlier scoping and meta-narrative reviews

To develop my understanding of formal CPD’s IoPP, between 2015 and 2017, I began with an initial, exploratory scoping of the literature which progressed into a meta-narrative review (cf. Wong et al., 2013a) that I completed in 2021. Beginning with my topics of interest, ‘effective CPD’ and ‘impact on practice’, I cast my net wide (cf. Wong et al, 2013a). These early reviews therefore covered broad areas of medical education and non-medical teacher development. The aim was to map out, in broad terms, the conceptual and theoretical terrain by uncovering what is already known about effective CPD and factors in the workplace context which contribute to, or hinder IoPP. Initially, I therefore included continuing medical education programmes (where the content is clinical) as well as CPD for those in educator roles. I included any format of formal CPD (including one-day workshops, short courses, and longitudinal provision, online, face-to-face, or blended learning) for any health care professional (including nurses, dentists, physiotherapists and allied health care professionals) as well as reviews thereof. I also included theoretical papers addressing effective CPD for medical and non-medical educators, including schoolteachers and vocational lecturers. Typical of meta-narrative review, later, I asked of this literature what researchers meant by ‘effective CPD’ and by ‘impact on practice’; which paradigmatic and empirical approaches had been used to study these concepts and how they were linked in a theoretical framework (cf. Wong et al, 2013a).

From these earlier reviews, I saw that ‘effective’ meant different things, that impact could occur at different ‘levels’ and that effectiveness or impact studies most usually took the form of outcomes evaluations. First therefore, I distinguished the different aims of ‘effectiveness’ studies, which include ‘cost-effectiveness’, a comparison of modalities to determine which is ‘better’ at engendering learning, and studies of ‘impact on practice’. Then, focusing on ‘impact on practice’, the literature showed that ‘impact’ can occur at a range of levels from the individual learner’s behaviours, thinking or values to institution-wide practices. Most commonly, however, studies reported on IoPP at the individual level. IoPP was shown to be
due to learners’ reactions to and knowledge gains from the CPD and included affective as well as behavioural changes.

My earlier engagement with the literature also showed that in medical education research, studies of impact on practice regularly take the form of outcomes evaluations. Other research traditions were much less represented in the literature. While realist evaluation was becoming more widely used to study the provision of health care, there were only three realist evaluations of formal CPD for medical educators (Onyura et al, 2017; Sorinola et al, 2015; Sorinola et al, 2017). As a result, little is known about the social complexity of formal CPD’s IoPP in postgraduate medical educator development. Indeed, reviews (e.g., Steinert et al, 2016) and position papers alike (e.g., O’Sullivan & Irby, 2011) called for greater understanding of educational processes and workplace factors which may shape formal, professional learning and its IoPP. In contrast, in teacher education, at least three influential models of CPD existed: technical training, reflective practice, and critical teacher education (cf. Cakcak, 2016; Kennedy, 2005). These showed that underpinning epistemological assumptions or different approaches to teaching and learning can shape the nature, and sometimes the extent, of IoPP. They also highlighted tensions between policy and competing discourses as to the nature and goals of CPD and any IoPP it should engender. Drawing these three themes together, my earlier reviews showed that further exploration of two factors could enhance our understanding of IoPP. Firstly, the role of teaching and learning processes in shaping the nature and extent of IoPP. And secondly, the influence of the workplace and practice domain on CPD outcomes.

3.4.2 Steps 2 and 3: Initial focusing and a rough framework for the current realist synthesis

Having earlier scoped the conceptual and theoretical terrain, I was able to focus my questions for the current realist review (cf. Wong et al, 2013b). Although generally guided by the realist question, ‘what works for whom in which circumstances and why?’, realist review questions are
iteratively honed to a more specific and manageable focus (Wong et al, 2013b). Realist reviews then first begin with ‘rough theories’ or frameworks drawn from the literature and stakeholder consultations (Pawson et al., 2004). As the review progresses, the questions and focus become more specific as the literature indicates pertinent avenues of inquiry (cf. Wiese et al, 2017). Gradually, rough theories are refined (Pawson et al, 2004). For the current realist synthesis then, I began by asking what is known of effective CPD in terms of bringing about IoPP; what features in the CPD and workplace contexts support professional learning and IoPP; and what hindrances exist in these contexts, for whom and why?

With this still fairly broad focus, I identified a provisional framework of explanatory accounts which could inform my search strategy for a focused realist review (cf. Wong et al, 2013b). My “initial rough theory” suggested that the nature of teaching and learning processes during formal CPD could influence the nature, and perhaps extent, of impact on educators’ practice. Also, factors in the workplace influence attendance at and engagement in formal CPD as well as practitioners’ embodiments of IoPP. And thirdly, researcher’s worldviews and chosen foci shape what we can know about formal CPD’s IoPP: different worldviews may complement one another to illuminate different aspects of formal CPD’s IoPP. Due to these ideas, I developed the following search strategy as well as inclusion and exclusion criteria for papers.

3.4.3 Steps 4 and 5: Search terms and inclusion and exclusion criteria for the current realist review

My earlier reviews had indicated that teaching and learning processes have received less attention in PGME than in other cognate fields. Therefore, here I included literature reviews of IoPP studies from teacher education and higher education faculty development, as well as theoretical papers addressing substantive educational theories. These papers permitted me to explore how epistemological assumptions shape IoPP. Relatedly, I now excluded empirical studies and reviews thereof focusing on formal CPD’s impact on clinical practice. This was
because I wished to focus on the influence of the teaching and learning processes deployed
during CPD programmes on educators’ practice.

Because my earlier reviews had uncovered calls for a focus on the influence of the practice
domain, I included empirical studies and literature reviews involving formal CPD for
postgraduate medical educators from any clinical specialty. This was also because the
participants in my study work in a range of clinical specialties. However, since my participants
do not work in primary practice as General Practitioners and to keep the selection of papers
manageable, I excluded papers reporting solely on GP educator development. For the same
reasons, I also excluded papers which addressed formal CPD’s IoPP for other healthcare
professionals such as nurses, physiotherapists, and allied health professionals. Similarly, I
excluded papers concerning solely CPD for educators in undergraduate medical education
because the context for their work differs greatly from my focus: they teach medical students
in university settings rather than trainee doctors in the workplace. I anticipated studies of
undergraduate educators would shed little light on enablers and barriers to IoPP for
postgraduate educators supervising in a patient care context. I also limited the date range of
my search to 2005, the time of MMC inception in the UK. This was in order to explore whether
the formalisation of educator roles and national standards for educational practice influence
CPD provision, design, experiences, or outcomes. However, through snowball searching, I
identified two earlier papers which fit my inclusion criteria.

Different from my earlier reviews, I now focused solely on longitudinal or repetitive formal CPD
programmes akin to the module which formed the focus of my own empirical work. This
included both CPD in university settings (such as master’s level programmes) and non-
accredited, local, ‘in-house’ provision (previously, often referred to as ‘train-the-trainer’
courses). I therefore excluded studies of single, one-off workshops and conference attendance.
Similarly, I excluded papers reporting on journal clubs, informal study groups and
departmental meetings as, despite their repeated nature, I did not conceptualise them as formal programmes which follow a curriculum and are facilitated by tutors².

As with my earlier reviews, I continued to include study designs and review types of any kind as different approaches to research contribute understanding to different aspects of CPD and its IoPP. My aim was to identify context-mechanism configurations which support or undermine IoPP. This review therefore draws on 13 prior literature reviews from teacher and faculty development as well as PGME, on 25 empirical studies of formal CPD for postgraduate medical educators and on substantive educational theories.

Using the search terms set out in Table 2, I searched the British Education Index, APA PsychInfo and ERIC databases. I chose these search terms in light of the rough, initial theory or framework guiding the start of this realist review. This search strategy helped me to find further evidence to 'populate' and 'test' this framework (cf. Pawson et al, 2004).

<table>
<thead>
<tr>
<th>Formal CPD</th>
<th>continuing professional development or CPD or professional development or faculty development</th>
</tr>
</thead>
<tbody>
<tr>
<td>IoPP</td>
<td>impact or effect or influence or outcome or program evaluation</td>
</tr>
<tr>
<td>postgraduate medical educators</td>
<td>Educational Supervis* (supervisors or supervision) or doctors or physicians or consultants not nurs* (nurses or nursing) not allied health care professionals</td>
</tr>
</tbody>
</table>

² I refer to the consultant doctors participating in CPD programmes as ‘learners’ or ‘(postgraduate) supervisors’ and I refer to the junior doctors who are their learners in the workplace as ‘trainees’ or ‘juniors’. For those delivering the CPD to learners, I use ‘tutors’, ‘facilitators’ or ‘(CPD) staff’. 
Until submission of this thesis, I included papers published since the 2005 inception of MMC, reading only those studies published in English, although studies from any country were included to help test the realist theories under development.

3.4.4 Step 6: Iterative, realist analysis of the literature

This review aims to uncover transferable aspects of CPD programmes and explain the influence of workplace environments on IoPP rather than to accumulate descriptions (cf. Wong et al, 2013b). To do so, I extended the example set by Wiese et al (2017) who coded the results and discussions sections of empirical papers to identify context, mechanism, outcome configurations. Additionally, I coded the background or introductory sections of empirical and review papers. I did so to seek out wider contextual influences on CPD provision and design or on the outcomes of interest to the researchers. I also examined the CPD course descriptions for evidence of the interplay between epistemological assumptions, learners’ experiences, or perceptions of the CPD and any IoPP outcomes. I looked for patterns (or demi-regularities) to determine how similar approaches to teaching and learning are affected by different contexts. From researchers’ discussions of findings and their study designs, I identified complementary areas for research which may enhance our understanding of formal CPD’s IoPP.

Guided by my initial framework and focus, first, I recorded themes from each paper under the broad headings shown in the top half of Table 3. Iteratively, I looked for patterns in the themes across multiple papers. From these, I organised the themes into the categories of i) CPD structure, ii) CPD content, iii) CPD process iv) overlapping structures in the practice domain and v) inter-related role-holders in the workplace. In each of these categories, I found enablers and barriers to learning and IoPP.
Following RAMESES training materials (Wong et al, 2013b), I used the conceptual tools of juxtaposing, reconciling, adjudicating, consolidating and situating to synthesise disparate content into a realist theory of contextual influences on pertinent mechanisms. The purpose of these tools and examples from my review are set out in Table 4.

To set out my findings as context, mechanism, outcome configuration, I considered key contexts to be the CPD programme that participants attend, the physical workplace and the wider professional practice domain for postgraduate supervision. I used Elder-Vass’s (2015) stratified conceptualisation of mechanisms. As well as individual agency, this acknowledges the ‘causal powers’ of social groups, social processes and role-holders’ role-based coordinated
interactions. A key example is learners and tutors engaging in learning and teaching. I viewed learning as (a process and) an interim outcome, with IoPP as the ultimate outcome of interest.

Consistent with RAMESES guidelines, as analysis progressed, the questions I asked of the literature became more focused (cf. Wong et al, 2013b). In practice, this meant that I revisited steps 2, 3, 4, 6 and 7 outlined above in a cyclical fashion. For example, from asking which CPD components have the potential to engender IoPP, I identified sustained engagement with CPD ideas, concepts, or skills. I then focused on sustained engagement, seeking evidence of how it is conceptualised, supported, or interrupted in the CPD and workplace contexts.
Table 4: Conceptual tools, their purpose, and examples from my review

<table>
<thead>
<tr>
<th>Concept</th>
<th>Purpose</th>
</tr>
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<tbody>
<tr>
<td>Juxtaposing</td>
<td>when one study provides the process data to make sense of the outcome pattern noted in another</td>
</tr>
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</table>

In teacher education, Kennedy (2005; 2014) argued that the nature of teaching and learning processes shape the nature of IoPP. In PGME, Hewson (2000) showed that conceptual change theory underpinned CPD design and this shaped the nature of the IoPP. This caused me to search for the theoretical underpinnings of CPD programmes which may explain their IoPP outcomes.

| Reconciling | identifying differences which explain apparently contradictory sets of findings |

Some learners enjoyed mixed specialty groups others preferred same specialty groups. Others still preferred to study with strangers or with colleagues. This suggests a combination of goals, task types and group composition influences learners’ reactions to CPD.

| Situating    | this mechanism in context A, that one in context B                      |

In master’s level programmes (C), reinforcement of learning (M) in between sessions can sustain engagement (M). During in-house CPD contact sessions (C), protected time for regular attendance (M) can sustain learners’ engagement (M).

| Consolidating| building ‘multi-faceted explanations of success’                        |

The curricular structure, content and process of CPD, as well as workplace social structures and colleagues shape the nature and extent of IoPP. It is therefore important to understand drivers for CPD in the professional domain, tutors’ intentions and learners’ reactions or perceptions of their experiences. Even then, IoPP does not transfer unproblematically to the workplace.

(Based on Wong et al, 2013b)
Differences in the literature regarding the content or goals of CPD also shifted my focus. From asking which educational contexts and mechanisms are effective at causing IoPP, I also asked what the purpose of educator development might be. The goals or intentions underlying the provision of formal CPD became centrally important and this led me to focus on two factors: the social embeddedness of CPD within wider policy contexts and substantive theory linking approaches to teaching and learning with the nature and extent of IoPP goals. Relatedly, I saw that an evaluation research design should ‘match’ the goals of the programme (cf. Rogers, 2008). Therefore, the specific review questions are:

1. What components make formal CPD programmes effective at improving supervision in postgraduate medical education?
   a. In the CPD context, what barriers to learning and impact on practice reduce the effectiveness of CPD?
   b. In the workplace context, what supports or hinders the realisation of IoPP, for whom and why?
2. What are the purpose and goals of formal CPD?
   a. How are these influenced by the wider professional context?
   b. How might epistemological assumptions about teaching and learning contribute to intended goals?
3. Which aspects of IoPP require further research to enhance our understanding?

Questions 1) and 2) address what is already known about formal CPD and its IoPP for postgraduate medical supervisors. Question 3) asks what future foci could contribute meaningfully to the field and which strategies may be useful in examining these.

In the following sections, I present my findings in the form a realist theory. Where the distinction between context (C), mechanism (M) or outcome (O) is not clearly stated in the wording, I follow the convention of indicating each with a capital letter in parentheses.
3.5 The influence of curriculum structure: sustained engagement through longitudinal provision

Earlier literature reviews exploring effective CPD for educators already in role note that longitudinal programmes are more effective or have more impact on participants’ practice than do shorter offerings or single events (Garet et al., 2001; Leslie et al., 2013; Steinert et al., 2006; Stes et al., 2010). Indeed, following her work with Garet et al (2001), in her work on professional development for schoolteachers, Desimone (2009; 2011) found a consensus of evidence positing longitudinal provision as an essential, core feature of effective CPD. This was because she found that longer courses, rather than single events, lead to more improvements in the quality of teaching. In part, these outcomes are achieved by creating “a rhythm” that connects CPD activities with follow-up and consolidation activities, including further support where needed (Hopkins, 2022). Similarly, in post-secondary education, Stes et al (2010) concluded that CPD of lengthier duration (from a couple of weeks to a couple of years) produced more positive behavioural changes to participants’ teaching practice as well as more improvement in their learners’ learning, than one-time events. Since Stes et al (2010) sought, through systematic review, to identify which duration of CPD is more effective at producing IoPP, they called for further investigation into this comparison. They did so because the majority of studies in their review reported on prolonged courses, making comparisons with shorter courses difficult. In effect, then, Stes et al’s (2010) review identified the shift towards more longitudinal CPD for educators working in post-secondary education, as is now generally promoted for schoolteachers’ professional development also (cf. Hopkins, 2022). Similarly, in medical education, Leslie et al (2013) noted a shift from the traditional format of single, one-time ‘train-the-trainer’ workshops which were prevalent in the 2006 BEME guide, towards longitudinal programmes being the most common format for CPD. The authors suggest this indicates that CPD designers and leaders in the field now acknowledge that practice change is facilitated by prolonged exposure which affords time for the application of learning in the workplace and subsequent reflection thereupon. These conclusions were echoed by the findings of the empirical studies in this review, which stated that the success of the CPD was due in part to the longitudinal nature of the programme (Knight et al., 2007) or the repetitive
nature of the intervention over time (e.g., Roos et al., 2014). In realist terms, CPD courses of a longer structure (C) offer the potential for sustained engagement as an educational mechanism which can lead to deep learning (as an interim outcome) and IoPP (O). Indeed, in their realist evaluation of a longitudinal CPD course, Sorinola et al (2015) found engagement to be the most important educational mechanism responsible for learning and IoPP even more so than participants’ perceptions of the CPD and their motivation for attending. And this finding resonates with earlier work in teacher education noting that engagement is a pre-requisite for learning (Hargreaves, 2006).

This common theme prompted me to begin asking of the literature how CPD courses sustain learners’ engagement. I found that university-based, master’s level programmes explicitly encourage or require workplace-based learning while participants are away from the immediate CPD context. In contrast, locally designed and delivered CPD courses use interactive teaching techniques during the CPD contact sessions to sustain learners’ engagement, but do not explicitly encourage or require learners to engage with CPD ideas or skills in between contact sessions.

3.5.1 Connected sessions facilitate engagement

In postgraduate medical education, sustained engagement throughout the CPD experience has been supported by clear connections between the aims and content of individual contact sessions or modules. Such connections between sessions have been found to be effective in the university as well as the local context. This has included retrospective reinforcement such as when a later contact session revisits the content of an earlier session (e.g., Karg et al, 2007) or a later task is based on earlier learning (e.g., Sorinola et al, 2017). It has also included prospective, developmental links such as highlighting to participants the meaningful connection between modules in a lengthy course (Archer et al, 2022). Also, introducing the focus of any eventual assessment early on and working towards it over time (Archer et al, 2022; Sethi et al, 2016). However, poorly designed connections can cause learners to
disengage because they perceive content to be repetitive (Foster & Laurent, 2013; Sorinola et al, 2015) or when they fail to perceive how lengthy provision ‘fits together’ into an overall message (Archer et al, 2022). For example, Archer et al (2022) found that over time, medical educators in a two-year master’s in education disengaged from the programme. This was because they began to view the multiple modules as disconnected and failed to perceive the overall message of the programme. To ‘connect’ modules and sustain learners’ engagement within each module as well as across the programme, Archer et al (2022) introduced a programme-long, e-Portfolio as a means of continuously reminding learners of the “golden threads” that tied the programme modules together. These threads were, in fact, the educational principles of adult learning and transformative learning which underpinned the master’s programme design. The scholars found that constantly referring to these golden threads throughout all modules, via the e-portfolio, helped sustain engagement by reminding learners what the program was about and what its aims were. Learners reported IoPP as transformations to practice. Similarly, Sorinola et al (2017) found that the requirement to submit a reflective portfolio at the end of the CPD course not only helped learners perceive connections between various sessions, but also sustained their engagement with CPD content and ideas after contact sessions had ended. Learners reported using the skills that were taught and practiced during the programme while they were studying alone, in preparation to submit the portfolio. Subsequently, these skills also constituted IoPP for participants. The immediate CPD structure (C) then, is influential in sustaining learners’ engagement (M) and this in turn supports IoPP (O).

3.5.2 Reinforcement in the workplace and the busy clinician

Longitudinal CPD can also be effective at causing IoPP if there are opportunities for behaviours learned during contact sessions to be trialled and reinforced in the workplace (Hoekstra & Crocker, 2015; Hopkins, 2022). In post-secondary faculty development and postgraduate medical education alike, CPD research has found that peer observation in the workplace (e.g., Amundsen & Wilson, 2012), workplace mentors connected to the CPD programme (e.g.,
Archer et al, 2022) and action research or critically reflective projects at work (e.g., Sethi et al, 2016) can sustain learners’ engagement with CPD content while away from the CPD context. However, the current review found that, in medical education, only studies of university based CPD explicitly reported curriculum design features which aim to reinforce CPD learning in the workplace, in between contact sessions. This form of engagement was not overtly reported in local CPD contexts. University CPD programmes then aim to blend together the roles of clinician-educator and CPD learner. Formal curriculum components aim to maximise the benefits of reinforcing CPD learning in the workplace.

However, while at work, a lack of time for teaching related activities can influence learners’ ongoing engagement with CPD content or ideas. That is, sustaining participants’ engagement throughout the prolonged CPD experience is not a simple matter of designing requirements into the CPD curriculum. For the busy clinician, the complexities of clinical service delivery can vie for their time, energy, and attention (Schostak et al, 2010) making it difficult to trial new teaching skills or ideas and critically reflect upon them (Junod-Perron et al, 2014). Barriers to IoPP reported by outcome studies equally suggest barriers to reinforcing CPD learning in the workplace, in between contact sessions. Outcome studies of locally delivered CPD show that, following CPD, clinical educators have reportedly been frustrated by a lack of time to set objectives for daily teaching (Barratt & Moyer, 2004), by a lack of time to create teaching and learning opportunities (Karg et al, 2013) and by a lack of time for refreshing their memories about CPD content (Barratt & Moyer, 2004). Medical educators need job plans that are conducive to implementing CPD ideas, otherwise they continue to teach according to habit (Barratt & Moyer, 2004). Indeed, Perron et al, (2014) found that the use of and reflection on newly acquired teaching skills was more likely among those who hold a formal teaching role with protected time for it. The workplace then presents impediments to reinforcing CPD learning at work. In particular, the competing demands of a busy clinician’s role as healthcare provider reduce opportunities for focusing on their role as educator.

Additionally, impediments to sustained engagement and reinforcement may be present in the CPD context. An onerous CPD curriculum can cause strategic engagement for postgraduate
medical educators because they typically study part time alongside full-time work and other commitments. For example, Archer et al (2022) found that participants struggled to balance their personal life with their blended learning, master’s level studies in PGME and therefore disengaged from CPD at times to prioritise other activities. The researchers and participants alike were somewhat surprised that the part-time CPD curriculum had proved more onerous than many had expected but agreed this negatively impacted on sustained engagement. Sustained, meaningful engagement as a mechanism then is contingent upon the interplay between the demands of the CPD curriculum and competing personal and professional responsibilities.

3.5.3 Sustained engagement as regular attendance at course sessions

For locally delivered programmes, sustained engagement has largely been framed as attending all of the sessions on offer throughout a course. This is apparent from the course descriptions and findings of empirical studies. These demonstrate the researchers’ keen awareness of the importance of regular attendance throughout a programme, as well as their acknowledgement that factors in the workplace context may interfere with this. For example, many studies attribute the ‘success’ of the CPD programme to its ‘longer-than-traditional’ nature, offering more than a one-off event (e.g., Foster & Laurent, 2013; Karg et al, 2007). And consequently, published reports focus on how logistical decisions aimed to facilitate regular attendance over time.

Locally delivered courses are cognisant of the competing demands of service delivery. These include time constraints, lack of clinical cover and lack of funding for CPD. These influences have been considered prior to CPD provision (e.g., Hewson et al, 2000) or uncovered retrospectively through research (e.g., Leslie et al, 2013). Together they demonstrate that

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3 (Engagement during these sessions is engendered by (inter)active learning and is addressed in section 3.8).
engagement in CPD is influenced by workplace factors beyond the immediate CPD context. Many locally delivered courses were offered before (e.g., Hewson et al, 2000) or after (Foster & Laurent, 2013; Macvicar et al, 2013) the working day. This reportedly helped participants attend more regularly by avoiding clashes with clinical commitments. Nonetheless, studies noted absences due to work pressures (e.g., Schostak, 2010) and holidays (e.g., MacVicar et al, 2013). Macvicar et al (2013) found that some participants missed one third or more of the evening sessions on offer. Furthermore, CPD staff made express decisions to offer CPD courses on-site (e.g., Foster & Laurent, 2013) or wholly on-line (e.g., Brown & Bullock, 2014; Ozuah et al, 2010). This reduces travel time to a CPD venue, making CPD accessible before or after a working day. Of note, Foster and Laurent (2013) claimed that not only was local provision preferable, but university attendance was simply not feasible for busy clinicians.

Alternatively, others found that senior management had facilitated regular attendance by offering protected time for CPD during shift hours or designating the CPD programme mandatory (e.g., Barratt & Moyer, 2004). Rather than retrospectively uncovering this during evaluation research, one study by Onyura et al (2017) reported that procuring agreement from managers was a pre-requisite for enrolment in the course, thereby demonstrating stakeholders’ keen awareness of contextual influences on CPD. The scholars explicitly linked protected time to engagement with CPD, characterising the course as “an unprecedented opportunity” (p.172) for participants to focus on their roles as educators, because usually clinical commitments take priority. Learners reported greatly enjoying repeated opportunities to talk with like-minded peers about education and indicated this was a cause of IoPP. Yet in contrast, despite a widespread consensus across cognate fields that longitudinal provision is conducive to IoPP, in their review of CPD for educators working in family medicine, Sorinola and Thistlethwaite (2013) found that the majority of studies reported on short courses and workshops. Moreover, they found that participants in these studies reported a preference for brief events due to time constraints. There is a tension then between ‘best practice’ as indicated by evaluation research evidence and profession-specific factors that influence CPD design and learners’ engagement.
The availability of funding for attendance at CPD or to pay for clinical cover staff also influences consultants’ engagement in CPD sessions. For example, O’Sullivan and Irby (2011) and Sorinola and Thistlethwaite (2013) noted that cuts to funding for educator development in family medicine had led to fewer clinicians enrolling in CPD courses. And Onyura et al (2017) found that although CPD participants had leave from departmental duties, some had not procured cover for their clinical duties. Consequently, these learners were unable to engage fully in CPD sessions as they needed to regularly check their bleepers in case clinical colleagues needed their input.

Empirical evaluations of locally delivered CPD then, evidence a concern with managing role conflicts. Those enrolled in educator development courses are first and foremost, consultant clinicians responsible for patient care and the training of juniors in the workplace. Their role as ‘CPD learner’ is therefore influenced in positive and negative ways by this. Consequently, sustained engagement with CPD is not simply invoked by factors in the immediate CPD context. It is also shaped by factors in the professional context. Although reported descriptively, rather than theorised through recourse to substantive social theory, logistical barriers to regular attendance at CPD are widely reported. Most notably among them, lack of time for attendance and lack of funding for clinical cover. Similarly, the support of senior management has been shown to reduce role conflicts, by enabling attendance through protected time and clinical cover, and by enabling IoPP through job plans with time for teaching. For those who design and deliver CPD, implementing best practice such as offering longitudinal courses, is also subject to the wider contextual influences of profession specific funding. In realist terms, features of CPD curriculum design (C) can aim to invoke sustained engagement (M) to bring about deep learning and IoPP (O), but this educational mechanism is affected by variations in local workplace contexts and the wider practice domain (C). Health care provision, funding and staffing structures are causally influential in whether and how clinicians engage in formal CPD. Furthermore, the affordances and constraints of these structures are embodied through the decisions and actions of inter-related role holders in senior management positions. Given that sustained engagement with CPD has been shown to
facilitate deep learning and IoPP, more theoretically informed accounts of how it is enabled or disrupted for postgraduate medical supervisors may enhance practice.

3.5.4 The importance of concatenation in realist theories

The literature shows that sustained engagement is a key educational mechanism made possible by longer courses, and that sustained engagement has been shown to have strong potential to lead to IoPP. Sustained engagement can be engendered by the curriculum structure but is not solely dependent on this. Influences in the local workplace and wider professional domain may also support or interrupt sustained engagement. Furthermore, features of the CPD curriculum itself may also encourage or disrupt learners’ meaningful engagement. Sustained engagement has been viewed as regular attendance and meaningful participation throughout a course or as continued engagement with CPD ideas even when away from the CPD immediate context. Sustained engagement entails reinforcement in the CPD or workplace context. This may occur through a connected sequencing of tasks (e.g., Junod-Perron et al, 2014), through experiential learning (e.g., Schostak, 2010) and through deliberate (guided) reflection on learning (e.g., Archer et al, 2022). As such, reinforcement, experiential learning, reflection and consolidation, can be considered as the interim outcomes of sustained engagement (prior to IoPP). They can also be viewed as further educational mechanisms involved in causing IoPP. This is what is meant by concatenation, which is an important concept in the building of realist theories. Outcomes are not produced in linear fashion by one causal factor, but by complex multi-mechanism interactions (Astbury 2013) which are open to contextual influences.

Together, the evidence surrounding these concatenated mechanisms and the barriers presented by the workplace suggest that asynchronous blended learning may help manage role conflict. Blended learning CPD for postgraduate medical educator development offers the potential to sustain learners’ engagement at times and from places that are convenient for the busy clinician (Cook & Steinert, 2013). However, curriculum requirements perceived as
onerous, repetitive, or disconnected may fail to engage learners at times. Future research then could explore what task types work for whom in the asynchronous blended learning context and why (not).

3.6 Learning from relevant CPD content supports IoPP

There is evidence in cognate fields across the literature that the content of CPD and IoPP are causally linked. However, there is disagreement regarding what manner of content ‘works’ for whom during formal CPD. In schoolteacher education, Desimone (2009) argues that discipline specific content is the most important core feature of effective CPD provision, because it has been shown to have larger positive effects on teachers’ practice and pupils learning than skills focused CPD. Yet, in higher education, Stes et al (2010) found that discipline specific CPD had a comparable impact to discipline general CPD, with both producing positive outcomes. In medical education, some reviews found content relevant to learners educational and clinical work to be a key feature of effective CPD that leads to IoPP (Lesliet et al, 2013; Steinert et al, 2016). Whereas the review of faculty development for health care professionals by Behar-Horenstein (2019), noted that participants most needed support in developing their teaching skills because they are already skilful in their clinical practice. Differently again, Sorinola and Thistlethwaite’s (2013) review concluded that effective CPD design is not a matter of choosing the best content, but rather designing a productive learning experience. However, theirs was already a discipline specific review of CPD for educators in family medicine. They noted that CPD content “varied widely” (2013:e1312) but concluded that the review highlighted the success of formal provision.

3.6.1 Relevant content addresses role-based learning needs

The debate over what manner of content most effectively contributes to IoPP can be interpreted as advocating for content that is relevant to the learners’ learning needs and
professional roles. This resonates with the principles of adult learning (cf. Knowles, 1990) and is supported in the disparate findings and foci of the empirical studies reviewed here. For example, Karg et al (2013) recognised that doctors need clinical updates throughout their careers and those who are educators also need educator development. They therefore found that integrating clinical updates and teaching skills into a single course is “highly effective” (p.e1564) in changing consultants’ medical and teaching practice. They note that there are very few courses which integrate medical updates with teaching skills practice and therefore call for more research into the comparison between integrated and ‘separated’ courses. However, other studies recognised that doctors are clinical experts in their specialty but receive no formal training in education (Berbano et al., 2006; Foster & Laurent, 2013; Knight et al., 2007; Onyura et al., 2017). These studies therefore prioritised participants’ learning needs derived from their educational roles. CPD content focused on educator development therefore included topics relevant to workplace-based postgraduate supervision such as being learner centred (Knight et al, 2007) by eliciting trainees’ current knowledge (Myhre & Lockyer, 2010) and letting them talk more (Myhre & Lockyer, 2010; Ozuah et al., 2010); or, raising trainees’ awareness of their own strengths and weaknesses (Junod-Perron et al., 2013); and asking more open-ended, higher-level, analytical questions of trainees. This latter skill entailed a shift away from recall or clarification questions (Berbano et al, 2006). Other CPD topics relevant to the postgraduate supervisor included assessing learners (Onyura et al, 2017; Perron et al, 2013), using competency-based assessment tools (Myhre & Lockyer, 2010) and checking their understanding of a supervisor’s feedback on performance (Junod-Perron et al, 2013); or prompting learners to self-assess and to plan future approaches to patient care (Ozuah et al, 2010). Of note, giving feedback is a core, common topic found in all the empirical studies reviewed here, as this is a highly valued teaching technique in workplace-based supervision (cf. Chowdhury & Kalu, 2004).

Most studies in this review reported that IoPP outcomes uncovered by evaluation research reflected, or even matched, CPD content. This supports the realist theory that IoPP is supported by content that is relevant to the learners’ role-based learning needs. For example, Perron et al (2013) interpreted outcome data on observable behaviours to suggest that the
reason supervisors did not adopt two particular teaching behaviours taught during the CPD was perhaps because these were not “most meaningful” (p.913) for their practice. Similarly, Schostak et al (2010) elicited learners’ views of effective CPD and found that doctors perceived CPD as inextricably linked to doing their jobs. They appreciated content that helped them fill gaps in the knowledge or skills needed for practice. Furthermore, Sarikaya et al (2010) explained differences in IoPP in terms of the relevance of the content to participants’ professional roles. These scholars offered CPD to clinicians from undergraduate and postgraduate medical education and different clinical specialties. They found that IoPP differed among learners according to their academic position. Unlike the pre-clinical teachers, workplace-based supervisors found all the topics covered to be very or completely useful and 98% of this sub-group reported deploying content to change their educational practice. However, what is not clear is whether these educators therefore encountered challenges in learning together, due to the differences in their positions and their different perceptions of the relevance of the content. IoPP is made possible then when CPD content addresses participants’ learning needs (Junod-Perron, Nendaz et al., 2014; Junod-Perron, Cullati et al., 2014) arising from responsibilities at work (Brown & Bullock, 2014; MacVicar et al., 2013; Schostak et al., 2010). And this aligns with principles of adult education.

3.6.2 Varying approaches to determining learning needs

While CPD that meets learners’ needs has strong potential to bring about IoPP, the way in which postgraduate supervisors’ role-based learning needs are determined differs in medical education. Learning needs may be elicited from a sample of the target population, from the views of senior management or from formal standards for practice. Less often, information about learning needs is gathered from supervisors’ trainees. Alternatively, content is deemed relevant and necessary due to its widespread use, rather than through formal needs assessment involving learners. For example, Knight, Carrese and Wright (2007) stated the programme content included concepts which are known to be essential to effective supervision. Myhre and Lockyer (2010) taught skills known to be necessary for improving
medical educators teaching and assessment of trainees. And Ozuah et al (2010) reported on a course that taught the ‘one-minute preceptor’ because it is a widely used method by clinician-educators. Learners’ needs then were decided based on widespread practice and outcome studies report uptake of this CPD content by learners in their teaching practice. However, since the evaluation research did not include learners’ reasoning for the outcomes, less is known about why learners may have valued this content and therefore why it led to IoPP. Had learners already felt a need for development in these areas, or did exposure to the content signal its utility in practice? Might widespread use elsewhere facilitate IoPP in any way?

Other studies carried out ongoing needs assessments with current learners. MacVicar et al (2013) delivered a course for Educational Supervisors which permitted them to choose which modules they wished to study and in which order, while Hewson (2000) committed to letting participants’ agendas take precedence over the formal session plan. Similarly, Onyura et al (2017) report that programme content and goals were decided first, but that they used an evolving curriculum design. This meant that just-in-time learning could be incorporated into the CPD to ensure the CPD focus continued to match learner’s own needs. Learners’ needs assessment then was integrated into and shaped the CPD on an ongoing basis. Evaluations of these CPD courses showed that learners drew direct connections between content which they deemed timely and relevant and IoPP. Similarly, Foster and Laurent (2013) found that doctors disengaged when they found content to be irrelevant to their teaching practice and reported negatively on irrelevant content during the evaluation research.

Differently again, some studies drew on policy or standards to determine what should be learned but only one study formally involved learners prior to curriculum development. Barratt and Moyer (2004) report a formal needs assessment carried out by Likert-scale survey, with items decided by the Dean of the general paediatrics department. The two-page survey enabled CPD staff to collect information about paediatric consultants’ learning needs for their supervisory roles prior to the start of the course. The skills on offer were recommended by senior management and local policy. Learners chose the most relevant or most needed from among these. Evaluation of the CPD’s IoPP found statistically significant change in all the skills
for all 13 participants. Also drawing on external drivers to identify CPD participants’ learning needs, Fellow-Smith et al (2013) and Brown and Bullock (2014) developed programmes for postgraduate supervisors which met the UK General Medical Council’s (2012) Standards for Trainers. To further refine identification of learning needs, Fellow-Smith et al (2013) also drew upon the GMC’s Trainee Surveys. Both studies collected feedback from participants at the end of the course using a rating scale. Over 85% of participants’ in each study rated the CPD content as excellent. Brown and Bullock therefore concluded that the CPD could help educators meet regulatory body standards. Similarly, Fellow-Smith et al (2013) attributed reported improvements in supervisory practices to the content being relevant to trainers in the workforce. Consequently, they underline the importance of regularly reviewing CPD provision to ensure it remains aligned with policy. These studies therefore highlight the connection between external influences in positions of power, CPD content that is relevant to externally defined roles and IoPP. However, richer explorations of why the learners adopted these practices may enhance our understanding of the multiple causal factors involved in formal CPD’s IoPP. Qualitative approaches to research and process evaluations may complement our understanding. For example, might the involvement of senior management, policy or standards introduce an element of compliance that could explain IoPP? Might policy agendas reduce barriers to IoPP through formalised roles or expectations in the workplace? Role-based, professional learning needs then are a contributory factor in IoPP, but the ways in which these needs are determined varies for postgraduate medical educators. Additionally, in program evaluations of formal CPD for postgraduate medical educators, there is a lack of theory explaining the interplay between the professional context, CPD tutors’ and students’ values surrounding role-based learning needs.

3.6.3 The medical educator’s changing role profile

Furthermore, since the early 2000s, what is deemed relevant to a medical educator’s role has evolved and this also influences the content of formal CPD. Up to 2016, systematic reviews noted formal provision for educators predominantly focused on improving teaching skills (e.g., Leslie et al, 2013; Steinert et al, 2006;2016). Programmes with wider aims nonetheless also
offered teaching skills (e.g., Sorinola and Thistlethwaite, 2013). Reviewers noted this common focus was due to raised awareness of the importance of teaching skills rather than assuming that clinical experts can automatically teach well (e.g., Leslie et al, 2013). For example, in Canada, changes in educational trends created a need for CPD that helped those in educator roles keep abreast of teaching and assessment requirements (Steinert et al, 2016). In the UK, as formal roles for postgraduate supervision were gradually introduced, the influence of the supervisor’s educational skills on trainee progression were noted (Agius et al, 2008), thus creating a need for educator development courses. Nonetheless, these reviews looked forward and called for more provision that focuses on other aspects of an educator’s role. This includes curriculum design, scholarship, career development and educational leadership (e.g., Leslie et al, 2013; Steinert et al, 2006; 2016). In doing so, they highlighted the potential for an educator’s role to be multi-faceted and non-static. Furthermore, the need for CPD programmes to address more than teaching skills is not specific to medical education. A later review of teacher development by Phuong et al (2018) considered the increasingly complex roles of teachers have “put pressure” (p. 375) on CPD programmes to respond. More recently, medical education studies have noted that these calls have been heeded: longitudinal, formal CPD now more commonly focuses on a combination of topics and skills beyond didactics (Archer et al, 2022; Alexandraki, 2020). In addition, there is continued growth in the number of master’s level university courses focusing on the multi-faceted role of medical educators (Sethi et al, 2016; Alexandraki, 2020). In their scoping review, Alexandraki et al (2020) argue this is because CPD for medical educators aims to align with accreditation requirements. In other words, the formalisation of postgraduate medical educators’ roles is part of a quality assurance agenda but has also opened a career path comprising several formal roles. This means CPD provision and content can support role-holders to remain in role by meeting formal requirements, but it can also support clinicians to successfully advance their educational careers. Formalisation of educator roles then, changes what can be deemed relevant content for educator development programmes. And this suggests that clarifying the goals of a CPD programme is important during design, delivery and evaluation.
3.6.4 The importance of clarifying CPD goals

The differing views as to what might be appropriate CPD content and the varied content that leads to IoPP, raise the question as to the purpose and goals of a CPD programme. In university and workplace contexts alike, CPD can be construed as a mechanism for improving practice. Yet what do we mean by ‘improved’? To claim CPD was effective at improving practice, it stands to reason we should first establish the intentions underpinning the CPD. That is, we should evaluate a programme in terms of its own goals (Amundsen & Wilson, 2012; Kaufman, 2019), asking not only if they were achieved, but also how and why (Pawson & Tilley, 1997). Yet what might be the goals of CPD; who selects them and why? In the field of teacher education, this is a complex, long-standing discussion (Day & Sachs, 2004; Hodkinson, 1998; Nieto, 2003). Related questions abound. For example, should CPD for educators improve individuals’ teaching skills, encourage the scholarship of teaching or help with career progression? Alternatively, should CPD develop team-based or organisational practices in education such as departmental wide curriculum reform or the creations of learning organisations? Does CPD function as a mechanism for policy implementation or provide a space for educators to envisage transformations of practice (cf. Hodkinson, 1998; Kennedy, 2014)? Further, we might ask who the ultimate beneficiaries of CPD are. In medical education, there is common sense consensus that trainees can benefit from more skilled supervisors, but medical education research recognises the complexities of uncovering the causal links (e.g., Fellow-Smith, 2013). Others still, have suggested educator development may contribute to improved patient care (Reddy et al., 2012). To answer these questions requires socially situating CPD provision in the wider professional context. And this adds to the realist theory developed here: The nature and extent of IoPP is shaped by the goals of the CPD which are in turn influenced by socio-professional structures and discourses beyond the immediate CPD context.

Work in teacher education also shows that the (espoused) purpose of CPD can influence the nature of teaching and learning activities and experiences during the programme (e.g., Amundsen & Wilson, 2012; Cakcak, 2016; Kennedy, 2005, 20014; Hodkinson, 1998). That is, curriculum designers’, tutors’, and learners’ epistemological assumptions about the purpose of
CPD can influence the way in which they engage in or support learning. However, in medical education research, links between CPD purpose and process may be explicit and intentional or implicit (Steinert et al, 2016) and even habitual (Bunniss & Kelly, 2010). To enrich explanations of CPD’s IoPP then, it is important to explore the theoretical underpinnings for teaching and learning processes and the goals they support. I therefore address this more fully in the next section.
3.7 The influence of process: Epistemological assumptions shape IoPP

It is important to understand the epistemological assumptions underpinning CPD teaching and learning processes as these have been shown to shape the nature of IoPP in teacher education, in vocational lecturer development as well as in medical education (Hodkinson, 1998; Kennedy, 2014; Ng et al., 2017; Ng et al., 2020). However, in the PGME program evaluation literature focused on effective educator development, teaching and learning processes have so far received less attention than the structure, content and outcomes of the course. This is apparent in three findings of this review. Firstly, explicit, detailed discussions of specific educational theories, bodies of work or epistemological assumptions underpinning teaching and learning processes are rare. This means the manner in which learners engage in CPD activities is unclear. Instead (and secondly), course descriptions list teaching techniques or methods such as presentations, skills practice and small group discussions and report on learners’ reactions to these in terms of enjoyment or motivation to continue with the course. Consequently (and third), CPD processes and outcomes are not regularly linked in theoretically generalisable ways. This is in contrast to the cognate fields of teacher and vocational lecturer education.

In teacher education, epistemological assumptions and manner of engagement in CPD have been linked with the nature of IoPP. Kennedy’s (2005; 2014; 2015) work on models of CPD specifically links the nature of CPD outcomes with the nature of learning processes and, furthermore, situates these in the wider professional domain. She finds nine categories of CPD whose dominant characteristics include views on the sources of knowledge and beliefs about the role of learners. For Kennedy (2005; 2014), the first three of these specifically refer to formal CPD. These models therefore also include beliefs about the role of facilitators. I find a further three models (standards-based, action research and transformative) may or may not involve a formal curriculum and facilitators as set out in the right-most column of Table 5.
According to Kennedy (2005;2014), the standards focused, deficit, training and cascade models are underpinned by a transmission view of teaching and learning. This includes the belief that knowledge is constructed externally to the CPD context, mastered by experts, and transmitted to learners during CPD. In ‘traditional’ CPD programmes such as these, learners are viewed as passive recipients or consumers who receive the knowledge unchanged as if it were a physical product (De Cossart & Fish, 2005), and are expected to apply it in practice (Kennedy, 2014). Primacy is given to generalisable, academic knowledge over socially situated knowledge derived in practice (Eraut, 1985). Learning is viewed as the decontextualised acquisition of such codified knowledge (Eraut, 2000). It is assumed to occur through psychological processes that emphasise individual cognition and behaviour and minimise any social and environmental influences.
During transmission-based CPD, the emphasis is on encouraging educators to behave in certain, pre-selected ways (Zeichner & Liu, 2010) through ‘conventional’ learning. The latter elaborates or expands a learners’ knowledge about teaching by focusing on the ‘what’ and ‘how’ of practice, rather than the ‘why’ (Kaufman, 2019). From this perspective, the CPD activities such as small group discussions, role-plays, and reflection on practice, reported by the empirical studies in this review may involve what Zeichner (2010) termed ‘application of theory to practice’. Learners are guided to address pre-identified weaknesses in their practice or to learn new techniques and methods as ‘updates’, by aligning their behaviours with external, research-based knowledge (cf. Kinsella, 2007). The goal of such CPD programmes is to promote uniformity of practice (Kennedy, 2014) which at least meets a minimum quality threshold (Hodkinson, 1998). Elsewhere, these epistemological underpinnings have been referred to as technical rationalism (e.g., Schon, 1991) and have been linked with external influences in the wider professional domain (Hodkinson, 1998). In teacher education and medical education alike, reforms, quality assurance and standardisation agendas have sought to improve practice according to externally determined benchmarks for reasons of accountability to stakeholders such as pupils, trainees, patients, and the public, as well as for economic reasons (Kennedy, 2014; Swanwick, 2014). As a result, medical education is now subject to multiple quality assurance frameworks (Bleakley, Browne & Ellis, 2014). In this context, it is possible that CPD activities may be underpinned by epistemological assumptions that value expert transmission and expect uniform application by learners. From this, we can see firstly that underlying epistemological assumptions shape the nature of IoPP and secondly that approaches to teaching and learning may be influenced by social structures and events beyond the immediate CPD context.

A contrasting example further underlines the influence of epistemological assumptions on the nature of IoPP. In teacher education, Kennedy (2005;2014) identified models of CPD which have potential to transform practice (rather than to meet external standards) through their focus on identifying and questioning norms. Rather than unifying practice in terms of an external benchmark, the action research and transformative models of CPD have the potential to enable teachers to contribute to and shape education policy (Kennedy, 2005;2014). This is
because, in contrast to conventional learning, transformative learning results in new perspectives or changed values through critical questioning of underlying assumptions about the goals and purpose of practice (Kaufman, 2019). CPD underpinned by transformative epistemological assumptions then focuses on practice-based knowledge and may support professional creativity and autonomy (Kennedy, 2014). Learning takes the form of critical reflection, beginning with practitioners’ own interests and concerns (Ng et al., 2015). Learning may happen alone or in groups (Brown, 2009), but a practitioner’s own professional practice plays a central role in indicating learning needs rather than an external curriculum or benchmark (Kinsella, 2006). Such CPD foregrounds the generation of knowledge by learners, through ‘reflection-on-action’ (Schon, 1991) and experience rather than the acquisition of knowledge from experts. Instead of complying with transmitted ideals, practitioners envisage new ways of practicing that may change the purpose of their interactions with others (Kaufman, 2019; Kincheloe, 2004). Further sources of information or ‘lenses’ help provide answers to questions, solutions to problems and fresh, new ideas. These include colleagues’ experiential knowledge of supervision, trainees’ input, and the literature (Brookfield, 2017). Formal programmes therefore offer tools to support this epistemological stance. These include discussions exploring the effects of learners’ actions on others as a means of unearthing and questioning their beliefs about practice (Kaufman, 2019); tutors who first role-model critical enquiry and then coach learners (Kaufman & Mann, 2014); seminars that interpret [work] experience by introducing relevant theory (Eraut, 2000); audio-visual recordings of practice and discussion thereof (Kaufman, 2019); and tools for documenting and evaluating reflections such as portfolios (Ng et al., 2015). Moreover, since the sources of information and materials used as a basis for reflection are unstructured or uncertain, learning and practice change outcomes are neither obvious, uniform or singular (Moon, 2019). Focusing on the nature of IoPP outcomes, conceptual works in medical education (e.g., Ng et al, 2015) support the view that critical reflection aims for transformation of practice rather than conventional knowledge gains. Furthermore, Ng et al (2015) distinguish critical reflection from reflection, arguing the former should involve explicit attention to “forces” in the social and professional domains and the power relations inherent in these. Critically reflective or transformative models of CPD can
therefore serve to change the purpose or goals of a professional role (Kaufman, 2019) and to inform or even change policy (Kennedy, 2014).

3.7.1 Varying conceptualisations of ‘reflection’ in medical education

In the wider medical education literature, work by Kinsella (e.g., 2006; 2007; 2009) and Ng et al (2015) identifies various conceptualisations of ‘reflection’ in professional learning. This further highlights the need for clarification of the epistemological assumptions underpinning CPD: common nomenclature conceals very different teaching and learning processes. Noting that reflective practice is widely promoted in the education of healthcare professionals, Kinsella (2007) believes that part of the reason for this is that reflective practice as envisaged by Schon (1991) places emphasis on practitioner experience as a source of knowledge generation. She argues that Schon’s work does not reject expert transmission, but rather acknowledges its limits in addressing all the problems of practice. Kinsella (2009) clarifies the differences between professional learning as technical rational transmission and as reflective practice as envisaged by Schon (1991). In doing so, she demonstrates different values regarding sources of knowledge and solutions to problems: while technical rationalism looks to systematically derived, formal scientific knowledge, Schon’s reflective practice also values knowledge derived from practical competence. Consequently, the outcomes of these different learning processes differ also, and this resonates with Kennedy’s identification of different models of CPD. However, in reviewing the literature, Kinsella (2009) notes that since the mid-1990s, medical education scholars have identified, and lamented, a lack of conceptual clarity regarding reflective practice. While the term is used widely, the practices it refers to are often underpinned by differing epistemological assumptions. Kinsella (2009) cites others’ earlier concerns that, in health care professional learning, reflective practice has become a ‘catch-all’ term (Bleakley, 1999 in Kinsella, 2009) and a ‘vague slogan’ (McLaughlin, 1999 in Kinsella, 2009). Exploring the conceptual confusion further, (Ng et al., 2015) found that reflective practice in medical education is frequently used in ways akin to technical rationalism. These ways include reflection as a utilitarian application of external knowledge and reflection with an
individual (decontextualised) focus. Moreover, in health care professional education, this is a common approach to formal assessments (Ng et al, 2015). For example, by reflecting on a transmitted evidence base, an individual practitioner may identify ways in which they could better align their practice with codified knowledge. Together, conceptual works from cognate fields and the wider medical education literature highlight the need for empirical CPD programme evaluations to clarify what is meant by reflective discussions, reflective portfolios, or reflection on video recordings. The contrast between transmission and transformative models, and the various interpretations of reflection, show that CPD activities may distinctly vary in nature and purpose, shaping IoPP accordingly.

In developing a realist theory of formal CPD’s IoPP, I do not intend to prescriptively advocate for one view of reflection, nor indeed one approach to teaching and learning over another. Rather, in drawing on a wider body of literature, I intend to highlight the need for greater discussion the epistemological assumptions underpinning formal CPD because these shape the nature (and possibly extent) of IoPP. Discussion of epistemological assumptions is also important because differences can be masked by common terminology such as ‘reflection’ and ‘group discussion’.

3.7.2 Epistemological assumptions: a blind spot in IoPP research

This review finds there is a need for program evaluation research in PGME educator development to discuss the epistemological underpinnings of CPD processes and to explore the interplay between these, group composition, modality and IoPP. Here instead, most studies briefly and descriptively reported the teaching techniques deployed during face-to-face CPD (Barratt & Moyer, 2004; Berbano, 2006; Foster & Laurent, 2013; Junod-Perron et al, 2013; 2014a; 2014b; Karg et al, 2013; Knight et al, 2007; MacVicar et al, 2013; Myhre & Lockyer, 2010; Reddy et al, 2012; Roos et al, 2014 and Sarikaya et al, 2010). These included didactics, demonstrations, videotaped role-plays of teaching for learners to watch and feedback from a facilitator on learners’ performance in the ‘classroom’ (e.g., Berbano et al, 2006; Foster &
Laurent, 2013), workshops and plenary sessions (e.g., Myhre & Lockyer, 2010; Sarikaya, 2010; Sorinola et al, 2015) and seminar days which concluded with a session of peer-coaching on an individual teaching session (Roos et al, 2014). However, learners’ manner of engagement with these CPD activities was not a focus of the evaluation research. It is therefore unclear whether, for example, transmission of information or transformation of practice was intended, or, which of the many conceptualisations of ‘reflection’ were intended or embodied. Furthermore, where the CPD was delivered fully online, two studies omitted any mention of learning techniques (Brown & Bullock, 2014; Ozuah et al, 2010). The asynchronous nature of these courses suggests expert transmission of (static) content for conventional learning and application by learners. Study findings also support this interpretation. For example, Brown and Bullock (2014) found the online course supported Educational Supervisors to comply with UK General Medical Council standards for training. Such evidence from evaluation research serves to support the hypothesis that approaches to teaching and learning shape the nature and extent of IoPP. However, more direct attention to links between CPD theoretical frameworks, tutors’ intentions and learners experiences, reactions or outcomes could enrich our understanding of formal CPD’s IoPP. That is, the lack of focus on the interplay between epistemological assumptions, learning experiences and IoPP represents an important gap in the literature.

Among the studies included in this review, only three explicitly discuss the epistemology of learning. That is, only three studies link the theoretical framework that informed the CPD course design and activities to IoPP. (Archer, 2022; Hewson, 2000; Onyura et al, 2017). For example, Archer’s (2022) course design was shaped by transformative learning theory and, as such, learners were found to be more critically reflective and sought to influence the field. In addition, Archer (2022) also reports learners’ eventual realisations that such IoPP differs from improving one’s practice according to pre-determined, external benchmarks. Hewson’s (2000) course was underpinned by conceptual change theory. Due to the purpose of their discussions, her participants began to view themselves not just as clinicians but also as educators and developed more elaborate and personalised conceptions of teaching. These studies go beyond naming the teaching techniques deployed during CPD, such as seminars, one-to-one-coaching and individualised projects (e.g., Hewson, 2000) or reflective portfolios (e.g., Archer et al,
They show an explicit constructive alignment between the nature of learning espoused by the theoretical framework for the CPD course, and the nature of the outcomes learners’ achieved. Of note, only Archer et al (2022) report on any difficulties encountered by learners, but these were related to the volume of studies rather than the epistemological underpinnings of tasks.

Explicit discussions of curriculum designers’ epistemological assumptions then are scarce, and discussions of learners’ assumptions are absent. Moreover, the fact that most studies overlooked epistemological assumptions cannot be explained by claiming that research in some CPD contexts is more conducive to these explorations than others. The courses by Archer et al (2022) and Onyura et al (2017) were university based involving group members who would not normally study together, but Hewson’s was delivered locally, involving colleagues who knew each other. Courses delivered and evaluated by Onyura et al (2017) and Hewson (2000) were entirely face to face, but Archer et al’s (2022) course was delivered by blended learning. Instead, it seems there is a common blind spot regarding epistemological assumptions in programme evaluation of CPD for postgraduate medical educators.

Further, despite three studies’ overt references to epistemologies, more consistent discussions of how these shape CPD activities and influence outcomes could enhance a theory of formal CPD’s IoPP. Onyura et al (2017) state their course was intended to expose participants to educational theory as content - although which one(s) is not specified - and that this was to be done by expert transmission and demonstration. CPD tutors were highly qualified, well-known leaders in their fields. The evaluation study reports that participants acquired knowledge about educational theory and practice, including formal terminology. Following course participation, learners reported feeling that their practice was more theoretically informed. In particular, many learners reported that observing tutors was key to their IoPP. This raises the possibility that the small group “co-reflection” (p.189) and individual reflection activities may have been underpinned by application of theory to practice, rather than any other approach to reflection. That is, learners may have focused on how to emulate tutors’ demonstrations of theoretically
informed practice, but this is not clarified. Future IoPP research then could more consistently report epistemological underpinnings and link these to the nature of IoPP.

Theoretical and conceptual works also indicate further benefits of discussing epistemological assumptions. Firstly, such discussions could further support claims of CPD effectiveness in terms of a programme’s own goals (cf. Amundsen & Wilson, 2012). Moreover, clearer connections between the nature of intended goals and programme effectiveness could also help illuminate external influences on CPD design and outcomes. Is the CPD intended to support policy implementation or perhaps to challenge current norms and inform policy reform? Common ‘labels’ such as ‘training’ or ‘action research’ may conceal dominant discourses and powerful influences. Indeed, Kennedy (2005) cites Burbank & Kauchak (2003) as warning that even in her transformative category, the boundaries or scope of some courses may be set by external, powerful stakeholders. Clarifying epistemological assumptions then could help socially situate CPD provision in specific socio-temporal contexts, dominant discourses and questions of power. This highlights the importance of involving curriculum designers and CPD staff in IoPP evaluation research.

3.8 Interactive learning in a safe environment promotes IoPP

Despite an absence of epistemological discussions, active learning and in particular interactivity between learners and tutors in a safe environment has been shown to promote meaningful learning and long-lasting IoPP. While the teaching techniques used to promote active involvement are regularly reported, the safety of the learning climate is largely conveyed through post-course findings of learner satisfaction with tutor behaviours. The exploration of other factors influencing the learning climate may help refine a realist theory of formal CPD’s IoPP.
3.8.1 Active learning as multi-modal interactions between people

During CPD contact sessions for postgraduate medical educators, active learning has been shown to support IoPP. For example, in her study of effective CPD for medical educators, Schostak (2010) found “active modes of learning” (p. 591) supported the achievement of goals. And this resonated with Desimone (2009)’s review of teacher education, in which she listed active learning as the second most important aspect of effective CPD. Active learning refers to learners being meaningfully engaged with CPD content, principles and goals. This involvement can be cognitive, emotional and physical. This is different from passive learning which is typically characterized by listening to a lecture (Desimone, 2009).

Active learning can take a number of forms, but interaction between learners, tutors and materials has been shown to promote learning and IoPP. For example, in their review of CPD for teacher educators, Phuong et al (2018) noted a widespread emphasis on the importance of interactions between CPD participants and staff to promote learning and development. In particular, they found that mentoring and coaching provided significant active learning experiences. This review finds IoPP in postgraduate medical education is regularly linked to multi-modal interactions. These include mini lectures by staff leading to learner role-plays (Berbano et al, 2006; Sorinola et al, 2015) or to participant presentations (Sorinola et al, 2015); learner role-plays leading to small group discussions (Foster and Laurent, 2013; Sorinola, 2015; Onyura, 2017), or evidence-based readings followed by small group discussion of professional experience (MacVicar et al, 2013). Also, opportunities for learners to observe tutors demonstrating new teaching skills, followed by reflective discussions have supported IoPP (e.g., Foster & Laurent, 2013; Junod-Perron, 2013; 2014). Having learners interpret materials and others’ input to make presentations, hold discussions, role-play or offer feedback to others then has potential to lead to IoPP. Further supporting this, in their review of online learning for faculty development, Steinert and Cook (2013) found that “uni-dimensional” (p. 936) CPD which relies on only one activity type, is less effective at causing learning and IoPP. IoPP then, is supported by multi-modal activities that actively engage learners and allow for reinforcement through various means.
However, factors in the CPD context may support or inhibit active learning. In PGME, factors that are more commonly addressed include group size or composition, rather than, for example, the interplay of these with seniority or epistemological assumptions. For example, Foster and Laurent (2013) capped participant numbers to ensure that group size remained conducive to multiple interactions between participants, rather than a large group of learners listening to one or two voices. The researchers report that participants enjoyed such discussion-based interactions, and these contributed to IoPP. Similarly, studies by MacVicar et al (2013), and by Onyura et al (2017) note that group composition influences interaction. Both studies found that CPD can offer opportunities for learning with and from others that are not available in the clinical workplace. While Onyura et al (2017) brought together clinicians from different specialties who held a range of educator roles, MacVicar et al (2013) brought together Educational Supervisors from primary and secondary practice. Participants reportedly enjoyed these rare opportunities to discuss their roles as medical educators with like-minded peers and this both kept them engaged and lead to “light bulb moments” (MacVicar et al, 2013:180) or ideas for changing practice. Interactivity then can be a powerful driver of active learning if enablers in the CPD context are maximised. A realist theory of CPD’s IoPP may however be further refined if we include the influence of seniority or epistemological assumptions into explorations of interactivity.

3.8.2 A safe environment supports active learning

A safe or supportive learning environment supports active learning. In a safe learning environment, learners feel no threat of judgement or ridicule when expressing themselves freely; they feel that it is safe to participate, ask questions and admit to not understanding (Kaufman, 2019). Here, five studies attributed IoPP to the safe learning climate. Further they attributed ‘safety’ during CPD to tutors’ actions (Hewson, 2000; Onyura et al, 2017; Roos et al, 2014; Sorinola et al, 2015;2017). For example, Hewson (2000) established an informal and friendly teaching climate by using learners’ first names and providing breakfast before the session. Onyura et al’s (2017) participants reported feeling comfortable while sharing their
experiences, challenges, and concerns with other educators and with tutors without “fear of suffering negative consequences” (p.172). Learners directly attribute this to the tutors’ skilful approaches. This inclined learners to look forward to discussions with like-minded peers throughout the programme, thereby further suggesting they did not feel threatened or frustrated by these activities. As a result, CPD discussions were productive and lead to IoPP.

Four more studies reported links between positive learning experiences and IoPP. In these, post-course evaluations included reports of learner satisfaction, enjoyment or difficulties (Archer et al, 2022; Foster & Laurent, 2013; Junod-Perron et al, 2014; MacVicar et al, 2013). For example, Junod-Perron et al (2014) found that a positive personal experience during the course motivated most participants to try to reproduce the advocated techniques in their own practice. In contrast, Foster and Laurent (2013) had to make adjustments to ensure positive learning experiences. They found that role-play made their learners uncomfortable, and they chose instead to have tutors demonstrate the teaching techniques in question. They report that learners were subsequently happy to discuss the techniques they had observed. However, they do not explore this matter further to explore why learners were uncomfortable. The literature suggests that perhaps group members were not yet familiar enough with one another to face this interactive ‘challenge’ to perform (Tuckman, 1965), that they did not have an adequate sense of belonging to the group (Maslow, 1970) and therefore feared ridicule (Kaufman, 2019). The different findings regarding productive discussions and uncomfortable role-plays suggests explorations of the interplay between group composition and task type could enrich our understanding of IoPP. Similarly, Archer et al (2022) reported that some learners, on occasion, had very difficult experiences of the module. Participants felt “bashed” and “crushed” (p.5) by the transformative learning espoused during the course because it eroded the confidence they had had in their earlier approaches to teaching. This aligns with literature indicating that a key ingredient of transformative learning is the questioning of assumptions, and this can lead to difficult interactions between learners and tutors (Kaufman, 2019). The study by Archer et al (2022) underlines how the discussion of theoretical frameworks underpinning CPD activities could enhance our understanding of how and why learners may perceive a learning environment as safe.
3.9 Evaluation designs shape our understanding of IoPP

In this section, I offer an overview of the evaluation designs commonly used in studies of CPD for postgraduate medical educators, indicating what each can learn from the other. My aim is not to provide an exhaustive review of evaluation models, nor the theories of science which underpin them. This has been done elsewhere (Chen, 2014; Frye & Hemmer, 2012; Pawson & Tilley, 1997). Rather, with this overview, I intend to identify trends in my own field that shape our understanding of IoPP and to further situate the current study in the wider peer reviewed literature on evaluation methodologies. The affordances and limitations of the trends identified here further informed my realist theory of formal CPD’s IoPP by highlighting the potential benefits of exploring CPD processes and workplace contexts. This entails the need for conceptual clarity and social theory to collect and analyse data.

Firstly, this review found no ethnographic studies of CPD’s IoPP. Therefore, our understanding remains limited regarding the role of the workplace and wider professional domain in shaping IoPP. More in-situ research is needed to explore whether, why or how colleagues, resources, working patterns or policies constrain or enable supervisors to change their educational practice following formal CPD. Ethnographic studies observing actual practice offer the possibility to experience and analyse contextual factors (Porter, 2000) that may be normalised by research participants and therefore not be conducive to recall during interview.

Within postgraduate medical educator development, IoPP is most commonly conceptualised as the linear result of formal CPD (Archer et al, 2022). The majority of empirical papers included in this review used outcome focused research designs underpinned by a positivist worldview. Such studies may control for external influences on the outcome of interest (e.g., Junod-Perron et al, 2013; Ozuah et al, 2010) and therefore provide evidence that CPD works. Here specifically, the studies included by the focus of this review demonstrate that CPD can bring about IoPP.

In addition, the outcomes of interest researched by papers in this review provide evidence that medical education has shifted away from teaching as an ad hoc, habitual, non-reflexive
activity. Training and supervision are now seen as a discipline requiring a skill set (e.g., Knight et al, 2007), an identity formation (Hewson, 2000) and scholarship (e.g., Sethi et al, 2016; Onyura et al, 2017), as well as offering a career path (Alexandraki et al., 2020).

Furthermore, a focus on outcomes helps us see that IoPP is behavioural, cognitive, and affective for the individual. Following CPD, medical educators may, for example, shift from asking recall questions to instead ask more analytical questions of trainees (e.g., Berbano et al, 2006); or supervisors may refrain from minimal compliments to give more specific, personalised feedback on trainee’s performance (e.g., Knight et al, 2007; Ozuah et al, 2010; Junod-Perron et al, 2013). CPD participants may subsequently consider their educational practice is more grounded in educational theory (e.g., Foster & Laurent, 2013; Onyura et al, 2017; Sethi et al, 2016) and may therefore feel more confident in their roles as educators (e.g., Sethi et al, 2016; Onyura et al, 2017). And this can make supervisors more willing to seize teaching opportunities in the busy workplace (Sorinola et al, 2015). IoPP then, is not necessarily empirically observable. In addition, outcomes may be realized at team, departmental or organizational levels (Kirkpatrick, 1998), although reviews regularly note that very few studies focus on outcomes at these levels in medical education (e.g., Steinert et al, 2016) or in cognate fields (e.g., Stes et al, 2010).

The common drive to measure IoPP outcomes can be explained by at least three factors. Firstly, outcome studies are valued by the commissioners of CPD programmes and other stakeholders because they provide empirical evidence that the program, in its context, produces the desired results (Pawson & Tilley, 1997). Outcome evaluations then can provide evidence to justify continued provision of resource intense CPD. This is of importance in a resource-strained healthcare context (e.g., Brown & Bullock, 2014; Myhre & Lockyer, 2010; Ozuah et al, 2010). Secondly, this tendency can be explained by Chen’s (2014) work which shows that across its history, programme evaluation (in any discipline) tends to focus on outcomes before deploying approaches such as planning or process evaluations. Supporting this as an explanation, a recent review by Alexandraki et al (2020) claimed that the evaluation of educator development programmes for clinicians is still “under-developed” (p.599). And
thirdly, according to Frye and Hemmer (2012), programme evaluations in medical education may focus on outcomes because bio-medical, cause-effect outcome studies are a familiar research design for clinicians who wish to establish the efficacy of an intervention. This aligns with Bunniss and Kelly’s (2010) and Rees and Monrouxe’s (2010) earlier observations that medical education researchers may find their ontological commitments so familiar they forget to declare them or are unaware of them. Additionally, this resonates with Elder-Vass’s (2010) work which argues that enculturated practices, endorsed in the practice domain influence our approach to similar activities in different contexts. Other world views, social theories and approaches to researching IoPP may therefore contribute complementary understanding of complex, socially situated enablers and barriers. (cf. Leahy, Fitzpatrick & Wright, 2020).

Alternative approaches to understanding IoPP include planning, process, or implementation evaluations (Chen, 2014) or using open-ended, qualitative research methodologies which foreground other stakeholders’ values (Denzin & Lincoln, 2011) and illuminate different aspects of IoPP. Indeed, several outcome studies also collected qualitative data “to add depth to quantitative findings” (Sethi et al, 2016:162). For example, Knight et al (2007) included an open-ended survey question asking learners about career progression. Their stated rationale was to “detect deeper and more sustained [IoPP]” (p.599) than that intended by the CPD. Focusing on process as well as outcomes, the interpretivist, qualitative study by MacVicar et al (2013) linked CPD teaching and learning processes and people’s reactions to IoPP outcomes.

However, descriptive themes in qualitative data were mostly not informed by any explicit conceptual framework drawn from social theory. This is in contrast to longstanding calls in the literature for more (statistically or theoretically) generalisable explanations of CPD’s IoPP (e.g., Leslie et al, 2013; Steinert et al, 2006,2016). In the wider health education literature also, there are similar calls for more use of social theory to guide research questions, data collection and analysis (e.g., Bunnis & Kelly, 2010; Rees & Monrouxe, 2012) because this may “overcome the limitations of descriptive and ‘common sense’ approaches.” (Leahy, Fitzpatrick & Wright, 2020:3). Programme evaluation of formal CPD then appreciates the potential for rich
explanations of IoPP as offered by qualitative data but as yet largely struggles to theorise these through recourse to social theories.

Four studies included in this review stated an explicit theoretical framework for their evaluation design. These papers therefore enhance our understanding by offering theoretically generalisable explanations of how or why formal CPD caused IoPP. Archer et al (2022) used Haji, Morin and Parker's (2013) framework which draws heavily on realist principles, Sorinola et al (2015;2017) used Pawson and Tilley’s (1997) realist evaluation and (Onyura et al., 2017) enhanced realist evaluation with the use of “relevant psychological and education theory” (p.168) to interpret their data. All of these studies look beyond asking if CPD ‘works’ (cf. Haji, Morin & Parker, 2013; Pawson & Tilley, 1997) to seek explanations of why and where.

Realist evaluation sits in between the positivist and interpretivist paradigms to offer theoretically generalisable explanations of CPD’s IoPP which takes contextual contingencies into account. Perceiving a need to address complexity in causal explanations, (Astbury & Leeuw, 2010) realist research, and in particular Pawson and Tilley’s realistic evaluation, has garnered notable use in health-related research (Jagosh et al., 2016; Wong et al., 2016). Such research acknowledges that health care and professional training are complex, open systems which act on and in other complex open systems (Pawson et al., 2005; Wong et al., 2012; Wong, 2018). Hence realist studies eschew linear causality and subscribe instead to a generative view of causation (Pawson & Tilley, 1997; Porter, 2015). In particular, this involves the identification of causal mechanisms which produce outcomes and the contextual influences on these. As stated earlier, the precise ontological definition of mechanism is contested because scientific realism does not consistently recognise groups of people as causal mechanisms (cf. Dalkin et al., 2015; Porter, 2017; Westhorp, 2018). However, mechanisms can be conceptualised as invisible processes or forces that cause effects (cf. Bhaskar, 1978). Driven by the now, well-known question, 'what works for whom in which circumstances, to what extent and why?' (Jagosh et al., 2016) realistic evaluation seeks out patterns or demi-regularities in outcomes (Bhaskar & Lawson, 2007) arising from processes in contexts. Realist studies therefore do not control for confounding factors or isolate variables from multiple
influences. Instead, they acknowledge that programme outcomes emerge from the complex conditions under which they take place (Befani et al., 2007). In particular, I find realist studies have potential to socially situate IoPP in the wider professional context, as, for example, work by Kennedy (2005;2014) and Hodkinson (1998) has done in teacher education.

However, the realist evaluations reviewed here, like realist studies in general risk not living up to the realist promise of multi-level explanations (Marchal et al., 2012). Our understanding of IoPP therefore risks being limited to explanations at the level of agency only, rather than also considering social factors. For example, Sorinola et al’s (2015;2017) conceptualisation of mechanisms is constrained to learners’ psychological reactions to learning activities. CPD learning is not viewed as a contextualised social activity during which educational mechanisms are triggered by interactions between role-holders. That is, mechanisms are seen to arise from individuals’ own minds, not from interactions between people as they go about the business of being students, tutors or doctors (cf. Elder-Vass, 2010). This is likely a result of over-reliance on a limited but well-known interpretation of Pawson & Tilley’s (1997) definition of mechanism as programme participants’ reasoning and reactions to programme resources. Furthermore, (Dalkin et al., 2015) have argued that this is the only definition of mechanism necessary for small scale programme evaluation. Hence, there is a proclivity to explain IoPP in terms of agency, rather than the interplay of structure and agency. This tendency risks overlooking some groups and some teaching and learning processes as causally involved in IoPP. It also decontextualises staff and learners. As a notable exception, (Onyura et al., 2017) identify group reflective discussions and social network building as influential educational and programme mechanisms which lead to IoPP. How we conceptualise mechanisms then shapes our understanding of IoPP. A conceptualisation which admits forces or processes at both the individual and group levels may contribute richer understanding of IoPP.

Further, without a more coherent ontological basis for context, there is difficulty distinguishing mechanism from context, and this has been called the realist researcher’s quandary (Astbury & Leeuw, 2010; Marchal et al., 2012). The realist evaluations reviewed here noted this potential for conceptual confusion and Sorinola et al’s (2015) study exemplifies these difficulties. The
scholars clearly define each concept, yet finally, re-label context as mechanism. Firstly, despite the fact that mechanism is defined as “how subjects learn from the intervention” (Sorinola et al, 2015:386), the study reported “learning within a small group of highly educated individuals, [and] experienced facilitators giving feedback” (p.386) as key contextual factors rather than educational mechanisms. Yet this seems to contradict substantive educational theories about learning through interaction and feedback. Even if we accept group learning and feedback as contexts, there is an internal inconsistency in the final realist theory. In setting out findings as a context, mechanism, outcome configuration (CMOc), the original contexts of informative and interactive learning are relabelled as mechanisms.

I believe this demonstrates a need for clearer ontological commitments when undertaking realist evaluation and suggest a Bhaskarian critical realist view of stratified mechanisms is helpful. This is because the perspective encourages the identification of mechanisms above the level of individual agency. As a result, some confusion between context and mechanism can be cleared away. The quandary noted above also demonstrates the benefits of exploring concatenation (chains of mechanisms), rather than C-M pairs. I set out my beliefs in this regard more fully in the next chapter.

3.10 Summary: What can we learn from each other?

Having gleaned from the literature a realist theory of effective formal CPD for postgraduate medical educators, in this section I set out how each body of knowledge that I reviewed can help advance theory and practice.

From empirical evaluations of formal CPD, literature reviews thereof and works in teacher education which discuss the differing natures and goals of CPD, we can see the benefit of clearly articulating the theoretical framework underpinning CPD programmes. This is because the nature of CPD teaching and learning shapes (but does not determine) IoPP. However, epistemological assumptions remain largely unexplored in formal CPD provision for postgraduate medical educators. Furthermore, from discussion papers in teacher and
vocational lecturer education, we can see how socially situating the nature and goals of a programme within a wider professional agenda can further enhance our understanding of choices in CPD processes and the nature or extent of IoPP outcomes.

Relatedly, from the wider field of programme evaluation (e.g., Chen, 2014; Haji, Morin & Parker, 2013), we can see that researching the planning stages and processes of CPD could offer explanatory accounts of how or why IoPP outcomes were brought about. In addition, realist evaluations offer a protocol for researching staff beliefs. Moreover, from outcomes evaluations, we learn the importance of conceptual clarity because realist evaluations and reviews thereof have noted difficulties with this (e.g., Marchal et al, 2012; Onyura et al, 2017) and have struggled to maintain internally consistent conceptualisations (e.g., Sorinola et al, 2017).

From the local and university contexts, we see that collaborative, active learning or engagement has most frequently been encouraged through group discussions. The stimuli for these are tutor presentations or demonstrations and reflection on practice. Yet in other fields, such as undergraduate medical education, learners are offered opportunities for problem-based (e.g., Hmelo-Silver, 2004) or case-based learning (Ali et al., 2018) and simulation (Klein, 2020). Curriculum designers in educator development may therefore wish to expand the range of learning strategies offered to postgraduate supervisors during CPD.

From the university context, we can learn the importance of more consistently designing reinforcement of learning into the CPD course. University programmes have created opportunities to ‘revisit’, extend and consolidate learning through blended learning (e.g., Archer et al, 2022) or workplace-based action research, reflective projects or mentors (cf. Sethi et al, 2016). Where resources do not permit this is in the local context, perhaps in addition to ‘take home messages’, contact sessions may elicit learners’ ‘action plans’ that can be discussed at the next meeting. Outcomes based evaluations which used commitment to change statements as sources of data (e.g., Karg et al, 2013; Myhre & Lockyer, 2010) have shown that having learners actively identify their own IoPP plans encourages the realisation of IoPP within a learners’ own practice. Future research may offer complementary explanatory accounts of
outcomes by focusing on and theorising the enablers and barriers to IoPP plans in the workplace.

From locally delivered CPD courses, we can learn the importance of managing role conflicts. The practicalities of CPD curriculum design should bear in mind that CPD participants are busy clinicians whose primary responsibility is patient care (Schostak et al, 2010). To enable participants to focus on their role as educators, protected time for attendance (e.g., Myhre & Lockyer, 2010; Onyura et al, 2017) and easily accessible, viz. local CPD locations (e.g., Foster & Laurent, 2013) have been found helpful. Arranging cover for clinical duties (e.g., Onyura et al, 2017) or scheduling contact sessions outside of clinical working hours (e.g., Hewson, 2000) is also helpful. Together these oft noted barriers to CPD attendance or engagement suggest that social theories focusing on social structures and roles within them, role norms and enactment or norm critique may address calls for more theoretically generalisable accounts of workplace influences on IoPP (e.g., Haji, Morin & Parker, 2013; Steinert et al, 2016).

Yet, a lacuna of ethnographic studies of IoPP leaves the workplace under-explored as a causal factor in IoPP, despite longstanding calls to the opposite (e.g., O’Sullivan & Irby, 2011). Researching the workplace as a causal factor shaping IoPP would require recourse to social theories as ‘sieves’ and ‘lenses’ to select and focus our attention on potential explanations. And this would respond to calls in the literature for medical education research to engage more with theory (e.g., Bunniss & Kelly, 2010; Frye & Hemmer, 2012; Rees & Monrouxe, 2010; Leahy, Fitzpatrick & Wright, 2020).

In the next chapter, I review Bhaskarian critical realist literature to show how it offers a theoretical framework with potential to respond to the points raised above. Despite the growing interest in realist studies in medical education (cf. Wong et al., 2012), postgraduate medical education has so far engaged predominantly with the scientific realist works of Pawson and Tilley (1997). However, I believe Bhaskarian critical realism offers potential to further enrich our causal explanations of formal CPD’s IoPP through its more consistent and ontologically defensible conceptualisation of groups of people as structural mechanisms.
4 Reconceptualising CPD’s impact on professional practice: a critical realist perspective

4.1 Introduction

In this chapter, I draw together findings from my realist synthesis of the literature to set out the theoretical framework for my study. To do so, I look beyond postgraduate medical education, and evaluations of CPD to engage with the Bhaskarian critical realist theoretical works of Elder-Vass (2007;2010;2015;2017), Archer (1995;2003), Porpora (2013) Bhaskar & Lawson (2007) and Sayer (2000;2007). These permit me to set out a unique and original realist regional social ontology (cf. Lawson, 2015) of formal CPD and its IoPP. This literature enables me to work from a hitherto unexplored viewpoint to socially situate CPD learners concurrently in multiple social structures, and to explain how IoPP is shaped by multiple factors in and beyond the CPD context.

The literature shows that process orientations as well as causal explanations involving contexts beyond the CPD, such as the workplace, may enhance our understanding of IoPP outcomes. Realist evaluations offer the potential to explore these areas and offer theoretically generalisable findings. However, the literature also shows that there are “methodological headaches” (Onyura et al, 2017:168) involved in operationalising a realist approach. In part, this may be because concepts such as context (C) and mechanism (M) are used as common-sense labels without ontologically defensible referents (cf. Marchal et al, 2012) or because realist evaluations to date have refrained from recognising mechanisms above the level of individual agency (e.g., Sorinola et al, 2015;2017). As labels, context and mechanism then may be interchanged. In light of this quandary, here, I review Bhaskarian critical realist works and suggest that they offer a robust and coherent conceptual framework for realist evaluations of formal CPD’s IoPP.

Drawing on critical realist emergence theory, and in particular, Elder-Vass’s (2010) synchronic relational version of it, I reconceptualise impact on professional practice (IoPP) as the emergent property, or potential outcome of CPD. By this, I mean that IoPP is not a context-free, linear
outcome. Instead, I believe it is multiply influenced and shaped in and beyond the CPD context. Applying synchronic-relational emergence theory provides the conceptual tools for exploring how IoPP emerges from tutors’ and learners’ interactions with each other and with materials during the CPD, as well as from their membership in other professional teams. These tools include emergent social structures, roles and agency. Relatedly, I therefore view CPD programmes, professional teams and the regulatory body, the GMC as a particular type of realist, emergent structure, viz. Elder-Vass’s (2010) organisation. These are relatively enduring, power-imbalanced groups comprising specialised roles. The influence of one structure on another, role norms and role enactment within these structures help explain IoPP.

Elder-Vass’s (2010) synchronic relational version of emergence theory therefore permits me to seek various, stratified causes of IoPP in different contexts. Firstly, stratified explanations address the criticisms of realist studies and evaluations (Marchal et al., 2012; Porter, 2015) by acknowledging causes ‘above’ the level of individual agency. Secondly, the conceptual tools provided by synchronic relational emergence theory enable causal explanations to theorise the role of the PGME practice domain in shaping IoPP which remains largely under explored in the literature. Thirdly, my focus on role norms and role enactment highlights the causal effects of stakeholders’ beliefs, their contextualised interactions and CPD processes on IoPP, thereby offering complementary understanding of outcomes (Haji et al., 2013; Pawson & Tilley, 1997). Finally, the conceptual framework set out here offers a more robust conceptualisation of ‘context’ and ‘mechanism’ which supports more coherent data analysis and may resolve the realist evaluator’s quandary.

This chapter therefore proceeds by first establishing the critical realist view of structure and organisation. Next, I give an overview of the critical realist emergent view of causation. This is the belief that the composition of structures creates the potential for certain outcomes to emerge. Following this, I distinguish between CPD contexts and CPD mechanisms through the realist notion of compositionality. This permits a distinction between intended programme mechanisms and unintended mechanisms, which is lacking in the literature. Throughout, I show how CPD provision, goals and experiences are shaped by ‘external’ influences.
4.2 The realist notion of structure provides stratified causal explanations

The realist notion of structure permits causal explanations at and above the level of individual agency. Consequently, if we view CPD programmes as social structures, this has potential to enhance our understanding of IoPP beyond individual, psychological responses to ‘external’ stimuli. Of note, the realist view of structure differs from other views of structure espoused by different worldviews (cf. Porpora, 2013). Indeed, structure is a much debated, elusive concept (Elder-Vass, 2015) which has been used to signify different referents (Elder-Vass, 2007) and differently understood from individualist, collectivist and realist perspectives (cf. Porpora, 2013). Each of these different viewpoints has implications for causal explanations of social life (cf. Porpora, 2013). I therefore begin by reviewing what is and what is not meant by social structure and causation in the current study.

Porpora (2013) identifies four conceptualisations of social structure as set out in Table 6.

Table 6: Four conceptualisations of structure

<table>
<thead>
<tr>
<th>View of structure</th>
<th>View of agency</th>
</tr>
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<tbody>
<tr>
<td>Individualist</td>
<td>Agency is paramount. Structure holds no causal power.</td>
</tr>
<tr>
<td>Uniform collectivist</td>
<td>Agency is subjugated to structural influences.</td>
</tr>
<tr>
<td>Fragmented collectivist</td>
<td>Agency is paramount. ‘Structures’ are ‘accidental’ patterns.</td>
</tr>
<tr>
<td>Realist</td>
<td>Agency and structure interact. Both are seen as causally efficacious or ‘real’.</td>
</tr>
</tbody>
</table>

(Based on Porpora, 2013)

Porpora (2013) notes that an individualist viewpoint holds that people reason and choose to act in the ways they do regardless of experiencing group membership. I therefore find this conceptualisation unhelpful for explaining IoPP. If we view CPD modules from an individualist perspective, each person’s membership in the group, as a group would be inconsequential for explanations. Learning and IoPP would be explained as individual reactions to the CPD rather than as a result of role-based relations with others or group norms. An individualist perspective would not consider how coming together as a group of students and tutors in a CPD module
may enable events and outcomes that are not possible for individuals alone. It would maintain that outcomes are due only to each individual. This viewpoint may obscure questions about student-student or student-tutor relations and interactions. Instead, individualists may conceptualise the CPD experience as an individual, psychological reaction to ‘external’ others. This perspective also overlooks constraints on people when they enact roles that are an intrinsic part of a whole. For example, an individualist perspective may overlook notions that students and tutors do not have free reign to act entirely as they please (cf. Kahn, Qualter & Young, 2012). There are expectations of the student role, such as submitting required works on time for assessment. Overlooking group constraints and enablements constitutes a reductionist approach to causality explaining IoPP from the bottom up (cf. Porpora, 2013) where ‘the bottom’ is the individual person’s agency. This discounts the role of social structures in our lives.

In contrast, according to Porpora (2013) and Archer (1995), there are two collectivist, non-realist views of structure, both of which I also find unhelpful for researching CPD’s IoPP. Firstly, a uniform-collectivist viewpoint considers social structure to dictate or control behaviours (cf. Lawson, 2015). If a CPD programme were viewed as a deterministic, collectivist structure, then every learner would be expected to embody roughly the same IoPP in lawlike fashion. IoPP is explained in terms of monocausal pathways: CPD and nothing else causes IoPP. Learner or tutor agency and wider aspects of their social lives would not form a focus of IoPP research or explanations. This view of structure entails prioritising downward causation meaning the causal powers of the social entity (CPD) prevail over its components (Lawson, 2015). Yet this offers an incomplete view of learners, tutors and IoPP outcomes by ignoring agency and wider social factors beyond the CPD which influence learning and IoPP.

Different again, a fragmented collectivist viewpoint sees aggregated patterns of behaviours at small and even large scale, ultimately as individual people somehow repeating similar behaviours in similar places (cf. Porpora, 2013; Gorski, 2013; Archer, 1995; Lawson, 2014). According to Archer (1995), this view makes no ontological argument for the causal powers of real structures for fear of committing reification. However, I find this view also offers an
incomplete, inadequate explanation for IoPP. Viewed from this perspective, CPD and IoPP research would contain references to the social context without theorising their influence. Aspects of real life within the CPD and beyond would be included because without them descriptions feel incomplete (cf. Archer, 1995), but these would constitute a rich, descriptive background, not a causal account. This would seem to ignore calls in the literature to understand the influence of context and in particular, factors in the workplace, on IoPP (e.g., O’Sullivan & Irby, 2011).

In contrast the realist viewpoint argues that peopled, social structures cause events (Bhaskar, 1978) because of the nature of relatively enduring relations between role-holders (Elder-Vass, 2010). And this is the view of structure I adopt in my study. Rather than arguing for structure or for agency, for groups or for individuals as the essential components of social life, a realist perspective enables us to examine the interplay between them (cf. Hu, 2018). Structures are peopled, not reified (cf. Bhaskar, 1978), but the realist perspective holds that groups of people above the level of the individual can cause real effects in the social world, that individuals acting as individuals cannot. That is, the Bhaskarian critical realist perspective accords ontological status to social structures (Elder-Vass, 2010; Porter, 2017). For this reason, peopled structures are viewed as causal mechanisms because they can bring about outcomes⁴. For example, Modernising Medical Careers (as a causal structure) has brought about a national standardisation of supervisor role remits that hitherto did not exist. It did so through people working in specific roles and interacting with each other in expected or normative ways. Nonetheless, the realist view of structure does not view it as deterministic. People in roles have agency to act so rather than otherwise (Archer, 1995). Realist studies therefore seek to explain how people filter these structural affordances and limitations through their agential reflexivity.

⁴ As a note on the plurality of terminology deployed in the literature, Elder-Vass (2010) refers to such groups of people as ‘causally efficacious social structures’ or ‘causal structures’, Archer (1995) and Marchal et al (2012) refer to ‘social structures’ and in addition, I use the term ‘structural mechanism’ to distinguish it from agency.
(Spacey et al., 2021). That is, critical realism seeks to explain how structures influence people’s choices and lives.

Conversely, realist studies also seek to explain how people’s choices influence or ‘elaborate’ (Archer, 1995) social structures. Many (types of) social structures pre-exist our membership in particular instantiations of them, yet they may be changed by our decisions and actions (cf. Archer, 2003). That is, our actions may create, perpetuate, elaborate or overthrow structures. The structure for postgraduate medical education training, for example, was changed from local firms (cf. Dornan, 2012) with local goals, to nationally regulated programmes with centrally prescribed competences as outcomes. Such elaboration is continual because those who come after us ‘inherit’ and change the structures in existence (cf. Archer, 1995). This is exemplified by the brief historical overview of postgraduate medical training and supervision set out as the background to this study. Structures are developed over time, are changeable and depend on people for their existence. Structures influence people and vice versa. Archer (1995) refers to this as a pre-structured context for our lives.

The above sets out how structure and agency are related, and therefore demonstrates how realist explanations of IoPP can be stratified – offered at the level of structure or individual subjectivity. Acknowledging the causal ‘powers’ of groups as well as individuals responds to some criticisms of realist studies (e.g., Marchal et al, 2012) and situates my study among the various ‘branches’ of realist literature. However, it does not yet fully clarify what a social structure (such as CPD) comprises or explain how structures cause their effects. The realist notions of natural and conceptual necessity and emergence theory explain this (cf. Harre & Madden, 2007).

4.3 Causality as emergent from relations between parts

The critical realist view of (social) structure argues that it can be identified by the presence of specific related parts; and that this composition makes some particular outcomes more likely than others. In part, this belief is expressed through the notions of natural and conceptual
necessity and emergence. These first two realist notions hold that a structure comprises a specific set of internal parts, that are related in specific and relatively enduring ways. Together, these have the potential to produce particular events (cf. Harre & Madden, 2007). The realist theory of emergence which is central to critical realist causal thinking (Archer, 2003; Elder-Vass, 2007) posits that a whole is greater than the sum of its parts. Emergence theory holds that together, related parts are able to achieve effects or produce events that alone, the individual parts could not. Outcomes and events (such as IoPP) therefore emerge from the coordinated interactions between the parts of the structure (Elder-Vass, 2010). For example, viewing a CPD module as a social structure, we can argue that it can cause learning and IoPP (as outcomes) precisely because there are students, tutors and materials present who are related by expectations of teaching and learning (as processes). This is illustrated in Figure 4. Emergence theory therefore offers an anti-reductionist view of causation (Archer, 1995) because the effects that wholes or structures produce depend on relations between the parts. From this view, any impact on practice caused by a CPD module is not attributed to an ad hoc aggregation of individuals, nor solely to isolated individuals’ psychological reactions to resources. Rather, IoPP outcomes emerge from the presence of and relations between tutors, students and materials\(^5\).

\(^5\) Of note, the theory of emergence is applied to inanimate and physical structures also such as water and fireworks (e.g., see Elder-Vass, 2007) but for the purposes of this study, by ‘structure’, ‘whole’ or ‘entity’, I intend the pre-fix ‘social’ in reference to groups of people.
Figure 4 focuses only on CPD’s internal structure: the presence of and relations between tutors, students and materials. This is not to decontextualise CPD as an activity or the people involved, but to illustrate how the realist notion of conceptual necessity can apply. These parts and relations create the structure of CPD and its potential for IoPP.

The formation, recognition and ‘causal power’ of a structure therefore depends on its internal composition for it to be so and not otherwise (Bhaskar & Lawson, 2007). Were other parts present or related differently, the object under study would constitute a different structure with different causal powers (Harre & Madden, 2007). For example, were the object of this study comprised of a chef, wait-staff and diners it would not be seen as a formal CPD module and would not be expected to cause learning and IoPP.

Despite structures being identified by specific parts and relations, and having the potential for specific outcomes, Sayer (2000) argues that some ostensibly different structures have enough in common to be recognised as the same ‘thing’. Elder-Vass’s (2010) work suggests one such commonality may be power-imbalanced relations between specialised roles. He therefore posits organisations as a particular type of structure in which the power-imbalanced relations
between formalised, specialised roles help produce effects in the world (Elder-Vass, 2010). Organisations then, are different from other social groupings or structures, such as friendships, in which role remits are not defined in terms of hierarchical powers. Based on this, I suggest viewing CPD modules, NHS and academic teams and the GMC as Elder-Vass’s (2010) organisations. In these social structures, relations (between tutors and students or consultant supervisors and trainee doctors, for example) are shaped by norms for role enactment (cf. Elder-Vass, 2010). This underlines the importance of exploring learners’ and tutors’ epistemological assumptions regarding CPD because these are the normative beliefs which shape people’s role enactment as well as their expectations of other role holders. As shown earlier, the extant literature holds many examples of differing epistemological assumptions which cause learners and tutors to enact their roles differently. And these differences lead to IoPP of differing natures also.

In addition, an organisation’s potential to cause effects not only emerges from ‘internal’, related parts, but is also influenced by other ‘external’, inter-related, social structures (Elder-Vass, 2010). CPD’s IoPP then may be facilitated or impeded by other structures beyond the immediate CPD context as illustrated in Figure 5. This is the realist belief in contingent emergence which holds that a structure’s potential outcomes and events may not emerge if conditions are not conducive. Contingent emergence therefore socially situates CPD programmes, their members, experiences and outcomes in a wider context. Moreover, as shown above, the realist notion of structure helps ‘demystify’ context because it permits identification and analysis of elements in the wider context which influence learning and IoPP. These non-CPD structures can be termed contextual structural mechanisms (Porter, 2017). Involving wider contextual causal influences further contributes to rich, stratified explanations of IoPP. However, in any study, the boundaries or scope of ‘context’ must necessarily be an abstraction from, viz. a limited selection of, the vast, interwoven complexities of concrete situations (Sayer, 2007). That is, all theoretical frameworks should focus our attention on a small, select sub-set of all potential explanations.
Here then, I conceptualise CPD programmes and NHS teams as causally efficacious organisations (cf. Elder-Vass, 2010). For a CPD programme, the necessary parts are people in the roles of (at least) students and tutors, plus educational materials. CPD students, tutors and materials are related by expectations of teaching and learning (as processes) and these have the potential to bring about learning and IoPP (as outcomes), as shown above in Figure 4. This accords CPD programmes ontological status: they are considered a ‘real’ stratum of reality distinct from agency because they can cause effects in the world – the so-called causal criterion (Kaidesoja, 2007). Furthermore, I equally accord ontological status to other structures beyond the CPD, such as the postgraduate training system or the regulatory body, the GMC. This acknowledges the potential for these ‘over-lapping’ or inter-related contextual structures to influence CPD provision and design, CPD learning experiences and IoPP outcomes. In other words, the critical realist view of contingent emergence permits me to socially situate the CPD module in the wider practice context and to seek complex causal explanations of IoPP.
4.4 A solution to the realist evaluator’s quandary

Over the next two sections, I show that Bhaskarian critical realist literature offers a solution to the realist evaluator’s quandary. The particular view of structure and context offered by Elder-Vass (e.g., 2010; 2015) and Archer (1995) provide robust conceptual tools to distinguish programme context from programme mechanism. Yet, to date, the realist evaluations of formal CPD for postgraduate medical educators have not engaged with this literature. CPD programmes have not been conceptualised as structural mechanisms, neither have smaller groups of learners within a CPD programme. I suggest this is due to (interpretations of) Pawson and Tilley’s (1997) view of social structure as a fragmented, collectivist one (cf. Porter, 2015). In this section and the next then, I clarify how CPD modules can be conceptualised both as structural mechanisms and pre-structured contexts in which other mechanisms may occur. I do this through an overview of the general realist belief in compositionality and recourse to Elder-Vass’s (2010) synchronic relational emergence theory. The solution I propose for disentangling context from mechanism provides conceptual clarity for the final set of conceptual tools I deploy in this study. Namely, intended and unintended mechanisms, norm circles and agency.

4.4.1 CPD programmes as structural mechanisms within a wider system

The critical realist notion of compositionality permits a conceptualisation of CPD programmes as structural mechanism within a wider system. In essence, compositionality explains how structures are made up of other structures. Therefore, compositionality permits us to ‘unpack’ structures into their component parts (as I did above for CPD programmes), as well as to combine structures to form relatively higher-level ones (Elder-Vass, 2007). Here, ‘higher-level’ refers to one structure being composed of others as illustrated in Figure 6. Both the ‘higher’ and ‘lower’ level structures have the potential to cause effects in the world, as explained above. For example, the medical profession can be viewed as a social structure, one of whose aims is to standardise supervision of juniors to quality assure training and patient care. Focusing on
the medical profession as the structural mechanism of interest, we can examine its relatively lower-level parts and their relations to see how they contribute to the profession’s effects. In doing so, CPD programmes may be identified as one of several, lower-level structural mechanisms (or parts) which have the potential to help standardise practice. Figure 6 provides a brief illustration of this. Compositionality then goes up and down a system (cf. Gorski, 2013), where ‘system’ is essentially synonymous with structure (Elder-Vass, 2010) but helps locate any particular causal structure in relation to others.

**Figure 6: Depicting the compositionality of social systems**

![Diagram](image)

Figure 6 is not intended as a complete depiction of the compositionality of a higher-level structure. Instead, it illustrates how one structure’s parts are other structures or structural mechanisms. Figure 6 is also not intended as critical depiction of CPD’s role in the medical profession. That is, CPD programmes as ‘lower-level’ structural mechanisms may cause different effects other than standardising practice, depending on their nature (cf. Amundsen & Wilson, 2012; Kennedy, 2005; 2014).
Nested compositionality and emergence then provide the first part of the solution to the realist evaluator’s quandary: programmes are mechanisms when viewed as relatively lower-level parts of a relatively higher-level structure. This permits us to begin socially situating not just individual learners or staff, but whole CPD modules, by asking what the CPD may be a mechanism for and why; and how this came about. I believe Kennedy’s (2005; 2014) work in teacher education has demonstrated this by identifying for example, the training and deficit models of CPD which function to standardise practice according to external benchmarks, and the transformative models of CPD which have the potential to inform or even challenge policy. Compositionality then provides a robust conceptual tool to consistently identify CPD programmes as structural mechanisms. Equally, taking a CPD module as the structure of interest, we can identify its relatively lower-level structures such as (online) discussion groups or role-play groups. These too can be conceptualised as structural, programme mechanisms for learning and IoPP. They are groups of people (or structures) with the potential to bring about outcomes through their interactions. Furthermore, such group learning activities are usually designed into a formal programme and may therefore be termed ‘intended’ structural, programme mechanisms. Here then, I have shown that whole CPD programmes, as well as the ways in which learners are grouped together for interactive learning can be conceptualised as intended, structural mechanisms or programme mechanisms. However, realist studies also involve contextual influences. To distinguish context from mechanism, in the next section, I apply Archer’s (1995) notion of ‘pre-structured context’.

4.4.2 CPD programmes as pre-structured contexts for intended programme mechanisms

CPD programmes can be considered as pre-structured contexts which offer the potential for intended programme mechanisms to be realised. This is because ‘within’ a CPD programme, members’ role-based interactions are influenced (but not determined) by their normative beliefs about teaching, learning and the purposes of CPD (cf. Harre & Madden, 2007; Elder-Vass, 2010). In other words, the CPD context is somewhat pre-structured by tutors’ and students’ epistemological assumptions (cf. Archer, 1995) because these guide manner of
engagement with content, and interactions with and expectations of fellow members. An example of this can be seen in formal curriculum documents which capture staff beliefs and expectations for the CPD, thereby pre-structuring the learning environment prior to student enrolment. In addition, our expectations about how to be a student or tutor have been formed previously by others, over time and prior to our particular instantiations in these roles (Archer, 1995). That is, “roles are essentially bundles of [pre-existing] norms” (Elder-Vass, 2010:145) which we learn through social experiences over time (Archer & Elder-Vass, 2012) by studying, working, and living with other people (Elder-Vass, 2010). The CPD context may therefore be pre-structured by long-standing factors.

Roles within social structures and role norms therefore play a large part in pre-structuring the contexts in which we study or work (cf. Archer, 1995). This is because embodying normative beliefs (or curriculum statements) about how to be a CPD tutor or student shapes the learning context by the way it positions students, tutors and materials in relation to one another. Taking a transmission-based approach to teaching, for example, creates a context in which students are positioned as recipients of external, codified knowledge (cf. Kennedy, 2014; Eraut, 2004), whereas facilitating critically reflective discussions may place expectations on the learners to generate new knowledge from practical experience (Schon, 1991). Here then, we can see that a whole CPD module or a discussion group within it may be conceptualised as a programme context for interaction. The nature of this context is shaped, or pre-structured, in part, by sets of normative beliefs.

Yet, having already established that whole CPD programmes, or CPD components such as discussion groups are mechanisms for certain outcomes, why might we choose to also conceptualise them as contexts? I suggest the answer is that it depends where our research gaze falls. And here, the realist notion of compositionality provides a coherent approach to distinguishing context from mechanism. If we ask how standardisation of practice (as an outcome) is brought about in the wider context of postgraduate medical training, we might identify MMC, revalidation and CPD as key mechanisms. If we ask how IoPP is brought about in a formal CPD context, then we might identify group discussions or collaborative reflections as
key mechanisms that support outcomes (e.g., Onyura et al, 2017). If we focus on or conceptualise discussion groups as CPD ‘internal’ or programme contexts, then we may begin to ask what manner of mechanisms are realised in these contexts. We may identify educational mechanisms such as utilitarian reflection by learners (cf. Ng et al, 2015). Depending on the actual people and interactions in concrete instances (cf. Elder-Vass, 2010), we may also identify critical or consequential engagement with CPD content, in which learners examine the consequences of applying it to their situations (Gresalfi & Barab, 2011). Compositionality then provides a robust tool for directing our research gaze up and down a system (cf. Gorski, 2013) and a non-chaotic rationale (cf. Sayer, 2000) for sometimes referring to groups of people as mechanisms while at other times referring to them as contexts.

4.4.3 Distinguishing unintended mechanisms from intended programme mechanisms

The realist notion of compositional, causal structure provides a ‘home’ for CPD educational mechanisms (cf. Elder-Vass, 2010). It therefore also helps distinguish between intended and unintended mechanisms. This is important because the latter may lead to desirable or undesirable outcomes and CPD stakeholders may wish to know how to replicate or avoid such events in future. Mechanisms are not free-floating or homeless (Elder-Vass, 2010). They are psychological and social processes (Westhorp, 2018) embedded in people’s interactions with their environment, including role-based, “coordinated interactions“ (Elder-Vass, 2010:155) with each other in social structures. This means the planned, coordinated interactions between CPD tutors, students, and materials, as set out in a curriculum, can be viewed as Pawson & Tilley’s (1997) intended programme mechanisms. Moreover, in the case of professional learning, it seems reasonable that intended programme mechanisms be termed educational mechanisms (cf. Porter, 2015).

Further, a focus on pre-structured contexts and role-based interactions permits the distinction of intended programme mechanisms from unintended ones. While Pawson and Tilley’s (1997) seminal work on realist evaluation discusses programme mechanisms and unintended
consequences at length, there is far less discussion of how to distinguish intended and unintended programme mechanisms. I therefore propose this distinction as a point of clarity. For example, a CPD module curriculum may intend transformative, critical reflection as an educational mechanism to bring about changes to practice. However, transformative learning has also been shown to engender difficult interactions between tutors and learners because it ‘upsets’ learners’ current frames of reference (Kaufman, 2019). CPD may also frustrate learners by suggesting ways of practicing that learners perceive as overly ambitious or infeasible (cf. Eraut, 2004) or it may be overly burdensome causing learners to disengage (e.g., Archer et al, 2022). Yet, it stands to reason that a CPD curriculum would not intentionally wish to engender mechanisms which risk a loss of learning. Frustration or disengagement then are unintended programme mechanisms (with undesirable consequences) that merit attention for the damage they do. They can be explored through analysis of role-based interactions in pre-structured contexts.

4.5 Multiple influences on role-enactments: agency, norm circles and synchronic relations

Above, I have shown the causal influence of role norms and role enactment on approaches to learning and IoPP. Yet, IoPP is not rigidly determined by these, nor perfectly predictable. An over emphasis on normative expectations risks offering a simplistic, deterministic view of structures which is incongruent with realist philosophy. Instead, we should acknowledge that there are many sets of normative beliefs about ways to enact a role (Elder-Vass, 2010). This has been exemplified by different approaches to designing CPD curricula (Kennedy, 2005; 2014), different approaches to teaching (e.g., Cakcak, 2016) and multiple ways of being a reflective practitioner or tutor (e.g., Kinsella, 2007; 2010). The causal mechanisms of agency and norm circles (cf. Elder-Vass, 2010) help explain why these differences arise. Agency and norm circles show that structure is not a deterministic, prescriptive shackle and therefore help explain why IoPP from CPD likely occurs in patterns rather than law-like regularities.
Agency is a causal mechanism that influences role enactment. According to Archer (1995;2003;2012), people are reflexive; we have the capacity to ponder our values and deliberate our actions. We have the ability, proclivity and “degrees of freedom” (Archer, 2003:7) to decide “to act so rather than otherwise” (Archer, 2003:3) in light of structural and cultural contexts. Moreover, we tend to do so with a desired end (Archer, 2003) or a concern (Sayer, 2000) in mind. We weigh up the benefits, or lack of sanctions that a particular course of action may bring (Elder-Vass, 2010). People can correctly or incorrectly, anticipate the ease or difficulty in pursuing a course of action and benefits in achieving it (Archer, 2003). We can devise ways to overcome obstacles, make the most of disappointing situations and or aim for better goals. Agency then is a person’s causal power emerging from the composition of our being, which includes biological factors and social experiences (Archer, 2003). As shown by earlier works in teacher education, agency and reflexivity imply that learners may engage with CPD differently and draw different outcomes from it because of different interests, concerns, or prior experiences (e.g., Korthagen & Kessels, 1999).

Elder-Vass’s (2010) notion of norm circles also help explain variations in role-enactment by historicising learners. Norm circles show how our beliefs and practices are developed by negotiating life alongside others, elsewhere and over time. According to Elder-Vass (2010), throughout our lives, social experiences lead us to perceive apt and beneficial ways of doing things, either because they help us achieve goals or avoid unpleasant situations, or both. For example, in teacher education, Korthagen & Kessels, (1999) drew on Stofflett and Stoddart’s (1994) work which showed that teachers’ conceptions of and approaches to teaching are strongly influenced by the way(s) in which they were previously taught. In addition, the extensive body of work on the various approaches to teaching and learning indicates our previous experiences of being taught may differ from each other’s. Norm circles therefore help explore questions as to why people may approach teaching, learning or supervision differently from one another.

In addition, the notion of norm circles holds that we believe others around us also hold similar beliefs; that there is a ‘circle’ of people who share our normative assumptions. This also
resonates with earlier works in teacher education. For example, Huibregtse, Korthagen and Wubbels (1994, as cited in Korthagen & Kessels, 1999) found that teachers’ beliefs about how best to learn prevented them from appreciating that their learners held different beliefs. The teachers in their study believed everyone subscribed to the same, ‘best’ way of learning.

Moreover, Elder-Vass (2010) argues that we come to believe those around us may not only share or endorse, but even enforce adherence to normative beliefs. Elsewhere termed socio-cultural considerations (Kahn, Qualter & Young, 2012) or cultural systems (Archer, 1996), norm circles then are a social mechanism or ‘force’ (cf. Westhorp, 2018) that (partially) explain why students and tutors might act so and not otherwise. They help account for different ways of enacting student or tutor roles by historicising and contextualising people. This may explain why a CPD student may bring to her current studies expectations that she built up in other times and places: because she believes the same norms apply now as did then. Within a CPD module then, there may be multiple competing or complementary norm circles (Elder-Vass, 2010) as curriculum designers, students and tutors enact their roles (differently) according to the beliefs and values they have amassed elsewhere over time.

Agency and norm circles then help explain why tutors and students may enact their roles in certain ways during a CPD module. They help explain why CPD’s likely IoPP outcomes are patterned rather than uniform or wildly disparate. Agency and norm circles also help explain how CPD’s IoPP may be blocked. They provide conceptual tools to answer Pawson and Tilley’s (1997) guiding question for realist evaluations: what worked for whom in which circumstances and why? To understand how the interplay between these causal forces shapes CPD’s actual IoPP, we need to explore how people actually interact in concrete instances (cf. Elder-Vass, 2010).

Where emergence theory provides a framework for understanding what could or should usually happen by focusing on normative relations; Elder-Vass’ (2010) synchronic-relational version helps explain what actually happened by focusing on ‘real time’ interactions between people and materials (cf. Elder-Vass, 2017) in social structures. Researching people’s actual interactions then offers the potential to identify varied causes of outcomes: role-based
“coordinated interactions” related to the structure, normative assumptions developed through norm circles over time and agency. These may or may not match the intended programme mechanisms and may therefore facilitate or impede intended programme outcomes. Therefore, identifying these as well as the contexts conducive to them, may help refine CPD delivery and strengthen explanations of IoPP.

4.6 Summary: The theoretical framework for this study

In this chapter, I have shown that critical realist emergence theory and Elder-Vass’s (2010) synchronic-relational version of it provide a rational conceptualisation of CPD and its IoPP. These theories offer conceptual tools which can enhance our understanding of formal CPD’s IoPP. These are set out in Table 7. This framework also offers a solution to the realist evaluator’s quandary by providing analytical tools to distinguish context from mechanism. In the current study, I therefore propose a unique conceptualisation of CPD as an example of Elder-Vass’s (2010) organisation. That is, a structural mechanism comprising people in specialised roles, using materials, and related by educational strategies. Role-based relations shape (but do not determine) teaching and learning processes which in turn shape learning and IoPP outcomes. I also propose CPD programmes as pre-structured contexts for intended and unintended programme mechanisms. Intended programme mechanisms are the educational strategies designed into the curriculum by staff. Unintended programme mechanisms are also embedded in the interactions, or synchronic relations between students, tutors, and materials in the CPD context. They include agency and normative assumptions developed through norm circles that people experience prior to CPD. Unintended mechanisms may be beneficial or harmful to learning and IoPP. In addition, I consider that CPD is embroiled in social relations with other causal influences co-existing in the wider socio-professional context. These include ‘formal’ contextual structures such as the regulatory body, the GMC, MMC training structures and NHS staffing structures. IoPP emerges in patterns from the interplay between structure and agency and is realised in conducive conditions. That is, formal CPD has the potential to
cause IoPP, but its actual realisation is contextually contingent. In Part Five of this thesis, I set out my methodology for research underpinned by this conceptual framework.
Table 7: The conceptual tools in the theoretical framework for the current study

<table>
<thead>
<tr>
<th>Concept</th>
<th>Brief explanation</th>
<th>Main source in the literature</th>
</tr>
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<tbody>
<tr>
<td>Morphogenesis</td>
<td>The reasons why a structure comes into being. Examining the wider socio-historical and political context can illuminate these influences.</td>
<td>Archer (1995)</td>
</tr>
<tr>
<td>Morphostasis</td>
<td>Influences in the wider context which support the continued existence of a social structure. Once in existence, social structures remain susceptible to ongoing influence by relevant, overlapping structures in the wider context.</td>
<td></td>
</tr>
<tr>
<td>Structural mechanism</td>
<td>People in social groups of any size can cause effects in the world. They can be referred to by various terms including 'social structures' and 'structural mechanisms'.</td>
<td>Elder-Vass (2010); Porpora (2013).</td>
</tr>
<tr>
<td>Natural necessity</td>
<td>A social structure is identifiable through the presence of specific related (human and material) parts...</td>
<td>Elder-Vass (2010;2017); Harre &amp; Madden (2004)</td>
</tr>
<tr>
<td>Conceptual necessity and emergence</td>
<td>...which imbue it with the potential or power to bring about particular outcomes (e.g., learning and IoPP)</td>
<td>Bhaskar &amp; Lawson (2004); Harre &amp; Madden (2004)</td>
</tr>
<tr>
<td>Organisation</td>
<td>Some social structures comprise people in specialised, power-imbalanced roles. These roles are the essential parts of the structure and the hierarchical relations between them enable the structure to produce its effects.</td>
<td>Elder-Vass (2010)</td>
</tr>
<tr>
<td>Role norms</td>
<td>A set of normative beliefs which guide people’s role enactments and their expectations of others in inter-related roles. For example, epistemological assumptions about the nature and purpose of CPD.</td>
<td>Elder-Vass (2010)</td>
</tr>
<tr>
<td>Norm circles</td>
<td>A social mechanism which influences people to act in certain ways because they believe this is optimal or appropriate in a situation. Built up over time, through social experiences, norm circles are apparent by their effects on people’s behaviour.</td>
<td>Elder-Vass (2010)</td>
</tr>
</tbody>
</table>
| **Agency** | People’s subjective reflexivity imbues them with the power to cause effects in the world. (People are considered socio-biological structures and therefore agency is also emergent). | Archer (1995;2003)  
Elder-Vass (2010) |
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<tbody>
<tr>
<td><strong>Synchronic relations</strong></td>
<td>People’s actual interactions in concrete situations. The way people interact in the moment is influenced by multiple factors including role norms, norm circles and agency.</td>
<td>Elder-Vass (2010)</td>
</tr>
<tr>
<td><strong>Intended, programme mechanisms</strong></td>
<td>The educational processes designed into the CPD programme by curriculum designers or intentionally deployed by tutors.</td>
<td>Pawson &amp; Tilley (1997)</td>
</tr>
<tr>
<td><strong>Unintended programme mechanisms</strong></td>
<td>Social processes or forces which occur during synchronic interactions which were not intentionally planned into the CPD programme. These may have beneficial or damaging effects on learning experiences and outcomes.</td>
<td><em>current study</em></td>
</tr>
<tr>
<td><strong>Emergent causality</strong></td>
<td>The specific parts which comprise a structure and the way they are related imbue the structure with the potential to cause effects in the world. The individual parts acting outside of the structure could not cause these same effects.</td>
<td>Bhaskar (1978); Elder-Vass (2010); Harre &amp; Madden (2004).</td>
</tr>
</tbody>
</table>
| **Contingent emergence** | A structure’s potential to cause effects is subject to conducive conditions. Causality is neither linear nor deterministic. Lawlike outcomes are not possible. Outcomes are patterned by multiple influences ‘inside’ and ‘outside’ the social structure. | Archer (1995); Bhaskar (1978); Elder-Vass (2010)  
Fleetwood (2017); Lawson & Bhaskar (2004). |
| **Contextual structures** | Other, ‘overlapping’ or inter-related structural mechanisms beyond the (CPD) structure of immediate interest but nonetheless, influencing any outcomes. | Porter (2015;2016) |
Part 3: Methodology and Research Design for the Current Study

5  Rationale for and structure of the research design

5.1  Introduction

In this part of the thesis, I show how my ontological commitments entail epistemological assumptions which carry methodological and ethical implications for my study (cf. Cohen et al., 2011). Further, I show how addressing these implications can meet the quality criteria for realist research as set out by (Healy & Perry, 2000) and the RAMESES project (Wong et al., 2016). In so doing, this part of the thesis heeds calls for educational research to pay greater attention to aligning philosophical under labouring meta-theories with methods of data collection, analysis, and interpretation (e.g., Scott, 2014). I begin by articulating the broad assumptions underpinning my research and then explain my choice of research design before detailing the methods used to carry out this study.

5.2  Beyond empiricism: multiple windows onto a real world

In Part 2, I showed that a critical realist ontology offers robust conceptual tools for studying IoPP. I therefore established the ontological appropriateness of critical realism for this study. Such ontological commitments entail epistemological assumptions that guide the logic of my inquiry which in turn give rise to methodological implications including issues of ethics and quality. Importantly, a critical realist approach involves epistemic relativism and therefore triangulation, and retroductive thinking.

Ontological realism necessitates epistemic relativism because as a critical realist, I hold that reality is greater than any person can possibly experience. Instead, through the particularity of our lives, we each acquire different, limited views of an objective reality. I believe there is a vast, pre-structured reality which we inherit, partially experience, and reflexively deliberate throughout our lives (cf. Archer, 1995). Our relatively enduring social relations within and across social structures in our lives shape but do not determine our values and actions.
Variation renders reality complex and makes causality contingent: the actualisation of events depends on the ‘mix’ of causal mechanisms present, both at the level of agency and structure. This relational emergence in open systems means absolute knowledge of the social world is unattainable (cf. Scott, 2005). That is, a “God’s eye view” of our area of study is not humanly possible (Putnam, 1999 as cited in Maxwell, 2012).

An emergent, objective reality studied through epistemic relativity has two important implications for realist research regarding the collection and analysis of data. Firstly, triangulation of data, method and theory is needed to support analytic generalisability: multiple windows onto the external reality create a higher quality picture of it. Secondly, stratified causal explanations require retroductive thinking, not empiricism, nor participants’ subjective views as an end point. Realist studies aim to explain social life (Archer, 1995), yet explanations are not based on covering laws (Elder-Vass, 2015). Instead, abductive and retroductive thinking offer ways of identifying generative causal mechanisms (Bhaskar, 1978) during data analysis. While abductive thinking re-describes data in terms of pre-existing theories, retroductive thinking takes the research beyond the data, to ask what the world (or context) must be like for the data to have come about (Bhaskar, 1978). Retroductive thinking for theory building is necessary if realist explanations are to address the socially situated contingency of outcomes.

In the following sections, I set out the ways in which I enacted these beliefs about research through the choice of a realist evaluation research design and use of specific methods for data collection and analysis. Such an audit trail helps increase the trustworthiness of findings (Healy & Perry, 2000) by enabling readers to follow the steps taken to arrive at my conclusions.

5.3 Multiple viewpoints and outcomes help answer my questions

My decision to adapt Pawson & Tilley’s (1997; 2004) realistic evaluation research design was informed by my research questions and aims for the current study. These arose first from my reflections on my practice, then from findings of the literature review. My aim in academic
terms, is to understand the nature and socially situated, multiple causes of CPD’s IoPP through answers to my research questions. In practical terms, my aim is to use this new understanding to improve my own practice as a CPD curriculum designer and tutor. Since my aims entail ‘how’ and ‘why’ questions, a realist research approach is appropriate (Healy & Perry, 2000). As such, my research design is a further component of my conceptual framework (cf. Ravitch & Riggan, 2017).

Initially, I deemed a realist evaluation research design the most appropriate for my study because it endorses the inclusion of curriculum designers’ and tutors’ intentions for IoPP, not simply the exploration of actual IoPP for students. I also believed that realist evaluation’s focus on patterned outcomes was more appropriate in my professional context (see Section 1.1). However, within the postgraduate medical education literature, findings from realistic evaluations largely explain formal CPD’s IoPP at the level of agency. This is possibly influenced by methodological works grounded in scientific realism as shown in Chapters Three and Four. Further, causal explanations of IoPP in published realist studies remain close to the empirical data. That is, retroductive thinking is not used to offer causal explanations that address wider contextual influences. Reflecting on my professional concerns, I felt this overlooks significant causal factors in the workplace and profession. I therefore perceived that explicitly socially situating our learners in CPD and professional structures may offer fresh, wider understanding of IoPP as multiply determined by structures and agency.

The current realist evaluation design is therefore guided by my reconceptualisation of IoPP and my solution to the realistic evaluator’s quandary both of which socially situate stakeholders. These ideas are grounded in critical realist emergence theory and in particular, Elder-Vass’ (2010) synchronic-relational version of emergence theory (as set out in Chapter Four). Therefore, differently from studies to date, I begin by conceptualizing CPD and work-teams as power imbalanced, causally efficacious structures or organisations (Elder-Vass, 2010). I anticipate that CPD staff and students’ roles, and relations with colleagues within these organisations influence IoPP. This means causal explanations are sought and offered both at
and beyond the level of individual reasoning about or reactions to CPD; that is at both levels of agency and structure.

In addition, through the literature and reflection on my teaching practice, I perceived the benefits of understanding staff’s expectations regarding IoPP. Studies to date underutilise information about staff’s intentions or approaches to help explain how and why IoPP might come about. Another key reason for selecting a realist evaluation research design then is because it provides a means by which to theorise the influence of CPD staff on IoPP through the stage of initial programme theory gleaning.

5.4 Refining programme theory helps improve practice

In a realist evaluation, the unit of analysis is programme theory (Pawson & Tilley, 1997): it is the starting and end point of a cycle of research, and I felt this approach could help me improve my practice. This is because a refined programme theory posits abstract, theoretical generalisations which may inform future programme design or delivery by explaining what worked for whom in which situations and why (Pawson & Tilley, 1997). This is done through reference to the real causal effects of agency and structure that may be generalisable across multiple conducive contexts (Tilley, 2018). This offers the possibility to understand how or why our aims for CPD were achieved or thwarted. Developing programme theory then is different to a ‘black-box’ approach to evaluation-research (Astbury & Leeuw, 2010) which does not seek to explain the ‘how’ or ‘why’ of IoPP. A ‘black-box’ approach may also reduce the likelihood of us questioning or amending our aims. Yet ‘business as usual’ has potentially negative implications for repeatedly offering a program or rolling it out in new contexts (Dixon-Woods et al., 2011). Since the module I study here is offered twice yearly, is an important component in educational revalidation for supervisors and is time consuming for students, I felt that programme theory refinement may help me improve my practice as module leader, to better serve our students.
Due to the centrality of programme theory, it is helpful to clarify what the term means. Indeed, (Rogers, 2008) notes the potential for confusion due to a range of similar terms used in evaluations including “theory-based, theory-driven, theory-oriented, theory-of-change...[and] intervention theory” (p.63). Further, some scholars use these terms as synonyms for the same underlying concept (e.g., Weiss 1997 as cited in (Rogers, 2009), whereas some scholars consider different labels suggest significant differences in research approach (e.g., Blamey & MacKenzie, 2007).

In the current study, I use ‘programme theory’ to refer to the set of beliefs and assumptions held by the module designers and tutors about how CPD is expected to cause intended outcomes in certain conditions (cf. Marchal et al., 2018). Since my study is based in education, learning outcomes are important, but I consider these a necessary interim outcome for my ultimate outcome of interest: IoPP.

Here then, programme theory is less abstract than grand theories. The latter serve to establish the boundaries of disciplines (Higgins & Moore, 2000) and can be said to be operating at a higher level of generality (Dixon-Woods et al., 2011; Higgins & Moore, 2000) For example, learning theories. While preferably informed by these more generalisable and abstract theories (Oosthuizen & Louw, 2013), programme theory is an explanation, at a very specific level, of the working of a particular programme in a particular setting (Befani et al., 2007). However, Pawson & Tilley’s (1997;2004) Context, Mechanism, Outcome configuration or CMOc heuristic potentially provides a means by which a refined programme theory can posit causal explanations which are relevant beyond the level of concrete instances. Through retroductive thinking, the CMOc may prompt a relatively higher level of abstraction so that the causal explanations offered by realist evaluations may sit between grand theory and initial, practitioner beliefs (Marchal et al., 2018) . Such middle range theories (cf. Merton,1949) may be achieved provided data analysis goes beyond thick, thematic description of empirical data to identify real, underlying referents. However, this approach remains uncommon in studies to date.
5.5 The three stages of realist evaluation

Programme theory is eventually refined through a three-stage research design. First, an initial programme theory is gleaned from experiences of the programme in action, from programme documents and with the input of programme leaders. In education, this helps uncover the intentions of curriculum designers and tutors. Next the initial theory is tested with the help of programme users or, in education, students. Student experiences and achievements help to ‘test’ staff assumptions about which outcomes may be possible in which conditions. This can provide information about wider influences on IoPP in concrete instances. The third and last stage of programme theory refinement seeks to identify generative mechanisms which help or hinder desired outcomes, and the contexts conducive to them. This goes beyond theoretical re-description of the empirical data to retroduce underlying real referents. The extant literature on broader yet related theories may therefore provide another window through which to view programme outcomes and their multiple causes. For example, as I showed in Chapters Three and Four, the oft-noted theme of time constraints on CPD, may be attributed to staffing or funding structures in the healthcare context. Critical realist emergent theory permits us to identify these structures as real, causal influences in our lives. Refined programme theory then may help CPD staff amend or maintain approaches to delivery accordingly. I therefore took this three-stage approach to refining programme theory as set out in the research schedule below.
Table 8: Research schedule for the current study

<table>
<thead>
<tr>
<th>PRINCIPAL TIMEFRAME6</th>
<th>RESEARCH ACTIVITY</th>
<th>OUTCOMES</th>
</tr>
</thead>
</table>
| Jan-Feb. 2017        | Ethical approval  | Granted by University of Cambridge, January 2017  
                       |                   | Granted by my employing university, February 2017 |

Pilot study (1 staff, 3 students)

| Feb-May. 2017 | Curriculum document analysis | Gleaned first parts of programme theory prior to reconceptualising IoPP |
|               | Semi-structured interviews (1 staff, 1 student) | Refinements to enacting the Teacher-Learner cycle through more turn taking. |
|               | Impact Diaries | Removed as a data collection method due to the research burden for participants |
|               | Observations of 3 students’ NHS supervisory practice | Re-affirmation of a realist view of contextual contingency - against verificationism |
|               | Coding pilot study data | Solutions to the evaluator’s quandary: Reconceptualised CPD and IoPP |

Stage One: Programme theory gleaning with module staff

<table>
<thead>
<tr>
<th>DATA COLLECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>May-Sep. 2017</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

DATA ANALYSIS

| June-Oct. 2017  | Template analysis of staff interview data | Initial template based on a-priori codes and staff data |
|                 |                                           | Initial programme theory expressed as CMOc |
|                 |                                           | New logic model for use in student interviews |

6 In reality, stages of the research overlapped, and later stages caused me to cycle back to earlier stages, meaning analysis of all data was ongoing and blended.
(Table 8 continued)

<table>
<thead>
<tr>
<th>Stage Two: Theory testing with module students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRINCIPAL TIMEFRAME</strong></td>
</tr>
<tr>
<td><strong>DATA COLLECTION</strong></td>
</tr>
<tr>
<td>Cohort 1: Sep. 2017 &amp; Cohort 2: Feb. 2018</td>
</tr>
<tr>
<td>Cohort 1: Jan-Feb. 2018 &amp; Cohort 2: June-Aug. 2018</td>
</tr>
<tr>
<td>Cohort 1: Jan-Feb. 2018 &amp; Cohort 2: June-Aug. 2018</td>
</tr>
<tr>
<td><strong>DATA ANALYSIS</strong></td>
</tr>
<tr>
<td>Nov. 2018-May 2019</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Stage Three: Programme Theory Refinement</td>
</tr>
<tr>
<td>Nov. 2018-May 2019</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

5.6 Ethical considerations permeating this study

This study gained ethical approval first from the University of Cambridge, Faculty of Education in January 2017 and then from my employing university in February 2017. To gain ethical approval from the University of Cambridge, I submitted a research design, including a specific statement about ethical considerations, a copy of the informed consent sheets I planned to use to recruit participants, a completed Risk Assessment form and written statements from my two supervisors. The proforma for the latter included a request to detail any concerns my supervisors had regarding the ethical nature of my proposed study, and none were noted.
Having gained ethical approval from the University of Cambridge, I used the online NHS questionnaire to determine if my study required NHS approval but as it did not involve human tissue or patients, it did not. Subsequently, my employer accepted the outcomes of these two external approval processes in lieu of their ethical approval procedures. However, my employer reminded me that research is unethical if it wastes participants’ time or is purely for personal gain (cf. BERA, 2011). I therefore reaffirmed my earlier decisions to avoid burdensome activities. I discuss these in more detail in Section 5.9. Having gained ethical approval and acknowledging that piloting may increase rigour (cf. Denzin & Lincoln, 2011), I conducted a pilot study between February and August 2017 (See Appendix 2).

5.6.1 Considering vulnerability in close to practice research

In preparation for requesting ethical approval and throughout the enactment of my research, I strived to keep research activities in line with BERA (2011) tenets of best ethical practice for educational research. In particular, I was concerned that the present study constitutes an example of what BERA (2018) now terms “Close to Practice Research” (CtP): it focuses on an issue relevant to my practice as defined by me, the practitioner and researcher, and involves my own colleagues and students to investigate it. Consequently, throughout my study, I reflected on ways to mitigate the ethical implications of my role as colleague to the staff and as tutor to the students who might eventually consent to participate. Being professional adults who did not fall into any fixed ‘at risk’ categories, I did not consider my participants susceptible to what Gordon (2020) now calls ‘categorical vulnerability’. This refers to potential participants such as children or those with special needs who require safeguarding measures if they are invited to participate in research. However, I did consider my participants to have a relational vulnerability as described by Gordon (2020). This arises from their participation in my study while they were my students and colleagues. For example, the potential for harm arises because my student-participants are under my formal authority (cf. Gordon, 2020) as module tutor, and this may conflict with their efforts to contribute meaningful data. Their vulnerability is role based and would be changed, perhaps reversed, if we were interacting in our other
social roles of doctor and patient. Initially, I responded to this potential for harm by requesting my PhD supervisors also include their contact details on the informed consent sheets for this study. This allowed anyone with a concern who may feel uncomfortable approaching me, to contact my supervisors. Both supervisors kindly agreed, but no concerns were raised. In Section 5.9, I set out my further consideration of students’ vulnerabilities during later stages of the study.

5.7 Informed consent for participants

Ethical considerations were further reflected in the informed consent sheets I designed to recruit staff and student participants prior to data collection (See Appendices 3 to 6). Following BERA (2011) guidelines, I explained, in plain English, that the aim of the study was to improve the appropriateness of the module for busy professionals by helping me reflect on curriculum design and my practice in delivery; that no one was compelled in any way to join, and that there would be no reward for participation, nor detriment to those who did not participate. Participants were informed in writing that their participation would be anonymous and of their right to withdraw at any time without needing to give any reason. I included my contact details on these sheets to that end (cf. BERA, 2018). Informed consent sheets also detailed what participants would be asked to do, how long their engagement might last and how I would store, process, and possibly disseminate any information they shared with me. This included alerting potential participants that this study was being conducted for a doctoral degree which ultimately involved the writing of a thesis and possible wider dissemination through conferences or publication.

5.8 Gaining access to observation sites

Furthermore, since my observations of students’ supervisory practice also involved trainee doctors who are not my research participants, I drew up two further informed consent sheets.
One was directed to Training Programme Directors (TPD), requesting access to the premises and the professional situations I wished to observe. In a double loop of considerations, I asked participants if they would kindly email this request for access to their own TPD, or whether they would prefer I did. This was because, I did not want to contact a TPD before my student had the opportunity to let their TPD know of their participation in my study. All participants, except those who were also TPDs themselves, chose to speak to their TPD and forward me email confirmation of granted access.

A third information sheet requested trainees’ permission for me to observe and audio record supervisory sessions. (See Appendix 4). It explains that the focus of my study is not the trainee, not their progression through training nor the cases they discuss with their supervisor, but rather the supervisor’s approach to facilitating learning and the environment for supervision. The sheet explains the aim of my study is to understand how and why the module could better support supervisors and through such understanding to improve my practice as module leader. The sheet also states my aim to contribute new substantive and methodological insights to the academic community regarding IoPP research (cf. BERA, 2018).

During the pilot study, I took one copy of this sheet per trainee to an observation and emailed the signed sheet to the trainee after I returned home. However, reflecting on my pilot study experience I decided it was potentially invasive to ask for a trainee’s email address. Therefore, during the current study, I took two copies per trainee and left the trainee with their own signed, hard copy at the moment of consent.

Observations of practice were arranged according to my students’ schedules, not mine since these were episodes of actual practice, not simulations. Occasionally, I was unable to accept an invitation due to my own teaching commitments and re-scheduling meant data collection took longer than planned.
5.9 Reducing the research burden by choice of data collection methods

In designing my study, I aimed to reduce the research burden for participants. Based on lessons learned from a pilot study, I decided against asking students to keep an impact diary throughout their module studies, as this had proven burdensome. Instead, I asked that I be allowed to analyse students’ first, compulsory contribution to module studies online. This is a Learning Agreement that, since 2015, I have asked students to create and upload within the first three weeks of module studies. Only a students’ personal tutor views this. It should detail how and why students intend to progress through the module. I anticipated Learning Agreements would offer information about students’ epistemological assumptions and values surrounding CPD.

As far as possible, I also wanted to collect data at times that were not overly busy for students. My students undertake module studies part time while working full time in busy professional roles. Time is a precious commodity. Furthermore, failing the module has real consequences for my students, their trainees, and their colleagues. My needs as a researcher collecting data could not override my students’ needs as clinicians and students; their study time needed to be predominantly for them, not me. I therefore decided to interview and observe students after they had submitted their final, summative assessments as I knew from experience that these tasks in particular took a lot of time and energy to prepare. Also, this timing was intended to reduce any potential for the institutional hierarchy (cf. Gordon, 2020) between student and tutor to distress my participants. Having completed the module, my observation of their practice or eliciting their views of the module through interview could in no way influence their grades.

5.10 Protecting identities and avoiding unfair advantages

I decided not to include any naturally occurring data from any of the compulsory online discussions, nor summative assessments since the instructions for these do not address IoPP. Using this data may have revealed students’ participation to others or provided an advantage
to my participants. At the time of data collection, discussion prompts and intended learning outcomes for assessments lacked any explicit, formal requirement to discuss actual or planned IoPP. Ethically then, I did not wish to skew my participating students’ online discussion focus so publicly, potentially signalling to other students and their own tutors that they were my research participants. I also knew that according to formally defined assessment criteria, students could pass the module without explicitly discussing how their practice has recently changed or will change in future. From experience, two patterns in student essays predominated. Some essays focused on previous, ‘successful’ instances of supervision, overlaying these with newly acquired theoretical terminology. Typically, however, most students reflected on prior difficulties in supervising trainees, discussing alternative approaches suggested by the literature and how outcomes may have differed. In either case, explicit mention of IoPP was usually lacking. My experience as module leader showed me that, in these cases, feedback from the assessing tutor usually informed the student that their submission, and grade may have been strengthened by such considerations. I therefore judged that requesting consent to include summative essays in my data collection may skew my participants’ focus onto IoPP and could indeed constitute an unfair advantage (compared to non-participants) in terms of final grades.

5.11 Data Storage

All digital data such as photographs, audio files and related transcripts collected by means of interview and observations of practice, were stored in a password protected folder in a password protected cloud account. Data organisation files that contain participant identities, such as the key to pseudonyms and my data collection tracking sheet were also stored in the cloud.

During observations and while engaging with data at various times, I made hand-written field notes and analytic memos in a pair of journals. As ‘physical’ data, journals and any transcript printouts used for coding were all stored in a locked drawer of my desk in my home office.
5.12 Addressing the quality criteria for realist research

Throughout Chapters Six and Seven, I note how my choices addressed existing quality criteria for realist, qualitative research. (See Appendix 19 for an at-a-glance chart). Further, this study suggests ‘explanatory adequacy’ as an addition to the existing quality criteria for realist research. This acknowledges that ‘realism’ is a family with quite different members. It is commonly noted that quality criteria for positivist and constructivist research are inappropriate for judging realist studies (Healy & Perry, 2000; Sobh & Perry, 2006). Consequently, Healy and Perry (2000) developed quality criteria that are widely applicable to realist studies in general. Subsequently, the RAMESES project (Wong et al., 2016) set out quality criteria for reporting realistic evaluations. In Appendix 19, I set out how the RAMESES procedural steps intended to improve the quality of publications can be viewed as elaborations of Perry & Healy’s (2000) general research quality criteria. However, I find both sets of criteria, but particularly the RAMESES guidelines, permit misalignment between a stated realist approach and the nature of findings. That is, the term realism is at risk of becoming a popular label rather than a guiding philosophy. I suggest we make explicit which branch of realism informs our theoretical framework and show how we have aligned the ontological commitments of this branch with the concepts in our causal accounts. In particular, this should aim to alleviate criticisms of inadequate causal explanations. Realism is not a singular ontology, but a family whose members resemble each other in different ways (cf. Porter, 2006). While scientific and pragmatic realist studies may permit flat ontologies, their non-stratified causal explanations can be perplexing to a reader expecting to understand the causal influence of social structures even in small scale programmes. Just as paradigmatic assumptions influence what we consider good quality research, so then may ‘branches’ of ‘family trees’. Given the different views of social structure identified in the literature review, I therefore suggest (realist) studies should offer an explicit rationale for the view of structure adopted, and this should stem from a particular, named ‘branch’ of the realist family tree. Explanatory adequacy may be achieved by overtly aligning views of causality with branches of realism.
6 Data collection methods

6.1 Introduction

Stages one and two of the research involved three data collection methods: documentary analysis, semi-structured interview, and observations of practice, as set out in Table 9. In this chapter, I set out the data collection tools I used in both the theory gleaning and theory testing stages of this realist evaluation. Theory refinement is presented as findings and discussion in Part 4.

Table 9: The purpose of research stages and data collection

<table>
<thead>
<tr>
<th>Stage of research</th>
<th>Data Collection Methods</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory gleaning with module staff</td>
<td>• Documentary analysis (module curriculum) • Semi-structured interview</td>
<td>To develop an initial programme theory with staff involvement</td>
</tr>
<tr>
<td>Theory testing with module students</td>
<td>• Documentary analysis (students’ module Learning Agreements) • Semi-structured interviews • Unstructured observations of in-situ practice</td>
<td>To test and enhance programme theory with student-participants</td>
</tr>
<tr>
<td>Theory refinement</td>
<td>n/a</td>
<td>To explain patterns of outcomes in terms of causal mechanisms and contexts</td>
</tr>
</tbody>
</table>

6.2 Triangulation and iteration for depth of theorisation

Realist hypotheses are confirmed or abandoned through relevance and rigour (Pawson, 2013). This means collecting data in various ways from multiple sources, rather than through saturation obtained via large numbers of qualitative interviews (Gilmore et al., 2019). For the current study, I intended relevant and representative data triangulation may off-set the limitations of this small-scale research by facilitating depth of analysis and theorisation (Wyse et al., 2018).
As a study for academic award, the design does not include investigator triangulation of my interpretations of data, as advocated to enhance the quality of research (e.g., Denzin and Lincoln, 2011) and as used in the published studies reviewed (e.g., Sorinola et al, 2017; Onyura et al, 2017). However, triangulation of data source, method and theory have informed the development of programme theory (Wong et al, 2016). Due to my research questions, in both phases, I selected qualitative methods to facilitate the collection of rich empirical data bearing on the programme theory (Layder, 2013). I sourced data from different stakeholders: module designers and tutors as well as students from two consecutive cohorts. I also draw on my own reflection on practice. I also used multiple data collection methods: semi-structured interviews, documentary analysis and observations of practice. And collected different types of data: naturally occurring as part of module studies or NHS work, and data elicited by interview. I used a combination of deductive reasoning grounded in a-priori theory from the literature, plus inductive reasoning, letting theory develop as I moved back and forth between data sets. Each of these ‘windows’ offers different theories for consideration. Eventually I used retroductive reasoning to achieve the explanatory goals of a realist enquiry (cf. Hu, 2018).

While hereon I necessarily present my data collection and analysis methods in a linear text format, my actions were in fact iterative and cyclical. Due to textual constraints, the stages of any realist evaluation may be presented in a seemingly straightforward manner. However, in reality, I found programme theory development necessitated and indeed benefited from cycling back and forth between data collected from staff, from students and from documents as well as the literature. This was because “fragments of evidence” (Emmel, 2013:141) in one source of data spurred “conceptual refinement” (Pawson & Tilley, 1997:167) by ‘re-visiting’ data from different stages of the study to reconsider other sources of evidence. A cyclical rather than linear approach enabled me to aim for greater depth of theorisation which can compensate for a small sample size (cf. BERA, 2018).
6.3 Sampling data sources

In sampling data sources for this realist enquiry, I aimed for relevance and variation among people and materials (cf. Emmel, 2013) to help amend and develop programme theory. I included materials created by each of the participant groups, namely staff’s curriculum document and students’ learning agreements. However, I also decided there were unethical implications in using some materials (as discussed above) and therefore excluded them. Regarding people, I recruited a purposive sample of module staff and students who I judged to be best placed in terms of their relevance to my research questions (cf. Layder, 2013). I chose not to involve other groups of people whom I considered to be ‘further removed’ from my research questions. In particular, I did not include my students who were taking the module in preparation for practice, as I deem it a separate matter from my focus on IoPP for practicing professionals. Nor did I elicit the opinions of my students’ trainees (junior doctors who have not taken the module), as my research questions include a focus on how IoPP was brought about by module studies.

To ensure appropriate variation among my participants (cf. Emmel, 2013), I involved module staff and students because their different positions could teach me about curriculum planning and delivery decisions as well as experiences of studying on the module which led to IoPP. Moreover, the two groups may offer glimpses of different contexts in which programme mechanisms are supported or hindered. I therefore approached four colleagues who I felt were well-placed key informants with insider understanding of the program. (cf. Layder, 2013). This was because they had longer experience of the module than me, and in particular, experience of the curriculum planning stage. Moreover, since realist sampling should be designed to test the contexts that matter to the programme theory, I invited academic and clinical members of the steering group to participate to ensure a representative view of socially situated, curriculum design decisions.

From among students, I recruited practicing supervisors from a variety of specialties to help me discover if the module can have IoPP across a range of sites or practice domains (Weiss, 1998 in Emmel, 2013). Participants worked in A&E, anaesthetics, dentistry, dental surgery, obstetrics,
opthalmology, paediatrics, psychiatry and surgery. I recruited thirteen students: six students from the September 2017 intake and seven from the February 2018 intake. Due to professional commitments, one student from the first intake soon formally withdrew, one student from the second cohort was unable to attend interview and another unable to invite me to observe at a mutually convenient time. All data sources for this study are set out in Table 10.

There were limitations on the extent to which my sample was varied. Firstly, the module was designed nine years before my study began. Consequently, some of the original curriculum design team and tutors were simply no longer available due to reasons such as retirement, illness and moving abroad. My study therefore included the only four key-informant members of staff available at the time of this study. Secondly, voluntary participation means that I was not able to ensure consultants from all 16 of the NHS specialties participated despite the module being open to all these and their sub-specialties.

6.4 Participant recruitment procedure

Having gained ethical approval for the study and designed informed consent sheets, during late spring of 2017, I emailed colleagues with a copy of the information sheet and a request for their participation. Of the four who joined my study, two colleagues worked on campus daily with me, two came to campus for workshop teaching occasions only. Nonetheless, as colleagues and friends, all four were aware I was studying for a doctorate and had often kindly enquired about my experience and progress and offered moral support. I believe it is for this reason that no colleagues approached me with requests for clarification or further information regarding the nature of my study, despite my written invitation to do so in my emails.

At the start of the September 2017 and February 2018 intakes for the module, I emailed each student with a request for their participation. I sent a copy of the informed consent sheet and an invitation to contact me by email, phone or in person should they wish to have further information before deciding whether to participate. I used the email address that students had given as their preferred method of contact when they enrolled at the university. As module
leader, I have access to these email addresses for logistical purposes. Nonetheless, I verified with my employing university ethics committee that I was permitted to use them for the purposes of participant recruitment. Contact by email avoided public disclosure of voluntary participation, such as conversations at module workshops.

Table 10: Data sources for the current study

<table>
<thead>
<tr>
<th>Participant Pseudonym</th>
<th>Participant Group</th>
<th>Module Learning Agreement</th>
<th>Interview</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module Staff</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bob</td>
<td>Deanery staff</td>
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<td>n/a</td>
</tr>
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<td>Tina</td>
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<td>•</td>
<td>n/a</td>
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<tr>
<td>Emma</td>
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<td>Sarah</td>
<td>University staff</td>
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<td>•</td>
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<tr>
<td><strong>Module Students</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cassie</td>
<td>1: Sep. - Dec. 2017</td>
<td>•</td>
<td>•</td>
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<td>Connor</td>
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<td>Jen</td>
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<td>•</td>
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</tr>
<tr>
<td>Anaya</td>
<td>2: Feb.- May 2018</td>
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<td>•</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Leslie</td>
<td>2</td>
<td>•</td>
<td>•</td>
<td>1</td>
</tr>
<tr>
<td>Madhu</td>
<td>2</td>
<td>•</td>
<td>•</td>
<td>3</td>
</tr>
</tbody>
</table>

Module curriculum document

Once recruited, I eventually assigned all participants a pseudonym and only I had access to the document in which I recorded this against a participant’s real name. Assigning pseudonyms took me some time as I wished to choose a name that maintained anonymity while also being a meaningful association. As Close-to-Practice (CtP) research, renaming my own colleagues and students proved to be much more than a technical task (cf. Allen & Wiles, 2016). I wanted to choose respectful monikers, but herein began the questions I pondered: which aspects of
apparent identities to keep and which to change? I decided to align pseudonyms with sex and national origin of name, but not to find out the era in which names had been popular, if any, to choose a name from the same era. I used an online baby-name generator to learn about the meaning of names and tried to choose similar ones, but the suggested options for one or two of my participants simply did not resonate with me. In these instances, I took some time to let a pseudonym come to me. On reflection and now having read the study by Allen and Wiles (2016), in future qualitative studies, I would invite (but not require) participants to choose their own pseudonym.

6.5 Stage One: Initial programme theory gleaning

Realistic evaluation typically proceeds by first establishing an initial version of the programme theory that sets out programme leaders’ beliefs about how and why desired outcomes can be generated. In the current study, I wanted to understand what nature of IoPP staff intended, and how and why they hoped this to be brought about. Based on my reconceptualisation of IoPP, this means understanding how the socio-professional climate or wider norm circles influenced CPD curriculum designers’ choices; and how curriculum design pre-structures the learning environment through the ways it relates learners, tutors, and materials. Stage One then involved analysis of the curriculum document and semi-structured interviews with module staff.

6.5.1 Theory gleaning from the module curriculum document

To be able to discuss programme theory with staff during interview (cf. Pawson, 1996), I first used the module curriculum document as a source of data and ideas. This is because, if prospectively developed and codified before a program is offered, the initial programme theory may be found in formal documentation (Astbury & Leuw, 2010). Conducting CtP research, I felt knowledgeable about the day-to-day delivery of the module as well as in-house
processes for the quality assurance of our practice (cf. Manzano, 2016). At the time of data collection, I benefited from eight years’ experience working with the team, in the Faculty, on this module and other related ones. I engaged daily in programme-focussed conversations, in staff meetings and informally, and I taught alongside colleagues. Therefore, I felt I had my own understanding of the implementation theory for the module (cf. Blamey & Mackenzie, 2007) and the practice context of its delivery (Wyse et al., 2018). However, I now had research questions that I had never systematically explored before. To prepare for staff interviews about my questions, I therefore decided to review the module curriculum document through a researcher’s eyes, rather than through my usual teaching focus to glean an initial programme theory of IoPP.

Stored in the university’s database of curricula for current provision, the module curriculum document is a six-page, e-document. It is officially validated and periodically reviewed by the university’s Validation and Audit Standing Panel. It uses an institution wide template, with pre-labelled sections. It sets out the academic field, subject area, and faculty in which the module sits; the notional learning hours and modality; the rationale for the module as well as a summary description of it; the intended learning outcomes, indicative content including a reading list of peer reviewed literature and the teaching, learning and assessment strategy. The latter includes contact patterns for staff and students, descriptions of formative and summative assessment activities, demarcation of compulsory elements and the scores or grades attached to them as well as the threshold for successful completion of the module. I therefore expected to identify module parts and relations between them that lead to learning and IoPP as outcomes. In Chapter Seven, I set out how I used my theoretical framework to analyse this document to develop a very early programme theory and logic model prior to staff interviews. That is, from this document, I gleaned “minor but necessary working hypotheses” (Merton, 1949:39) that informed data collection from staff interviews.

However, the curriculum document contained no mention of impact on professional practice; there was no formal section for IoPP in the university template, nor entries in other sections setting out how practice may change as a result of module studies. Elsewhere, the stark
limitations to relying on initial design documents (Pawson & Tilley, 2004) or even on subsequent programme evaluation reports (Dixon-Woods et al, 2011) are noted. Namely, my outcome of interest, IoPP, was not explicitly addressed in the curriculum document and this left staff theories about it largely implicit. This reinforced my decision to ask staff an open question enquiring what nature of IoPP they intended and why.

Moreover, very few of my initial ideas about educational mechanisms and outcomes that I had drawn from the educational literature were fully formed in the curriculum document. This is because the institutional template encourages listing in many sections. The curriculum document contained, for example, lists of topics and indicative readings, and the number of online contributions or workshop attendances deemed compulsory. I therefore needed to interpret the document, in light of my reflection on practice and the literature review, to construct the very initial programme theory that would guide staff interviews. Drawing on the literature increased the validity of my interpretations of the curriculum document. Yet, for now, my ideas about the curriculum were ‘fragments’ that I would begin to explore in depth (Emmel, 2013) with module staff, to glean more programme theory. Following Roger’s (2008) methodological advice, I represented these ideas as a logic model as shown in Figure 7. This visual aid provided a semi structure to staff interviews and was further developed by them.
Figure 7 shows a visual representation of the initial programme theory drawn from the module curriculum document. This is shaped by the theoretical framework for the current study which is informed by the literature review. During interviews, staff were asked why module parts were connected or related in the ways they are. However, the blue and red annotations did not appear on the version used in practice.

6.5.2 Theory gleaning interviews with staff

Staff interviews offered further perspectives on IoPP. They enhanced programme theory by ensuring it is not solely based on my beliefs as the researcher or my interpretations of the
literature. Data triangulation therefore increased the likelihood of programme theory being applicable and relevant beyond the study, in broader practice contexts (cf. Johnston & Smith, 2010).

However, prior to commencing staff interviews, I felt anxious because I had been unable to determine explicit statements regarding IoPP from course documents. The curriculum constructively aligned teaching, learning, intended learning outcomes and assessment (cf. Biggs, 1996), but not explicitly IoPP in the workplace. I felt concerned that one possible interpretation of documents was that IoPP had been overlooked or assumed to follow unproblematically from blended learning. This was difficult for me as a CtP researcher. I worried about the possibility of causing offense to interviewees and the implications for our working relationships afterwards (cf. BERA, 2011). I overcame this once I recognised my concerns as gaps in my own knowledge and my need to learn from colleagues. During interviews, I therefore deployed the realist technique known as the teacher-learner cycle which positions me as learning from interviewees. I set out this approach in more detail in section 6.5.5.

6.5.3 Interview logistics and confidentiality

Between late June and early September 2017, I conducted three further staff interviews on our university campus at times of convenience for my interviewees according to their teaching schedule and other professional commitments. Of the four staff interviews (including the first during piloting), two took place in my shared office at times when I had ascertained no other colleagues would be working in the room. Informally, between colleagues, I ‘booked’ our office for interviews and attached a printed notice to the office door reading ‘Please do not disturb - interview in progress. Thank you’. For just such reasons of confidentiality, another interview took place in an empty classroom that I was able to formally book and another, in my colleague’s private office. On all four occasions we had the use of a computer on which I displayed the logic model to guide our discussions. Interviews lasted approximately 50 minutes
to fit into working schedules while also covering programme theory adequately. With my interviewees’ informed consent, I audio-recorded our conversation using the native app on my iPhone. This allowed for immediate storage in a password protected cloud-based folder. I subsequently transcribed audio data using InqScribe for reduced play-back speed.

6.5.4 Semi-structured realist interviewing with a logic model

Using the logic model to guide our discussions about programme theory, all staff and student interviews were semi-structured. This allowed me to retain some control over content (cf. Elger & Smith, 2014), to answer my research questions (Rowley, 2004) by laying bare the theory of IoPP I was developing (cf. Pawson, 1996). It also allowed flexibility for active responses to each other’s utterances (cf. Harvey, 2015). Whereas interviews underpinned by a positivist philosophy might be tightly structured via a standardised schedule of (closed) questions, to enable a neutral interviewer to objectively collect unbiased data from participants, realist interviews share some assumptions inherent in the interpretive approach to interviewing (cf. Elger & Smith, 2014). It is recognised that meaning construction and communication between interviewer and interviewee is essential to help a researcher theorise about the external reality they wish to explain (Elger & Smith, 2014). This meant our conversations covered the programme theory in a flexible order, depending on who had what to say. It also meant that I included strategies to help me understand participants’ input, rather than ‘overlaying’ my own, unchecked interpretation on their words. However, differently from constructivist studies, I interviewed participants to collect data on the external, objective reality that I believe enables and constrains their professional actions (cf. Archer, 1995).

Since this realist evaluation comprises two stages of data collection, first with module staff, then with students, the approaches to and benefits of interview strategies described here also apply to student interviews.
6.5.5 The Teacher-Learner cycle

Realist interview interactions typically theorise the interview (Pawson, 1996) while following a Teacher-Learner cycle, and this benefitted the development of programme theory. This approach to interviewing alternately places each person in the ‘teacher’ role to explain their thoughts, beliefs, and concerns about (tenets of) programme theory while the ‘learner’ listens (Pawson & Tilley, 2004; Manzano, 2016). Importantly, interview participants regularly switch roles between ‘teacher’ and ‘learner’. I felt that using the Teacher-Learner cycle countered the potential for my position as researcher to be perceived as more powerful (cf. Gordon, 2020) or invasive. Firstly, this was because it enabled me to convey to my participants just how much I needed their help to theorise IoPP. Also, in the teacher role, I set out my theory verbally and visually and invited participants to help me improve it. Theorising the interview in this way can help reduce participants’ anxieties or confusion of a hidden agenda (Pawson, 1996). Further, once participants assumed the teacher role, they had the ‘power’ to readjust, amend or ‘correct’ programme theory (Manzano, 2016). Indeed, I learnt a great deal from staff interviews.

In each interview, I assumed the teacher role first to explain my overall approach to research and my aim to understand the nature and causes of any IoPP. After this, I began with an open question eliciting the nature of intended IoPP from each member of staff. Answers to this open question took our conversation beyond my pre-conceived, initial, and limited framework. Staff contributed rich, qualitative data (cf. Price & Martin, 2018), offering me accounts of decision-making processes, external influences, events, and values that I had not found available in module documentation. Where I had vaguely discerned a CMOc, staff interviews clarified or rejected it. I concluded interviews by asking if staff felt there was anything missing from the programme theory, but since staff had already indicated omissions and corrections throughout our conversation, there were no end-of-interview additions. Staff interviews and module documents together then helped provide a more robust programme theory to test with students than my own reflections on practice or review of the literature alone would have done.
6.5.6 Analytic memos as entry points to analysis

As soon as possible after staff (and student) interviews, I jotted memos in a journal to capture my impressions of the interview dynamics and content (cf. King & Brooks, 2017a). However, depending on my teaching schedules, sometimes I wrote memos immediately after an interview and other memos some hours later. My feelings about an interview ‘in-the-moment’ became important entry points to later analysis; they helped me connect multiple participants’ perspectives into a programme theory. Noting and recalling, for example, my own different feelings about the ‘ease’ of staff interviews helped me realise that staff held different epistemological assumptions about teaching and learning on this module.

In my journal, I noted that I had found interviews with two clinical staff ‘easy’ and ‘smooth’. I had profited from a very convivial exchange in which we agreed about the nature and goals of the module. I noted that each interview seemed to have largely confirmed but greatly enhanced programme theory. In contrast, I found my first academic staff interview difficult to understand. I felt frustrated that I could not clearly articulate why, but I was concerned that Sarah and I had talked past one another.

My interview with Sarah marked an important point in my study. I felt a sense of disquiet about Sarah’s explanations of initial programme theory and consequently, some days later, listened again to our conversation. Fortunately, as CtP research with colleagues, I was subsequently able to talk to Sarah again before interviewing my last academic colleague in the theory gleaning phase. Sarah listened with interest to my reflections on our interview and programme theory. Then, she re-explained her viewpoint, explicitly contrasting it with my ideas. The clarity of her insight and her phrase “We never meant to tell them what to do” helped me understand that members of the Steering Group held different epistemological assumptions about the nature and goals of professional learning on this module. I jotted this down as a prompt for detailed coding. My project further benefited greatly from its CtP nature as I was able to later email Sarah asking why she held the epistemological assumptions she did as I had not found indications of this in her recorded interview.
Staff interviews concluded mid-September 2017 while my first cohort of student-participants were studying the module.
6.6 Stage Two: Programme theory testing

Once developed, a programme theory is tested with programme participants (Pawson & Tilley, 1997). Stage two therefore involved the help of my students. As with theory gleaning, programme theory testing may use inductive, deductive, and user-focused approaches (cf. Oosthuizen and Louw, 2013). I combined these three approaches by examining students’ module Learning Agreements, conducting semi-structured interviews and by observing students’ practice as NHS supervisors.

Stage two allows for the examination of links between what program leaders assume they are accomplishing, and what changes actually arise for participants (cf. Onyura et al, 2017). Importantly however, programme theory testing is not entirely akin to process evaluation. The aim is not to judge the degree to which (students feel) module tutors adhered to the syllabus or curriculum. That is, the underlying question does not ask whether staff ‘followed the plan’. Rather, the driving question is: ‘given that we did what we did, what worked for whom in which circumstances and why?’ (adapted from Pawson & Tilley, 1997). Students are well placed to teach the researcher about these matters (cf. Manzano & Pawson, 2016).

Stage two, theory testing with student participants ran from September 2017 to August 2018 covering two cohorts of module students and collecting data as shown in Table 11.

Table 11: Schedule of Theory Testing with students

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Module start date</th>
<th>Module completion date</th>
<th>Data collection method</th>
<th>End of data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>September 2017</td>
<td>December 2017</td>
<td>Students’ module Learning Agreements; Semi-structured interviews; Observations of supervisory practice in the NHS workplace</td>
<td>End of February 2018</td>
</tr>
<tr>
<td>2</td>
<td>February 2018</td>
<td>May 2018</td>
<td></td>
<td>End of August 2018</td>
</tr>
</tbody>
</table>
6.6.1 Students' Learning Agreements as a data source

I began stage two data collection by collating student participants’ module Learning Agreements at the start of their module studies. Writing this agreement and sharing it with their tutor online is the first of six compulsory online activities. Whereas gleaning initial programme theory from a literature review helped suggest CPD’s generic potential to cause IoPP, I expected that Learning Agreements would signpost examples of intended actual social practices and events in this concrete case (cf. Elder-Vass, 2010). That is, I anticipated these documents could help explain what learners wanted to gain from the module, how they might do this and why.

For each intake or cohort of students, module studies begin with a three-hour workshop which includes explanation and discussion of module logistics and requirements. The latter include six compulsory, online, asynchronous discussion tasks spaced throughout the module calendar and students must contribute to at least four out of six of these to successfully complete the module. As module leader, in 2015, I had replaced the first group discussion with the requirement that each student make a semi-private entry in a Blackboard Journal, visible only to each individual student-author and their Learning Set Tutor. This first compulsory task is to be completed in the fortnight following Workshop One and asks students to peruse module materials while reflecting on their reasons for taking the module and then to write-up a Learning Agreement for their module studies. The Learning Agreement should cover students’ own planned pacing through this blended learning module, perhaps noting areas of interest, existing strengths, and learning needs. (See Appendix 8 and Figure 12 for examples). It is for this reason, I anticipated collecting data regarding the desired nature and expected causes of IoPP from these documents.

I also chose Learning Agreements as a data source for ethical reasons: Unlike discussion boards, entries are ‘isolated’ from any other students’ entries, and I would not be collecting information from or about students who had not consented to join my study and to have their contributions used for research purposes.
However, since module requirements permit students to opt out of a maximum of two of the compulsory tasks, I could not be sure that all participants would complete a Learning Agreement. Two of my twelve student participants did not. Further, like all compulsory online tasks, the format and length of the Learning Agreement is left to student decisions, and this meant that participants entered comments varying in length from six bullet points or one paragraph of under 140 words, to eight paragraphs of over one thousand words.

6.6.2 Theory Testing Interviews with Students

I expected student interviews to help answer my research questions by providing data at the concrete level of students’ empirical experiences, as well as at the abstract level of structures in the real domain. Specifically, the theoretical framework applied to this research guided me to explore the causal powers of the module and NHS teams in shaping learning and IoPP. Interviews therefore aimed to collect data on module experiences and IoPP in the workplace. As with staff interviews, I maintained the realist approach to theorising the interview (Pawson, 1996) and focused on programme theory as the unit of analysis (Pawson & Tilley, 1997). This gave our conversations a balance between structure and pertinent, rich elaboration of ideas.

At the end of each iteration of the module, I conducted semi-structured interviews with students to test the programme theory so far and to enhance it. For the September 2017 cohort, I anticipated beginning interviewing in late December 2017 through to early January. However, students informed me that a particular, virulent strain of influenza was circulating in northwest England at the time. Students’ time and energy was therefore dedicated to NHS work, or they were themselves unwell. I therefore began interviewing participants from this cohort in mid-January, finishing late February 2018. For the February 2018 intake of students, I conducted theory testing interviews from early June to mid-August 2018.

Although I sent out brief, polite reminders that we had agreed to meet for an interview near or after the end of module studies, I always let my participants’ clinical commitments inform the scheduling of our conversations. I was keen to minimise the research burden for my
participants, not only through my choice of data collection methods, but also through timing of these. In particular, I was concerned about the time and effort required for students to participate in an interview and ‘host’ me during observations of practice, (cf. Wyse et al., 2018). I therefore asked students to contact me via email to schedule meetings at their convenience.

Interviews took place face-to-face, in locations around northwest England based on interviewee requests, with seven students (re-)inviting me to their workplaces, two asking that we meet at a point of convenience and two kindly meeting me on our university campus. To manage confidentiality and minimise any psychological discomfort that may arise from concerns about being overheard, all interviews except one took place in a quiet, private place. At my student’s request, one interview took place in a coffee-shop near their home. The background noise of the coffee-shop was minimal enough to enable us to talk and helped mask our conversation. Due to the ad hoc and often urgent nature of their clinical work, one of my twelve participants was unable to meet for interview despite us both trying on several occasions.

Interviews lasted between 50 minutes and one hour. As with staff interviews, all interviews were audio-recorded with participants’ consent, saved in a cloud drive. I later transcribed audio tracks verbatim. As with staff, I enacted the Teacher-Learner cycle for interviewing. In conveying this approach to participants, I explained that our different experiences meant I was relying on them to teach me things I could not know or understand without their input. The following extract from the beginning of a student interview exemplifies this

Me: So, if I just begin by explaining how my research is designed. It’s based on my beliefs about life really. ...I don't have in my head any correct answer or good answer or appropriate answer I hope you will give me...I believe that you've had an experience that I haven't had and therefore you've got some knowledge that I haven't got...So I know I taught on the module, but I haven't studied it, - I don't know what it's like to be a student on the module and I'm not a doctor so I don't know what it's like to work in the NHS ...and so what I would like is for you to share with me what it was like for you going through the module...
By stage two, the programme theory now comprised enhanced and new elements gleaned earlier from staff. Before student interviews, I had added these new relations between parts and contextual structures to the logic model, as shown below in Figure 8. To support student interviews, I printed out the enhanced logic model in colour, in both A4 and A3 size. This was because I knew from my teaching experience that even if interview rooms had a computer for potentially displaying the logic model, NHS firewalls would prevent me from using a non-NHS, unencrypted memory stick. Further, my asking for access to, or use of a computer intuitively felt invasive and burdensome for my participants. The paper logic model served as a visual aide-memoire rather than a strictly structured schedule of questions; our conversations discussed the programme theory, but flexibly, as I committed to responding naturally to interviewee’s utterances rather than forging ahead with the next question on a schedule (cf. Pawson, 1996), as shown by the example below.

   Me: That's really fascinating. So, I've got lots of questions about that if that's ok?

   Interviewee: No, that's fine... (Ryan)

Sometimes this meant first picking up on one part of a comment and later returning to other parts and I tried to indicate this with natural language. This conversational approach facilitated member checking within the interview to ensure we did not talk past each other too much.
Figure 8: The developed logic model for student interviews

Figure 8 shows enhanced and new elements of programme theory gleaned earlier from module staff. For example, this logic model now contains barriers to learning and IoPP in and beyond the CPD, as well as educational mechanisms designed into the curriculum.

6.6.3 Observations of students’ practice in their NHS workplace

I approached observations as an opportunity for me to witness and explore contextual matters that I had not previously thought of and that participants were unlikely to mention in interview. I was an overt, complete observer, and my observations were unstructured (cf. Bøllingtoft, 2007). I audio recorded supervisor-trainee conversations and wrote field notes about non-audio aspects in a notebook. This helped address the quality criteria of contingent validity because data from the practice context permitted me to later retroduce structures and
mechanisms that influence IoPP. These ‘invisible forces’ would be discernible by their effects that I observed in the empirical domain. (cf. Bhaskar, 1978).

6.6.4 A realist focus on context

Cognisant that my very choice of what to observe shapes and limits possible findings, I used my research questions and realist perspective to direct my gaze. In this way, I also addressed construct validity, using my theoretical framework to both collect and later analyse data (cf. Healy & Perry, 2000). I focused on how supervisors enact their role in the daily reality of the NHS workplace, seeking to understand if the module can be more supportive. This directs my attention away from other aspects of NHS practice and culture, yet this ‘artificial abstraction’ is necessary due to researcher resources and the need to delimit a study (cf. Sayer, 2007). With limited capacity and bearing in mind the scope of content covered in the module, I chose to observe supervisor-trainee meetings. I judged these conversations would better help me answer my research questions than the group consultant meetings in which supervisors discuss their trainees in absentia. I anticipated witnessing enablers and barriers in the workplace that might not be raised in interview (cf. Rowley, 2004), perhaps because what is routine and unremarkable for my students may be new and illuminating for me. This opportunity to cross from insider to outsider researcher was an invaluable experience for which I am most grateful. Because I observed my students when invited and as often as possible, I was able to collect data about supervision in its natural setting, from multiple locations, varied clinical specialties, and at different times of day. That is, I had the opportunity to peer through numerous windows at the external reality I sought to understand.

6.6.5 Observation logistics and my role as observer

For both cohorts of student-participants, I travelled to their place of work to observe their one-to-one educational supervision of junior doctors. I did this when invited, as often as possible
and if my work commitments permitted. I observed five students from cohort one and six from cohort two, making a total of 20 separate observations. My students and their trainees were aware of my reasons for observing. They knew I was conducting evaluation research for my PhD and wanted to better understand the contexts in which supervision takes place. All but one pair completely ‘ignored’ me while they went about their business, and I therefore felt my presence as a student researcher did not impede practitioners’ plans or change their attitudes. Whether trainees were informally jovial, somewhat submissive, confident, or otherwise, the supervisors seemed unsurprised, and vice versa, suggesting a rather ‘usual’ style of interaction.

Since I audio-recorded the conversation between supervisors and trainees, my field notes concentrated on non-audio aspects of the situation. I noted my feelings, the physical logistics of the room, the timing of the observation within the workday and any interruptions to the conversation. I sketched diagrams of where the supervisor and trainee sat in relation to each other and what, if any, equipment they had to use. As I had chosen not to video record, I also jotted down notes about participant body-language and facial expressions. I felt video recording would be overly intrusive and may ‘distort’ the conversations. On two occasions, once the trainee had left the room and we were standing in the doorway, the supervisor suggested I take a photograph of the empty room.

On several occasions, I was surprised by events or the environment and sometimes working hypotheses came to me during an observation. I noted these in my journal, writing a question mark in the margin to identify them. For example:

> ? Colleague interrupts supervision session and clearly wants to get changed in this room. Where do doctors put on their scrubs for practice; is there a changing room?

Usually, supervisors were able to spare a few minutes to chat with me after an observation, but some necessarily had to rush back to clinical duties. After one observation, a supervisor asked me if I could offer some feedback on his approach to supervision. Slipping back into my module tutor role rather than researcher, I discussed his surprising control of the conversation.
During interview, this supervisor had told me of his new active listening approach to supervision, gained from the module. Yet during the observation, I noted the supervisor did much of the talking, so I asked why. He gave me a clear explanation grounded in his knowledge of the trainee and the training system: this had been a final meeting and this had influenced his approach. As this study and my thinking have progressed, I have repeatedly reflected on my decision to give feedback to this supervisor, with growing regret each time. For me, this has been a learning experience about the complexities of CtP research as I concurrently carry out two roles. Yet, this serendipitous conversation about actual practice fortified my belief that socio-professional structures influence IoPP.

After each observation, once home, I read though my journal notes to clarify any potentially ‘cryptic’ jottings that may not make sense later on. I transcribed audio verbatim and saved digital files in a password protected folder in a password protected cloud-based account.

6.7 Summary

Data collection for this study spanned 18 months, beginning with a pilot study in February 2017, and ending with the second cohort of students in late August 2018. Using three different collection methods and data sources, I addressed Healy and Perry’s (2000) quality criteria to involve multiple perspectives. By observing NHS practice, I addressed a gap in the literature to date and enhanced the contingent validity of my subsequent explanations. That is, observations of practice permitted socially situated, multiply determined explanations of IoPP. The concepts from my theoretical framework underpinned data collection as well as subsequent analysis and helped meet my aim to explain the how and why of IoPP. This addressed Healy and Perry’s (2000) quality criteria of ontological appropriateness and construct validity. In the next chapter, I set out the steps in my data analysis and show how these further meet existing quality criteria, as well as my own proposed category of ‘explanatory adequacy’.
7 Data analysis methods

7.1 Introduction: An iterative approach to data analysis

In this chapter, I detail the methods I used to analyse data and the procedure I followed. I chose Template Analysis to iteratively analyse data from both stages of the research. And I engaged in abductive and retroductive reasoning as is typical in realist studies (cf. Price & Martin, 2018). Below, I necessarily present my steps in a linear fashion as outlined above in Table 12.

However, in reality, analysis overlapped data collection, and was iterative. For example, while collecting data, I drew comparisons to data already collected. Moreover, my thinking about the initial programme theory continued to develop even as I later worked with student data or read more widely. Whenever I inductively identified a new theme, I cycled back through data sets to determine if I could also identify it elsewhere. To establish themes then, I returned to data sources within sets, comparing for example, one staff interview to others; I looked across sets, by comparing Learning Agreements to student interviews, for example, and across both stages of this project, comparing staff and student data.

Additionally, realist data analysis involves both abductive and retroductive thinking and I engaged in these iteratively rather than in succession. Abductive analysis entails theoretical re-description by identifying themes in the data (cf. Fletcher, 2017). For example, in my data sets, I collected together various fragments under the themes of ‘engagement’ and ‘strategic learning’. Retroductive thinking moves analysis past observable traces in the data to ask what the world must be like for the themes to be apparent (Bhaskar, 1978). Realist researchers ask what else is present or happening in a context. Occasionally, such ideas came quite quickly to me, usually based on prior reading. However, as I continued to code the data abductively, my retroductive thinking developed. As I clarified themes and saw better connections between them, I became more able to suggest socially situated explanations of IoPP. Finally, I identified four key educational mechanisms and three non-programme causal mechanisms which contribute to IoPP.
### Table 12: Steps in data analysis

<table>
<thead>
<tr>
<th>Theory gleaning from curriculum and staff data</th>
<th>1. Arranged a-priori codes from the theoretical framework into a template</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Applied the template to the curriculum document.</td>
</tr>
<tr>
<td></td>
<td>a. Noted empty code slots</td>
</tr>
<tr>
<td></td>
<td>3. Posited a very early programme theory</td>
</tr>
<tr>
<td></td>
<td>4. Applied the template to staff interview transcripts</td>
</tr>
<tr>
<td></td>
<td>a. Added new codes if necessary</td>
</tr>
<tr>
<td></td>
<td>b. Noted empty code slots (staff differences)</td>
</tr>
<tr>
<td></td>
<td>c. Re-arranged groups of codes</td>
</tr>
<tr>
<td></td>
<td>5. Developed CMOc for each staff member</td>
</tr>
<tr>
<td></td>
<td>6. Developed initial programme theory</td>
</tr>
<tr>
<td>Theory testing with student data</td>
<td>7. Applied the template to learners’ module agreements</td>
</tr>
<tr>
<td></td>
<td>a. Template amendment</td>
</tr>
<tr>
<td></td>
<td>8. Applied the template to student interview transcripts</td>
</tr>
<tr>
<td></td>
<td>a. Template amendment</td>
</tr>
<tr>
<td></td>
<td>9. Developed CMOc for Learning and IoPP</td>
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<tr>
<td></td>
<td>10. Developed a template for observations</td>
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<tr>
<td></td>
<td>11. Applied the template to observation transcripts</td>
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<tr>
<td></td>
<td>a. Template amendment</td>
</tr>
<tr>
<td></td>
<td>12. Applied the template to observation field notes</td>
</tr>
<tr>
<td></td>
<td>a. Template amendment</td>
</tr>
<tr>
<td></td>
<td>13. Developed CMOc for IoPP in the workplace</td>
</tr>
<tr>
<td>Theory refinement</td>
<td>14. Refined programme theory</td>
</tr>
</tbody>
</table>

### 7.2 A note on technology

I began my data coding and analysis using NVivo. Exporting codebooks to Word documents helped me see that codes were, at times, repetitive and proliferating. Slightly different labels denoted quite similar themes in the data, and these could be collated with a more appropriate code. However, my laptop caught a virus that destroyed its hard drive; technicians were unable to recover anything, and I bought a new laptop. I was unable to purchase another copy of NVivo at that time. Emulating NVivo exports, I continued coding using Microsoft Word and Excel tables. I printed out transcripts saved as Word documents and photocopied field notes to
code them using coloured pens. To organise codes in a structure and keep extracts of data, I trialled Excel spreadsheets and finally chose tables in Word.

7.3 A-priori place-holder codes and choosing Template Analysis

I chose Template Analysis as developed by King (2017a; 2017b) because it permitted the use of descriptive and abstract a-priori codes which were necessary to my realist thinking. My ontological commitments had led me to develop a theoretical framework before data collection and this framework also underpinned data analysis. My framework then provided a-priori, place-holder codes. Place holders are not themes in themselves but serve to organise themes that can explain how IoPP is brought about in concrete cases (Gibbs, 2002, in King, 2017a). Since I view CPD as a causally efficacious organisation, able to bring about learning and IoPP because of the parts that are present and the way they are related, module parts and relations or educational mechanisms were therefore two of my essential a-priori, abstract, place-holder codes.

Further, as module tutor and leader, I was aware that important module ‘parts’ included workshop groups, online groups, fellow students, tutors and learning materials. I anticipated these would very likely be involved in causing IoPP. I therefore included these as a-priori, place holder codes. Synchronic-relational emergence theory suggests the causes of IoPP lie in the way these parts are related and I was already aware of some important relations. For example, in workshops, students and tutors are related by expectations to engage in discussion about readings and realia. I therefore included such relations and assigned them a-priori codes (e.g., GRP-DISC) to guide my further attention to them in the data.

Necessarily, I also had a placeholder labelled ‘Outcomes: IoPP’ to collect and organise further themes. Moreover, from the earliest stages of this study, I have wanted to understand the wider influences on learning and IoPP by socially situating staff and students alike. This provided me with another abstract, a-priori placeholder, namely ‘overlapping contextual
structures’. Due to my experience, I anticipated mention of at least the regulatory body, the GMC, and the latest structure for training, MMC.

**Figure 9: Module parts, relations, and the wider professional context as a-priori codes**

<table>
<thead>
<tr>
<th>Overlapping, contextual structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMC, GMC</td>
</tr>
<tr>
<td>Formulated the supervisor role. Provided remit</td>
</tr>
</tbody>
</table>

*16-week blended learning, university accredited module*  
Compulsory, summative assessment of learning

- **Face-to-face Workshop Groups**  
  Compulsory attendance  
  Give and listen to presentations  
  Discussion of readings and realia  
  Role-play

- **Asynchronous Online Groups**  
  Compulsory contributions  
  Discussion of readings and practice

**Impact on Professional Practice**

Grounded theory, IPA and other approaches which eschew the use of a-priori codes (cf. King, 2017) were therefore inappropriate. Instead, I chose Template Analysis (TA) because it is not committed to any specific philosophical underpinnings or methodology and could therefore be adapted to my approach. Located within the broader field of thematic analysis, TA lies in the mid-range of the deductive - inductive continuum (King, 2017), and therefore also permitted me to add new codes to my template as I inductively identified new themes in the data. This was equally important because I needed to code inductively to further develop my theory of
IoPP and to address complexity. For example, Elder-Vass’s (2010) synchronic-relational version of emergence theory highlights that unpredictable mechanisms may be identified, embedded in the coordinated interactions between people and materials in concrete cases of CPD. Therefore, I also inductively developed the template in reaction to each set of data I analysed, and I recorded these developments to aid with the methodological trustworthiness of data analysis (cf. Sobh & Perry, 2006). See Appendices 12 to 19 for versions of the template and development of coding.

Prior to analysing the curriculum document for the first time, I arranged the a-priori codes from my theoretical framework into a template. This template was based on the notion of a logic model, as shown in Figure 9 above. Here, module parts are set in blue boxes with the relations between parts in black text. In practice, the Excel, and later Word table permitted the addition of further spaces for noting further themes.

Using a-priori codes has advantages and disadvantages. Drawn from my theoretical framework, they helped ensure analysis did not stray from answering my realist research questions about the varying nature and multiple causes of IoPP. Without these codes, analysis could stray towards process evaluation (how well did tutors adhere to the syllabus?), towards outcomes evaluation (what did students learn?) or a ‘worth’ evaluation (should we keep offering this module?). However, a-priori codes can also have a ‘blinkering effect’ (cf. King, 2017) which may have rendered my analysis almost entirely deductive (cf. Sobh & Perry, 2006). Deductive only analysis would have damaged my intentions to understand causes of IoPP in concrete cases, by exploring hitherto under-theorised factors. Further, having a set of codes from the beginning, at times had an overwhelming effect because the subsequent additions through inductive coding resulted in a voluminous template (cf. Price & Martin, 2018). I experienced ‘template overgrowth’ at several points in my analysis until further thinking helped me remove and combine some codes. I now recognise this as a necessary stage in data analysis: a proliferation of codes meant I was attentive to data, but also prompted me to refine my thinking.
In practice, I found TA meshed well with programme theory development because each endorse iterative amendment. TA permits the addition, removal and hierarchical re-organisation of codes as analysis ensues. Programme theory development aims to refine causal explanations by adding, removing, or re-connecting ideas in different ways.

7.4 Curriculum document analysis reinforced the template

As a first step in data analysis, curriculum document analysis largely confirmed my very early thinking about the module and programme theory. This step therefore offered little amendment to my data analysis template. This was to be expected since my existing knowledge of the curriculum drove my earliest theorising about the module’s IoPP and my template design. However, analysing the curriculum document raised fruitful questions about tutors and IoPP.

To analyse this document, I applied the concepts from my own theoretical framework as set out in Chapter Four and sought to understand how they might answer my research questions. That is, I asked of the document which ‘parts’ are present in the CPD module and what is the nature of these parts. Doing this, I confirmed that the CPD comprised lower-level structures such as online and workshop discussion groups. I looked to see how ‘parts’ are related to one another. Specifically, I wanted to check my own understanding of how students are related to each other, to materials and to tutors, and of how tutors are related to materials. This analysis indicated (some of) the educational strategies I had anticipated, such as discussion and assessment. However, analysing the curriculum document with researcher’s rather than teacher’s eyes, helped me notice that there was no rationale for the nature of the tutoring team and nor was my outcome of interest, IoPP explicitly addressed in these written plans. After analysing the curriculum then, the place-holder code of ‘Outcomes: IoPP’ remained empty and the a-priori place holder of ‘Tutors’ was no further elaborated.
7.5 Familiarisation with data

Realist data analysis focuses on data pertinent to relevant aspects of an external reality which help answer the research question (rather than coding every part of a data source as constructivist research may do (Sobh & Perry, 2006). Therefore, before beginning to code staff or student data, I familiarised myself with these in three ways: by re-reading field-notes and analytic memos, by listening to audio files and by transcribing audio data verbatim. This immersion aided with the interpretive process of identifying themes.

However, I am cognisant that themes are not “objective facts, waiting to be uncovered in the data” (King & Brooks, 2017b:28), but rather a product of my focus and choice. Throughout iterative analysis, my research questions therefore served to indicate potentially significant features of the data. Themes in the data and the eventual findings from this study are therefore my interpretation of events, of pre-existing structures, my participants’ agency and their influence on IoPP. They are a partial and fallible explanation of CPD’s IoPP. This is because concrete situations are far more complex than any abstraction I choose to offer (cf. Sayer, 2004). My conceptual framework acted as a focused but subjective, partial lens to examine certain contexts, mechanisms, and outcomes. The same framework also acted as a sieve, intentionally letting other causal factors, conditions and events slip out of view.

7.6 Memo reading

Firstly, I re-read the memos I had jotted down shortly after interviews and my field notes from observations. This helped remind me of any problematic or potentially fruitful points I had considered earlier. Regarding staff interviews, I noted that Deanery staff had largely confirmed my initial programme theory whereas university staff had disagreed about the intended nature of teaching, learning and IoPP. Before detailed analysis of Learning Agreements, I had noted that it was striking how they differed in length, but not in essence. Regarding student interviews, I had gladly noted in my memos that students were not at all reluctant to teach me what had not worked for them and why. This reassured me that the potential power-imbalance
between our roles had not been a barrier to my research. Regarding student observations, I reminded myself of all the disparate times of day and in all the various types of room that educational supervision takes place, something which is not at all obvious from audio-recordings and I began to wonder if or how this shapes IoPP.

7.7 Transcription and Listening

I transcribed interviews and supervisory conversations verbatim using Inqscribe ©. This took a great deal of time but was an opportunity to immerse myself in the minutiae of the data. Influenced by my earlier studies in linguistics and King’s (2015; 2017) approach to transcription for TA, I noted pauses and false starts in a speaker’s utterances as I felt these may indicate the speaker’s understanding of and familiarity with any point in question. During these weeks, I also listened to observation and interview audio files in their entirety, using headphones to ensure confidentiality. This provided an alternative type of immersion in the data: rather than iteratively replaying short fragments while typing, I listened to whole, flowing messages. I could hear acute and extended intonational contours in context. In brief, I could hear frustration, enthusiasm, doubt, and sagacity.

7.8 Analysis of Staff Data for initial programme theory

Analysis of staff interview data was essentially an exercise in understanding curriculum design and delivery in realist terms. That is, I set out to explore which parts of the module were related in which ways and how this was intended to generate learning and IoPP outcomes. I had a very basic, simple template (Figure 9 above) that I applied to data and subsequently further developed from the data. Coding staff interview transcripts helped me notice relations between parts that I had not perceived in the curriculum document and only partially perceived while reflecting on interviews. From the curriculum, I had noted ‘compulsory attendance at workshops’ or ‘compulsory reading topics’ and we had talked about these in interview.
Analysing staff data helped me gain rich understanding of how the intended educational mechanisms lay in the coordinated, role-based interactions between tutors, students, and materials.

7.9 Deanery staff interviews and template development

King and Brooks (2017) recommend that a data analysis template first be developed from a subset of the data. For this, I chose Deanery staff transcripts, because, prior to analysis, during staff interviews, I had become aware that Deanery and academic staff’s approach to curriculum design was underpinned by different epistemological assumptions. I felt the different approaches to teaching and different views of the goals of professional learning were significant. They represented a 'split' in the initial programme theory. Therefore, I felt it might confuse template development to take an interview from each staff group as an initial subset of data. Instead, I first analysed Deanery interview data and developed the template accordingly. I proceeded by reading lengthy stretches of text to understand their meaning, then applied a-priori codes from the template or developed new codes from the data. While coding Deanery data, I reshaped the textual layout of the template. I then used this same template and procedure as I next analysed academic interview data and this enabled me to capture and highlight differences in epistemological assumptions.

7.9.1 Codes and the theme glossary: en route to a visual programme theory

When I began coding staff data, I set aside the visual logic model that I had used to collect data, only to return to an enhanced version of it after much trial and error. The hierarchical organisation of codes in a template helped cluster meaningful themes, but my text-based, linear documents did not initially match my realist thinking.

Beginning with NVivo and moving to paper and pen, my codes were short labels, text-based abbreviations indicating stretches of data that suggested meaningful themes. While working
with printouts of the data, I wrote codes in the margins of the paper or between lines of text. Additionally, I kept a Word document, a template in which I recorded and organised my codes hierarchically to show sub- or related themes. After all, simply noting that all staff mentioned the compulsory readings (COMP-R) could not tell me how the module readings were linked to IoPP. I had to capture staff intentions and beliefs in shorthand. For example, I used ‘SUST-ENG’ to refer to sustained engagement as an educational mechanism. As I engaged with the data, I noted staff talked about active learning and the 16-week duration of the module being factors in sustained engagement. I therefore chose to treat ‘SUST-ENG’ as a higher-level category, containing lower level, related codes. ‘SUST-ENG-act.’ and ‘SUST-ENG-time’. Looking later at staff data, with my research question in mind, I drew a connection between sustained engagement and IoPP: Curriculum designers intended learners to achieve deep, memorable learning through a variety of activities over time. This growing template was in fact a visual representation of programme theory.

I also developed a theme glossary explaining in more detail the meaning of codes for me. This explicit articulation helped with organisation and theorising. At times I stumbled over which code to apply to a stretch of data. Clarifying my thoughts about what a code meant, what the essence of a theme was, helped me decide. I also realised I had different abbreviations which meant similar things on some occasions when I tried organising codes in the template. For example, correction by tutors (CORRN-T) and addressing known deficiencies (ADD-DEF) were at first very similar. Should I delete one and keep the other? And what did they say about programme theory? Teasing them apart, I judged that addressing known deficiencies is an approach to teaching and learning (T&L-DEF). Deanery staff data showed me this comprised three aspects: providing codified knowledge in the form of compulsory readings, correcting application of knowledge during workshop discussions and correcting errors or omissions during module assessment. I could now keep both codes and relate them hierarchically in the template. The left half of Figure 10 shows this re-organisation, although in practice I used indented lists in Word. Further, Deanery staff viewed provision and correction as responsibilities of the tutor role. They were espousing a transmission-based approach to CPD. From reflections on interviews, I anticipated that academic staff data would not contain this
theme. Therefore, I later re-labeled the top node as 'Approaches to teaching and learning'. From this, related branches, with their own sub-nodes could now follow, as shown in the right-hand side of Figure 10.

**Figure 10: Hierarchical re-organisation of codes**

Using the early, linear version of the template that I was developing in Word, I struggled to organise themes into a programme theory 'on paper'. The hierarchical organisation of codes for themes at first seemed a neat and logical way to divide data: A blended learning CPD module comprises workshop groups and online learning groups; these groups are made up of students, tutors and materials. However, in practice, I needed to identify and capture *relations* between parts, some of which are *non-*hierarchically related. My conceptual framework holds that IoPP is (partly) brought about by the coordinated interactions between the lower-level parts of a CPD programme. Yet while it was clear in the data that, for example, workshops and online learning groups were connected by a flipped classroom approach, the linear text
The template was proliferating with repetition as shown in Figure 11. To reduce this, I therefore inductively developed the template according to the data and my conceptual framework, somewhat returning to a logic model layout. Module parts remained as a-priori placeholders, but I paired or clustered parts according to the relations between them as reported by interviewees (See Table 13). The visual representation of my thinking was becoming more realist. It was showing the importance of relations between parts. These were the causal mechanisms that gave CPD its potential to bring about IoPP; they also shaped the nature of that IoPP.

**Figure 11 : An extract from the initial, linear template showing repetition of themes**

<table>
<thead>
<tr>
<th>OUTCOMES: IOPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>REGION WIDE UNIFORMITY</td>
</tr>
<tr>
<td>PROFESSIONALISATION OF PRACTICE</td>
</tr>
<tr>
<td>LOCALLY APPROPRIATE AND DIVERSE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACE TO FACE WORKSHOPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUTORS TRANSMIT EXTERNAL KNOWLEDGE</td>
</tr>
<tr>
<td>STUDENTS DISCUSS APPLICATION OF READINGS</td>
</tr>
<tr>
<td>LEARNERS SHARE OWN PRACTICE-BASED CONCERNS</td>
</tr>
<tr>
<td>LEARNERS CO-CREATE NEW KNOWLEDGE</td>
</tr>
<tr>
<td>FLIPPED CLASSROOM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASYNCHRONOUS ONLINE GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEXIBLE ENGAGEMENT</td>
</tr>
<tr>
<td>FLIPPED CLASSROOM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENTS DISCUSS APPLICATION OF READINGS</td>
</tr>
<tr>
<td>LEARNERS SHARE OWN PRACTICE-BASED CONCERNS</td>
</tr>
<tr>
<td>LEARNERS CO-CREATE NEW KNOWLEDGE</td>
</tr>
</tbody>
</table>

In Figure 11, module parts are shown in black with themes from the data shown in blue. Bullet points indicate that a theme applies to more than one part. For example, ‘discussing applications of readings’ could be included under workshops, asynchronous online groups and under students. This repetition obscured relations between parts and therefore caused me to re-organise the template as shown by Table 13. Keeping prior versions of the template and tracking its development serves as an audit trail of my thinking, showing how I coded and
analysed data to develop programme theory. And this contributes to methodological trustworthiness, possibly enabling others to repeat the procedure. (Healy and Perry, 2006; Wong et al, 2016).

**Table 13: The re-organised template following initial inductive analysis**

<table>
<thead>
<tr>
<th>PARTS (Structures)</th>
<th>RELATIONS (Educational mechanisms)</th>
<th>DATA SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshops, Online Groups, Readings &amp; Assessments</td>
<td>Sustained engagement Personalised deep learning</td>
<td>All staff All staff</td>
</tr>
<tr>
<td>The VLE &amp; Workshops</td>
<td>Flexible timeframes for study sustain engagement</td>
<td>Academic</td>
</tr>
<tr>
<td>Workshops &amp; Compulsory Readings</td>
<td>Flipped classroom Multiple sources of solutions to concerns Discussing application of readings to practice Compulsory</td>
<td>Academic Deanery Curriculum</td>
</tr>
<tr>
<td>Tutors and Students</td>
<td>Transmit &amp; receive external knowledge Correct pre-identified deficiencies in practice Correct application of theory to practice Role-model dual roles, validity of knowledge Explore own practice-based concerns</td>
<td>Deanery Academic</td>
</tr>
<tr>
<td>Students and Students</td>
<td>Co-create new ideas for practice Help each other with problems</td>
<td>Academic</td>
</tr>
<tr>
<td>OVERLAPPING STRUCTURES</td>
<td>RELATION TO THE MODULE</td>
<td>DATA SOURCE</td>
</tr>
<tr>
<td>MMC</td>
<td>Formalised educator roles Created need for CPD</td>
<td>All staff</td>
</tr>
<tr>
<td>GMC</td>
<td>Set standards for educators’ practice Prompted module design – Agential reflexivity of Deanery staff</td>
<td>Deanery</td>
</tr>
<tr>
<td>‘The System’</td>
<td>Constrains IoPP derived from module studies</td>
<td>Deanery</td>
</tr>
<tr>
<td>NORM CIRCLES</td>
<td>Influence approaches to teaching and learning</td>
<td></td>
</tr>
<tr>
<td>Delivery by non-expert tutors</td>
<td>Module tutors to endorse new norms: tutors as experts, education as a formal discipline</td>
<td>Deanery</td>
</tr>
<tr>
<td>Statistics as valid source of knowledge</td>
<td>Creates barriers to learning and IoPP, education not viewed as a formal discipline</td>
<td>Deanery</td>
</tr>
<tr>
<td>Reali as a bridge between classroom &amp; practice</td>
<td>Workshop activities include critiquing realia and authentic tasks</td>
<td>Academic</td>
</tr>
<tr>
<td>Consultant as knowledgeable practitioner</td>
<td>Causes face-saving during module studies</td>
<td>All staff</td>
</tr>
</tbody>
</table>

Table 13 shows how my thinking was becoming more realist by focusing on relations between parts. The left-hand column now contains more than one ‘part’ and the relations between them are set out in the central column. As a visual representation of ongoing data analysis at the time, it also reminded me to remain realist in my thinking.
7.9.2 Evidencing the split in programme theory

After analysing Deanery staff data, I moved on to code academic interview transcripts. I tracked commonalities and differences between staff groups, at first using coloured fonts (See Appendix 1) and then by entering comments in an additional, third column seen on the right in Table 13. Noting the data source for themes helped record the ‘split’ in programme theory. In university staff interview data, I found no new placeholders since these derived from my ontological framework, but I traced common and different themes under these placeholders. If existing themes in the template seemed apparent in academic interview transcripts, I coded the relevant stretch of text and noted ‘All staff’ as a data source in the template. For example, all staff agreed that a 16-week, blended learning module was intended to support sustained engagement. Further, one academic explained the role of the VLE and flexible timeframes in sustaining engagement. Upon finding new themes in the academics’ comments, I returned to the Deanery data to check if this theme was also apparent there before deciding to note it as a difference or commonality. For example, academics told me they intended learners to share and address concerns about their own practice (‘PRAC-CONC’), helping each other to find solutions. Yet taking learners’ experiential knowledge as a starting point for IoPP did not appear in Deanery data. In this way, I was able collate staff beliefs about IoPP without erasing inter-group differences in epistemological assumptions about the nature and goals of CPD. I noted that my broadest theme, ‘IoPP’ could be subdivided according to the intended nature of it: uniform professionalisation of practice or locally appropriate changes. Nonetheless, all staff wished for IoPP relevant to the role.

Staff data analysis ended with my development of an initial programme theory underpinned by my conceptualisation of Context, Mechanism and Outcome as set out in Chapter Four. However, as mentioned, engaging with student data and reading more widely meant my thinking about initial programme theory continued throughout this study.
7.10 Analysis of student data for programme theory testing

7.10.1 The template as a connection between staff and students

My aim in analysing student data was to understand what had worked for whom in which circumstances and why (cf. Pawson & Tilley, 1997). Therefore, I chose not to develop a separate template of codes for themes, but rather to apply and develop the staff template for use with student Learning Agreements and interviews. Although King and Brooks (2017b) advise that a comparison of two different stakeholder groups may warrant the development of two different templates, I felt this inappropriate for programme theory testing. I see the connection between stages one and two of my evaluation research as seeking to understand whether and how staff intentions for regarding module IoPP resonated with students. I therefore judged it more apt to apply the staff template to the student data. In this way, template developments would indicate confirmation, elaboration, and refutation of programme theory. In practice, if themes in student data elaborated staff themes, I recorded additional information in red font in the template. Confirmations I left in black. (See Appendix 15). Staff beliefs that students may struggle to appreciate module studies because of their “hard science” background was not supported by the student data. I crossed this out but did not delete it as this enabled me to track the progression of programme theory.

7.10.2 Learning agreements confirm programme theory

As “social products” (Saldana, 2013:54) emerging from the overlap of students’ prior experiences of learning and their first encounter with module studies, Learning Agreements played a role in testing and refining programme theory. Being individualised responses to an open-ended question ‘how will you progress through this module?’, students’ Learning Agreements varied in length and format. Nonetheless, they were a good source of information about my students’ initial intended approach to the module, how it might cause IoPP and of what kind. See Figure 12 for an example. I analysed these documents looking for evidence of students’ epistemological assumptions regarding the nature and goals of formal CPD. In realist
terms, these documents indicated the outcomes students expected from their coordinated interactions with tutors, each other, and materials.

**Figure 12: Sample Learning Agreement indicating nature and extent of IoPP**

```
Saturday, 23 September 2017

My Learning Agreement
Posted by NAME REDACTED at Saturday, 23 September 2017 21:43:03

I have taken on this module in order to complete my PGCert and to improve my skills as an educational supervisor. I supervise 3 higher trainees per year.

The benefit of this module will be personal in improved skills as an ES and I can also share my learning with my colleagues in my department and also through the educational supervisor days that we run as a school for.

My Goals are: to become a better ES in terms of supervision skills, support for struggling trainees and appraisal of progress. I will measure this by the feedback I get from my trainees and the ES days that I run. I will achieve this through engagement with the course reading materials weekly and contributing to the compulsory discussion activities in a timely manner. The extra reading I will do for my assignments will also contribute to this.

My specific areas of interest include: giving good careers guidance, supporting IMGs and trainees in difficulty and preparing an ES report. This topics are particularly relevant to my work as an ES in and to my work as HOS in the region. I intend to read further on these topics.
```

Key:
- IoPP – better role enactment (specific skills)
- IoPP – beyond own practice
- IoPP – achievement criteria
- Personally meaningful learning relevant to the role
- Learning from module materials & activities
- Sustained engagement

I applied the existing coding template and found staff intentions largely upheld in the ten Learning Agreements submitted by students. I identified themes that suggest most learners expected to engage individually in conventional learning, as shown in Figure 13 below.
While these themes are arguably findings, I discuss them here to show how they influenced template development during data analysis. Documents indicated students planned to stay engaged, to follow the timetable and curriculum requirements. Students set out plans to read the provided texts, attend workshops and contribute to online discussions in a timely manner. Student IoPP goals appeared to match staff goals also, with everyone noting that they wished to be ‘more effective’ supervisors. This caused me to elaborate the theme of ‘personalised, deep learning’, adding ‘for effective supervision’. However, it was difficult to understand what individuals meant by ‘effective’. I did note that all Learning Agreements appeared to suggest a conventional, non-transformative approach to learning during the module and this suggested ‘effective’ as ‘within the formal role remit’. Further, no Agreements mentioned questioning or challenging the remit of the formalised supervisor role. Yet that raised questions for my template development. How to capture noticeable omissions? I decided that a set of notes under the template could be useful. Notably, one student mentioned sharing IoPP more widely with colleagues during formal meetings. Together, such data prompted me to further subdivide themes clustered under IoPP as shown in Figure 13. In staff data, I had identified two different natures of IoPP. Now, from student data, I noticed IoPP of two different extents: within or beyond a supervisor’s own practice.
As with staff, I kept analytic memos about student data which compared Learning Agreements, interviews and observations. Memos helped me see that two students achieved or envisioned a different nature of IoPP than they had intended at the outset. This enabled a significant finding of this study and highlights the gains made possible by a non-linear procedure and a more holistic immersion in data.

7.10.3 Student interviews: windows onto synchronic relations

My approach to analysing student interview data greatly replicated the approach to staff interviews, individually coding themes in the data, applying and developing the template working towards clusters of themes as CMOc. Student interviews were a rich source of information about synchronic relations, my participants’ experiences with other role holders on the module and at work. In this data set, I perceived unintended mechanisms that were arguably not designed into the curriculum. On occasions, these ‘other’ mechanisms helped generate IoPP. On occasions, they did not. To identify these mechanisms took multiple ‘passes’ over the data.
First and second coding passes produced a plethora of themes that were close to the data. These risked proliferating beyond being useful until I compared students’ comments with one another and engaged in retroductive thinking. This helped me to cluster the descriptive themes into more abstract explanations of the data and IoPP. I identified three in interview data: epistemological (re-)orientation, role salience and role-based sphere of influence (explained in detail in Chapters Eight and Nine).

Thinking retroductively, I posited epistemological (re-)orientation by clustering descriptive themes about the nature of IoPP for students and their evaluative judgements about the module experience. Interviews had begun with open questions about participants’ greatest sense of IoPP. Answers to this question largely confirmed programme theory that the module helped supervisors better enact the role. I added a descriptive sub-theme ‘atomistic’ to the nature of IoPP. However, two students had tried to transform the supervisor role which lead me to wonder how the module had caused this. I noted these two students connected transformative IoPP with concerns for their trainees’ experience of training. I added the themes of ‘approach to learning’ and the sub-themes of ‘receipt and application’ and ‘critical reflection’. This also sent me back to staff data to clarify the initial programme theory. I could see now that all staff had intended conventional (non-transformative) learning about the role, albeit underpinned either by transmission or by reflection on experience. Further, interviews contained expressions of disappointment with the teaching approach, frustration with fellow learners and preferences for some tutor approaches over others. This happened at workshops as well as online. Interviewees reported these impeded learning and IoPP. Drawing on my conceptual framework, Archer’s notion of pre-structured context helped me now see workshops and online learning groups as contexts for role enactment, specifically the student and tutor roles. Given that I view roles as bundles of norms (cf. Elder-Vass, 2010), I then saw that frustration, disappointment and preferences occurred when a participant’s expectations of student or tutor role holders were met or unmet. My participants’ expectations of fellow students and tutors emerged from their epistemological orientation to formal CPD. Moreover, asking why my participants may hold such assumptions, I concluded that they are likely shaped
by norm circles encountered at work or earlier. Returning to the data, I found support for these ideas.

My focus on contexts and roles also helped me cluster other seemingly disparate themes in the data to posit role salience as a causal mechanism. Interviewees mentioned engaging fully in module studies off campus, even at times when this was difficult. There were widespread mentions of time pressures and assessments being ‘painful’ yet helpful. Yet students also mentioned strategic learning, skipping optional activities, making minimal contributions to compulsory activities online and refraining from participating in workshop discussions on campus. They spoke about themselves and shared their perceptions that other students had done likewise. By asking why the data might contain these themes, what else was happening in the context, I identified the causal mechanism of role salience. Changes in the learning environment or context made one of my participants’ multiple roles more salient than another. This caused enactments of this role to take priority over enacting other roles.

My continued focus on roles made me re-consider student reports of IoPP and to posit role-based sphere of influence as the third significant causal mechanism. For the nature of IoPP, I had coded stretches of data as ‘role enactment’ or ‘role transformation’, and as ‘successful’ or ‘unsuccessful’. But I had also coded the extent of IoPP as ‘within own role’ or ‘beyond own role’. Now I saw a fresh way to cluster descriptive themes. I saw that IoPP beyond the individual supervisor’s role, for example at departmental level, was only successful for those concurrently holding a more senior role than educational supervisor. That is, IoPP is constrained by the sphere of influence of a person’s most senior role in an organisation. I returned to the data and found that in the module context, a student’s sphere of influence also influenced interactions with fellow learners.

The template and my theory of IoPP now contained intended educational mechanisms that were produced by module parts interacting as well as overlapping structural mechanisms in the wider professional context. The latter included the formal structures of MMC and GMC as influences, norm circles endorsing views of teaching and learning, role salience and role-based
sphere of influence. To refine programme theory, I also needed to test these ideas and develop new ones using student observations of practice.

7.10.4 Observations of student practice

In analysing observation field notes and audio data, I wanted to explore how mechanisms in the workplace context might support or countermand CPD’s IoPP. This is achievable because observation data provided some empirical evidence of mechanisms’ effects (cf. Porter, 2010). My template, now an elaborated theoretical framework provided a set of hypotheses for some analysis of observations. However, large sections of the template dealing with module ‘parts’ felt inappropriate for analysing this data set. I therefore retained sections of the existing template relating to IoPP and then inductively developed new sections for observations (See Appendix 1).

To analyse observation data, I took themes from the existing template and inductively developed new ones. My research questions asked what nature of IoPP students had gained from the module, and earlier analysis suggested mostly a shift towards developmental conversations with trainees. Coding transcripts of observed supervisions, I therefore looked for themes that could support or refute this. Under ‘approach to supervision’, I found two sub-themes that suggested a shift away from supervision as scheduling and tallying tasks: Reconceptualising the e-portfolio as an educational rather than learning tool and trainee identified discussion points. In field notes, I noted ‘furniture use’ supported trainee-centred uses of the portfolio.

However, to remain realist, analysis of observational data must look beyond empirically verifying students’ interview comments. I therefore looked to transcripts and field notes to explore whether there were apparent barriers and enablers to IoPP in the workplace context. That is, I asked which causal mechanisms were supporting or countervailing the module’s IoPP in the workplace? I found five themes explaining why IoPP was actualised or blocked: timing of the supervision, location and nature of the room, inter-related role-holders, the training
system and service delivery pressures. Some of these themes, such as the supervisory room were ‘simple’; there were many fragments of data which served only to reinforce the theme. Others, I created after several passes over the data and by clustering together smaller themes. For example, ‘inter-related role-holders’ as an influence on IoPP was drawn from one theme in field notes, two in supervision transcripts and another in student interviews. Field notes showed ‘interruptions’ by different colleagues influenced what a supervisor could achieve. This resonated with students’ interview comments that ‘senior-role holders had blocked IoPP’. Transcripts of supervisions showed trainees and supervisors commenting on how ‘other colleagues’ input’ to the supervisory process was influencing their conversation. Additionally, transcripts showed how the ‘trainee plays a role in shaping IoPP’.

Using retroductive thinking, observational data supported the identification of ‘role salience’ and ‘sphere of influence’ as socially situated causal mechanisms. ‘Epistemological re-orientation within the module context’ was understandably absent from observational data. In the next chapter, I present findings about both the initial and tested programme theories indicating points of convergence and divergence between them that help refine my theory of the causes and nature of CPD’s IoPP.

7.11 Data Presentation Decisions

Since this study is a realist evaluation, I followed the long-standing tradition of presenting data analysis and findings arranged around a CMOc (cf. Pawson & Tilley, 1997). While a previous study by Onyura et al (2017) presents CMOc visually in mandala, I follow earlier studies by Sorinola et al (2015;2017) in presenting data in tables (See Appendix 18). These tables show the module as a mechanism in the policy context of standardisation; the module and its parts as pre-structured contexts for educational mechanisms and other, unintended mechanisms that bring about or block learning and IoPP; and how mechanisms in the workplace context impede or enable IoPP.
7.12 Reflexivity during data collection and analysis

Throughout data collection and analysis, I have reflected on why and how I chose to carry out this study. That is, I contemplated how my rationale shaped the research process and findings. And this led me to examine how my professional relationships with my participants and the academic community influenced data collection, analysis and interpretation. Moreover, “I” have many social roles, in several social structures. These which shape my relations with others depending on context. This is similar to St. Louis and Barton’s (2002) notion of ‘positionality’ as a way of articulating reflexive deliberations. Below then, I discuss how my positionality shaped the research process which in turn changed me (cf. Palaganas et al, 2017).

As an overall aim, I conducted this study to better understand and improve my own practice in supporting my students. However, even before data collection began, I sensed tensions arising from my multiple roles. Firstly, I reflected on whether I should position myself as CPD tutor aiming to improve my local practice, or a researcher aiming to produce knowledge claims of how to improve practice, to share with the academic community. Who should benefit from this project; where did my responsibilities lie? (cf. St.Louis & Barton, 2002). Answers to this question would permeate every stage of this study. For example, I felt that during interviews and observations of practice, either role could pose risks to my establishing trust with participants (cf. Foley, 2002). For example, during staff interviews, if I acted in ways which led participants to perceive me as a fellow tutor, would staff assume shared understandings of practice (cf. St. Louis & Barton, 2002) and leave much unsaid? With student participants, if I acted as their CPD tutor, would students present me with an overly positive view of the module and their learning (cf. Denzin & Lincoln, 2011)? That is, would the power imbalance prevent them from sharing disappointments or frustrations? Yet, if I were positioned as researcher, would staff and students alike feel a distant or even authoritarian power imbalance between us? Might participants choose not to disclose concerns or negative experiences because of my responsibility as a researcher to produce and share findings with the research community? If I positioned myself as a researcher, would this influence me to talk to the people I know well in a strange, formal language? (cf. Foley, 2002). This might limit data collection by alienating
others. Should I therefore balance these roles and if so, how, and when? These deliberations underpinned my choice of data collection methods, specifically Pawson and Manzano’s (2016) realist interviewing technique involving the teacher learner cycle and overt observation where I was completely uninvolved (cf. Bollingtoft, 2017). That is, I chose methods which enabled me to explicitly position myself as a learner. Each person and situation had something to teach me, and I shared this belief with my participants.

Additionally, as I began to collect data, I felt my context dependent role-based relationships were more complex than this. I had assumed I was an ‘insider’ researcher, but I was not part of the module commissioning team, nor the original curriculum design team. Nor am I a clinician or a module student. How could I perceive colleagues’ and students’ glimpses of the external reality I believe in and reach an understanding of their acts of agency within these pre-structured contexts? This realisation prompted me to probe for more information where I could, or to convey to my interlocutors that any and all disclosures would help me understand more. I would not be disappointed or offended by comments. However, my ability to do this was shaped by time constraints, particularly during observations and by my own capabilities in noticing. That is, talking with people I know well, on occasion I slipped back into feeling like an insider and assumed I understood their meaning. I think participants did too. During data analysis, I realised this could limit what can be known (cf. St. Louis & Barton, 2002). I wondered if an outsider may have probed more or asked different questions, or whether participants would explain things in more detail to an outsider. I realise then, that my positionality shaped my decisions and values and these shape the research process and findings.

This raises the question as to whether the account of IoPP I offer in this thesis lacks construct or contingent validity (cf. Healy & Perry, 2000). That is, are these purely my own, biased views? Acknowledging that my research is not possibly written in objective terms (cf. Healy & Perry, 2000) and is specific to the time and place that I conducted this study, I have therefore taken steps to minimise the “corruption” of theory that my biases may produce (cf. Sobh & Perry, 2006). Firstly, I involved the extant literature in both reconceptualising IoPP and CPD as well as in early developments of programme theory, I have looked beyond only my own beliefs to
collect fragments from multiple sources (cf. Emmel, 2013). This enhances the construct and contingent validity and explanatory adequacy of my account. Secondly, I have involved colleagues and students to teach me about their experiences and beliefs. Inductive analysis of their contributions helps collect other glimpses of the external reality that interests me, which I believe is perceptible through its effects on us (cf. Bhaskar, 1978). Nonetheless, this gathering of fragments is guided by my own aims and values underpinning this study as set out in the rationale. As such, my analysis offers an abstraction, focusing on selected aspects of a far more complex reality (cf. Sayer, 2004).

The research process and findings also changed me (cf. Palaganas et al., 2017). Through this study, I have been prompted to articulate my assumptions about social life more clearly and have therefore located my educational work in a particular branch of philosophy or meta-theory. The planning of this study impelled me to begin articulating my beliefs about the nature of social life. In particular, in researching IoPP, I had to express my beliefs about complexity and causality in ontologically defensible ways. Early in my studies, I believed Pawson and Tilley’s (1997) approach to realist evaluation in healthcare studies would enable me to do this. I was delighted to find an established research tradition which appeared to fit my worldview. However, in conducting a pilot study and trying to enact such methodological guidance, I found I disagreed about the nature of social structures. I therefore read more widely around realism as a meta-theory and found Bhaskarian works such as Elder-Vass (2007; 2010; 2017), Archer (1995; 2003) and Porpora (2013) which offered solutions to the problems I perceived. Underpinning the three-stage realist evaluation research design with these ontological commitments then provided me with the methodology set out above in this chapter. I now identify my worldview as critical realist (rather than scientific or pragmatic realist).

Additionally, through a particular instance of data collection, viz my interview with Sarah and through data analysis, I uncovered and eventually challenged my own epistemological assumptions about teaching and learning. Through Sarah’s patience, I was able to notice and later critically question my technical-rational assumption that this CPD module should transmit
ideals for practice because of its relations to revalidation and GMC policy. For me, on this module, reflection and discussion were acts of applying theory to practice (Kinsella, 2007; Zeichner, 2010). I now appreciate that CPD learning may start from craft knowledge and practice-based queries and may even end by transforming norms, roles or systems. In the next chapter I present the findings which lead me on this journey.
Part Four: Contributions to Knowledge

Introduction and Overview

In this part of the thesis, I present findings from both stages of my research which together constitute a refined programme theory of the module’s IoPP in answer to my research questions. Following realist evaluation traditions, in Chapter Eight, I first present the four tenets, or strands of the initial programme theory. These are drawn from stage one of this study involving staff interviews and curriculum document analysis. Initial programme theory is therefore an account of staff’s curriculum design. It captures their values and intentions towards teaching, learning and IoPP. As module tutor and leader, my own beliefs and actions have also influenced curriculum design and delivery, therefore, where appropriate, I include my own reflections on practice.

Findings from stage one answer questions as to what nature of IoPP staff intended, which educational mechanisms they chose to bring it about and which barriers to IoPP in the workplace they anticipated. Findings show that, influenced by MMC, staff intended the module to help supervisors better enact their role within the pre-defined parameters. Staff did not intend the module to be a mechanism for transforming the purpose or goals of the Educational Supervisor role. Staff agreed that sustained engagement, active learning and addressing learners’ habitual ways of knowing and doing could help lead to IoPP. However, staff interviews show Deanery and academic tutors held different epistemological assumptions about the nature and goals of professional learning during formal CPD. This study therefore finds a ‘split’ in the first strand of initial programme theory as set out in Table 14.
Table 14: The split initial programme theory gleaned from staff

<table>
<thead>
<tr>
<th>Tenets 1 &amp; 2: Conventional learning for better role enactment</th>
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</thead>
<tbody>
<tr>
<td><strong>Problem</strong></td>
<td>MMC has formalised the educational supervisor role. Practitioners need support to meet requirements.</td>
</tr>
<tr>
<td><strong>Solution</strong></td>
<td>A standards-based, deficiency focused, award bearing model for regionally uniform practice. (Deanery)</td>
</tr>
<tr>
<td><strong>Problem</strong></td>
<td>A reflective practitioner model for practitioner identified, locally appropriate IoPP. (Academics)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tenet 3: Sustained engagement for deep learning</th>
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</table>
| **Problem** | Previous provision ineffective:  
• Passive learning  
• No reinforcement |
| **Solution** | Multiple, active learning tasks requiring personalised connections over time lead to meaningful understanding of practice change. |
| **Solution** | Flexibly timed, blended learning with feedback and support reduces likelihood of disengagement. Compulsion ensures engagement. |

<table>
<thead>
<tr>
<th>Tenet 4: Role models and authentic tasks to address workplace barriers</th>
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| **Problem** | Learners are unfamiliar with education as a discipline.  
Learners may perceive changes are beyond their ‘reach’.  
Administrative use of ePortfolio and ARCP Reports limit developmental conversations. |
| **Solution** | Educationally qualified Educational Supervisors as tutors role model the feasibility and benefits of blending two practice domains and making changes. |
| **Solution** | Critiquing authentic materials questions implicit norms and endorses new ones. The use of actual materials helps narrow the theory practice gap. |

Table 14 shows that programme designers consider their provision will address problems that they perceive in the social world (cf. Pawson & Tilley, 2004). Here, staff intended conventional learning to enable supervisors to emphasise the educational aspects of supervision over the managerial ones. However, as I show in Sections 8.2 and 8.3, Deanery and academic staff held different epistemological assumptions about the nature of this conventional learning. Hence, those different sets of assumptions provide tenets one and two of the programme theory.

Next, in Chapter Nine, I present findings from student interviews, learning agreements and observations of practice in NHS workplaces that develop programme theory. The latter stages of a realist evaluation involve programme participants to ‘test’ any initial theories built up
earlier. My stage two findings therefore test and develop the initial realist theory of IoPP that I
drew from the literature, from staff interviews and the module curriculum document. These
findings explain students’ experiences of the module and their attempts to subsequently
change their practice. In asking what worked for whom and why (cf. Pawson & Tilley, 1997),
Chapter Nine compares student experiences and outcomes with staff intentions, as is typical of
realist evaluations. In the data collected from students, I find that the causal mechanisms of
epistemological re-orientation, role salience and a role-based sphere of influence played a key
role in shaping IoPP. These mechanisms either supported or impeded the intended, module
mechanisms and outcomes, depending on context. Student data therefore answer my
questions about the nature of actual IoPP achieved by students and how this came about. I find
barriers and enablers to learning and IoPP are located in both the CPD and workplace contexts.
Together Chapters Eight and Nine present an account of how IoPP is multiply determined by
structures and agency and is contextually contingent.

Finally, I discuss how the unique conceptualisation of CPD and IoPP that I adopt here permits
me to offer a refined realist theory of formal CPD’s IoPP. Viewing CPD as an organisation (cf.
Elder-Vass, 2010) whose effects in the world emerge from role enactment, norm circles,
contextual structures and agency brought into focus the causal mechanisms of epistemological
re-orientation, role salience and a role-based sphere of influence. Through these mechanisms,
the current study accounts for the influence of people and socio-professional factors beyond
the immediate CPD context which shape IoPP. As such, this is the first realist evaluation of
CPD for Educational Supervisors to account for the nature and causes of IoPP by socially
situating the learners and the staff concurrently in multiple social structures. This
complements our current understanding by addressing areas which remain relatively under-
explored and under-theorised in the postgraduate medical education literature.
8 Initial Programme Theory: Staff beliefs about learning and IoPP

8.1 Socially situating the module: CPD as a mechanism for improving role-enactment

Stage one of my research shows that staff intended the module to offer opportunities for conventional learning that would help practitioners better meet the new, formal requirements for supervision. In this section, I show that their decision emerged from the interplay of structures and agency. That is, staff deliberated the requirements of the regulatory body, the GMC and the formal structures for postgraduate training, known as MMC. As a result of these deliberations, staff designed the module curriculum accordingly. This demonstrates that IoPP is shaped by multiple influences pre-dating and beyond the CPD programme, including large scale national structures and the agency of other stakeholders, not just CPD students.

The externally regulated context for practice provided the rationale for module design and module aims. That is, the module was created and offered in direct response to Modernising Medical Careers (MMC), as signalled by Bob’s use of “the whole thing started off...”:

“...the whole thing started off when I was first appointed as an Associate Dean... Modernising Medical Careers was published, so the role of the medical educator received a higher profile than it had done previously. And MMC required that we expand the profile and the quality of medical educators.” (Bob).

Staff then situate their practice as CPD curriculum designers and tutors within the wider professional context. Above, Bob recalled that “MMC required that we...” improve medical educators’ practice. Below, Tina concurred, explaining their roles as managers carry expectations that they will support doctors and dentists to meet the requirements of the regulatory body, the General Medical Council (GMC):

“We were presented with ‘Here is the job: we need our educators to be fit for purpose against their GMC standards’.” (Tina)
Due to their roles, staff therefore refer to meeting, not challenging GMC standards. Indeed, Tina’s comment “fit for purpose against their GMC standards” seems to preclude transformative learning that may seek to change a system or one’s position in it. Academics too, were aware of these structures and see the module as an opportunity for supervisors to better understand how to carry out their roles within them, as shown by Sarah’s comment:

“There were structures in place, but I don’t think it was always very clear how to enact that role.” (Sarah)

Academics and Deanery staff therefore agreed that the focus of the module was educational supervisor role enactment. This entails conventional learning during CPD to help practitioners enhance their knowledge, skills and understanding, but not to challenge or transform the purpose of the role. Rather, staff perceived that MMC policy developments necessitated CPD that could help educational supervisors understand the newly developed remit rather than continuing to practice in habitual ways. The nature of IoPP emerging from a CPD programme then began to be shaped prior to student enrolment by the influence of policy: CPD content or goals which lay beyond MMC requirements were not tolerated, as shown by Tina’s comment here:

“The main thing was it was to be...very based around is this relevant to your role; ‘Is this relevant to your role? Right, anything that wasn’t shouldn’t be in there!’” (Tina)

The module studied here then was created and continues to run because of the national formalisation of the Educational Supervisor role. Indeed, Deanery staff began to conceive of the region-wide module when they identified a potential mismatch between train-the-trainer, local courses and the goals of national standardisation. Below, Bob’s use of the word “appropriate” signals his intention that henceforth CPD should address and meet MMC requirements. Further, Bob signalled that he values formal, centrally organised CPD because
he sees it as an “improvement” on the then-current situation. He described a shift from “courses” (plural) to “something” (singular).

“So, my starting point if you like was to improve the courses that were then running to something that was more appropriate…” (Bob)

However, the decision to improve the situation by offering a university module was not unthinking compliance with policy but arose from the commitment and agency of staff in light of national agendas. Bob explained that the GMC do not mandate university accredited CPD for revalidation. Instead, staff deliberated the national “framework” and chose to offer university accredited CPD in education for the region’s consultant supervisors, as shown by Tina’s recollection below. References to “set our bar high” and “do this well” show that staff valued peer-reviewed, codified, disciplinary knowledge as is often found in university courses (cf. Willis, 2009). And this is likely because medical education, at the time, was shifting further towards evidence-based practice rather than unquestioned, habitual practice (cf. Swanwick, 2019). This further demonstrates that IoPP is multiply determined by norm circles and by the agency of other stakeholders, not just students.

“The GMC …set a framework in place which everybody had to follow, but they allowed each individual Deanery to decide how to deliver that. So we set our bar high... Not many, if any other Deanery would have (...) a university level course.” (Bob)

“We wondered ‘how could we do this well?’ And I think what is important … is that we felt really strongly that you could answer that question in lots of different ways”. (Tina).

Curriculum design then, was not a simplistic one-to-one mapping from regulations to CPD delivery but involved interpretation of structural requirements by curriculum designers. That is, the MMC structures enabled curriculum designers’ actions but did not rigidly determine them (cf. Elder-Vass, 2007). The curriculum document also captures this interplay of structure and
agency. Below, the use of “match” highlights how curriculum design looked to external role definitions to provide notions of quality and relevance for module content.

“The [commissioning Deanery] has described the knowledge and skills that match to three main levels of postgraduate educator roles, which are relevant to all clinicians in the [region], and indeed in the UK as a whole.” (eVal).

While Deanery staff exercise agency in their choice to work with a university partner, and in selecting the knowledge and skills to teach, these decisions are not context free. Staff are influenced by contextual structures as shown in Figure 15.

**Figure 15: Socially situating module curriculum design in the wider professional context**

Figure 15 shows the ‘external’ or contextual influences on staff’s curriculum design choices. This is not to claim that members of the GMC were directly involved, nor to reify MMC, but to show that module staff deliberated these influences. This led to educational strategies that would support policy implementation in the workplace by module students.

The module then, is a structural mechanism for policy implementation through better supervisor role enactment. However, over the next two sections I show that staff conceive of
better role enactment differently and consequently adopt different approaches to teaching and learning. That is, they hold different epistemological assumptions about the nature of knowledge and the goals of CPD. They view learner and tutor roles differently and they also see IoPP starting and ending in different ways, as set out in Table 15. A focus on epistemological assumptions as normative beliefs which guide role enactment therefore permitted this study to find a 'split' in programme theory. And this is the first realist evaluation of CPD in educator development for clinicians to do so. This, combined with the negative effects on students (presented in the next chapter), highlights the importance of unearthing and aligning epistemological assumptions during the curriculum design phase for CPD.

Table 15: Two sets of epistemological assumptions underpinning conventional learning

| Initial Programme Theory: Formal, conventional learning for better role enactment within nationally, pre-defined parameters |
|--------------------------------------------------|--------------------------------------------------|
| Deanery staff and I | Academic staff |
| Model of CPD | Standards-based, deficiency focused, award bearing training for regionally uniform practice. | Reflective practitioner model for practitioner identified, locally appropriate IoPP. |
| View of Tutor | Expert who has mastered content matter evidence base. Transmits externally acquired information and corrects students' applications thereof. | Facilitates student interactions and self-directed learning. Encourages student-led group activities through engagement with peers’ questions or concerns. |
| View of Learner | Receives codified knowledge from tutors and texts to apply to own deficiencies. Discusses ways of applying external knowledge with other learners and tutors. | Experienced, active participant who raises questions and concerns about own practice. Constructs new knowledge for practice, alone or with others, according to the needs and interests of those present. |
| View of Knowledge | An external commodity, mastered, packaged and transmitted to learners like a physical product. Benchmark for identifying deficiencies. | Situated and relational, derived from a range of sources including reflection on experience, from colleagues, trainees and the literature. |
| Nature of IoPP | The deployment of proffered techniques to address deficiencies and converge on an external standard. Legitimised by policy. | Practitioner identified, locally appropriate and feasible ways of practicing which ameliorate concerns or add new approaches. |

Table 15 sets out the two different sets of epistemological assumptions presented in sections 8.2 and 8.3 below.
8.2 Expert transmission to professionalise practice: The Deanery view of IoPP

Deanery staff’s intended model of CPD was a blend of Kennedy’s (2014) standards-based, deficiency focused and training models. These rely on expert transmission of externally codified knowledge to address pre-identified deficiencies in learners’ practice. This approach to teaching and learning and practice change relies on an application of theory to practice (cf. (Zeichner, 2010) and has been termed technical rationalism (Schon, 1991). Works in teacher and vocational lecturer education have shown that such CPD encourages IoPP as policy implementation and convergence on an external standard (e.g., Hodkinson, 1998; Kennedy, 2005; 2014). Since the current module intended to achieve such IoPP by furnishing specialised knowledge about the discipline of education I follow Korthagen and Kessels (1999) and refer to this manner of IoPP as a ‘professionalisation of practice’.

8.2.1 IoPP by addressing pre-identified deficiencies

Deanery staff taught me that they intended the module to professionalise supervision by addressing deficiencies in supervisors’ practice. These deficiencies were not arbitrarily selected, rather staff drew on their knowledge of the practice domain to identify common weaknesses in practice. Further, the specific deficiencies selected by Deanery staff match the national role remit as set out in the Gold Guide (GMC, 2007; GMC, 2016). In this way, Deanery staff answered my questions as to what nature of IoPP they intended and why: CPD should enable supervisors to address deficiencies in practice, to supervise in similar ways by applying expert knowledge to meet an external benchmark. They also indicated influences in the wider context, showing how these shape CPD and its potential for IoPP.

The Deanery intended known deficiencies in supervisors’ practice to drive syllabus design. Drawing on his experience in multiple roles, Bob identified current ‘problematic’ supervisory practice around the region that now fell short of the recently published Gold Guide standards.
Previously an NHS consultant and Educational Supervisor, at the time of curriculum design, Bob was also an Associate Dean for postgraduate medical and dental education and training. His rationale for module content is grounded in Deanery audits showing that supervisors are currently weak in three specific areas, as per his comment below.

“...the expertise we were bringing to the table were the practical experiences, the type of things we wanted them to do because we knew what they weren’t very good at... We knew that people weren’t very good at writing proper Educational Plans...[and] Supervisor Reports, ... And the biggest challenge... Trainees in Difficulty... so they were key things that we wanted to incorporate into the academic whole as it were” (Bob)

In this way, Bob indicates an intention that CPD help practitioners ‘improve’ their practice according to external benchmarks, rather than their own individual concerns. The resultant model of CPD is therefore deficiency focused and standards based. Accordingly, the curriculum document shows these pre-selected deficiencies form the focus of compulsory workshops, readings, and online discussions. This pre-selection of content by tutors, framed as deficiencies, forms the module's structure (as explained in Chapter Four) and therefore has the potential to shape IoPP.

8.2.2 Tutor as expert and learner as recipient of external knowledge

To help learners address deficiencies, Deanery staff value CPD tutors as content matter experts who select and transmit an evidence base and correct learners’ application of it. This view of tutors creates a training-based model of CPD in which all learners follow the expert’s lead (cf. Kennedy, 2014). Further this wish that tutors be content matter experts appears multiply influenced by medical education’s shift to evidence-based practice (cf. Swanwick, 2019) and by previous, disappointing experiences of CPD. As an NHS manager, Tina has witnessed workshop delivery by non-expert tutors, and she judges this to be dissatisfaction or “watered down”. She strongly believes teaching and learning can be improved if tutors possess greater content matter knowledge than learners. Tina shared her disappointment with
norm circles in medical education that endorse didactic transmission of content from PowerPoint slides in non-interactive sessions, by non-experts. She holds that this approach to CPD means learners do not listen to a ‘sage on stage’ (cf. Swanwick, 2008), but to someone whose more senior role simply places them in a position to read from slides. Tina insists that good CPD involves expert transmission of an external knowledge base, which she refers to as “academic rigour”.

“I think it was the wanting to make sure it had academic rigour so that over time it didn’t get watered down, it didn’t become just a workshop that someone is delivering but not with any kind of - I have seen this… over time things like that get watered down…it’s like “Oh could you deliver that workshop today?” And the other person says “Well I can, but I’m just reading your slides, and I don’t know this stuff”. We wanted it to stay - over time - rigourous... So, it was partly that side that we felt very strongly about.” (Tina).

“Academic rigour” during delivery of CPD suggests as view of tutor as expert. In turn, it suggests a view of knowledge as a “solid, immutable base” (Willis, 2009:4), an external commodity that can be acquired and mastered by expert tutors, then packaged and transmitted to learners (cf. Willis, 2009) much like a physical product (De Cossart & Fish, 2005). This resonates with the literature review which found ‘traditional’ approaches to CPD involve a technical-rational transmission approach to teaching and a conceptualisation of IoPP as the embodiment of proffered techniques in practice (cf. Schon, 1983; Hodkinson, 1998). Indeed, in discussing the rationale for module readings, Bob reinforced this view through reference to “content that [we] wanted to deliver”. Moreover, by saying “if we were doing it again”, Bob signals that he remains committed to a model of CPD in which expert tutors are to select and deliver, or “direct and provide” the best ‘product’. This takes the form of team authored precis of “important ideas for outcomes”; that is concise, evidence-based messages to help address deficiencies quickly.

“I guess my concern...would be to get the content that you wanted to deliver, you would need a large number of published papers or
books or whatever... and that would actually increase the amount of reading required, so I think that what the students were looking for and what we were trying to achieve was acceptance that they were being taught by experts and they were dependent on those experts to bring together for them a summary of the important ideas for outcomes... If we were doing it again, I think I'd probably still feel that that was the right way to do it... to reach the masses, you probably need to have teacher directs as well as teacher provides, in my opinion.” (Bob)

My approach to teaching and learning on this module aligns with Bob and Tina’s. That is, I also took a transmission-based approach to teaching and a technical-rationalist view of IoPP on this module. This is evident in my 2015 decision as module leader to provide a reading list of peer-reviewed, published literature rather than the team authored precis. My rationale was that providing the original texts could allow learners to focus on advice that was meaningful to their own learning needs, viz. deficiencies. I did this because, as a non-clinician, I lacked knowledge of the learners’ practice domain to pre-identify deficiencies and therefore assigned this responsibility to the learners. Despite intending an element of personal meaning making, nonetheless, my decision was underpinned by the epistemological assumption that for these module students, the purpose of professional learning is to acquire and apply knowledge from the extant evidence base to improve practice. I therefore expected IoPP to resemble module content, but to vary according to learners’ idiosyncrasies. Such choices by me or Deanery staff influence the nature of potential IoPP, likely encouraging predictable changes that match transmitted content, to eradicate pre-identified deficiencies and to converge on a standard.

Further indicating the intention to address deficiencies, Tina referred to immediate corrections by tutors as “ideal”. Recalling that the early years of module delivery involved tutor observations of learners’ workplace-based practice as part of summative assessment, Tina lamented the loss of this activity due to logistics. Tina conceded that nowadays tutors offer corrections during discussions or role-plays but is concerned of the ‘gap’ between classroom-based simulation and actual practice. She believes correction in-situ or “right in there” to be more effective for IoPP.
“...in the early days we actually had some practice-based assessments. And... it was kind of sad to see those go, but they weren’t sustainable really with the numbers that we had, because actually putting the academic learning right in there [in the workplace] and actually having a tutor or one of your assessors alongside to say ‘Oh yes, I can see that you are doing this or you’re not doing this’... I know we do that now in the workshops, but there are some things that were probably maybe too idealistic for the size of the programme.” (Tina)

The intended relations between students, tutors and materials then are expert transmission, receipt and application by learners and correction by tutors to address deficiencies in practice. These relations shape the potential for IoPP and further demonstrate the Deanery intended the module as a mechanism for the uniform professionalisation of practice.

8.2.3 External benchmarks as drivers for IoPP

Together, Deanery interviews and my reflections indicate a particular interpretation of socio-constructivist based learning that is not shared by academic staff. The prior knowledge we build on is external to the learners. This external knowledge comes from Deanery audits, externally regulated standards and substantive theories of education. The decision to have experts transmit an evidence base to help learners suggests socio-constructivism as learning from ‘wiser’ others. Discussions and other learning activities among peers are acts of sharing various ideas on how to fill the pre-identified gaps in practice. This suggests both the impetus for and end goal of IoPP lie in an external benchmark as shown in Figure 16. Consequently, any change in external benchmarks necessitates (further) CPD to support practitioners in meeting others’ expectations. Indeed, this was the Deanery rationale for commissioning the module.
Figure 16: The cyclical interplay of external benchmarks and IoPP

Figure 16 indicates that the 'starting point' for IoPP lies, in part, in external benchmarks. It shows how people other than the learners can identify learners’ deficiencies and suggests the educational mechanisms which can facilitate IoPP.

8.3 Building theory from action: The academics’ view of IoPP

In contrast to Deanery colleagues, academic staff intended a reflective practitioner model of CPD that would lead to practitioner identified IoPP. Rather than external benchmarks, the academics’ approach values practitioners’ experiential knowledge as a starting point for learning and IoPP (cf. Schon, 1991). This entails examining practice through multiple lenses: a supervisor’s own questions and concerns, peers’ experience, and advice, as well as module readings cf. (Brookfield, 2017). These multiple sources of learning are illustrated in Figure 17. Academic tutors therefore position themselves to facilitate group discussions and individual or group reflection on practice. IoPP goals are not pre-specified or predictable, instead they
emerge from the experiences, concerns, and interactions of those present. Below, I draw on academic staff interview data to highlight this ‘split’ in programme theory. In Chapter Nine, I show that these differences in staff’s epistemological assumptions had negative consequences for students’ learning experiences and potential for IoPP.

**Figure 17: The academics’ intended pathway to IoPP**

Figure 17 illustrates the starting point or stimulus for IoPP according to staff interviews. Since learners raise their own questions drawn from experience, IoPP is not necessarily predictable from module content alone.

**8.3.1 Reflection on experience for practitioner identified IoPP**

Rather than external benchmarks, academic staff emphasise learners’ experience in the educational supervisor role as a starting point for discussion, learning and IoPP. Academics intend that learners’ experience be foregrounded or “harnessed” by group discussion and
individual reflection. These activities play a significant role in helping learners identify their own, locally appropriate IoPP. This view is captured in the module documentation which shows that group discussions are a significant feature of the curriculum and that intended learning outcomes require reflection on practice. Module workshop agendas list plenary and small group discussions at each session and the curriculum document denotes participation in online discussions as compulsory for passing the module. Sarah explained that during group discussion, supervisors’ questions, concerns and ideas derived from experience should drive learning and IoPP rather than externally set goals or tutor advice.

“...there was a recognition that there was lots of experience and that we were going to harness that, not to say 'Right, you've had this experience, put that to one side'. No, it was to bring that experience. Discuss it.” (Sarah).

Since academic staff value experiential knowledge, CPD is intended to offer the opportunity for extended “reflective time” that is difficult to achieve in a busy, working day (Swanwick, 2005:862). While the Deanery intended a training model for CPD in which learners take time away from practice to learn from an expert (cf. Kennedy, 2014), academics saw this ringfenced time as “an opportunity” for peers to share and discuss experience. Viewing CPD as ‘protected study time’ and ‘an opportunity’ resonates with earlier evaluations of formal CPD for clinicians (e.g., Leslie et al, 2013; Onyura et al, 2017). Academic tutors then wanted to provide time for supervisors to articulate tacit knowledge or “realise what they knew”, identify their own learning needs or “what they didn’t know” and share craft knowledge as openly as possible between peers, as shown by Sarah’s comment below.

“...I think there was a recognition from the team's perspective that there wasn't always opportunities to talk about that, so bringing people out of work and into workshops and into a course gave them an opportunity to realise what they knew, perhaps become more aware of what they didn't know, find out what other people did, what might work in what situation.” (Sarah).
Practitioner IoPP derived from reflection on experience implies a different interpretation of socio-constructivist learning and knowledge than that held by Deanery staff and me. From the academic perspective, supervisors build on their prior knowledge by articulating or “unpicking” assumptions and by soliciting ideas or questions from a range of sources, including module peers, tutors and the literature. That is academics’ curriculum design decisions intended learners to engage with craft and codified knowledge to address their practice-based interests. Knowledge then is not an external, immutable base received from others, but can (also) be built from reflection-on-action and discussion thereof (cf. Ryan & Ryan, 2013) with others who have different perspectives and capabilities (cf. Reich et al., 2015). CPD is therefore an important opportunity to build theory from action.

“The social constructivism theory was very strongly applied... it was assumed that as they were going through, they would be sharing their good and bad practice that they may or may not have done themselves, but definitely had seen in other ways and in other people.” (Emma)

Socio-constructivism for the academic staff involved building on one’s own knowledge through explicit articulations of craft knowledge gained in practice with others. When I later asked Sarah why she valued this approach to gaining IoPP, she explained that she was influenced by norm circles in her earlier career. At times, she had limited access to an evidence base, but was supported by workplace colleagues to use feelings and value judgements about prior practice to inform future practice. Influenced by prior experience, Sarah considered that reflective discussions among experienced colleagues could be a powerful educational mechanism for IoPP. CPD was therefore intended as an opportunity for “unpicking” tacit knowledge of “what they did and why they did it” and “sharing” those explorations.

“I didn't get the impression that there had been a lot of discussion about sharing how that role was enacted ... there would be a mix of people with varied amounts of experience of being supervisors... there might be quite a few people who had been in that role... for some time but had grown into the role perhaps without any unpicking of what they did and why they did it.”
This view values differences in practitioner experience, reflexivity and creativity (cf. Kennedy, 2015) for shaping IoPP rather than practitioners adapting their practice to ‘match’ external theory (cf. Zeichner, 2010). Academics therefore emphasised the importance of learning from diversity and the module was intended as a platform for this.

“It was [because] different specialisms might have had possibly different cultures of how the ES\textsuperscript{8} role could work.” (Sarah)

In realist terms then, the module is a structural mechanism for sharing various normative views of supervisor role enactment. Working in different contexts permits learners to develop different ways of supervising and formal CPD, away from the workplace presents an opportunity to share this. In the academic view, reflection and socio-constructivism means valuing and foregrounding experienced professionals’ craft knowledge. Consequently, this suggests a view of tutors as facilitators, rather than didactic ‘experts’.

8.3.2 Tutors as facilitators of active learners

The academics’ intended model of CPD entails a different view of the student and tutor roles than that held by Deanery staff. In the reflective practitioner model intended by academics, tutors facilitate interaction among peers (other supervisors and trainees) and materials, online and face-to-face. IoPP goals are left open. This is because academics consider learner differences, capabilities and concerns will drive learning and IoPP. As module tutor and learning technologist, Emma taught me that to facilitate rather than transmit, academic tutors focus on the ‘how’ and ‘why’ of IoPP, leaving the ‘what’ to individual learners. This is in part

\textsuperscript{8} The module team (and students) refer to Educational Supervisors as ‘ES’.
because the academics anticipated learner diversity in terms of needs, interests and workplace constraints.

(Me: The curriculum document contains a lot about learning but not necessarily much about changing practice back in the workplace?)

“Yeah, …it’s difficult, isn’t it? It’s different for everyone …because learners are so different and… people go back and it’s different and all the rest; …so maybe [it’s] not “What impact?”, but “What are you hoping to do that will make them change?” …and that might be through interaction with peers online in those discussions, peers at workshops, tutors at workshops… which fits with the whole you know, the social constructivism thing, doesn't it?” (Emma).

Academic tutors then take a facilitator role rather than transmitting “the answers” because they position module students as experienced, mid-career learners able to co-construct new knowledge from a range of sources. Sarah also recognises students’ “experience of the role” could be the stimulus for learning. Moreover, she indicates the intended relations between tutors and students with her insistence that tutors did not pretend to have answers that students did not.

“…because there was recognition that amongst the team that had come together to design this, [that] there were some individuals who had had experience of the role…and we weren't wanting to put across this idea that we as a team of educators had all the answers and - that they didn't have; it was, ‘Well let's see how you can work out what the answers might be by taking a wider view’.” (Sarah).

In realist terms, academic staff intend learners, tutors, and materials to be related differently than Deanery staff do. As shown in Chapter Four, this creates a different module structure and hence the potential for different outcomes also.

Alongside learners’ professional experience and differences in their working contexts, academics believe different learner interests drive IoPP. That is, from the academic viewpoint, active learners not only formulate ‘the answers’, but they also decide which questions or aspects of practice to discuss. Academics wanted learners to feel safe through the “support of
others” to raise their own concerns. Also, to help each other formulate solutions or “ways round” those issues, rather than necessarily starting with applications of policy or formal theory to practice.

“I think we were hoping that if students found that they were concerned about how they were practicing as a supervisor, they would have the skills and knowledge and the support of others to work out what might be a way round that.” (Sarah)

Learners’ concerns may derive from multiple sources. These include external benchmarks as well as local issues. Academic interviews therefore lack any mention of specific supervisor responsibilities or skills as pre-determined IoPP goals. That is, academics intended learners to identify their own, role-based learning needs and for these to drive IoPP.

8.3.3 IoPP driven by learner diversity

Overall, academic interviews indicate expectations of varied IoPP. Rather than pre-selecting specific desirable outcomes for CPD, academic tutors focus instead on CPD processes. Academic colleagues acknowledge learner diversity and allow it to drive IoPP: different lengths of experience in the role, different workplace enablements, norm circles or “specialty cultures”, different interests and learning needs, and different opportunities to develop as a supervisor can lead to diverse, locally appropriate IoPP for each learner. Due to their recognition of learner diversity and experience, academic tutors foreground the educational mechanisms of reflection and reflective group discussion. They expect these are conducive to learners defining improved practice for themselves. Rather than uniform IoPP eventually reaching a regional scale, learners are expected to set their own goals that make sense in their own contexts (cf. Dunne et al., 2000). IoPP then is not only personalised paths to the same goal (as in the Deanery view), but also different goals. Such practitioner co-created outcomes may reduce the limitations of standards based CPD which has been noted to constrain views of what is possible in a role (e.g., Hodkinson, 1998; Kennedy, 2015). Yet, despite such variation, IoPP is considered feasible because ‘improving’ practice is a matter of reflexive deliberations on structural
constraints and enablements (cf. Archer, 1995). This can lead to contextually appropriate or feasible IoPP plans. Nonetheless, academics do not intend CPD to transform, challenge or disrupt the purpose of supervision. Like Deanery staff, academics’ focus on role enactment highlights their intention that the module be a mechanism for better role enactment within defined parameters.

8.4 Talking past each other: staff’s mismatched assumptions remain unaddressed

Of note, staff interview data indicate that the differences in their epistemological assumptions set out above have gone unnoticed over the years. Like earlier papers in cognate fields (Kinsella, 2009) this study finds a shared or common terminology masks underlying differences in approach. Findings here also support my earlier claim, in section 3.7.2, that epistemological assumptions constitute somewhat of a blind spot in PGME. Indeed, despite differences revealed by data analysis, no staff interviewees recall struggles to see the others’ point of view while working together. For example, Tina fondly recalls that the Steering Group discussions were a favourite among her professional commitments.

“I used to say to Bob that they were my favourite afternoons of the month when we used to have those joint meetings” (Tina)

In addition, Sarah’s reflection on the curriculum planning stage indicates that some parts of staff practice were “implicit”. Staff “assumed” a common approach, hence different epistemological assumptions were not explicitly shared or questioned.

“So, we were meeting up on a regular basis, ...and maybe... one of the gaps if I think back now, is that maybe we had ideas that were more implicit and assumed rather than really, truly, you know, this is what we’re doing, this is why we’re doing it.”
Furthermore, my own reflections on realist interviewing suggest that we have unknowingly approached our work differently. I initially found it difficult to understand the underlying meaning of Sarah’s interview. I therefore needed to have a second conversation with her and during this, we were both shocked at realising the divergence in staff views. It is likely that working in different contexts, academic and Deanery staff have been socialised into different norm circles regarding the nature and purpose of formal CPD. Different normative beliefs therefore guided our work, but a ‘common language’ masked these differences. This, combined with refinements to programme theory contributed by students (and presented later) highlights the importance of focusing on the epistemological beliefs of CPD staff and learners alike.

Findings in Section 8.2 and 8.3 also show that the nature of IoPP is at least partly influenced prior to students enrolling in CPD, during curriculum design. Staff agency, regulatory structures and norm circles shape staff’s epistemological assumptions about the nature and goals of CPD. In shaping CPD, these three causal influences therefore contribute to IoPP.

8.5 Sustained engagement as a key educational mechanism for IoPP

So far, I have demonstrated a divergence in the programme theory. Here, I draw on staff interviews and module documentation to show that staff agree on the importance of sustained engagement to cause deep learning that leads to IoPP. As an educational mechanism, sustained engagement is made possible by the CPD structure, content and processes. In realist terms, staff’s curriculum design shaped the intended relations between module tutors, materials, students and their workplaces to sustain learner engagement. Furthermore, as a key mechanism, it is supported by and engenders a chain of other educational mechanisms, including active, deep learning and reinforcement. Also, staff pre-empted barriers to sustained engagement located in learners’ multiple professional roles and therefore designed the CPD accordingly.
8.5.1 Longitudinal provision supports sustained engagement as repetition, reinforcement, and consolidation

Staff intended longitudinal blended learning to offer repeated opportunities for contact with materials and module members. Rather than disconnected workshops (previously known as ‘train-the-trainer days’), a module offered possibilities for repetition, reinforcement and consolidation which could lead to deep learning and practice change. Therefore, staff intentionally designed a 16-week module to promote regular learning opportunities among members, as shown by Tina’s comment below. Tina explains that curriculum planning discussions included questions of duration and structure and she recollects that staff felt “very strongly” about providing opportunities for learners to “get immersed in thinking about [the CPD]”.

“Something that was also quite important for us ... [we had] discussions about the difference in saying ‘Go to two or three workshops’ or ‘Do a module over a period of time’, and ... we felt very strongly it should be a period of time, because then you get immersed in thinking about it, so you don’t just think about it on two or three days of workshops and then forget, but actually you are doing a however-many-weeks module. And so, you have...more time to engage, you have more time to reflect and therefore I think ...your learning is getting deeper by the fact that you’re revisiting and revisiting and going round those cycles of learning.” (Tina).

Reflecting widespread practice in the extant literature, staff believed a course of studies over a length of time would be more effective for practice change because it permitted sustained engagement rather than “just think[ing] about it on two or three days of workshops and then forget[ting]”. That is, module membership offers “more time to engage [and]...to reflect” than one-off attendance and staff believed this entailed “learning...getting deeper”.

Like Tina, Emma also indicates that the structure of the module was intentionally planned to sustain learners’ engagement. She refers to staff’s constant “emphasis” on ways in which the CPD structure could promote deep learning which leads to IoPP. In particular, Emma contrasts
one-off events with longitudinal courses, stating her belief that the former is not conducive to deep learning, but instead encourages “cramming” or the transmission of large amounts of content to learners over a short time.

“You need to give people time to go out and practice it...the emphasis, always, in planning for all the modules...was that sustained, touching back to base with work and then touching back into the module would help to...embed their learning deeper than if it was just ...a two-day thing to cram it all in. It was trying to move away from that philosophy.” (Emma).

In realist terms, staff explained how the intended nature of relations between students, tutors and materials imbue a module with the potential to cause sustained engagement, deep learning and IoPP “by the fact that you’re revisiting and revisiting and going round those cycles of learning”. This is supported by the literature showing that deep learning may result from multiple opportunities for productive repetition (Grant, 2019) and time to connect new knowledge to past experiences (Entwistle, 2000). A different CPD structure, such as “two or three workshops” may have triggered different educational mechanisms, such as “cramming” and brought about different outcomes. The literature suggests this could involve surface learning (Marton & Saljo, 1976) or memorisation of information without understanding how it may be enacted in actual contexts for practice (cf. Grant, 2019). Longitudinal blended learning then was intentionally chosen as a curriculum structure conducive to sustained engagement and deep learning.

8.5.2 Deep learning through reinforcement in the workplace

In addition to engagement in the CPD context, staff also intended sustained engagement with CPD ideas in the workplace. That is, in line with findings elsewhere (Amundsen & Wilson, 2012; Hoekstra & Crocker, 2015; Kirkpatrick, 2007), staff considered that IoPP could be facilitated by reinforcement of CPD learning through trialling new ideas in the workplace. Above, Emma exemplified this intention through her insistence on offering students “time to go out and practice it”. Furthermore, her reference to “then touching back into the module”, signals staff
intentions that subsequent CPD contact sessions should address any workplace-based trialling of CPD learning. Subsequently ‘revisiting’ workplace-based experiences in the CPD context (on campus or online) would “embed learning deeper” and thereby support IoPP. This is similar to other university based CPD courses included in the literature review supporting this study.

Staff then chose a module structure which could support sustained engagement beyond the immediate CPD context and into the workplace. This permits learners to integrate new knowledge acquisition with previous experience and practice in authentic contexts (Grant, 2019). Such a structure creates opportunities for learners to understand how and why something ‘works’ in a given context, rather than encountering decontextualised knowledge in the CPD context (cf. Eraut, 2004). Reinforcement in the workplace then facilitates deep learning which can lead to IoPP.

8.5.3 A flipped, blended classroom for deep learning

Moreover, to further promote sustained engagement, curriculum design connects off-campus learning to on-campus learning using a flipped classroom model as shown in Figures 18 and 19. That is, the VLE contains preparation and follow-up tasks for each workshop, which creates a joined-up learning journey for module students as shown in Figure 18. Off-campus studies then are not separated from on-campus activities; as shown by the comparisons in Figure 19. In the current module, asynchronous, active online learning serves to reinforce or prepare for learning on campus, which in turn refers to practical, professional experiences.
As a whole, the flipped classroom model designed by staff intentionally involves varied ways for learners to assimilate content, because this has been found to support deep learning (cf. Marton & Saljo, 1976). That is, a range of interconnected activities help learners make personal connections between module content and their own practice, as shown in Figure 18. Of note, Sarah explained that intentionally, these activities did not include multiple choice or single word answer quizzes about content as these may encourage rote learning of facts without understanding the value of them in one’s own context (cf. Biggs, 1996). Instead, staff hoped learners would identify their own meaningful learning points and changes to practice.

“...there was no intention to say ‘That's right. That's wrong. You mustn't do that. You can't do that’. But more a discussion of in which context you could do what and when it would be appropriate.

[Me: So, you couldn’t take a multiple-choice quiz?]

No!” (Sarah)
Figure 19: A comparison of blended learning models

Figure 19 sets out the difference between ‘side by side’ modalities of blended learning on the left and the ‘connected’ or flipped classroom arrangement deployed on the module.

The manner in which staff intended learners to regularly engage with blended learning is shaped by staff’s epistemological assumptions. Here again, we see further evidence of the ‘split’ in programme theory. Deanery staff intend transmission and receipt of module content followed by regular application in the workplace context. For example, in linking module activities to a student’s thought process at work, Tina exemplified an ‘application of theory’ approach.

“... you’re doing a...module and hopefully you’re doing at least some thinking about that week on week: ...some engagement with the forum and with workshops and some engagement in the workplace. And you will realise ‘When I was thinking about that last week, this happened. And I wonder if I actually apply that reading, what happens then?’” (Tina).

Above, Tina shows that regular engagement “week on week” through various means such as discussion forums and workshops may lead to IoPP. This is because “actually apply[ing] that reading” may improve practice compared to “last week”. Embodying theoretical knowledge in the workplace should help learners “realise” the benefits or understand the ‘how’ and the ‘why’ of practice change in real, local contexts. Regular engagement on and off campus then leads
to deep learning and IoPP, underpinned by application of theory to practice (cf. Zeichner, 2010).

In contrast, academic staff intended deep learning to be a learner-directed, continual building of theory for practice. That is, academic staff intend the generation of knowledge for practice, from learners’ professional experiences to date. Emma’s reference to “bringing prior knowledge to help” and Sarah’s intention to “give people the opportunity to reflect” suggest ongoing deep learning emerges from a blend of multiple sources (cf. Entwistle, 2000; Grant, 2019), rather than an application of theory to practice.

“...obviously, as an adult learner, as a... mature student, ...you have prior knowledge, and you're bringing that to help your learning, your ongoing learning.” (Emma)

“there was an assumption that if people are given the opportunity to reflect, that deeper learning and ‘impact’ can be an ongoing outcome of that learning.” (Sarah)

Despite different epistemological assumptions, neither Deanery nor academic staff offer a view of engagement as critical or transformative. For example, consequential engagement as posited by Gresalfi and Barab (2011) involves students considering the implications of using course content and even questioning whether course content is the most appropriate for their needs. Here however, Tina’s references to “immersion”, “revisiting” and “applying reading” strengthen the view that Deanery staff intended a transmission-based model of CPD. Similarly, academic staff’s focus on learners “bringing prior knowledge” and “having opportunity to reflect” does not imply examining the consequences of using module content (cf. Gresalfi & Barab, 2011), nor to questioning or changing the purpose of the supervisor role (cf. Kennedy, 2014). It implies better enactment of the role within the defined parameters. In realist terms, the contextual structural influence of the GMC encouraged staff to offer CPD as conventional learning as shown in Section 8.1. This largely precludes critical questioning or rejection of CPD ‘messages’ or transformation of the supervisor role.
Active learning relevant to the role as a mechanism for IoPP

Active learning with content relevant to the Educational Supervisor role was an intentional educational mechanism for IoPP. As such, it was one of several mechanisms which were intended to multiply influence IoPP. That is, differences in epistemological assumptions aside, all staff considered engagement and deep learning to be associated with personally meaningful, active learning (cf. Ravenscroft & Luhanga, 2018). Whether learners were to correct deficiencies in their practice by choosing which readings to apply, or whether learners were to envisage their own starting points and end goals for IoPP, staff intended learners to be actively engaged. The module challenged norms of a tick-box culture which permitted passive attendance at CPD for administrative reasons. Tina’s comparison of the current module design with prior approaches to CPD demonstrates staff’s reflexive deliberations on this.

“We wanted to make people think more and actually step back and say ‘Oh, what’s happening here; what’s going on here? I’m having to actually engage with this. I can’t sit in a corner and pretend to be listening, but actually I’m on my Blackberry or whatever’”. (Tina)

Tina framed active learning in contrast to norm circles for CPD that she has experienced in the practice domain where common approaches to CPD sustain passive listening or disengagement during didactic presentations. Bob’s explanation about the two sets of expertise involved in curriculum design also shows that the Deanery staff reflexively deliberated such norms in their practice domain. To endorse new norms for CPD learning, the Deanery chose to commission a university to design the module, so as to be able to draw on academics’ expertise in active learning strategies. Bob refers to these as “the actual mechanisms”.

“...the actual mechanisms for achieving that came much more from the university staff than from the Deanery... because the expertise we were bringing to the table were ...the type of things we wanted them to do because we knew what they weren’t very good at...So that’s where the two lots of expertise came together.” (Bob)
To design active learning into the curriculum, the academic team drew on university policy and their own expertise. Here again, the interaction between structure, norm circles and agency shaped staff choices. The module curriculum document contains an extract from university policy promoting learner-centred teaching practices. Policy then codifies the structure of the university. As part of learner-centred teaching, the university is committed to using technology to help reduce passive reading or listening. During interview, Emma taught me that due to these endorsed norms, the programme team had been using online discussion boards for some time and were “quite familiar ...and quite comfortable with” active online learning. Consequently, rather than offering an online repository of texts or audio-visual materials for students to passively receive while off-campus, staff chose Blackboard tools which enabled interaction between students and staff off-campus. Further, according to Emma, norm circles in the wider academic context supported the particular decision to use discussion boards. Namely, an evidence base supported their deployment.

"[Our approach] started from ‘What have you seen happen? What have you experienced, good, bad or ugly? What are your thoughts and opinions about it? And share with the rest of your group’... As a tool to facilitate this, [discussion boards] ... had been most written about. Other tools at the time hadn't really been researched much and...certainly weren't trusted“ (Emma)

Academic staff therefore were influenced by university policy and drew on their specialised knowledge to select ways of embodying this. They designed a curriculum that promoted active learning. They avoided passive learning techniques such as watching videos, reading texts or listening to lectures (cf. Desimone, 2009). Instead, they intended group discussions, in workshops and online, to be opportunities for active learning through interaction between those present. In resonance with the literature in medical education and cognate fields (e.g., Desimone, 2009; Schostak et al, 2010), active learning was intended to drive engagement and lead to deep learning which facilitates IoPP. A chain of mechanisms then, rather than a simple pairing of context and mechanism leads to IoPP. This aligns with realist philosophy that outcomes are multiply determined (e.g., Bhaskar, 1978).
8.6.1 Competing, socially situated role norms create a tension

However, programme theory contains a tension: while valuing active, personalised deep learning, staff also marked most module activities as compulsory. The curriculum documents show that to pass the module, students must attend three out of four workshops, contribute online to at least four out of six discussions and submit both assessments. All of these require engagement with compulsory readings. Failure to contribute to the required number of tasks results in failure of the module at first sitting. To pass at second sitting requires successful completion of all these activities. Learners then are not at liberty to attend workshops, enter into discussions or read texts based on intrinsic motivation. Learners are not free to select topics of most relevance to their own professional practice or own concerns. Active engagement then is also compelled by module structure. Elsewhere, the literature suggests this may result in strategic rather than deep learning, in which learners use their knowledge of the assessment system to ensure they pass by completing only the minimum of requirements (Entwistle, 2000). This includes spending less time questioning information or seeking to understand its relation to practice (Grant, 2019). And this appears to be in tension with staff’s desire to have students actively seek personally meaningful IoPP.

The different ways in which the module engenders active engagement can be explained in terms of two, concurrent sets of normative expectations associated with tutors’ roles. That is, as educators staff support learners’ development and therefore wish for learners to gain personally meaningful IoPP from module studies. However, in the ‘pre-structured’ university context, tutors also act as gatekeepers of qualifications: universities use success in formal, summative assessments as a mechanism for offering qualifications. University staff roles therefore include monitoring or gatekeeping responsibilities over qualifications. Power-imbalanced relations between students and staff therefore also drive engagement: students must comply, or staff may withhold qualifications. Furthermore, learners’ need or choice to obtain the qualification may be explained by socially situating the module, and staff’s decisions, within MMC structures for training. These now require supervisors to gain and maintain educational credentials. This prompted the Deanery to commission a university
course for educational supervisors which culminates in a qualification that can be used as evidence for revalidation. Passing module assessments then is needed for revalidation in this local context\(^9\). The Deanery’s response to MMC training structures introduced *compulsion* as an educational mechanism in CPD. This differs from the locally delivered CPD courses reviewed in Chapter Three, which involve no formal assessment and engage learners through other means.

### 8.7 Managing conflict between learners’ multiple roles facilitates IoPP

This final strand of programme theory shows that staff anticipated and addressed constraints on learning and IoPP by also considering learners’ other concurrent roles in professional structures beyond the CPD context. In particular, staff were aware that learners are busy professionals, consultant supervisors, experienced practitioners and clinical specialists. Staff expected that the formal structures in which these roles are embedded, as well as the norm circles which influence role enactment pose threats to the intended CPD processes and goals.

Here, I further explain my notion of role salience to explain staff decisions about how best to overcome or reduce these potential impediments. As set out in Chapter Four, students concurrently hold multiple roles in the CPD and NHS organisations. These each have different sets of normative expectations, enablements and constraints ‘attached’ to them (cf. Elder-Vass, 2010). Given the realist focus on the differential effects of contextual variation on outcomes, I therefore suggest the features of any given context may make salient the normative expectations of one role over others. Consequently, in some contexts, one role may be effectively enacted to the detriment of others. That is, role salience may be a damaging mechanism. In another context, one role being salient over others may be necessary and advantageous, such as when a crash team acts as emergency clinicians to save a patient in

\(^9\) Not all regions of the UK have created university accredited, formally assessed CPD courses for educator revalidation.
cardiac arrest. At other times, features of the context may productively balance learners’ multiple roles such that all or most normative expectations are met or at least not threatened. I suggest staff aimed for such a balance through their consideration of learners’ multiple roles and their curriculum design decisions. Socially situating learners in their other roles then enabled module staff to pre-empt barriers to learning and IoPP as shown in Figure 20.

8.7.1 Busy doctors need flexible learning opportunities

In line with the extant literature, Deanery and academic staff alike recognised that the learners are first and foremost busy, professional doctors with patient care responsibilities (e.g., MacVicar et al, 2013; Onyura et al, 2017). Bob demonstrates that these role requirements risk impeding regular engagement with module content and activities.

“When we went down the university route, …my big initial worries were that it was going to be too time demanding for many doctors”.

(Bob)

Cognisant that students are busy professionals, staff therefore chose to offer a blended learning rather than ‘traditional’ module, as exemplified by Emma’s comment below. This is because staff realised that calling learners out of clinical practice to a large number of on-campus workshops could have negative consequences for patient care. This would risk learners as clinicians absenting themselves from the module on multiple occasions, eventually disengaging from module studies.

“...it needed to be a blended course where you had students in for some of the time and online for some of the time.” (Emma)

Learners’ other social roles then influenced curriculum design to ensure engagement remained feasible. Not only did staff purposefully choose blended learning, but they also chose to make online activities asynchronous. This permits students and tutors to participate at a time, (Ravenscroft & Luhanga, 2018), as well as from a place which best suits their schedule (Cook &
Steinert, 2013). In addition, module documentation shows that the four compulsory workshops are each offered three times. Iterations take place morning or afternoon, and on different days of the week, over a ten-day period. This enables clinicians to minimise their absence from specific clinics. Further, the module timetable sets out timeframes for completion of online tasks instead of single point due dates. This affords busy clinicians flexibility to fit these tasks in around their other commitments. These curriculum design decisions facilitate students immersing themselves in tasks, rather than quickly completing them in tick-box fashion before an inconvenient deadline. Staff then aimed to create a CPD context which balances the requirements of the student role with those of the busy, professional doctor.

8.7.2 Dual role tutors diversify clinicians’ normative views of knowledge

Staff also considered that as clinicians, learners may consider studies in education to lack a credible knowledge base. They may therefore reject module studies and IoPP would be lost. That is, staff were concerned that as clinical specialists, learners’ beliefs about valid sources of knowledge derived from norm circles in the more familiar “hard sciences”. Staff felt learners may therefore remain unconvinced by social science knowledge, as illustrated by Bob’s comment below. In Archer’s (1995) critical realist terms, staff ‘historicised’ learners by considering how their past experiences of learning influence their current epistemological assumptions.

“I think if you talk to many doctors...they find it difficult to conceive of education because it’s a different discipline, it’s a social science not...a hard science. So, they are used to...rigid trials and p-values, ...and stuff that doesn’t sit within that kind of environment, they find difficult to accept, to understand, believe in...” (Bob).

Normative views of valid knowledge developed previously and elsewhere may therefore act as barriers to learning and IoPP. Curriculum design then had to consider learners’ roles as clinical specialists to minimise any barriers it posed to learners’ roles as CPD students. Bob explained
that such considerations led to a conscious decision to involve dual-role tutors who could exemplify and role-model how they enact a synthesis of bodies of knowledge. During interview, he underlined the importance of many module tutors being experienced, consultant clinicians who are also established medical educators. Module students could then view tutors as “someone...who has been through that and can...demonstrate how it works or how it can work”.

“So [module students] do need someone...who has been through that and can...demonstrate how it works or how it can work. So...having ...the clinicians as tutors... was definitely part of the original plan to convince people of its value. For sure.” (Bob).

Dual-role tutors were therefore intended to endorse new norm circles, “demonstrating” epistemological fluency (cf. Markauskaite & Goodyear, 2017). That is, role-modelling how different ways of knowing can also make ‘valid’ contributions to effective supervisory practices.

8.7.3 A multi-professional team overcomes experienced supervisors’ reticence to study

Staff also anticipated that learners’ roles as experienced practitioners or supervisors may block learning and IoPP because some students may not appreciate having to study for a role they already held. Sarah explained that, having successfully held the role for some time prior to MMC, some students may not wish to underpin practice with theory, nor perceive a need to learn more. Sarah explained that being experienced in the role risked ‘supervision as usual’.

"We almost had to sell it to the students. Some ...were very keen to learn and look at the theory behind what they were doing. Others were less keen and it was trying to... present the ...the rationale in a way that didn't disengage the people who thought "Well, I've been doing this job for X number of years, why do I need to study anything about it?". (Sarah)
Rather than a source of learning to be shared with others, staff considered that experience in the role combined with the decision to offer a university module may provoke reticence among practicing supervisors. Curriculum design and approaches to tutoring therefore aimed to minimise any barriers to learning inherent in experienced practitioner role salience. To “sell it to the students” staff promoted their joint working as a multi-professional team of experts. That is, a curriculum team with “different areas of expertise” in their respective fields were “coming together” to reveal and sign-post experienced practitioners to even more new ways of developing their practice.

“One of the …things we did speak about was the benefits of having a team who …had professional and academic experience. So, it was a bringing together of different areas of expertise, to make this…course. We very much promoted to the students this idea that we had medical experts in supervision and academic experts in teaching and learning coming together to work out …what the aims of this course might be” (Sarah).

Multi-professional working then was intended to convince experienced practitioners that further new aims may be beneficial to practice.

8.7.4 Normative expectations of consultants prompt face-saving in group discussions

However, reflecting on experience of tutoring on the module, staff express concerns that learners’ roles as consultant doctors may impede learning and IoPP. Over time, staff have begun to consider whether group discussion as an educational mechanism is countermanded by face-saving. That is, students refrain from sharing concerns or questions about their own practice lest this jeopardises their public image and others’ judgements of their abilities in their role (cf. Goffman, 1967). Indeed, Emma finds students’ online comments are largely single, retrospective examples of good, local practice that signal to others how the author’s practice
already aligns with the readings or evidence-base. Students “show off what they know” rather than raising questions or sharing ideas for changing supervision. These statement-like contributions do not invite multiple exchanges; the author “walks away” thereby closing down discussion while assuring their public reputation is protected by gaining “kudos from...peers”.

“I think sometimes the students are there to post things almost to show off what they know, and then walk away and leave it... just ‘Look at what I've done and isn't that great?’ and then walk away and get kudos from their peers, maybe. And certainly, from a planning point of view, that wasn’t intended.” (Emma)

Time and experience tutoring on the module then has helped staff consider the interplay between task type and learners’ roles as consultant doctors. Above, Emma indicates this potential barrier to collaborative learning was not considered during the planning stages. Tina’s recollections about the overall module design resonate with Emma’s later experiences. Both suggest group reflection on experiential knowledge and practice may create an ‘unsafe’ or “uncomfortable” learning environment by expecting ‘confession-like disclosures’ from “medics [who] like to look like they know what they are doing”. Although staff intended to create equal relations between all students, as students, staff now have concerns that students as consultant supervisors may refrain from publicly acknowledging or “exposing” questions about or weaknesses in practice. This is because more usually “people look to [consultants] for decisions”. That is, normative expectations surrounding learners’ roles as consultant supervisors may constrain learning and IoPP from group discussions.

“I want to say that we didn’t want to make people feel uncomfortable but if something is a little bit more challenging, then you perhaps are forced to engage with it more. And... we did have a lot of negativity...from some of the consultants...we did have some resistance and one of the conversations that I had quite a few times with people, when you got to the bottom of it, was about fear, about... academic work - they hadn’t ever done anything like this, because all they had done was very traditional or medical school stuff donkeys’ years ago. So, there was a real fear of being exposed and found wanting...because medics like to feel as if they always
look like they know what they are doing. Quite rightly because people look to them for decisions.” (Tina).

Naturally, engendering a face-saving mechanism was not an intentional aspect of curriculum design; this is an unintended mechanism. Tina and Emma suggest it arises in the CPD context due to normative relations between practicing consultant supervisors, their peers and their trainees beyond the CPD context. Importantly, since face-saving is shown here to be an unproductive mechanism in the context of group discussions, it highlights the importance of realist evaluations also considering what 'does not work and why'. That is, this finding underlines the importance of identifying and exploring unintended programme mechanisms. Furthermore, staff interviews contain no suggestions as to how to overcome this. The damaging effects of role salience are therefore an important finding to explore further with students.

8.7.5  Formal structures and norm circles as barriers to IoPP

Moreover, drawing on their experiences of working in the NHS and tutoring at university, staff also pre-empted barriers to learning and IoPP within formal structures and norm circles for supervisory practice at work. Deanery staff felt that learners may perceive IoPP as infeasible if it were advocated for by CPD tutors who concurrently hold higher management roles. Here, I introduce the notion of a role-based 'sphere of influence' to explain this. By this, I intend that a role-based sphere of influence is a social force that constrains and enables us to achieve our 'projects' (cf. Archer, 1995) due to the power, responsibilities and expectations of our role in a social structure (cf. Elder-Vass, 2010). Bob taught me that differentiated spheres of influence arise due to the hierarchical power dynamics embedded in the multiple roles that clinicians
may concurrently hold. That is, one educational supervisor may have a wider sphere of influence compared to another because they also concurrently hold a more senior NHS role such as Training Programme Director or Head of School. Staff therefore selected Associate Tutors who, although holding more educational qualifications than module students, hold the same seniority in clinical practice. This was to reassure students that effective supervision as promoted by the module did not depend on a wider sphere of influence derived from holding a more senior role. These decisions were reinforced by Bob’s experiences as a module tutor: as an associate postgraduate dean, consultant doctor and educational supervisor, he felt that module students often found his recommendations to be beyond their ‘reach’ or sphere of influence.
"I was always seen as being on the other side, I think because I came from the Deanery, although I did always try to talk about ‘in my clinical practice’, but people always perceived you as being not mainstream because you were part of the Deanery. So, it was most valuable to try and get people who were Educational Supervisors and people who were for want of a better term no more than Educational Supervisors…you know, ‘coal face’ Educational Supervisors. So that was definitely part of the ethos to try and get it accepted.” (Bob)

Drawing on experiential knowledge of formal structures, the module team make staffing decisions that aim to overcome differences in workplace affordances, especially those related to hierarchy. “Coal face” tutors with the same sphere of influence as learners promote acceptance that IoPP is feasible.

In addition, drawing on experience of tutoring on the module and her specialised knowledge of simulation for clinical practice, the Learning Technologist explained that authentic materials and activities were intended to overcome current normative views of supervisory ‘paperwork’ as administrative tools. As set out in the background to this study, MMC introduced mandatory training materials such as the e-Portfolio and an end of cycle Educational Supervisor Report for the annual review of competency progression (ARCP) panel. Every trainee and supervisor must use the e-Portfolio to log evidence of training and progression according to curriculum competencies as presented above in Section 2.3. Staff believe supervisors currently do not use these well, as indicated earlier by Bob’s list of ‘deficiencies’ in Section 8.2.1. Staff are therefore keen that mandatory tracking of progression does not result in an administrative approach to supervision in which supervisors merely tally past actions and schedule future ones for their trainees. To promote developmental supervision with an educational focus, the module learning technologist explained that critiquing authentic materials “that [students] come across day to day” helps foreground and question current normative views of practice.

“The idea was to help the students to unpack the meanings of real materials that they... come across day to day... rather than it just being hypothetical, it suddenly became ‘Yeah, this is the stuff that you’re actually using. And let’s critique it...let’s make sense of it
Through her references to ‘critiquing’, ‘making sense’ and ‘getting out in the open’, Emma indicated that discussions of realia are intended to unearth and problematise tacit assumptions which can be difficult to articulate (cf. Eraut, 2000). Non-human physical materials have no agency, but nor are they neutral objects used in the same way to the same ends by all practitioners. By “work[ing] out what's good, bad, indifferent with it”, Emma intends students to critically appraise a range of normative views of supervision. This is because, as Bob explained, some current ways of using these materials to perform required tasks can configure supervisory practice as an administrative activity, rather than a developmental one. To help supervisors see this, Emma intends activities to foreground norms and open up the possibility of calling some of them into question in the safety of the CPD context.

Furthermore, this critiquing of normalised approaches to supervision is intentionally underpinned by the use of realia, rather than discussion alone. This is because physical or psychological fidelity in the classroom helps focus learners’ attention on concrete instances of practice and this may support practice change (cf. Norman, Dore & Grierson, 2012).

“...we know that …more... simulation practice is coming into education everywhere, to make something as real as possible. And if you can set up something that is more realistic, …that is actually used out in practice, then it helps bridge that gap between your learning and out in practice...” (Emma).

Authentic materials and activities then were intended to minimise barriers to IoPP by making learning “as real as possible” so that it may “bridge that gap” between the university context and current normative assumptions in the practice domain. Moreover, Emma indicated that she continually tests her programme theory beliefs against student feedback; ensuring that the continued use of realia and authentic tasks is not habitual or unquestioned but informed by the student experience and a focus on facilitating IoPP.
And... all the way down the line from feedback that we've had from workshops is that those realistic interactions were always appreciated, whether it was role-play or seeing real documents ... and not just made-up stuff ... I think maybe that was the part that may have ended up having most impact on them.“ (Emma).

Realia and simulation then balance the student role with learners’ other social roles. Engaging in these activities, learners study how and why as experienced practitioners and consultant supervisors they may better support trainees’ development.

In summary, staff believed there were several threats to student role salience inherent in learners’ other social roles, in formal structures for training and supervision, and in norm circles in the practice domain. Staff beliefs arose from their reflexive deliberations of their own and learners’ backgrounds. And, as a multi professional team, staff intentionally designed features into the curriculum to minimise these anticipated barriers. These findings reinforce the view that IoPP is multiply influenced by previous and current, overlapping contextual structures and agency, and that staff as well as students shape IoPP.
9 Testing Programme Theory with students: what worked for whom and why

In this chapter, I show how and why students’ learning experiences led to IoPP in the workplace or not. That is, I present findings of what worked for whom in which circumstances and why (cf. Pawson & Tilley, 1997). To do so, I draw on student interviews, learning agreements and observations of practice. Alongside the educational mechanisms intended by staff, in this second data set, I find the causal mechanisms of epistemological re-orientation, role salience and sphere of influence also shape learning and IoPP. Of importance, these mechanisms do not bring about straightforward, linear results, such that one mechanism may always be considered ‘positive’ and another always ‘negative’. Instead, changes in context influence whether these mechanisms contribute to emergent outcomes that align with programme theory or not.

9.1 Conventional learning supports policy implementation

Students’ contributions to programme theory largely support staff beliefs that conventional learning could support policy implementation. Most commonly, Deanery staff’s beliefs that expert transmission could professionalise supervisory practice are upheld, as illustrated in Figure 21. The module then functioned as a mechanism for better role enactment where ‘better’ means emphasising the educational and developmental aspects of supervisory conversations. In particular, I find seven verbal strategies and two physical ones which reduced administrative approaches to supervision.

However, conventional learning was not achieved through a static correspondence between staff’s epistemological assumptions and those of the students. The data is patterned by productive matches and unproductive clashes between learners and tutors’ approaches to teaching and learning, as well as by students’ epistemological re-orientation and even rejection of approaches espoused on the module. These patterns indicate that IoPP is multiply
influenced by the immediate CPD context as well as by contextual structures and norm circles in the learners’ practice domain. Eventually, all but two students engaged in conventional learning to better enact the supervisor role within its defined parameters. Two students, however, attempted to transform the purpose of the role.

**Figure 21: Overview of student IoPP outcomes**

![Graph showing IoPP outcomes](image)

Discussing their greatest sense of IoPP during interview, most supervisors reported a shift towards developmental conversations. That is, a move away from administrative or managerial supervision which serves only to tally past actions and schedule future ones. This shift confirms staff beliefs that the CPD module could lead to better role enactment. Further, all but two students indicate they improved their practice by applying the literature as a stimulus and a benchmark. This supports the Deanery’s intentions, rather than those of academic staff. This is likely due to most module tutors, including me, taking an application of theory to practice approach to teaching on the module. In turn module tutors’ approaches are...
likely influenced by medical education’s shift towards evidence-based practice (cf. Swanwick, 2019). IoPP then is directly recognisable in module content.

A transmission-based approach to teaching and learning led many learners to add or remove behaviours from their supervisory practice. These behavioural changes addressed previously idiosyncratic, largely non-theoretical practice or challenged more widely circulating norms in their practice domain, as shown in Table 16. For most, the learning need became apparent as they engaged in module studies and compared practice to theory. That is, the transmitted evidence base was the stimulus for IoPP. For a few others, module content offered a solution to a specific learning need already indicated by the practice domain. That is, the transmitted evidence base functioned as an ideal benchmark for addressing deficiencies or inappropriate approaches. For example, George discussed how module studies encouraged him to be less didactic or “black and white” and to elicit trainee thinking by “get[ting] them to explain things more slowly” and “get[ting] out...what the difficulties are”. In noting that many trainees are not “quite so black and white”, George signalled his new appreciation of learner differences. Consequently, gaining specialised, educational knowledge which he refers to as “the softer side of things”, has prompted George to allow trainees more time to discuss their thinking by, “listening a little bit more to them”.

“I am quite black and white... And so ...the thing that I find most useful when talking to our trainees, is that a lot of them aren't quite so black and white... I find it easier now to work out ...ways to talk to them... and get them to explain things more slowly than I would have done previously. [It was] learning how to get out of the trainees what the difficulties are, and maybe listening a little bit more to them... more the ...softer side of things.” (George).

The evidence base transmitted by the module then acted as a stimulus for practice change. Noticing new ideas in module content provided the starting point for IoPP as the addition of new behaviours. For George, these were elicitation and active listening. Arguably, these behaviour changes signal deep learning in that supervisors appreciate the value to trainees.
That is, supervisors now consider supervisory conversations as opportunities for discussing trainees’ development rather than as a time to perform administrative tasks.

Further, alongside addressing idiosyncrasies, the literature also provided a stimulus for fresh thinking and approaches which challenge wider specialty specific, normative beliefs about the purpose of supervision. For example, Madhu explained that the learning theories he studied disrupted normative views of supervision in surgery, whereby gathering information about learners’ achievements is used for administrative tallying. Through his use of “I” and “we”, Madhu contrasted his own new way of practicing with earlier, specialty specific and habitual approaches. Madhu noted that “in surgery”, it is not normal to elicit trainees’ prior learning histories to inform plans for trainee centred learning during a rotation. Instead, supervision is usually “a tick box exercise” at the end of a placement. However, by applying theory to practice, Madhu now meets with new trainees to elicit or “delve deeply” into their prior experiences. This enables him to understand their strengths and weaknesses or “the nature of the person” thereby permitting developmental conversations about progression.

“So, it was [previously] almost like a tick box exercise at the end of the year...But now what happens...when they come to me as an educational supervisor, because the module...has helped...with the theory...what we learned and all that, I start off with, ‘Where did you start? What have you done before?’ In surgery, we do ask those questions...but we don't delve into that deeply to get an understanding of the nature of the person, which came from the module.”

The learning theories studied during the module helped Madhu recognise and move away from the administrative approach to supervision common in surgery. He shifted towards a developmental approach that focuses on trainee learning history and needs. The literature then served as a stimulus for new behaviours which differ from specialty specific norms for supervision.
Table 16: The nature and extent of IoPP emerging from conventional learning and causal influences in the practice domain

| Nature of IoPP | Technical rational changes to behaviour (addition or removal of practices which match module content)  
|               | Address idiosyncrasies or challenge norm circles  
|               | Affective changes (increased confidence in role)  
| Educational mechanism(s) | Application of theory (or policy) to practice  
| Contextual mechanism(s) | (Adherence to) GMC requirements for supervision  
|                       | (Rejection of) norm circles in the practice domain  
| Extent of IoPP | Within own supervisor-trainee relationship only

As well as the addition of ‘best practice’ behaviours, transmission based conventional learning also prompted supervisors to remove from their practice any behaviours framed as ‘suboptimal’. Again, the removal of behaviours either responded to idiosyncratic needs or addressed more widely circulating norm circles. For example, Gyana discussed how module studies on formative feedback provided a solution to her pre-existing concern about her own practice. Prior to attending the module, in her consultant appraisal, Gyana had received feedback that she overly “micromanages” trainees. She felt this was problematic behaviour as evidence by her insistence that she “had to fix it”. The module focus on effective formative feedback resonated with Gyana’s individual development needs which she refers to as “run very close to me”. Through module studies then, Gyana framed micromanagement as her regular provision of unsolicited feedback to trainees. And therefore, noted that the evidence base suggests removal of this practice would be ideal.

“One of the feedback from the trainees was that...with my delegation comes a bit of micromanagement. And so ... I had to fix it ...So when I did the module, unsolicited feedback was something which will run very close to me... which is good... So I'm very, very, very insistent on myself now that I don't give any feedback whatsoever unless it's solicited...” (Gyana).
These findings show learners looked to module content for notions of ‘effective supervision’ and aligned their practice with it. Through the cessation or removal of supervisory behaviours, learners shifted their idiosyncratic approaches further towards practice underpinned by theory. Further, module studies also provided a strong theoretical basis for ceasing behaviours hitherto endorsed by norm circles in the workplace context. For example, Leslie perceived socialising with trainees to be common practice as indicated by her comment that “there are so many... Educational Supervisors who get really, really close with their students”. She also explained how module readings about the gatekeeping functions of the supervisor role helped her recognise a conflict of interest inherent in socialising with learners whom one must assess. She referred to “loving” these “great” and “useful” papers that had a “big” influence on her thinking and consequently lead to IoPP. That is, module readings prompted Leslie to “take a step back” from socialising to establish more formal boundaries between her and her trainees.

“Those papers, definitely I found them helpful...the Drama Triangle one was a big one, that was great for learning about your boundaries... because there are so many... Educational Supervisors who get really, really close with their students and obviously that brings loads of other problems. I loved... ‘Not Your New Best Friend’. That was like, ‘Ok yeah... I DO need to take a step back and see where that professional obligation lies and where you're overstepping it’. Either they're demanding too much of you, or you're wanting too much friendship or going to the pub ... so a lot of the papers were useful.” (Leslie).

Leslie then drew her greatest sense of IoPP from the literature and discussions thereof. That is, readings endorsed a rejection of familiar norm circles in favour of a new one. Staff beliefs that an evidence-based course, designed and delivered by experts, could convince learners of its value therefore appear to be supported by learners accounts of how they derived IoPP. That learners selected for themselves which behaviours to add or remove from their approach to supporting trainees, suggests they deeply understand the value of these changes. That learners selected these changes through reflection on their own practice or perceived norms
for practice indicates learning and IoPP are not context-free, but socially situated in and related to professional practice.

Student data also enhance the initial programme theory by showing that expert transmission of an evidence base led not only to behavioural IoPP, but also affective. In treating module content and the approaches advocated by role models as ideals for practice, students who recognised themselves as matching these ideals gained confidence in role. This study therefore suggests that increased confidence as IoPP is not only an individual, psychological reaction, but a socially embedded one. Confidence in role is related to external guidelines and expert theory which propound ‘ideals’. However, these findings also suggest a limitation to the programme theory. Namely, students who gained confidence report no further IoPP; they feel reassured that practice need not change because it meets transmitted ideals. That is, once a pre-determined benchmark is reached, CPD learners may not look beyond it for alternative ways to improve practice.

For example, as shown below, in discussing their greatest sense of IoPP, Joshua and Anaya referred to gaining “reassurance” and feeling “comfortable and relaxed” respectively. However, they did not mention changes to their behaviours or values surrounding supervision. That is, for competent practitioners, transmission based CPD that propounds ideals may have a limiting ‘ceiling’ effect.

“I think a lot of it was probably reassurance ...part of the reassurance that the module gave me was that it's okay - probably necessary - to know what you expect your trainees to do. And if you don't, then you're probably not a very good educational supervisor... so that’s the approach I took when you came to see me.” (Joshua)

Joshua noted his reassurance stemmed from a match between module content and his current approach (of knowing the trainee’s curriculum) that suggests he is “a good educational supervisor”, according to external benchmarks. Similarly, following module studies, Anaya felt
her practice already aligned with transmitted ideals which she learnt about by “reading through different articles”. She referred to this alignment as ‘consolidating’ her ideas.

“I think it made me more confident as an Educational Supervisor overall because having read through the different articles and interacting with the other fellows who were in the Set with tutor, so it made me consolidate my ideas a bit more and I’m a bit more relaxed and confident supervisor now.” (Anaya).

Here, student contributions to programme theory suggest avenues for critical reflection on curriculum design or development. That is, CPD designers may find benefit in questioning whether provision should support learners to reach or surpass a standard. Addressing this point raises further questions as to the feasibility and consequences for learners’ practice.

Students’ greatest sense of IoPP then uphold the initial programme theory by showing that conventional learning supported policy enactment by supervisors. Expert transmission of an evidence base led to the addition or cessation of behaviours that either address idiosyncrasies or workplace norm circles. Also, to an increased confidence in role. Student data also suggest avenues for further programme theory development by raising questions as to whether a curriculum should encourage learners to reach or surpass the ideals transmitted. Overall, however, these findings demonstrate that IoPP from conventional learning is ‘restrained’ in nature and extent. That is the nature of IoPP falls within the official supervisor role remit, rather than attempting to transform or re-envision it. And in extent, IoPP applies only to the learners’ own practice rather than that of others.
9.2 Epistemological re-orientation: The influence of contextual structures and intersecting norm circles

Conventional learning gained on the module was not simply due to a productive match between students’ and tutors’ static epistemological assumptions. Rather influences beyond the CPD caused some students to epistemologically re-orient to learn from expert transmission. Moreover, events in the wider professional context also caused two students to ‘reject’ transmission-based learning, to shift instead towards critical reflection that led to transformative learning and IoPP.

Two supervisors explicitly re-oriented towards learning from transmission because of the nature of the module curriculum and their deliberation of external influences on practice. I refer to this as re-orienting because during interview, Joshua and Ella specifically highlight that at work they learn differently. Outside formal CPD, they learn through reflection on experience alone or in small groups to build on craft knowledge, as shown by Joshua’s explanation of “one to one” and “simulation” based teaching and learning in anaesthetics below.

“...I was like ‘I'm being taught how to teach, and I'm not being taught in a way that I think is effective’. In anaesthetics, the way we teach people, there’s a lot more one to one…and we use simulation” (Joshua).

The cause of Joshua and Ella’s re-orientation then can be explained in terms of the module curriculum and external, formal structures for postgraduate medical education. During interview, Joshua indicated that he re-oriented to learn from transmission because he “recognised” GMC requirements for supervisors to engage in CPD to revalidate their educational credentials. Therefore, to ensure he successfully completed the module and could use it for revalidation, Joshua aligned his approach to learning with the dominant approach he perceived during the module.
“And part of it was... recognizing that this was something that had been mandated – that the Deanery had to do...I don’t want to say it was useless...But it probably could have been done better.”

In realist terms, the causal powers of the GMC as a contextual structure and the module curriculum as a pre-structured context are evident in Joshua’s disappointment. That is, despite feeling “it could have been done better”, Joshua persisted and even epistemologically re-oriented to learn through transmission. This is because, beyond the CPD context, the overlapping influence of the GMC played a role in how and why Joshua engaged in and drew IoPP from CPD. Contextual structures in the wider context influence learning and IoPP and may even countervail negative learning experiences, causing a learner to persist with a course of studies rather than withdraw.

Ella re-oriented epistemologically towards transmission-based learning because this offered a ‘beneficial’ difference to workplace learning that aided her career plans. That is, at work Ella is “very much a kind of learn by doing person” who builds theory for practice “based on...experience”. However, the module offered unusual incentives to learn from codified knowledge as shown by her comment about “rigorously analys[ing]” the policy document. In part then, Ella’s re-orientation can be explained in terms of the module curriculum as a pre-structured context for learning from transmission.

“For me, the main thing that I really think about every day is that I've got a lot more awareness of the Gold Guide and what the expectations of an Educational Supervisor are. And... I think had I not done the module, I don't think I would have as rigorously analysed that document... The awareness of the expectations came from the module...I am very much a kind of learn by doing person. ...In my mind, rightly or wrongly, I have an idea based on my experience of what good ESs do...”. (Ella).

Further, Ella’s re-orientation can also be explained in terms of her socially situated career plans or “project” (cf. Archer, 2003). In her Learning Agreement and interview, Ella stated her
rationale for studying a postgraduate certificate in education lay in her intentions to hold more senior educator roles in future, to be able “to make a change”. However, the formalisation of these roles and medical education’s shift to evidence-based practice (as covered in the background to this study), requires Ella to be familiar with codified knowledge found in policy documents. These contextual structures then influenced the nature of Ella’s learning and IoPP.

Student data then, help enhance the programme theory by showing the interplay between structures and agency. These findings show that approaches to learning and the potential nature of IoPP are multiply influenced by factors within and beyond the CPD. The module studied here predominantly relates students, tutors and materials by transmission of an evidence base with expectations of subsequent application (cf. Kennedy, 2014). Yet even where learners find this disappointing or unusual, they deliberate overlapping influences in the wider professional context. For learners with a focus on their practice as supervisors, the influence of these ‘social forces’ (cf. Westhorp, 2018) or causally efficacious structures (cf. Elder-Vass, 2010) can prompt epistemological re-orientation towards the approach to teaching and learning prevalent in the CPD. Learning and IoPP then are embedded in complex social relations.

Moreover, for learners with a focus on the trainee experience within postgraduate training structures, contextual structures and events in the wider professional domain can cause epistemological re-orientation away from learning by transmission. Here, I find that beyond the CPD, negative events and experiences concerning trainees caused module students to re-orient to a transformative approach to learning. That is, having concerns for their trainees’ experiences of supervision, students questioned how the module could help. Deciding that an application of external theory could not provide an adequate solution to their worries for the trainee experience, two students epistemologically re-oriented away from the conventional learning propounded on the module. This critical analysis of course concepts has been termed consequential engagement by Gresalfi and Barab (2011) and the current study shows that for professional learners, such engagement is socially relational. Focusing on trainee’s experiences of the formal system for training, two participants derived IoPP of a transformative nature
which does not align with module or policy recommendations. Instead, these participants challenged the current, formally defined purposes of educational supervision in order to better support their trainees. During interview, Richard and Cassie both expressed concern that the nationally mandated use of an e-Portfolio may be harmful for trainees’ learning experiences. Richard believed formal records may prevent trainees from openly seeking help with their struggles. Cassie felt that monitoring progression against competencies overlooks wider, richer, and equally important aspects of becoming a doctor. Module studies which advocate the use of portfolios to discuss and track competencies and difficulties therefore did not address these supervisors’ concerns. Consequently, they critically questioned the transmitted messages. As a result, they (attempted to) transform the purpose of the educational supervisor role.

Influenced by the widely publicised Dr. Bawa-Gaba case, Richard rejected module messages about supporting trainees in difficulty to envision a different structure for postgraduate training. Between 2015 and 2017, it was believed that Dr. Bawa-Gaba’s portfolio reflections were used as evidence in a court case which saw her struck from the GMC register. In light of this event, Richard drew a “logical conclusion” that module teachings may be inappropriate. This is because the module places strong emphasis on supporting trainees in difficulty through thorough recording of conversations, reflections, and events. Instead, Richard wanted to involve a new, separate role holder or “mentor” in the supervisory process, with whom trainees could informally discuss any difficulties. Richard intended that conversations with mentors would involve no formal recording, as shown by his comment “whatever you say to your mentor cannot be used against you”. In saying “you want to draw out what their issues are”, Richard maintains that reflection on difficulties is an important part of learning. However, contrary to module content, he is concerned that the requirement to document a trainee’s struggles will prevent meaningful discussion during supervision.

“…there's no formal - ‘This is your ES, this is your mentor and whatever you say to your mentor cannot be used against you' type of induction, which is what you really need...So it makes it difficult cause... you want to draw out what their issues are, but... I guess... it's just a logical conclusion of realising that as the ES, no matter how
supportive you are, you've always got that fire power to say ‘... I'm not going to sign you off ... so I guess, it makes sense that there's a role for a mentor who could just be the good cop to your bad cop’ (Richard).

IoPP then is shaped by multiple influences, not simply by the module curriculum. Instead, the latter is deliberated in light of events in the professional domain. This led Richard to orient away from an application of policy and theory to practice. Instead, he envisioned changes to the nature of the role that he believed would benefit trainees.

Also reflecting on experiences beyond the module, Cassie questioned whether the role of the educational supervisor as portrayed on the module can truly support trainees’ development. During interview, she referred to her greatest sense of IoPP coming from a desire to “move...away from what I had read and what we had talked about”. Cassie reflected on her experience of supervising trainees within current structures compared to a family member’s experiences of supervision prior to the formalisation of competences. This prompted Cassie to articulate implicit beliefs that there is more to becoming and being a doctor than discussing nationally defined competencies. Cassie believes MMC requirements amount to “transactional” supervision with a “checklist”, and this limits the scope of developmental conversations.

"I felt that I needed to move away from what I had read and what we had talked about and move it away from just being... transactional in the terms of they come with a checklist. If I'm going to develop supervision, I think it almost goes on to be mentoring and coaching conversations...and to do that you're going to need to meet them more frequently and...take it to a deeper level.” (Cassie).

The module’s provision of learning theory to support developmental discussions about training curricula did not go far enough to address Cassie’s intent to provide a richer trainee experience. Therefore, in light of wider influences beyond the module, Cassie “moves away from”
conventional learning towards transformative learning which challenges the purpose of the educational supervisor role.

Overall, then, student data enhance programme theory to show why conventional learning was or was not supported. Epistemological (re-)orientation during CPD shapes the nature of IoPP. Further, as a causal mechanism, epistemological orientation is not only embedded in the relations between students, tutors and CPD materials but also influenced by overlapping structures in wider professional contexts. Examination of synchronic relations then illuminated a further link between a model of CPD and the nature of IoPP. Where earlier conceptual works have indicated that staff deliberate external influences to inform CPD design and aims (e.g., Kennedy, 2014), this study finds that learners also continually deliberate these influences during CPD and may therefore re-orient towards or away from the model’s espoused approach to learning.

9.3 Reconceptualising the e-portfolio as an educational tool

As shown so far, for the majority of students, conventional learning helped them shift away from supervision as a purely administrative act, towards supervision as developmental conversations. Here I show that this shift involves reconceptualising the e-portfolio as an educational rather than managerial tool. In practice, this shift is realised through physical and verbal strategies which actively involve the trainee in reflecting on and planning for progression. (See Table 17). These include manipulation of furniture in the meeting room and seven different verbal ways that reduce administrative or didactic teaching aspects of supervision. Verbal strategies involve varying orders of critical thinking by the trainee and are not deployed uniformly throughout all episodes of supervision by all supervisors. However, they suggest feasible ways in which module conventional learning can support trainee centred supervision.
Table 17: Strategies for trainee centred supervision in descending order of critical thinking required

<table>
<thead>
<tr>
<th>Verbal</th>
<th>Supervisor encourages trainee to select the focus of the supervision prior to meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supervisor asks the trainee to prioritise the order of the conversation</td>
</tr>
<tr>
<td></td>
<td>Supervisor encourages trainee to self-assess</td>
</tr>
<tr>
<td></td>
<td>Supervisor asks open questions of the trainee and permits talking time</td>
</tr>
<tr>
<td></td>
<td>Supervisor creates a safe conversational space</td>
</tr>
<tr>
<td>Physical</td>
<td>Supervisor encourages entry of portfolio input</td>
</tr>
<tr>
<td>Verbal</td>
<td>Supervisor provides 'safety net' reminders</td>
</tr>
<tr>
<td></td>
<td>Supervisor bypasses Trainee’s attempts to elicit rescuing moves</td>
</tr>
<tr>
<td></td>
<td>Supervisor minimises time spent on administrative, closed questions</td>
</tr>
<tr>
<td>Physical</td>
<td>Supervisor enables joint sight of the e-portfolio as ‘cues’ for conversation</td>
</tr>
</tbody>
</table>

9.3.1 Supervisors physically signal their trainee-centred approach

I begin by showing that manipulation of the physical lay-out of the room signals and supports a supervisor’s view of the portfolio as an educational tool. Workplace observations showed that supervisors place chairs in such a way as to offer joint access to the e-Portfolio on a computer, or to minimise the physical imposition of the computer in the conversation. That is, supervisors do not sit behind the computer, with a trainee opposite unable to see the e-Portfolio entries. This is because they intend to do more than record logistics. The contents of the e-Portfolio are no longer a checklist, but a conversational prompt. Therefore, supervisors position the furniture and equipment available to ensure equal access to these ‘conversational cues’. In the various rooms used for supervision, module students either position both chairs to jointly face the computer screen, or seat themselves facing their trainee, with the computer elsewhere. As shown in Figure 22, the former enables both supervisor and trainee to see any existing content or jointly enter new content in the e-Portfolio during the conversation. The latter minimises
the role or physical intrusion of the computer in the conversation, placing focus on face-to-face interaction. For example, Cassie created an atmosphere of ‘coaching conversations’ rather than logistical record keeping through her positioning of the computer to the side, and her use of a notepad and pencil. Facing her trainees for their conversations, and swiftly taking notes, Cassie placed emphasis on uninterrupted interaction rather than halting to turn and type.

“So, I'm going to quickly - I'm not going to fill this in here [nods to computer], but if I just make a note on here [taps on paper notepad] on your two MSc. modules in progress and then I can fill it in properly later [nods back at computer].” (Cassie).

Figure 22: Supervisors’ physical signals of trainee-centred conversations

These moves resonate with module workshop discussions and role-play which advocate that the e-Portfolio be used as a jointly created record containing no surprises for a trainee. That is, the module advocates a balanced approach to portfolio use. Firstly, module studies suggest the portfolio not be used as a top-down record imposed by the supervisor and disclosed to the trainee at some later point in time. Secondly, module studies discourage supervisors from taking a laissez-faire approach, expecting a trainee to completely manage portfolio entries, and simply signing when all is complete. Interviewee comments further demonstrate this reconceptualisation of the e-Portfolio as a jointly constructed educational tool, as exemplified by Jen below:
“I think instead of approaching it as ‘It’s your portfolio’, I’ve approached it as ‘It’s ours, because I’ve got my little bit to do, and you’ve got your little bit to do’. That’s the way that I viewed that.”

However, on occasion, the physical layout of the room and clinical service pressures made joint access to the e-Portfolio difficult. That is, I noted that the physical structure of most buildings does not yet endorse a view of educational supervision as an important, developmental activity. In the NHS workplaces I visited, I noted there are no dedicated or bespoke spaces for these meetings. Instead, supervisors and trainees used whichever room was most convenient for the time of day, including clinical rooms, shared lunchrooms and even a cleaner’s cupboard. Consequently, trainees sometimes missed supervisors’ physical cues to jointly discuss and create portfolio content. Nonetheless, supervisors made attempts to overcome this as best as possible, physically reinforcing their reconceptualisation of the e-Portfolio as an educational support. For example, workload pressures and the physical layout of the room prompted Anaya’s trainee to miss or resist her moves to have them both sit together in front of the computer screen. Lacking any dedicated space for supervision, Anaya called her trainees to the clinical room in which she last treated a patient. Being an ophthalmologist, the clinical room is divided by a long table in front of which the patient usually sits, and above which specialised equipment is fixed. When clinical duties caused Anaya’s trainee to arrive very late for his supervision, he hastily took a chair from near the door and quickly positioned it at the treatment table opposite Anaya (See Figure 23). He did not walk around the treatment table to use the chair next to his supervisor, facing the e-Portfolio together. This left the computer out of the trainee’s line of sight. In response, Anaya angled the computer screen towards the trainee, enabling them to both see the existing e-Portfolio contents and anything typed that day. On another occasion with a new trainee who may not have been accustomed to Anaya’s developmental approach, Anaya again angled the screen to share the portfolio. Anaya then prompted the trainee to use it as discussion cues:

“Okay [Trainee name] ...so let's go to each category and you can... tell me what you want from this post.” (Anaya).
Physical cues then support supervisor’s intentions for a developmental conversation. The portfolio as a physical representation of the curriculum continues to provide the focus of the meetings, but joint visibility supports trainees being actively involved in discussion. Conversation ‘cues’ are visible.

**Figure 23 : Supervision in clinical rooms restrains joint portfolio access**

Figure 23 is an extract from my observation notes, showing how a busy trainee missed the supervisor’s cue to sit in front of the PC to look at the portfolio together.

In addition to joint *visibility* of portfolio contents, where time allows, some supervisors advocate joint *input* of content. This positions the trainee as actively involved in capturing and evaluating their progress, rather than as a passive recipient of senior judgements. Supervisors signal this re-positioning by asking trainees to log into the e-portfolio or readily agreeing to such suggestions from the trainee. For example, Ella and her trainee each logon through the available computer and the trainee’s tablet. Their meeting is characterised by long stretches of talk, but then, periodically, they each type and watch each other’s comments become visible.
Reading them, they (re-)negotiate the wording to better capture their conversation. Similarly, Madhu’s trainee suggested “Can I just log in to mine?” to which Madhu agreed “Yeah, you go ahead” and Jen began the meeting by asking, “Do you want to logon or shall I?” (Jen). Jen’s trainee chose to log into his account to access the e-Portfolio and direct their conversation, as evidenced by his reply:

“I’ll log on because there’s a few things we need to do” (Jen’s trainee).

Such negotiations challenge habitual norms that the portfolio is a gate-keeping tool wielded by a supervisor in a position of control over entries. Supervisors are using the portfolio to encourage trainee judgements and analysis of progress. Nonetheless, joint access and input alone does not ensure a developmental conversation; it provides useful support. Instead, supervisors also used the verbal strategies set out in Table 17 to minimise administrative and didactic teaching approaches to supervision.

The various verbal strategies in use suggest module students interpret and enact ‘trainee centred’ conversations differently. While some strategies require critical evaluation or analysis by the trainee, other strategies simply permit a trainee to talk, rather than limiting their responses to one-word answers. That is, findings here suggest supervisors may elicit trainee input without engaging with it; without prompting the trainee to clarify, elaborate or justify their comments (cf. Zhang et al, 2011). For example, familiarity with the trainee’s curriculum did not necessarily lead to developmental conversations between Joshua and his trainee. Rather familiarity removed the need to pause, to read or check requirements during the conversation. This meant the conversation continued fluidly yet the content of talk was largely a tallying of past actions and planned future ones, as this extract of an observation shows:

**Supervisor:** This includes us?

**Trainee:** Yeah, I’ve got quite a few that are waiting to be signed off and even one in pain. I’ve got - is it two or three cases? Two definitely from Dr. [Name]. And I’ve spoken to him again last week about
getting it done. And he said yes, he'd do it last weekend, but it's still not done. So, I've got them waiting to be done.

**Supervisor:** Okay. So, you're waiting for assessments from [Name]. Is there any text in there? *[conversation moves on to next portfolio entry]*

This exchange demonstrates that the supervisor encourages lengthier trainee input than one-word replies, but the supervisor does not prompt reflection on the activities, nor, for example, system barriers to timely feedback on workplace-based assessments (cf. Steinert, 2013). Increased confidence that practice matches policy guidelines then may be inadequate for a shift towards developmental supervision. That is, formal structures for training may risk the very quality they intended to promote (cf. Hodkinson, 1998). Indeed, in Section 9.6.6, I show that final meetings were largely characterised by such tallying.

### 9.3.2 Developmental supervision achieved through verbal strategies

In inviting trainee to choose the focus and structure of the conversation, some supervisors reframed the purpose of supervision as supporting trainee’s needs rather than as monitoring mandated requirements. This is conducive to trainee’s critical evaluation or analysis of their own progress. Encouraging trainees to select or prioritise their topics for conversation, four supervisors position themselves as a resource rather than an evaluator. In short conversations, a trainee chosen topic creates a very focused dialogue centring solely on the trainee interests or concerns. In longer conversations, this ensures the trainee's interests or concerns are prioritised rather than rushed through at the end or weighted equally with other portfolio topics. Moreover, as shown below, two supervisors communicated with their trainees ahead of their meeting to give the trainee time to select a meaningful focus. As their conversation begins, Anaya indicates “I asked you earlier and you said…” and similarly, Ryan opens the conversation with a reference to the trainee’s concerns by saying “I gather from what you’ve said…” . Such planning and forethought mean the trainee is not only actively involved in
reflecting on practice and progression during the supervision, but they are also given opportunity to reflect and select the focus of these conversations beforehand.

“Hi [Trainee name], so I gather from what you’ve said, you’re having second thoughts about what you’re doing with your application, is it?” (Ryan).

“So, this is what we wanted to talk about today because I asked you earlier and you said you had a concern about ...and what do you think the main barriers are?” (Anaya)

Moreover, Anaya’s use of an open question and Ryan’s use of a tag question invoke turn-taking: rather than the supervisor beginning by didactically teaching about the trainee’s concerns, the trainee responds to the question. This demonstrates the importance supervisors now attach to trainee active engagement. It also demonstrates the supervisor’s commitment to engage with trainee concerns, rather than offering a blanket coverage of the portfolio. These supervisors then act as a resource for their trainees, rather than purely an administrative monitor of a checklist. That is, supervision is focussed on development.

Similarly, encouraging trainees to prioritise the order of the conversation signals to trainees that their concerns are valued and prompts trainee judgements. That is, the supervision is driven by the trainee’s own awareness of their learning needs arising from the curriculum, rather than by gatekeeping functions. The supervision then becomes an opportunity for trainees to discuss what they wish to, rather than to mechanically address portfolio entries in order of appearance. Below, Madhu exemplified this approach by questioning whether the supervision need address the whole portfolio and by asking his trainee “what should we do first?” and similarly, Jen elicited the components of their “plan” for the conversation from the trainee with her question “what else do we need to do?”.

“So, are we looking through the whole of your portfolio? What should we do first?” (Madhu, 1st observation)

“We need a plan...What else do we need to do?” (Jen)
Addressing portfolio requirements according to trainee's priorities rather than in order of appearance on the screen, shifts the focus of supervision onto trainee-centred learning and development.

Further, joint decision making about the structure of a supervision reduces the trainee's dependency on supervisor directions. This approach role-models and provides a safe space for trainees to engage in self-direction, as required for consultant practice (cf. Ramnanan & Pound, 2017). It is a safe space because supervisors are not judgemental and because they also act as a ‘safety net’ to remind a trainee should they overlook something of importance or benefit. For example, Ella prompted her trainee to include patient feedback in her portfolio in the form of an email. Further, Ella's focus on examples of her trainee's excellent practice signal that training or being a doctor are not simply limited to meeting a standard.

“…that email that came across the other day, you should ...incorporate that; the one from that teacher who said how amazing a doctor you were, and how she'd been speaking to the head teacher about you ...that's actually quite nice for your portfolio.” (Ella).

Encouraging the trainee to plan the order of the conversation then, is not a laissez-faire or 'hands-off' approach, but a strategy for developmental supervision. The trainee takes responsibility for identifying and critiquing the most pressing matters, but a supervisor draws on their more extensive knowledge of the training system to actively ‘fill gaps’ in the trainee's attention, if appropriate.

Further prompting trainee's critical thinking, supervisors framed normative, institutionalised goals for meetings as opportunities for trainees' self-assessment of their progress through training. That is, mid-term and final reviews require a supervisor to make and record judgements about a trainee’s achievement of competencies (Gold Guide, 2016). Some supervisors therefore used this requirement as an opportunity to position trainees as reflective
professionals actively involved in gauging their own progression. Supervisors therefore asked trainees to *self-assess* against these external, pre-existing benchmarks as exemplified by Connor and Cassie below.

“So, some of the things that we need to do today... review of whether the portfolio meets our initial plan and look at how YOU feel you’ve developed.” (Connor)

“So today we’ve got our three-month review, so I’ve had a little look at the form which we can go through, things we need to look at, but it’s essentially talking about how you’re progressing, but if we just get all the official bits done first”’” (Cassie)

In combination with the portfolio, the type of meeting suggests the “things” that supervisors and trainees “need to do” or “need to look at”. However, rather than passively accepting the supervisor’s evaluations of their progress, the trainee is encouraged to make their own. In this way, supervisory meetings become opportunities for trainees to practice some skills needed as consultants such as identification of learning needs, appraisal and analysis (cf. Ramnanan & Poound, 2017). Addressing structural requirements then is no longer an act of transmitting judgements.

Moreover, supervisors also made moves to minimise time spent on the compulsory tick-box sections of the portfolio. This reduced the administrative nature of conversations to allow time for more meaningful reflective discussions. Supervisors’ uses of the word “just” signal their intention to quickly complete closed questions in the portfolio to make time for trainees’ self-assessments. Above, Cassie referred to “just get all the official bits done first” and Ella swiftly completed administration to move onto more developmental topics or “juicier bits”.

“I’m just going to tick these, and we’ll come to the juicier bits later”.  
(Ella).

Constrained by the training system, supervisors then cannot eradicate administrative approaches, but they minimise them and openly signal this intention to trainees also. Finally, I noted one supervisor bypassed a struggling trainee’s attempts to have the supervisor analyse
her practice and map it to curriculum competencies in the portfolio. That is, he empathised with the complexities of the act, but warmly reassured her it was possible. This observation is made possible because the supervisor and I had opportunity to talk prior to the observation during which time he alerted me to his beliefs that the trainee was struggling. Moreover, this conversational ‘move’ closely resembles the compulsory module readings about Karpman’s Drama Triangle, that many students reportedly found useful.

Through a combination of verbal and physical strategies then, supervisors embody the conventional learning gained on the module to engage in developmental conversations with trainees. In these sessions, the e-Portfolio is reconceptualised as an educational tool. Supervision is driven by learning rather than administrative needs. Although supervisors enact their roles according to policy, in that they monitor curriculum competences, approaches to conversations are underpinned by learning theories studied on the module. That is, IoPP appears to be largely technical rational in nature due to structural requirements for training and conventional learning gained on the module.

9.4 Epistemological assumptions and role norms shape group discussions

In this section, I present findings which enhance our understanding of professional learners’ engagement in and learning from group discussions. I show that epistemological assumptions regarding enactments of the student and tutor roles, as well as the salience of multiple, other role norms shape learning and IoPP. First, I show how my own application of theory approach to teaching limited online group discussions. Next, I present findings that, at workshops, group discussions were more limited than staff had realised. This is due in part to an unproductive clash between staff and student beliefs about how to enact the student and tutor roles. Also, due to normative expectations surrounding participants’ roles as consultant supervisors and clinical specialists and other learners’ roles as trainees. These expectations prevented participants from fully enacting their concurrent role as CPD student.
Asynchronous, structured activities limit online discussion

As module leader, my own epistemological assumptions and influence on module delivery countervailed academics’ intentions for open-ended, learner lead discussions online. On the discussion boards, students did not build theory for practice by taking “a wider view” as Sarah had intended because I designed questions which predominantly invited an application of theory to practice first. Student contributions to programme theory then highlight the influence of tutors’ epistemological assumptions on the nature of learning and IoPP. Moreover, this suggests the potential benefits of tutors explicitly articulating their own epistemological assumptions and then sharing these with the curriculum and tutoring team and students.

During interview, students indicate that online forum activities were “constructed” in ways not conducive to dialogic interactions. Instead, students individually “make [their] own comments” to answer the set question, without collaboratively “chatting” with peers.

“It's constructed in such a way that ...it doesn't make you have a chat...it was statements.” (Leslie)

“Online is limited in the sense that you have one question and... everyone is writing on it and you make your own comments”. (Anaya)

My application of theory approach to teaching and learning then, limited the sources of information students would use to answer a question. There was no need to reflect on colleagues’ or trainees experience or engage with their craft knowledge. As module leader, I was constrained in my choice of theme for discussion online: these compulsory questions needed to cover the key topics that are recorded in the formal curriculum document. However, I was enabled to structure the discussion questions as I felt appropriate. Guided by my (then implicit) application of theory to practice approach, I set questions which asked students to map their own journey between a starting point (one’s current practice) and the end goal (the formal evidence base). As shown above this “limited” students approaches, prompting isolated monologues or their “own comments” rather than having “a chat”.

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Building theory for action from action is therefore curtailed by the nature of the compulsory questions. The structured questions in combination with an asynchronous, online modality do not invite exchanges between students, but rather an individual application of theory, done publicly. Consequently, instead of deriving IoPP from dialogic inquiry in ‘real time’, learning and IoPP are limited to “retrospectively” gleaning tips from the static comments, as exemplified by Jen’s comment.

“I found they helped retrospectively…when I went back to look at them, I could reread what other people had put and reread what I’d written. It gave me a sense of, ‘Yes I do actually grasp the value of this, the point of it’.” (Jen).

Moreover, as shown by Madhu’s expression “didn’t get to me”, learning from static posts can be lost without more discussion between participants to clarify or deepen the intended meaning.

“I did read some of them and some...were very good, but some of them...didn't get to me”(Madhu)

Here then, academics’ intentions for discussion boards were overridden, in part due to my epistemological assumptions which differed from theirs. The student experience therefore highlights the importance of CPD staff engaging in collegial discussions about the intended nature and outcomes of CPD tasks. Sharing beliefs across the tutoring team and with students may reduce the likelihood that implicit assumptions countermand each other.

9.4.2 The formal CPD context invokes expectations of didacticism

At workshops, academics’ intentions that learners’ queries drive group discussions were also countermanded by student preferences for pre-determined goals. In the formal CPD context, many students evidenced an expectation of, or preference for, tutor directed discussions with a
pre-determined end goal. Where these expectations were met, learners reported satisfaction. Where these expectations were unmet, learning and the potential for IoPP was lost. This suggests there are benefits to tutors and students discussing epistemology, clearly setting out any espoused approach(es), the rationale for them, and discussing what this enables and constrains. The split in programme theory found earlier and students’ struggles presented below also demonstrate that CPD stakeholders should not assume shared beliefs about formal CPD activities. Instead, an explicit and mutually agreed approach may lessen the likelihood that students will experience an unexpected and an unproductive clash in epistemological assumptions.

The formal CPD context arguably invoked expectations of didacticism. This is first apparent from students’ Learning Agreements. These documents set out participants’ intentions to receive external knowledge by “do[ing] module readings in a timely manner” and to apply this knowledge by “contribut[ing] to compulsory discussions”. Learning Agreements do not indicate participants’ intentions to ask the group questions about a particular, pre-existing, practice-based concern or solicit fellow learners’ experiences of a particular supervisory act. Nor to support others’ inquiries with their experiential knowledge. Therefore, when tutors facilitated learner-directed, open-ended group discussions, many students experienced frustration, confusion, and a loss of learning. That is, students expected expert transmission but, on occasion, some tutors embodied reflective practice and this constituted an unexpected, unproductive clash between their epistemological assumptions regarding role enactment. For example, during interview, George indicated that as a student in a formal CPD context, he expected transmission and therefore struggled to perceive others’ craft knowledge or practice-based concerns as “helpful” for achieving goals. He characterised other students’ reflection on examples of poor practice as “getting things off their chest” which had no “educational benefit”.

“...it's apparent from the vast majority of the medics in the room, they have not had good educational supervision... And it felt a lot like them using it as some kind of therapy to get it off their chests, all the bad examples they've had...but there's not actually any educational
benefit ...to anybody in the room really...And there's a lot of that, which isn't particularly helpful.” (George).

Expectations that tutors transmit ideals for practice then clash unproductively with others’ open-ended, reflective practitioner approach to teaching and learning. Similarly, Leslie indicated that she expected tutors to transmit content or “building blocks” and to set an end goal, “the information of what [she] was supposed to do”. Without this, she could not envision IoPP.

“I found ...I couldn't even get the information of what I was supposed to do and get the building blocks of the bottom in place... so, change was never gonna happen” (Leslie).

The formal CPD context then calls forth participants’ epistemological assumptions about the role of tutors and learners. This includes expectations about the nature of knowledge to be shared in a 'classroom’ context. Unexpected and unproductive clashes in assumptions damage learning and IoPP. Similarly, other students noticed the mix of approaches on the module, made explicit comparisons between them and indicated a preference for tutor guided discussions of pre-determined content. Madhu referred to this as “keeping on track” and expressed a preference for not “going off track”. That is, he compared the two approaches to facilitation deployed on the module and favoured transmission.

“...discussion was good, well - I think... you and [other tutors’ names], ...they try to keep us on track... So that is...a good way of learning for most...But you can't go off track too much”. (Madhu)

Through her frequent use of the word “structure”, Anaya also expressed a preference for tutor guided applications of theory to practice. She felt learner-directed or “open discussions” risked a loss of learning in the classroom because they “go here and there” with key messages difficult to decipher or forgotten. Instead, in the classroom context, Anaya felt visual aids such
as presentation slides helped “basic ideas...about the right thing” to “stick” and this enabled subsequent discussion thereof.

“I like [structure] because discussions can ...go here and there...I think if it was all open discussions then it wouldn't have been very useful because then you don't know what we've talked about. From the workshop, I remember...some slides with different models, those things stuck, because there was a structure to it, so the discussions that came after that obviously they go more in your subconscious, and you remember... you've got to stick with the structure so everyone gets the basic ideas about what it involves and what should be the right thing.” (Anaya).

Here, learners indicate how the formal learning context shapes expectations. The presence of people in formal tutor roles calls forth epistemological assumptions of expert transmission: tutors should select and present “the right thing”. These expectations are perhaps reinforced by the absence of any immediate, shared event on which to base discussion and learning such as in clinical or simulation-based learning. In the classroom, students want tutors to provide the stimulus. Expectations of structured discussions with pre-determined end goals may also be influenced by prior norm circles for learning, as indicated by Tina in her staff. Tina had indicated that CPD more commonly involved tutors reading from slides. What students contribute to programme theory then is the need for facilitation (of group discussions) to acknowledge and address the affordances and limitations of a range of epistemological approaches. Particularly in the formal CPD context, learners (and some staff) may need to be encouraged and supported to engage in the open-ended building of theory for practice from practice.

9.4.3 Role salience influences learning and loPP from group discussions

Staff intentions for active learning through group discussion were also impeded by the mix of social roles present at any one time. Whether discussions were underpinned by application of
theory or reflective practice, student involvement was limited by the normative expectations of their other social roles. Rather than everyone interacting as students, learners’ roles as senior or consultant supervisor, as clinicians from different specialties and as trainees limited learning and IoPP from discussion. Here I show that features of the learning context and in particular the presence of other inter-related role holders made salient one ‘bundle of role norms’ (cf. Elder-Vass, 2010) over others. Student contributions to programme theory show that it is not only the ‘disembodied’ questions and concerns of discussion group members which drive learning, but also the mix of social roles held by those present. Where staff had concentrated on what to discuss, how and why, learners taught me the importance of ‘who’. Programme theory was therefore challenged by students’ perceptions that the presence of trainees and different clinical specialties were a barrier to discussion. However, programme theory was upheld by students’ perceptions that interlocutors were experienced and skilful in the educational supervisor role. Figure 24 sets out student participants’ four other professional roles apparent in interview data and how these constituted a threat to the student role and its ‘responsibilities’.

For some supervisors, the effectiveness of group discussions was weakened because fellow members’ NHS roles as trainees was more salient than their role as CPD student. Experienced supervisors considered trainees as impoverished conversation partners because they lack experience in the role to help address practice-based questions and concerns. Cassie shared with me her feelings that discussion activities could have been more productive had she only learned alongside other experienced supervisors rather than also with trainees. Many of the students Cassie met on the module were trainees preparing for the supervisor role, not current supervisors engaging in continuing development for revalidation.
Figure 24 shows how participants’ other (non-student) roles can diminish enactments of the student role. Four such roles, apparent in student data, are shown in blue in the centre of the figure. Where contextual features, such as CPD arrangements foreground these other roles, (as shown in red boxes), there was a loss of learning and IoPP.

Wishing to engage in reflective practitioner, learner-directed conversations, Cassie feels trainees lack of experience as supervisors limits or “dilutes” learning and IoPP.
“I think it would be almost better if they [trainees] were taught in different groups because...actually I am probably going to learn from people who have got the experience of being in the situation: ‘How do you juggle this, how do you do this, what are your solutions for this conflict?’ Whereas for them it’s...fantastic that they are learning to do it ...[but] I think that for me that diluted the experience a lot.” (Cassie)

This undermines the academic intention that module members learn from each other, that local or cultural differences may proffer fresh new ideas or solutions. Instead, findings show experienced practitioners may consider some role-holders a barrier to their learning. In particular, those with no experience in the role. Facilitation strategies may therefore need to explore how others’ experiences of the role can also be beneficial to group discussions.

The presence of trainees in discussion groups further limited consultant supervisors’ participation in discussions by invoking ‘impression management’ (cf. Goffman, 1967). Group discussions require ‘public disclosure’ of aspects of learners’ own practice, and, in hierarchically mixed groups, this called forth participants’ own normative expectations of their senior or supervisor role. Consultant supervisors therefore limited or carefully managed their involvement in discussions. Tina and Emma’s worries that “consultants are expected to know things” resonate with students’ input to programme theory. That is, the academics’ intention that all learners interact as CPD students, was again undermined by participants’ role salience. Supervisors carefully navigated participation in group discussion activities, minimising the potential for trainees to make negative judgements of their abilities in their role. Rather than ‘confessing’ concerns, admitting struggles or seeking the advice of others, senior supervisors tended to post last online, to listen quietly at workshops, to teach the more junior members of their discussion groups or demonstrate their existing practice aligns with others’ notions of “what works”. Role salience in a mixed group of learners in effect produced an unsafe learning environment. Here the ‘unsafe mix’ refers to the ‘threats’ posed to the normative ‘public image’ (cf. Goffman, 1967) of senior role holders by the nature of the task and the composition of the group.
In mixed groups discussing practice, role salience incurred a loss of personalised learning beyond increased confidence. For example, Anaya indicated that listening to trainees’ accounts of supervision reassured her that supervisors “feel the same pressures and same problems”. However, Cassie found that mixed groups in workshops made her feel “very wary” and therefore “uncomfortable” about openly discussing her own approaches or concerns with fellow senior colleagues. Further, she recalled other, senior role holders also remained taciturn during workshops.

“[Trainees’ presence] …obviously made me very aware and wary in the group discussions face-to-face because it just makes you very uncomfortable because a lot of people who were talking were trainees, the consultants…and senior health professionals were not talking, they were quieter.” (Cassie)

Participants then did not interact as equal module students; despite not knowing the trainees prior to the module, participants acted as senior professional colleagues to juniors. Normative expectations from the hierarchically organised practice domain permeated the CPD classroom. That is, seniors avoided contributing to discussions lest this constituted a threat to their public reputation (cf. Goffman, 1967) as more knowledgeable practitioners. The damaging effects of role salience here suggests that public reflection on one’s own practice may be ill advised in hierarchically mixed groups. Alternatively, that facilitators need to actively consider learners’ multiple social roles to group students differently during workshops. Rather than facilitators requesting that large groups of students separate into smaller groups to talk, participants’ professional roles may serve as a more effective rationale for small group formation.

Conscious of studying alongside juniors, Madhu similarly avoided using his own practice as the content for discussion. Instead of listening quietly like Anaya or Cassie however, Madhu recalled that during group discussions, he preferred to share impersonal or “stock” examples or externally verified ideas “from theory”. He avoided offering his own views on supervision for examination by more junior others.
“I suspect...looking at the group, that I probably was the most senior...there might be one or two who are ...of similar age perhaps, but not still that senior in experience. And I would only sort of offer stock from examples rather than saying 'My view is this'. Even more, from a theory point of view” (Madhu).

While Madhu contributed to group discussions, he too made intentional moves to remove his own practice as a source of conversation and learning. Madhu’s decision to use “stock examples” suggests that learners may more willingly discuss typical or generic matters from the practice domain rather than personal examples. Here, senior role salience rendered the ‘confess and address’ approach too invasive and consequently, consultant supervisors avoided it.

Role salience then made participants reticent to divulge aspects of their own practice. This persisted online because logistical arrangements meant learners could not form their own discussion groups, nor easily form ‘safe’ relationships with fellow group members. That is organisational decisions arrange learners in fixed sets of 15 members online but permit students to attend any iteration of each of the four workshops. This makes it possible that students may never meet face to face with all the fellow members of their online group. Cassie explained that this made her reluctant to post and indeed she suggested different arrangements.

“I wonder if it would be better to be in smaller groups? ...and somehow, we could meet each other? ...If you had all met at a module session then there might be a bit more of a feeling that people could ask each other.” (Cassie).

Just as with workshops, feeling ‘unsafe’ online prompted learners to avoid sharing their own practice. That is, they engage in avoidance and face-saving strategies. For example, Gyana shared her strategy of posting online very close to the end of the timeframe for contributions, despite being ready to post earlier because she had already “read everything”. This increased the likelihood that her contributions would go unread by fellow students and removed the
possibility for fellow group members to discuss the points she made. Furthermore, Gyana’s use of the word “cheeky” indicates she knew her strategy counteracted staff’s intentions that students exchange ideas online.

“I was a bit cheeky. What I did was, I used to read everything but never give my input. But then, if everything was due on the Monday I only did it on the Friday or the Saturday morning.”

The negative effects of role salience then are sustained by logistical arrangements which prevent learners from building trusting relationships with one another before being required to address their own learning needs publicly. Consequently, online, learners offer ‘safe’ mappings of the evidence base to their practice. For example, Leslie noted that online, students indicated how their practice already aligned with the literature and that of others by posting ‘I’ve found that too; I agree’. Further, I believe Leslie’s use of “agenda” in conjunction with her characterisation of peers as “competitive and driven” refers to wide-spread, strategic engagement by learners for face-saving purposes (cf. Goffman, 1967).

“The online study groups..., it’s all very much with an agenda. I think that kind of person is competitive, driven...it was more of a ‘Thank you for that comment. I do that myself as well.’ or ‘I’ve found that too; I agree.’” - Leslie

The nature of group discussion activities and the presence of hierarchically related role holders then triggered consultant supervisor rather than student role salience. And this limited group discussions. Here, Leslie has identified students’ proclivity to recall and apply course concepts, but not to discuss the consequences of them for their own practice (cf. Gresalfi & Barab, 2011). That is, feeling their supervisor ‘role-face’ threatened during discussions, supervisors avoided questioning or suggesting changes to practice as intended by staff. These findings suggest CPD group discussions might more productively focus on typical problems found in the practice domain rather than an individual learners’ own practice. Anonymous rather than
personal problems may help keep student and NHS roles balanced and enable discussion of ideas for practice, with input from a variety of perspectives.

In addition, clinical role salience presented barriers to learning from peers during activities that prompted learners to apply codified knowledge to practice. In particular, dental supervisors perceived the dental and medical structures for supervision to be too disparate, as shown by Leslie’s frustrations (below) with a focus on the medical “system” for supervision. Consequently, supervisors felt unable to help each other apply transmitted knowledge to make “practical, nitty-gritty changes”. That is, where discussions began with codified knowledge of practicalities, dental practitioners struggled to envisage ways of helping different medical specialties apply module content to practice. Consequently, Jen, a dentist, expressed a desire for structural arrangements or “an overview of how it works” to be set out in their entirety to facilitate discussions with medics. As an alternative, both she and Leslie suggested medics and dentists study separately, as shown by Jen’s suggestion to create “two modules” and Leslie’s experience that IoPP requires learning “within your own profession”.

“I felt that divide was quite big so I wondered if you could have two modules, one for dentists and one for medics...I’d love an overview of how it works for [medics]...because I do think that foundational dental year is so vastly different from any other ES role in medicine.” (Jen)

“[The frustration] was their system, it was the ‘This is the system that you have to pass through; and if you’re gonna change it, you have to do this’. So, our system is really quite good, so some of the problems people were having were ...30 years old for us. I guess you could group people into their own professions for a bit.. I mean, if you’re talking about people actually making practical, nitty-gritty changes, then you need to almost be within your own profession.” (Leslie)

A focus on practical behaviours or system arrangements made clinical role salience into a barrier for learning and IoPP. Here, experienced dental supervisors felt less able to help medical supervisors apply transmitted content to practice due to not fully understanding the medical context for practice. This contradicts staff intentions for cross-specialty fertilisation through
group discussions online and at workshops. These findings therefore raise questions as to whether and how different clinical specialties performing the same role can learn productively together. Here, learning is minimised by curriculum contextual features which fail to balance clinical and student role salience.

Role salience, however, is not always a barrier to reflection on practice, rather the outcomes it produces are influenced by context. Contingent upon learning conditions, role salience may equally support learning and IoPP. For example, student interviews show that those who discussed practice with fellow experienced supervisors find the CPD provided opportunities to challenge their habitual practice, to learn new behaviours or skills, or to reassure them that peers faced similar challenges. That is, where discussion partners’ roles include experienced supervisor, learners feel more comfortable co-creating knowledge for practice. And this supports the academics’ intention that CPD provide experienced professionals time away from practice to discuss how the role could be enacted and build theory from action. Ryan for example, reported gaining IoPP or “practical bits” from other students and module tutors who he perceived as very experienced in the role.

“...the more practical bits sometimes came more from the workshops. I mean obviously you've got a wealth of experience there, a lot of people have been doing that as educational supervisors for a very long time...you've got all those ...Associate Tutors who have got a lot of experience of Educational supervision...the fact that we are all very different in the way that we approach things does provoke you to think in a different way ...having that alternative perspective on it which other people bring is useful at challenging what your practice is.” (Ryan).

Here then experienced supervisor role salience supported learning and IoPP. Interlocutors’ roles as fellow learner appears to be productively balanced with this professional role, meaning students are willing and able to learn from each other to share and “challenge” their current practice.
Still focusing on peers’ experience in the role, a mix of clinical specialties offered participants diverse perspectives on role enactment. This supports academics’ intentions for group discussions to be opportunities for the sharing of different specialty cultures. Here, the very technical specialties such as anaesthesia and surgery perceived themselves to be less proficient in softer, human skills than psychiatrists. They therefore learnt new ways of thinking about supervision from experienced educational supervisors from different clinical specialties. For example, Richard an anaesthetist, was inspired by “massively overpowered” psychiatrists in his workshop and online discussion groups to consider how trainees may feel about the supervision they receive; to consider the emotional responses that conversations may provoke. Richard noted that doing so was “a bit more of an add on for us”, again using first person plural pronouns (“us”) to situate himself within specialty norm circles and cultures.

“I think I've found the psychiatrists are like, massively overpowered when it comes to the course, compared to us sort of nuts-and-bolts clinicians, because that's what they do all the time. They think and talk and look at people’s emotions and how people interact with each other. That's a bit more of an add on for us.” (Richard).

This shows students were able to learn from each other when they perceived module peers to be experienced educational supervisors with different skills for the role. Here, supervisor, clinical and student role salience are balanced positively as educational supervisors from different specialities study productively together. These findings therefore suggest a solution to the conundrum posed by dental supervisors: for multi-disciplinary groups, a focus on skills, values and the trainee experience, rather than on practical requirements or resources may support learning and IoPP.

Overall, programme theory is enhanced by focusing on how curriculum contextual features promote or balance role salience. Findings presented in this section develop initial thinking about group discussions online and face to face, showing that epistemological assumptions and the presence of others make salient learners’ other social roles. And this influences learners’ manner of participation in and learning from conversations about practice.
Specifically, students did not interact uniformly as students, but also as supervisors and clinical specialists. They viewed others’ roles as trainees as barriers to learning except where trainee input provided reassurance that many supervisors act similarly. Students viewed clinical differences as advantageous for learning new supervisory skills, but a barrier to application of theory to practice. And finally, experience in the role was perceived as more conducive to IoPP than experience of the role.

9.5 Manner of engagement varies by context

Looking beyond group discussions to wider experiences of the module, the manner of learners’ engagement with the 16-week blended learning programme is shaped by a combination of the task type and the grading system, by intrinsic motivation and by the demands of other social structures in which learners lead their lives. Overall, staff’s decision to offer flexible blended learning via a flipped classroom is borne out, but online discussions and tutor-directed optional tasks did not engender meaningful, active learning. During module studies, professional commitments vie for students’ attention, time and energy. Therefore, off-campus, students strategically shift to meeting minimum requirements. This permits the prioritisation of non-student responsibilities, such as those related to work and family. And this shift to strategic engagement is made possible because asynchronous, online activities are scored by single points. Further, there is no evidence of student engagement with optional reflection points provided by tutors in the online environment. However, where activities are assessed by a range of grades, or where students are intrinsically motivated by personally chosen foci, sustained engagement and active learning occur. Students largely drew IoPP from personalised and consequential engagement (cf. Gresalfi & Barab, 2011) with module readings and assessments. And to a lesser extent from workshops. The initial programme theory then is only partially upheld: manner of engagement in module studies is contextually influenced and varies rather than remaining constant across all module tasks.
9.5.1 Flexible blended learning supports sustained engagement for busy professionals

The decision to replace multiple, self-contained train-the-trainer sessions with a 16-week module comprising ‘connected’ components promoted learner engagement over time. As module students rather than attendees at disconnected events, learners experienced repetition and reinforcement of learning. This led to deeper understanding of current practice and helped students make meaningful changes to practice as evidenced, for example, by George’s comment:

“It's time consuming. ... [but] if you read and see and hear enough things enough times, eventually it sinks in, doesn't it? So [IoPP] probably did come from an accumulation of places...If you just want to tick a box go on the two-day thing... if you actually want to learn, you're probably better off going on something that is more involved, like [this module]” (George)

In realist terms, the relatively enduring relations between members of the module as a social structure brought opportunities, affordances and expectations that disconnected meetings do not. Membership in a social structure generates ongoing engagement with role-based responsibilities. As students, participants had opportunity to “read and see and hear enough things enough times”. CPD modules then have the ‘power’ to cause sustained engagement and deep learning for IoPP.

Further, busy professionals' engagement with “something that is more involved” was supported by the choice of blended learning as a teaching and learning modality. Neither a fully traditional, fully synchronous nor fully online module would have sustained learners’ engagement. This is because the demands of learners' other roles may override student responsibilities. Indeed, interviews for the current study were difficult to schedule due to competing demands on participants’ time. Richard explained this means that learners would not have been able to engage in a ‘traditional’ module requiring regular attendance on campus.
“And one of the strengths of the module, I think, is the limited contact time, because that's the time that's at a massive premium...As well as the three contact periods, if there would have been another two discussion periods, it would've made it almost impossible” (Richard).

Even online then, a fully synchronous module would equally require time away from other commitments at regular, pre-specified intervals. Similarly, Ryan explained that the competing demands that learners juggle in their lives risks them disengaging from a fully online, purely asynchronous module.

“I definitely prefer the ...blend of online and face-to-face. I would find it very difficult to motivate myself to do just purely online stuff ... I mean things intervene at work.” (Ryan)

Opportunities for face-to-face guidance, support and feedback then helped keep learners motivated. It prevented other responsibilities from ‘taking over’ learners attention and energies. Student input to programme theory therefore upholds and reinforce staff decisions to offer flexible, blended learning module involving a flipped classroom. Students are provided multiple, but feasible opportunities for things to “sink in”.

9.5.2 Scoring systems and professional commitments lead to minimum engagement

Online group discussions and the single contribution point they carry prompted strategic engagement off-campus. Earlier, I have shown that minimal contributions are, in part, due to task type, which is shaped by tutors’ epistemological assumptions, and to an element of face-saving due to senior role salience. Here, I present further findings that strategic engagement online is also influenced by the interplay of role-based responsibilities outside the CPD and by the CPD grading system. Off-campus, students prioritise the most pressing responsibilities arising from their multiple social roles. And online tasks can be viewed as less pressing
responsibilities as signalled by the single point available regardless of quality or quantity of contribution. Therefore, when studying at a distance (off-campus), most students chose only to meet minimum requirements, posting only once to each conversation thereby gaining the contribution points necessary to pass the module.

Firstly, strategic engagement is not because students have misunderstood the task. Comments such as Jen's and Cassie's below indicate students appreciate Blackboard discussion forums are intended as platforms for multiple exchanges off campus. Students recognise they did not use these spaces “as they were intended” or according to “the idea of how it should work”.

“I don't think I was using them as they were intended, and I don't think most people were using them as they were intended”. (Jen)

“I think the difficulty is, as much as it is meant to be a conversation, it isn't...Everybody just gets on, does their own piece and goes ‘Phew! I've done that, I'll move on’. And so, the idea of how it should work, doesn't. And I don't know if that’s a reflection of the fact that everybody is so busy working.” (Cassie)

Students realised that online tasks were “meant to be a conversation”, but instead “most people” completed them in a perfunctory manner, by posting a single, sometimes brief comment. Students suggested this was, in part, because “everybody is so busy working”. Strategic engagement then, emerges from the interplay between other competing commitments and the single point scoring system which signals to students that it is sufficient to “do their own piece” and no more. That is, off-campus, CPD activity is not shielded from the competing demands of professional commitments, as shown by Anaya's comment that “everyone is busy doing other things”.

“It's not a big discussion because everyone is busy doing other things, so they can put the comment maybe once, maybe twice...So you don't feel like it's a chat”. (Anaya).
Amidst “other things”, students weigh up the ‘cost’ of one activity to another. Ryan exemplifies this kind of decision making through his phrase “it did get to the point where” and explains minimal engagement in terms of risks to other responsibilities or “stuff that [he] had going on”. He explained how a problematic work situation consumed his time and energy, making his professional role and its responsibilities more salient than his student role while off campus. His use of “get to the point where”, frames his decision to engage strategically as a change of approach. That is, he understood the benefit of engaging more deeply, but made a strategic decision in light of contextual influences.

“I found that because of other stuff that I had going on... I think it did get to the point where it was a matter of ‘I have to read that little bit so that I can write a little sentence and then that is me done on that bit’” (Ryan).

Staff’s concerns developed while tutoring on the module are upheld. Online discussions do not sustain meaningful engagement. This is because, in part, students perform a ‘cost-benefit’ analysis weighing up the responsibilities of each of their social roles. The module grading system provides important clues that a single post will enable participants to meet their responsibilities as students without posting more than once to online discussions. This leaves time for other, professional activities. Off-campus then, where engagement in CPD is not protected, and work commitments loom, a grading system causally influences the manner of engagement.

Furthermore, even when students’ have or make time for discussion, their intentions are restrained by peers’ acquiescence. Discussion is a social act: if fellow group members choose to engage strategically, an individual student naturally loses the opportunity for dialogue. Indeed, Richard shared his disappointment that he was unable to persuade members of his learning set to post more than once to a conversation online. Inspired by discussions of practice with psychiatrists, Richard tried to draw other members of his online discussion group
into more dialogic exchanges “to bounce some ideas around”, as intended by academic colleagues. However, his peers did not reciprocate.

“...a few times I tried responding to people's things in online discussion. And just no one would get back to you... me and maybe one other person ...[were] trying to bounce some ideas around... I went back, but they'd all just gone away again” (Richard)

Furthermore, Richard’s experience exemplifies the realist belief that events are multiply determined: manner of engagement has multiple causes. Being a student, not a tutor, Richard is unable to persuade fellow learners to do something different from that which is required by the curriculum. That is, Richard’s role as student, lacks the power or ‘sphere of influence’ to direct fellow students’ attention and energies in ways not required by the curriculum. Off-campus, Richard’s peers likely chose to only meet minimal online requirements for similar reasons reported here by participants. And Richard’s sphere of influence as a student on the discussion boards prevented Richard from persuading fellow Learning Set students to interact more meaningfully or regularly.

There is also a pattern on non-engagement with optional tasks which neither carry a score, nor are relied upon for workshop activities. The staff’s belief that non-compulsory, tutor-provided, extension activities might sustain engagement was therefore not supported by student data. These intra-personal, optional activities, known as Reflection Points, do not feature ‘voluntarily’ in participants’ accounts of learning and IoPP during the module. When called into focus by interview questions, students could not recall them, as exemplified by Cassie and Leslie’s comments here:

“(Interviewer: Was there anything in the Reflection Points...?)
Probably not, if it was non-compulsory probably not...I think you engage with everything that you have to engage with” – (Cassie)

“Not that I can remember off the top of my head... I can't think of ...any particular revelations”- (Leslie)
Alternatively, students mistook them for workshop tasks, as exemplified here by Gyana who recalls a problem-based task during the last compulsory workshop.

“I’m trying to remember. I am sorry, I don’t know...we had to do some exercises on giving a plan for a trainee in difficulty. So that I did, I think we did it in pairs.” – (Gyana)

The belief that engagement for deep learning could be prompted by providing a further set of pre-determined questions that are neither tracked and scored, nor form the basis of face-to-face interactions was therefore not upheld.

Minimum engagement in online discussions and the bypassing of optional tasks can therefore be partly explained by the change in learning context which foregrounds the priorities of other roles. Off-campus, participants’ are “busy doing other things”. Additionally, the nature of the task and assessment strategy permits students to prioritise these other activities. That is, students are able to meet module requirements with just a “little sentence” thereby saving time for “work and stuff”. Moreover, a student’s sphere of influence lacks the power to overcome these circumstances, to encourage fellow students to engage differently. This enhancement of programme theory, in conjunction with findings about role salience presented earlier therefore suggest curriculum designers should consider a different nature of online task, that creates a ‘safer’ environment more conducive to sustaining learner engagement off-campus. Importantly, however, designers should heed students’ emphasis on work related pressures and evasive manoeuvres. Simply changing the grading system for online discussions to a scale from fail through to distinction seems likely to perpetuate minimum engagement with students continuing to post only “their own piece” to score a pass. Rather, findings presented below that are related to engagement with readings and assessments suggest inquiry or problem-based tasks may better sustain engagement.
9.5.3 Personalised assessments drive deep learning and IoPP

The intention that graded, personalised and reflective assessments may sustain engagement, thereby leading to deep learning and IoPP is supported by the student experience. In contrast to online discussions and reflection points, students report making time to concentrate on both pieces of summative assessment despite competing professional demands. This suggests that the interplay between intrinsic motivation, grading scales and a safe environment for critiquing practice may sustain engagement.

Firstly, assessment sustained engagement because it was a mechanism for successful completion of the module and revalidation in role. That is, evidence of successful module completion can be included in a consultants’ annual appraisal and satisfies an institutional requirement to engage in CPD. Failing the module therefore has professional consequences and this exemplifies the interplay between CPD and other social structures in the wider context, such as regulatory bodies. Indeed, three participants in this study failed the module at first sitting yet persisted to pass at second sitting. That is, outside, professional influences and the existence of a pass/fail assessment system drove engagement despite adverse experiences.

Formal, summative assessments then drove learning. Indeed, students indicated that had there been no formal assessment, they would not have engaged deeply in reading and reflection. Anaya explained that, without assessment, intentions to read more widely would be countervailed by overlapping influences in life. In contrast, the use of assessment encourages students to “make time” for meaningful reading which leads to deep learning.

“You think ‘I might read this, I might read that’, but you don't...actually. But when you have an assessment to do, you ...read it because you want to get the maximum out of it. And you do get into the depth of it...so that was really useful because ... otherwise if I had not an assessment to do and just attended the module without an assessment, I might have not read some things; I might not otherwise make time I made for the assessments.” (Anaya)
Assessments then counteracted other contextual influences that optional tasks and single-point scores could not. As well as finding time to prepare for assessments, the possibility that submissions could fail “forced” students to remain meaningfully engaged rather than “ticking a box”, as shown by Ryan’s comment:

“…I do think that having a module with an assessment at the end does force you to do more than just to tick a box at a workshop, because I will be honest …you can go along to workshop [and just] talk the talk for the day.” (Ryan)

Assessment then helped keep participants’ roles as students balanced with other roles. Although students frequently refer to feeling ‘forced’; they convey the sense that assessments ‘pushed back’ against competing demands in life and foregrounded time for learning. Gyana noted that the compulsory case study which requires reflection on practice in light of the literature was “useful” but were it not formally assessed, she would “never” have engaged in such a task.

“The other thing I’ve really found useful is the case studies we have to do… because I’m never going to reflect on that, unless I’m forced to.” (Gyana)

Despite unpleasant experiences, students note that assessments were helpful for learning and IoPP. Students’ lack of familiarity with writing social science essays and competing demands in their lives mean preparing formal submissions was "painful". And this confirms Deanery staff concerns that professionals with a bio-medical background may experience difficulties studying and being assessed in social science subjects. Nonetheless, students appreciate that assessment drives learning. Participants talk quite differently about assessments than they do about online discussions and reflection points. They note that assessments are “really useful exercises” causing them to “go into the depth” and “critically appraise” information. They recall “going away” to spend time and energy on assessments which ultimately is “helpful”. They used multiple ‘lenses’ to prepare for assessment, including reflection on practice, critical appraisal of readings and the help of tutors.
“So as much as I hate doing the assignments, and they nearly finished me off! [laughs]...they are necessary, and it was a really useful exercise [laughs]. I found writing it up incredibly hard.” – (Cassie)

d"they are a pain for me also, I'm not saying they are very pleasant things...but still everything helps actually. So, I think with the help of the tutors and all, it was very good.” – (Anaya)

"And I think that [assessment] is a positive thing - it means that you...actually have to go away and think about ...at least some aspects of it, because you have to have gone away and done enough background reading...and critically appraise it.” – (Ryan)

For module assessments then, students did not take a surface approach to surviving the minimum requirements of the tasks. They overcame obstacles in both the unfamiliar nature of the task and in the busy nature of professional life to achieve deep learning. This can, in part, be attributed to the revalidation requirements and a grading system which includes a fail grade.

However, students’ non-surface approach to assessments can also be explained by the opportunity to personalise the focus of the assessment. That is, intrinsic motivation further sustained students’ meaningful engagement with the process. Choice and personalisation encouraged students to “go away and think about some aspects” of readings in light of experience or vice versa. Whether students chose to deepen an area of existing knowledge, or address a new, unfamiliar area, assessments were an opportunity to pursue a personally meaningful interest. In this way, participants roles as student and as Educational Supervisor are balanced or kept in equal focus.

“Because you choose something that you're interested in, and something that you want to explore further. So, YOU'RE choosing something and if you're interested in it, you’re more likely to read about it.” (George)
Of note, module assessments were a much more private exercise than group discussions online or at workshops and this created a safe learning environment for learners to address their own concerns about practice. *Intra*-personal rather than inter-*personal* critically reflective tasks therefore support academics’ intentions for learning and IoPP. Students report preparing for assessment through reading, reflection and help from tutors, but not by seeking the views or experiences of fellow learners. This particular lens was not included in module assessment. In this private, safe environment, provided by assessments, students acknowledge and reflect on their concerns about their own practice. This is further made possible by the authentic nature of tasks which require reflection on one’s own experiences of supervision as well as a reflection on a concrete episode of one’s own practice. Unlike group discussions, for these essays, students are prepared to ‘confess and address’ areas for improvement.

“I think the essays impacted on practice, actually analysing a recording of your educational supervision gives you an opportunity to actually think about, ‘Is this any good?’ Sometimes you'll sit there and think ‘Yeah, this is educational supervision and it's working really well', but going back and listening to it, and having to go, ‘Where is the assessment for learning happening here?’ That's really, really useful.” – (Ella)

“And that depends on what type of person you are...- Will you choose a topic that does actually challenge your own beliefs and make you ...think ‘I'm not so good at this’? - which is ...what I did...I did realize at that time that I had completely dismissed something that one of the trainees had said... so then I looked at that in more detail.” (George)

Staff’s beliefs that authentic tasks help overcome the divide between CPD and practice are therefore upheld. However, student input enhances programme theory by highlighting the importance of a safe learning environment. The personalised and authentic nature of the assessments maintained a balance between participants’ roles as student and as Educational Supervisor. That is, assessment as safe reflection on one's own practice sustained
engagement. This is in contrast, to findings about compulsory group activities which challenge staff beliefs that students will feel comfortable to address concerns publicly.

9.5.4 Summary of curriculum design’s influence on engagement

Across the 16-week blended learning module, students’ engagement is patterned rather than consistent. These patterns or demi-regularities have multiple, complex underlying causes. The physical learning environment – on or off campus – tends to make one social role and its related responsibilities more salient than others. As students on campus, participants are enabled to attend workshop activities by feasible attendance requirements. And face to face meetings help sustain motivation in the face of competing pressures. Additionally, a flipped classroom approach to readings and synchronous activities sets expectations for students to actively engage in group activities. However, as shown earlier, the manner of engagement is influenced by the salience of the hierarchically related NHS roles of those present. Supervisors benefit from discussions with peers but listen quietly or adopt a teaching approach with juniors. Off campus, students engage strategically with optional activities and online group discussions. This is due to the combination of role-related responsibilities, a role-based sphere of influence, tutors’ epistemological assumptions shaping the nature of the task and the grading system. The nature of the task may invite single answers to a question by each student, as well as an element of face-saving. Where tasks carry no points, they are by-passed and where they carry only single points regardless of quality or quantity of contribution, students meet minimum score requirements enabling them to prioritise other responsibilities. The competing demands of other roles can however be countervailed by authentic tasks for which learners may choose a personally meaningful focus and by the use of a grading scale rather than a binary point system. Engagement in authentic tasks engenders IoPP. Further, a safe or private learning environment supports sustained engagement in critical reflection on one’s own practice in ways that group activities do not. That is, intra-personal, critically reflective, personalised tasks maintain a balance between student and supervisor role salience. This causes personally meaningful learning through a range of lenses and consequently, IoPP.
9.6 Workplace Influences on IoPP

Despite its physical appearance of being an isolated, protected activity, educational supervision is embedded within postgraduate training and service delivery and is therefore subject to influence by staffing and training structures and by inter-related role holders. The latter include the Trainee, the Trainee’s Clinical Supervisor and the Educational Supervisor’s wider collegial team. This study finds that within a hierarchical organisation, the successful implementation of IoPP depends on a practitioner’s sphere of influence. That is Educational Supervisor’s attempts to effect changes to practice for groups of supervisors or to effect changes that fall outside policy are constrained by senior role holders (See Figure 25). Additionally, the norms endorsed and enforced by inter-related role holders constrain IoPP because educational supervision is viewed as subordinate to learning in and from clinical practice. Although curriculum designers explicitly aimed to address barriers to IoPP existing in the professional cultures of the workplace, the module’s predominant focus on individual supervisor’s behaviours and beliefs and on learning theories overlooked the influence of staffing structures, wider norm circles and the physical reality of educational supervision in NHS workplaces. These findings suggest that to support practice change, even at the individual practitioner level, CPD programmes for educators may need to look beyond learning theories.

9.6.1 Senior role holders constrain and enable IoPP

The actualisation or successful implementation of IoPP in the workplace is controlled by senior role holders and dependent on a supervisor’s sphere of influence. Senior role holders blocked the realisation of IoPP for two Educational Supervisors due to the nature or extent of the proposed IoPP. Ella wished for other supervisors in the workplace to understand how to better enact policy. That is, the extent of IoPP looked beyond her own individual practices to the wider department but recommended more rigorous adherence to the Gold Guide. Richard
wished to transform the nature and goals of the role by involving mentors and this not only challenged policy but also required involving other staff. That is, the nature of IoPP looked beyond policy and the extent of IoPP looked beyond his own individual practice. Both of these suggestions fell outside the Educational Supervisor’s sphere of influence (see Figure 25) and were therefore blocked by senior role holders. Since Richard and Ella were unable to gain their Training Programme Director’s consent, they were unable to put his plans into action across the department. Even on an individual level, Richard was blocked from realising IoPP because it would mean eschewing part of his official duties to support trainees in difficulty. IoPP then is not a simple matter of learners’ reactions to module resources, but is a socially situated activity, embedded in structures and therefore related to significant others.

Figure 25: A supervisor’s sphere of influence enables and constrains the extent and nature of IoPP

Where IoPP constitutes a challenge to policy and the formal role remit, an educational supervisor’s sphere of influence is inadequate to realise these changes without the support of senior colleagues. However, where an Educational Supervisor also concurrently holds a more senior role with a region or specialty, they have a wider sphere of influence and may therefore advance plans to challenge practice norms, as illustrated in Figure 26. For example, holding a
region-wide management role, Cassie was able to question and challenge policy and to begin implementing IoPP at a school wide level. Following module studies, Cassie wanted supervisors to meet more frequently with trainees to discuss matters beyond portfolio competencies. Since she runs and manages training sessions that focus on educational supervisors’ responsibilities, she is able to introduce these non-policy ideas into practice. That is, IoPP of a transformative nature or beyond an individual’s practice requires a wider sphere of influence as attached to more senior roles. According to the formal role remit, an Educational Supervisor’s role does not have these ‘powers’ within MMC structures whereas more senior role holders such as Training Programme Directors or Heads of School do.

**Figure 26: The relationship between spheres of influence and the nature and extent of IoPP**

Figure 26 visually presents findings from this study regarding IoPP and spheres of influence.
9.6.2 IoPP is constrained by clinical practice

IoPP is constrained by service delivery pressures and Clinical Supervisors’ views of educational supervision as subordinate to clinical working and learning in clinical practice. Service delivery pressures and Clinical Supervisors’ priorities can mean that the duration of educational supervisory meetings is reduced, or that educational supervision is interrupted or postponed. This limits the possibilities for developmental conversations. These workplace influences on educational supervision and IoPP arise because, while still in training, junior doctors are nonetheless NHS employees with service delivery responsibilities (cf. Sholl et al., 2017). They therefore work busy days and nights. While they care for patients, juniors are supervised by consultant doctors holding the formally recognised role of Clinical Supervisor (GMC, 2016). Educational supervision must therefore ‘fit in’ around these competing responsibilities. While Educational Supervisors’ job plans include time allotted for supporting trainees, observations of practice for the current study showed that, in reality, busy NHS working conditions mean educational supervision often takes place before or after shifts, during lunch times or on a trainee’s day off. And when educational supervision took place during the working day, it was necessarily subordinated to clinical work. That is, service delivery pressures and Clinical Supervisors’ views of educational supervision as less immediately pressing caused trainee supervisor meetings to be cut short or cancelled. Where a patient care emergency occurred, supervision (and my observation thereof) was necessarily postponed. Where a clinic ran over schedule, trainees arrived late for their arranged meeting with their educational supervisor. Alternatively, during the working day, Clinical Supervisors may call trainees back to clinical work, away from a meeting with an educational supervisor. These realities of the workplace result in fewer or shorter meetings that are less conducive to developmental conversations. This is compounded in part by the MMC requirement that an educational supervisor should review the e-portfolio. That is, supervisors must ensure portfolios contain evidence of trainees’ progression against nationally prescribed competencies, to show that trainees are engaging with the assessment process and that there are no signs of omission or struggle (Gold Guide, 2016). Therefore, with few opportunities to meet and in brief meetings, rich, developmental conversations are constrained by formal requirements.
While module studies ostensibly proffered feasible IoPP that was to take place within the supervisor-trainee pairing, this outcome does not occur in a simplistic or deterministic manner. Since educational supervision is embedded within healthcare and the wider training structure, trainees may arrive late for supervision. When a trainee arrived late for a meeting, the effect on the ensuing supervisory conversation is stark in most cases. For example, one of Anaya’s trainees twice arrived thirty minutes late or more for a meeting planned to last forty-five minutes over their lunch break. Anaya and her trainee therefore had less than fifteen minutes to talk and consequently took an administrative approach to ensuring parts of the portfolio were filled or scheduled to be so. This is in contrast to Anaya’s more trainee centred approach with her other trainee. Nonetheless, when this more developmental conversation was interrupted by the Clinical Supervisor who wanted to cut short the meeting, Anaya swiftly changed style to a didactic approach to ‘wrap up’ the supervision.

A trainee’s clinical activities then are prioritised over educational supervision. That is, Clinical Supervisors may interrupt a session to call a trainee back to work. Despite Anaya displaying a sign on her clinic room door reading, ‘supervision in progress, please do not disturb’, her trainee’s Clinical Supervisor entered the room and interrupted the conversation to ask the trainee about clinical matters. Anaya physically displayed her dismay with a small hand gesture and facial expression. However, in response, the Clinical Supervisor shrugged to convey that the situation was unavoidable and that her dismay was surprising: clinical duties take precedence. He finished by encouraging the trainee to return quickly to clinic, further downplaying the importance of the educational conversation. IoPP then is constrained by the embedded nature of educational supervision. While module curriculum designers had intended studies to lead to IoPP that is feasible within the supervisor-trainee pairing, educational supervision is not ring-fenced away from other professional colleagues and activities. Staffing structures which position trainees as busy service providers and Clinical Supervisors’ normative views of educational supervision as a subordinate activity reduce the potential for module students’ to consistently realise IoPP.
Additionally, the physical nature of most NHS buildings lags behind the more recent, formal view of educational supervision as important to trainees’ development. There are no dedicated rooms for educational supervision close to the clinical workplaces of trainees and supervisors. In some hospitals then, the physical distance between a trainee’s clinic and the space used by the educational supervisor compounds the effects of tardiness. George’s trainee, for example, arrived 10 minutes late for her final supervision in her rotation. She had left a clinical teaching session which had overran to attend her planned meeting with her educational supervisor. Due to the distance between the two locations, she arrived hot and breathless from running along lengthy corridors. Feeling rushed and pressured by expectations to conduct a complete review of the portfolio during this final meeting, the supervisor began immediately by offering a summary overview of feedback logged in the e-Portfolio to put the trainee at ease. At the beginning of the conversation, the trainee managed short phrases or one-word answers meaning the supervisor continues to talk and direct the conversation.

9.6.3 The physical quality of rooms influences IoPP

The physical spaces used for educational supervision then may also enable and even perpetuate other colleagues’ views that educational supervision is an administrative activity that can be interrupted. And other colleagues’ views influence the realisation of IoPP. That is, there is a cyclical connection between the physical learning environment and stakeholders’ perceptions of educational activities, and these play a role in IoPP. This study finds that in most clinical specialties, the physical quality of rooms for educational supervision does not yet match the value placed in the activity by MMC. Whereas in clinical activities, bespoke rooms are fit for purpose, the same is not true for educational supervision. Rather, the quality and location of rooms creates and perpetuates a view of educational supervision as an administrative activity which does not necessarily require privacy. And this may constrain IoPP. However, overcoming these barriers to IoPP lies beyond the role-based ‘power’ or sphere of influence of a single, Educational Supervisor. Most supervisors are unable to procure dedicated, private rooms for supervision and are therefore subject to interruptions which
continue while norm circles remain unchanged. This raises questions for CPD curriculum design. Should such barriers be overlooked because the CPD team cannot offer feasible solutions, or should such barriers be acknowledged with regret? Perhaps changes that lie beyond an individual’s sphere of influence could be addressed during student group discussions, to enable a sharing of ideas about how to minimise these. Or perhaps a different body of knowledge beyond learning theories, such as theories of change management may provide tools for addressing these barriers to IoPP.

The shared and non-private rooms used for educational supervision may influence a trainee’s willingness to openly reflect on difficulties in practice, thereby limiting a supervisor’s ability to support progression. This study finds that in many cases, supervisors met with trainees in shared offices, in clinical treatment rooms or in repurposed spaces which lack privacy. This leaves educational supervisory meetings susceptible to interruption by others who also need to use these spaces or to being overheard by others nearby. Such an environment may not be conducive to pastoral support or conversations about professional struggles. Further, having no option but to conduct educational supervision in these spaces may reinforce other colleagues’ views that the meeting is an administrative one which can be disturbed; that private, or difficult matters are unlikely being discussed. For example, in anaesthetics, Richard’s session with a struggling trainee in a shared office was interrupted by a colleague who entered to hang up his jacket, put down his bag and put on scrubs at the start of a shift. And in dentistry, Leslie’s session in the multi-purpose lunch and file storage room was interrupted by an administrator who had a message to pass on. Furthermore, such events are so normalised by my participants that interruptions by colleagues were not mentioned in interview. In psychiatry however, Connor benefitted from a private, sound proofed office space and from one hour a week of dedicated, uninterrupted time for educational supervision. In psychiatry then, educational supervision benefits from existing norms for clinical practice. These endorse time and space for regular, confidential conversations. And educational supervision in psychiatry is emulating this pre-existing, widely shared approach to supporting others. A quiet, private space for a meeting that is uninterrupted by colleagues is more conducive to IoPP; that is, to supervision as a developmental conversation. This positive
example from psychiatry also reinforces the cyclical connection between normative views of an activity and the physical resources dedicated to it, as shown in Figure 27.

Figure 27: The cyclical connection between normative views and physical resources

Supervisors are aware of and navigate these influences on their practice by meeting with trainees before and after shifts or on the trainee’s day off. This means clinical duties cannot cause a trainee to be late, nor be called back into work. Also, meeting late in the evening or early in the morning affords their conversations some privacy. There are fewer members of the team present in the environs, and patients clinics’ have either finished or not started. Yet should a CPD module espouse such solutions; and should student discussions conclude with a sharing of these practices? Learning theories tell us developmental conversations require a safe learning environment, a trusting relationship between supervisor and trainee and time for rich reflection. Might other bodies of knowledge offer ideas of how an individual supervisor could achieve these by overcoming rather than avoiding barriers to IoPP?

Findings from observation and interview of my most senior participant suggest a partial solution to the conundrum raised above. A supervisor concurrently holding a more senior role in the NHS may use their wider sphere of influence to overcome physical constraints on developmental conversations. Also, to change normative views of educational supervision
beyond the level of the individual practitioner, at departmental or School level. This suggests that CPD for educators may benefit by including content and activities that focus on the links between educators and educational managers and on theories of, for example, innovation or change management. Doing so may help educators engage with the wider structures and norms in which their work is embedded rather than tolerating, avoiding or clashing with them.

Holding a region-wide management role with responsibilities for training Educational Supervisors, Cassie relied on her greater sphere of influence derived from this role, to request a dedicated room be built during a refurbishment of her workplace premises. At the beginning of this study, Cassie’s workplace was being renovated and extended. She was using a cleaner’s cupboard for supervision and had been for some years. It was a small, very narrow room from which others’ conversations in the office beyond were audible. Module studies helped Cassie reconceptualise supervision as a developmental exchange between a senior and junior doctor. And her new sense of importance for the activity prompted her to request a dedicated, private space. When the refurbishment was complete, Cassie’s department had a bespoke room for supervision. If CPD is to help practitioners change rather than cope with existing practices, might an understanding of how to effectively involve those with a wider sphere of influence be useful? That is, might curriculum design further socially situate learners by acknowledging the influence of others on an educators’ work and by recognising that IoPP is embedded in multiple social structures and norm circles. To do so suggests CPD curricula need to involve other bodies of knowledge beyond learning theory.

9.6.4 IoPP is influenced by inter-related role holders’ contributions to the e-Portfolio

IoPP is also dependent on others’ contributions to a trainee’s e-Portfolio, in particular the Clinical Supervisor and the trainee themselves. Without these, an educational supervisor lacks much of the information needed for developmental conversations with trainees. That is, an educational supervisor’s work is connected in important ways to other healthcare
professionals’ work with their trainees. The work of these other colleagues influences whether and how module students can embody IoPP. Through working in clinical practice with the trainee, the wider team generate and record evidence of progression the trainee’s portfolio. For example, Clinical Supervisors add results of and feedback on a trainee’s workplace-based assessments. Other colleagues in the clinical workplace contribute to multi-source feedback on a trainee’s teamworking or attitude in clinical practice. Module studies encourage educational supervisors and their supervisees to synthesise portfolio entries into a ‘picture’ or ‘narrative’ of a trainee’s overall development. However, where countervailing influences have prevented others from populating sections of the portfolio, such IoPP cannot be actualised. For example, Richard is constrained from enacting IoPP because a trainee’s Clinical Supervisor has not recorded sufficient content in the portfolio. Additionally, because the trainee’s own Educational Supervisor was taking a lengthy leave of absence and Richard was acting as an interim supervisor. He was therefore unfamiliar with the trainee’s progress to date, had no prior access to the portfolio and found the portfolio too sparse for rich, reflective conversations about its content. Furthermore, the trainee’s explanation for a lack of portfolio content exemplifies the realist belief that events, or outcomes have multiple causes: the trainee’s clinical supervisor was busy planning a wedding and had not kept up to date with portfolio entries. In this context, Richard was constrained from immediately embodying IoPP because he must spend time at the beginning of the meeting reading the contents, rather than beginning in a trainee-centred manner.

“The first thing we need to do is - you should be able to let me in so that I can see all your stuff.” (Richard)

Richard spent almost nine minutes of a 45-minute conversation acquainting himself with contributions and omissions from the portfolio during which time there is almost no interaction with the trainee. Moreover, Richard could not engage in a developmental conversation about competencies because there was inadequate content to discuss and because Richard is concerned that the portfolio falls short of requirements. He and the trainee
then treat the portfolio as an administrative checklist for the next 11 minutes of their time together.

“It’s quite bare bones, isn’t it? Which means that I’ll probably have to look at all of these individually”. (Richard)

Almost 20 minutes passed before Richard encouraged a reflective discussion. Embodiment of IoPP then is constrained by inter-related role holders. An absent educational supervisor means as the interim supervisor Richard views the portfolio for the first time during the meeting. In it, insufficient input from a Clinical Supervisor offers little ‘food for thought’. This is due to influences in the Clinical Supervisor’s personal life. And, influenced by formal requirements of the supervisor role, Richard felt compelled to spend time checking sparse entries and gaps. In realist terms, IoPP is multiply determined by the contingency of the workplace and beyond.

“I’m only here temporarily, but we can talk about it if you want” (Richard)

Trainee input to the portfolio threatens IoPP. For supervisors deriving IoPP from conventional learning, a lack of trainee input into the portfolio has the potential to constrain IoPP. This is because their IoPP constitutes better role enactment according to the formally defined purpose of educational supervision. Where better role enactment means encouraging trainees to reflect and synthesise portfolio content into a picture of their progress, a lack of entries by a trainee constrains this approach. However, for supervisors drawing IoPP from a more transformative approach to learning, a lack of trainee input to the portfolio presents opportunities to discuss wider aspects of becoming a doctor, as well as formal requirements.

For Madhu, for example, IoPP means discussing (rather than tallying) formal requirements. However, his focus on formal requirements and a supervisor’s gatekeeping role caused him to ‘rescue’ a trainee who had not completed portfolio entries in good time. That is, Madhu sacrificed educational supervision in favour of performing a specific clinical reflection with a
trainee, to enable this reflective evidence to be added to the portfolio in time for review by the ARCP panel. Madhu spent over 17 minutes carrying out a mini clinical exercise (Mini CEx) to enable his trainee to fill a gap in the portfolio. In contrast, Cassie’s transformed view of supervision prompted her to engage in pastoral support, to seek out possible causes for a lack of entries. For the majority of their conversation, Cassie discussed the influence of family and other personal matters on becoming a doctor, before reminding the trainee that portfolio entries are necessary according to formal training regulations. Rather than providing evidence for the portfolio, Cassie enquired if the trainee had ideas of how to do so himself and signposted him to colleagues that he overlooked. Cassie’s approach then is one of encouraging the trainee to be proactive and to develop skills in self-regulation.

She also scheduled in an extra meeting to discuss the future entries, thereby exemplifying her developmental approach. The number of meetings is decided by learners’ needs not only by requirements set out in guidelines. The realisation of IoPP then is influenced by a trainee’s own input into the training process in combination with a supervisor’s view of the goals of supervision.

9.6.5 System changes limit IoPP

Alongside others’ input to the portfolio, a supervisor’s intention to engage a trainee in developmental discussions around training requirements is constrained by frequent changes in the training system. IoPP is also constrained by inconsistent or unclear information about these changes. The structure for training then is a highly influential causal factor in IoPP. Many participants noted that module studies highlighted for them the importance of knowing their trainee’s curriculum requirements. This is to enable supervisors to elicit trainee’s reflections on their progress against requirements. However, changes in the grading criteria for curriculum competencies, as well as in portfolio and exam formats, meant supervisors could not be sure how to frame a developmental conversation about these aspects. Supervisors therefore risk
treating the area of practice in question administratively, tallying numbers, or even bypassing the subject matter at hand. A pre-structured context in rapid flux is less conducive to IoPP.

Where recent changes rendered curriculum requirements unclear, supervisors and trainees were not sure how to frame discussions about them. Has a trainee done well by largely meeting requirements or should a conversation focus on ways to better meet them? For example, Jen and her trainee refrained from a reflective conversation about the trainee’s achievement of competencies because (at the time of observation) a recent change meant the number of required activities was unclear as shown below.

“Jen: We need to clarify if you need to do 40 or all 44 of these, at the meeting we went to they said 40 out of 44.

Trainee: [Senior colleague] sent an email round, he said it was 28 out of 44”.

Unable to resolve the matter, they moved on to other points. This is because a developmental conversation would take a different approach depending on whether a trainee who had carried out 28 activities was fully meeting requirements or falling far short of the prescribed number. For example, in the latter case, might the missing activities all concern the same clinical activity? That is, is the trainee bypassing troublesome aspects of practice that a supervisor could help address? (cf. Paice, 2009) Or is the system causing difficulties (cf. Steinert, 2013). Centralised training systems that require learners to meet benchmarks yet also move these benchmarks in an imprecise manner therefore constrain supervisors’ ability to engage in developmental conversations.

Similarly, changes in exam formats for junior doctors prevented supervisors from supporting trainees with discussions of exam taking skills. Richard wished to help a struggling trainee devise a more appropriate revision strategy more conducive to exam success. However, during their meeting, Richard learned from the trainee that the exam format was due to change. Unfortunately, neither supervisor nor trainee knew when or in what manner the exam would change, nor indeed whether the announced changes would affect the trainee. How then to engage in a critically reflective conversation about coping skills and learning approaches if it is
unknown which might be most appropriate for the exam format? Again, IoPP is influenced by changes in the training system.

9.6.6 External quality assurance limits IoPP: Last meetings revert to tallying

Influenced by the exigences of the annual cycle of quality assurance, many supervisors engaged in an administrative, tallying approach to a final supervision with a trainee. Knowing that on a specific date, a panel of training managers and members of the public will check the evidence contained in a trainee’s portfolio, in their last meeting prior to this event, supervisors sacrificed developmental conversations in favour of completing administrative requirements.

Since MMC, educational supervision is externally quality assured and monitored by a review panel known as the ‘Annual Review of Competency Progression’ (ARCP) panel. These panels inspect junior doctor’s portfolios and supervisor’s reports on trainees’ progression to pass judgement in the absence of both the supervisor and the trainee. An unfavourable outcome of panel review means a junior doctor may not progress to the next level of training. Therefore, since they are mostly unable to attend ARCP panel meetings to further explain portfolio entries or justify omissions, supervisors and trainees spent their last meeting together ‘ticking boxes’, ensuring ample evidence is clearly presented. In a brief conversation following my observation of a final meeting, George asked me for feedback on his supervisory style. I gently suggested there was more tallying than I expected, and George explained it was his “last chance” to meet the review panel’s expectations of a supervisor, by checking and agreeing upon all the evidence his trainee would submit for review. Therefore, while supervisors have derived IoPP that influences their initial and mid-term meetings, many supervisors shifted back into a tallying approach during a final meeting with a trainee. This resonates with Bob’s long held concerns that “the system” may cause supervisors to “revert” to prior approaches.

Retroductive thinking suggests this outcome is multiply determined by both the CPD and quality assurance and training structures. Module studies do not address trainee centred approaches to the final meeting. Instead, emulating the ARCP cycle, the end of module studies
focuses on how to write a more detailed supervisor report following a final meeting. Compulsory readings return to the quality assurance process for postgraduate training with explanations of the role of the ARCP review panel. And in the final module workshop, students critique a range of reports of varying quality and discuss what portfolio evidence might be needed to write a better report or how reports could more clearly refer to portfolio evidence. Students then practice writing ‘better’ reports using actual templates as used in practice. However, the module does not address ways of holding a final meeting which contains elements of ‘developmental feed-forward’. Instead, the main message about final meetings is that they should make trainees aware of a supervisor’s judgement on their progression through a review of evidence. That is, following a final meeting, a trainee should not be surprised by the judgement their supervisor records in the report submitted to the ARCP review panel. Arguably then, the module promotes an administrative approach to the final meeting in which supervisor and trainee agree how the evidence in the portfolio supports the judgement the supervisor will subsequently submit.

Here then, we see the context for practice involves expectations placed on supervisor role-holders by the regulatory structures for training. In this context, developmental supervisions are sacrificed to meet normative expectations embedded in a centralised quality assurance agenda.

9.6.7 Summary of workplace-based influences on IoPP

These concrete examples of supervision serve to highlight the complex and contingent influences on practice. Educational supervision is embedded in staffing and training structures and influenced by norm circles. Due to these real, causal influences, IoPP is more appropriately viewed as a socially situated, emergent potential of CPD rather than as a linear, unproblematic outcome. While the nature of CPD creates the possibility for and likely nature of IoPP, whether it is actualised in the workplace also depends on competing mechanisms and changes in context. In particular, training and quality assurance requirements, physical conditions, inter-
related role-holders’ other responsibilities and normative views of educational supervision as a subjugated to clinical practice can shape IoPP. These influences may permeate even within the supervisor-trainee pairing. A supervisor’s sphere of influence may therefore not be adequate for a consistent embodiment of IoPP even when implementing policy. Furthermore, a supervisor’s sphere of influence constrains IoPP beyond their individual practice whether this challenges policy or not.
10 Discussion of Findings

10.1 Programme theory refinements: A middle range theory of IoPP

The refined programme theory presented here argues that IoPP is multiply determined by causal factors in and beyond the immediate CPD context. This argument is underpinned by key concepts from the critical realist theory of emergence and in particular, Elder-Vass’s (2010) synchronic relational emergence theory. The framework on which this realist programme theory rests may therefore help enrich our understanding of how IoPP emerges from the social situatedness of formal CPD.

This chapter proceeds as follows. First, I give a brief overview of the refined realist theory which provides answers to my research questions. Next, I discuss in detail how the findings of this study contribute to theory and to practice by exploring fruitful avenues for enhancing our understanding of IoPP, as indicated in the extant literature. In each section, I show how these findings were made possible by the theoretical framework used to guide this study. In turn, this permits me to indicate ways in which this theoretical framework may be conceptually applied in further medical education research.

10.2 Overview of the refined realist theory

Findings related to the module structure and processes demonstrate that CPD is imbued with the ‘power’ to cause IoPP because of the nature of its internally related parts. The ways in which students and tutors engage with each other and with materials enables and constrains the possible nature or extent of IoPP. CPD structure then shapes (but does not determine) any eventual IoPP.

In addition, this study has shown that the CPD structure itself is shaped by overlapping causal structures in the wider practice domain. Here, these include the GMC, MMC and NHS staffing and funding structures. Staff and students reflexively deliberate these external influences and choose approaches to learning and intended outcomes accordingly.
Moreover, refinements to programme theory indicate that since students concurrently hold other roles in these contextual structures, the CPD context contains the potential for other role norms to become salient. I refer to this as role salience. The salience of multiple role-based norms can influence learners’ manner of engagement in CPD in positive or negative ways. CPD design which balances the influence of role norms offered the most productive learning experience in this study.

Further, ‘formal’ contextual structures are not the only influence on professional learning in the CPD context and any resultant IoPP. Over time, in different contexts, staff and learners’ prior professional experiences endorse normative expectations about learning and teaching. And both groups of stakeholders bring these expectations to the CPD context. These also help shape CPD learning experiences and IoPP outcomes.

Finally, factors in the workplace and wider practice domain also shape IoPP. At work, IoPP is shaped by the materiality of practice and a CPD participant’s role-based interactions with inter-related role holders. IoPP is constrained or enabled as colleagues reflexively deliberate how to enact their roles in the structures of the wider practice domain. In particular, this refined programme theory posits that IoPP is enabled and constrained by a role-holder’s sphere of influence in professional structures.

10.2.1 Contextual social structures influence learning and IoPP

Firstly, this study contributes to the medical education literature through its findings that the potential for CPD’s IoPP begins ‘outside’ the CPD context before a programme is designed. The empirical findings of this study resonate with theoretical works in teacher and vocational lecturer development, as well as professional learning which discuss how the wider professional context may shape the intended nature and goals of formal CPD (Eraut, 2000; Hodkinson, 1998; Kennedy, 2005; Schon, 1991). The theoretical framework adopted in the
current study permitted me to identify overlapping contextual structures as a causal influence cf. (Porter, 2017). These pre-structure the context for practice and therefore influence CPD staff decisions before and during CPD (cf. Archer, 1995). In particular, this study has shown the influence of ‘formal’ contextual structures in medical settings, namely the GMC regulatory body, MMC training structures and NHS staffing structures. The application of Elder-Vass’s (2010) synchronic relational emergence theory permitted me to see that staff’s actual choices in curriculum design were reflexively ‘filtered’ through these structural constraints, thereby shaping the nature of the module they designed. Arguably then, the presence of different contextual structures may prompt staff to design a different kind of CPD programme. And this begins to demonstrate the realist belief in contextual contingency. Findings therefore demonstrate that not only can CPD programmes be conceptualised as causally efficacious social structures with the potential for certain patterns of outcomes, but also the very nature of the CPD structure is formed, in part, in response to contextual structures. Here then, according ontological status to structures such as the GMC, MMC and NHS staffing systems permitted me to draw findings which offer a realist perspective on earlier conceptual and position papers in teacher and vocational lecturer education. That is, viewing the GMC, MMC, staffing systems and the CPD itself as instances of Elder-Vass's (2010) causally efficacious organisations helped explain staff choices in curriculum design, and how those choices make certain IoPP outcomes likely.

Similarly, during CPD, Educational Supervisors’ actual interactions with module materials and tutors were also influenced by these ‘external’ structures. Synchronic, relational emergence theory then helped avoid an overly deterministic view of formal CPD’s IoPP. Rather than focusing only on what learners ‘should’ do because of the module curriculum, synchronic relational emergence theory encourages an exploration of actual interactions and the reasons for them. Of note, this study shows that ‘causal forces’ beyond the immediate CPD context can prompt learners to change their approach to learning, viz. to epistemologically re-orient. The theoretical framework adopted here then offers medical education research ways of socially situating CPD programmes, staff, students, and outcomes in a wider professional context. This
helps address calls in the literature for process evaluations and richer explanations of IoPP which involve factors in the practice domain (e.g., O’Sullivan & Irby, 2011; Steinert et al, 2016).

10.2.2 Norm circles influence learning experiences

Findings have also shown how CPD students’ experiences during CPD can be influenced by norm circles for learning and practice. These too begin and develop ‘outside’ the CPD context, prior to enrolment in a CPD programme. Norm circles and the normative assumptions they endorse (cf. Elder-Vass, 2010) therefore ‘historicise’ learners (cf. Archer, 1995). This helps address the complexity of social life by providing an analytical tool to illuminate earlier or ‘background’ influences on learners’ reactions to CPD. As practicing medical educators, students in the current study had pre-existing expectations about the nature of formal learning with others. Students in this study had normative assumptions about how to enact the student and tutor role which had been developed through their own prior experiences of formal learning, as well as their experiences of teaching and learning in the clinical workplace. For several students these expectations matched productively with staff approaches during CPD. For others, fellow students’ enactment of the student role clashed with their expectations, causing frustration. For other participants, where their work-place based norm circles advocated small-group, problem-based learning, any transmission-based approaches deployed during CPD caused disappointment. Different again, some of the students who noticed differences between approaches to learning at work and on the module, perceived formal CPD as a unique context or opportunity to engage in learning as acquisition and application of theory, because this is not usual in their day-to-day educational work in the clinical context. The findings of this study then show that norm circles offer a powerful analytical tool to research students’ experiences of formal CPD in postgraduate medical settings. Realist evaluations of formal CPD’s IoPP to date have focused on learners’ reactions to and perceptions of CPD, largely without historicising or socially situating learners. This study shows that learners not only react to the CPD resources in the moment, but that they draw on prior experiences and norms to do so. Norm circles then help answer questions as to why
learners experience CPD in the ways they do. Here, IoPP outcomes show that students all felt more confident in their roles and included more education focused conversations into their supervisory practice. In addition, Elder-Vass’s (2010) norm circles help explain the various patterns of how and why these outcomes came about (cf. Pawson & Tilley, 1997). That is, this conceptual tool makes a powerful addition to the ‘process’ and ‘realist’ evaluation research tool-kit.

In particular, exploring norm circles and the normative assumptions they endorse can enable a focus on epistemological assumptions as it did here. In the context of educational research, a focus on normative assumptions about role enactment reasonably entails a focus on participants’ beliefs about how to be a tutor or student. These beliefs about role enactment are grounded in epistemological assumptions about the nature of knowledge and learning. It is important to understand the influence of epistemological assumptions because conceptual works in medical education have shown that the widespread use of common terminology such as ‘reflection’ may mask different epistemologies (Kinsella, 2007; Kinsella, 2009; Ng et al., 2015). Further, in the cognate fields of teacher education, different approaches to teaching and learning have been shown to lead to different outcomes (Amundsen & Wilson, 2012). Yet, my review of the literature indicates that epistemological assumptions remain largely unexplored during empirical evaluations of formal CPD’s IoPP (see section 3.7.2). As such, little is known about their influence on medical educators’ experiences of CPD or IoPP outcomes. The current study begins to illuminate these aspects. In particular, the realist evaluation research design used here helps this study contribute to practice and theory because it involved exploration of not just students’, but also staff’s epistemological assumptions. Importantly, findings here show that a team of CPD tutors may unknowingly hold different epistemological beliefs from each other about the nature and goals of CPD and how to enact their roles. Masked by a common language, here, these implicit differences were shown to cause frustration, confusion, and disappointment for students at times. In educational research then, norm circles and the enculturated views of role-enactment they endorse may clarify participants’ epistemological assumptions. Further, they can help explain
how these developed over time and in different contexts. Unearthing and exploring the effects of epistemologies may contribute to practice by providing medical educators with strategies for minimising the harmful effects of unproductive epistemological clashes. Future research in CPD for postgraduate medical educators could explore which strategies work for whom in which contexts and why.

10.2.3 Role salience in group discussions shapes manner of engagement

The notion of role-salience developed here further contributes to professional learning theory in postgraduate medical education by offering additional understanding of why adult professional learners engage in CPD in the ways they do. That is, this study demonstrates that including a focus on learners’ other, concurrent social roles can help explain engagement patterns in CPD. Through a focus on normative and synchronic role-based interactions, this study shows that manner of engagement in CPD is influenced by a complex interplay of logistical, pedagogical, and socio-professional factors. A careful balance of these factors is needed to facilitate meaningful engagement in CPD which can lead to IoPP. That is, IoPP is shaped by CPD structure, content, process, and multiple, concurrent role norms. I therefore posit role salience as a causal mechanism which shapes learners’ engagement in CPD and emerges from the interplay between these factors.

10.2.3.1 Role salience helps theorise time constraints on engagement

The notion of role salience posited here helps theorise the oft noted time constraints reported in empirical evaluations of formal CPD’s IoPP. It does so by viewing learners not just as CPD students, but also as busy professionals who must meet (at least) two sets of competing, role-based responsibilities. The current study’s theoretical framework included a focus on role-enactment, and this permitted me to identify learners’ multiple concurrent roles. Findings from staff and student data show that learners’ ‘other’ role as busy, working professional influenced staff’s curriculum design, and learner engagement. Firstly, this is apparent in staff’s practical decisions to offer flexible, blended learning. Staff’s chosen CPD structure and processes were
intended to sustain learner engagement and therefore, the logistics of curriculum design accounted for the competing demands of a busy professional schedule. That is, staff were cognisant that students’ NHS workloads may not be conducive to regular engagement with CPD on campus. Therefore, staff intentionally chose a flexible, blended learning model which included minimal contact time on campus and frequent, compulsory tasks online. Furthermore, each online task had a lengthy timeline for participation rather than a single point deadline.

Supporting staff’s beliefs or ‘programme theory’, students reported being glad of the logistical considerations included in curriculum design. Students noted that more frequent attendance on campus or fixed, single-point deadlines would have been difficult to fit into their busy working lives. As shown in the literature review, CPD logistical factors that acknowledge and respond to time constraints are key causal factors positively shaping learning and IoPP (e.g., Hewson, 2000; Leslie et al, 2013; MacVicar et al, 2013). However, role salience helps to theorise time constraints as the competition between expectations inherent in concurrent roles. Here, the expectations of professional roles compete with the expectations of the student role, influencing how learners use their time and energy and how they perceive CPD provision. This socially situates learners in multiple, causally efficacious social structures (cf. Elder-Vass, 2010) and offers causal explanations which acknowledge the complexity of social life (cf. Wong, 2018). In the current study, learners’ busy professional roles in NHS staffing structures help explain why learners had positive perceptions of flexible, blended learning. However, given these practical and logistical accommodations for busy professionals, it is difficult to explain learners’ minimal engagement in online discussions off-campus.

### 10.2.3.2 Epistemological underpinnings help explain strategic engagement off-campus

Focusing on the interplay between epistemological assumptions and role-based responsibilities helps explain why learners’ roles as busy professionals predominated off-campus, leading to strategic engagement in online discussions. Here, findings show that, off campus, learners’ roles as students became less salient. That is, the expectations of other roles
mostly overrode expectations of the student role. Thus, the theoretical tools used here permit
a contextually contingent and multiply determined view of professional learning.

Findings demonstrate that students and materials were related by inappropriate
epistemological assumptions for engendering multiple exchanges or balancing student and
professional roles in the off-campus context. In the current module, my own re-design of
online discussion tasks advocated an application of theory to practice. And this was not
conducive to maintaining student-role salience amid busy schedules off campus. Online tasks
requiring an answer to a tutor-selected question required only that each student display their
answer to it. Student exchanges were not needed to meet set requirements. Noticing this,
students reported that expectations of the student role could be quickly satisfied by providing
a single answer to a single question. As shown here, this led to procedural engagement (cf.
Gresalfi & Barab, 2011) where this means brief displays of accurate uses of course concepts
without critical engagement. Task design then reduced students’ motivation to explore a
matter further through discussion or questioning alone or with others. Therefore, despite some
students’ preferences for learning from problems or through reflection in the workplace, most
students took a procedural approach to online tasks. Here, tasks that encouraged and required
procedural engagement lacked the ‘power’ to engender sustained, multiple exchanges in
online discussions. Instead, task design permitted learners’ roles as busy professional to take
precedence. In the next section, I show that the salience of learners’ other roles also further
contributes to explanations of engagement and IoPP.

10.2.3.3 Seniority and face-saving in group discussions impedes active learning

Unexpectedly, this study found strategic, minimal engagement in group discussions on campus
as well as off. Together, role salience and epistemological assumptions help illuminate further
reasons for this. Here, I find that the nature of workshop and online discussions took on an
uncomfortable ‘confessional’ nature which threatened the role-based ‘face-needs’ (cf.
Goffman, 1967) of consultant supervisors. The threat to the professional reputation of these
roles (cf. Goffman, 1967) made the relevant role norms more salient than those of the student role. ‘Imbalanced’ role salience provoked face-saving in group activities, thereby limiting learners’ sharing of critical reflections on their own practice. This complements and extends findings elsewhere that strategic engagement occurs online due to the competing pressures of work and social lives (e.g., Archer et al, 2022), or that engagement during workshops can be disturbed by the demands of a busy clinical workload (e.g., Onyura et al, 2017). In addition, while the literature review in Chapter Three showed that other evaluations of formal CPD have mostly reported positively on group discussions, it found that studies have viewed learners primarily as learners and have not included an exploration of the epistemological assumptions underpinning group interactions. This study therefore contributes additional understanding to the ways in which epistemologies and multiple role norms interact to shape the learning environment, learners’ decisions, and emergent outcomes.

Findings show that during face-to-face interactions, consultant supervisors took evasive manoeuvres to avoid disclosures about their own practice. Here a focus on role norms permitted me to identify role salience as a causal mechanism embedded in learner interactions with each other and with materials. The epistemological underpinnings of workshop activities, in conjunction with group composition, did not manage the normative expectations surrounding senior and junior role-holders in hierarchical organisations. Consequently, current Educational Supervisors participating in this study perceived an ‘unsafe’ level of ‘exposure’. Therefore, supervisors listened to tutors and trainees rather than raising questions or contributing ideas; taught theoretical principles or tried-and-tested supervisory strategies to juniors rather than discussing concerns about their own practice and sought out peers for more private discussion during coffee-breaks. These strategies reduced learners’ recourse to the group for exploration of their own interests, concerns, or deficiencies. And this contradicts academic and Deanery tutors’ intentions for group work. Role salience, as influenced by epistemological assumptions then helps explain the surprising finding that students engaged minimally on campus. Imbalanced role salience undermined staff’s intention for active learning as well as their ongoing belief that workshop discussions are “the most useful” aspect of the module.
Online, learners also engaged minimally, and this can also be explained by the level of ‘exposure’ inherent in the task design and the ‘threat’ posed to non-student roles. In addition to being busy professionals, students indicated their minimal engagement with scored, online discussions was, in part, because they felt vulnerable ‘exposing’ less-than-excellent aspects of their practice to group members who were peers, juniors and sometimes strangers. Moreover, they believed other students felt the same way about online discussions. Students therefore chose to post short comments indicating how their practice already aligns with theory and with that of other group members. Elsewhere, opportunities to realise that others practice in similar ways has been shown to be enjoyable for learners (e.g., Foster & Laurent, 2013). Schostak et al (2010), refer to this as “professional triangulation” (p.591), but it may also limit learning and IoPP by not questioning the consequences of one’s practice for others (e.g., Kaufman, 2019) and by not envisioning more democratic ways of practicing (e.g., Kincheloe, 2004). Therefore, where online discussions intend a more critically reflective or transformative nature of learning and IoPP, role salience helps explain why this may or may not be achieved.

On campus and online then, supervisors perceived a “threatening delving” (Usher, 2009:182) into their practice, particularly in the presence of trainees. In this mixed group context, supervisor or consultant role salience was prompted by the nature of discussion tasks. Role salience therefore contributes to explanations of manner of engagement. Where the normative expectations surrounding participants’ non-student roles were ‘threatened’, students engaged strategically. Indeed, strategic engagement in both contexts lends support to role salience and epistemological assumptions as causal factors in IoPP because strategic engagement on campus cannot be explained by a lack of time to participate. Instead, findings about group work show that student engagement in discussions was strategic to minimise threats to the normative expectations of their other roles as knowledgeable, experts who guide others. This occurred because, on and off campus, students’ roles as NHS consultant and supervisor to junior doctor were somewhat overlooked. Unlike ‘learner as busy professional’, CPD design and delivery gave less consideration to ‘learner as consultant’ and ‘learner as supervisor’ as causal factors shaping engagement with discussion tasks. A focus on epistemological underpinnings, group composition and participants’ multiple role norms then
contribute to the refined realist theory of IoPP developed here. Further, these conceptual tools are widely applicable to other contexts for professional learning and medical education research.

10.2.3.4 Contextual training structures make specialist clinical roles salient during CPD

Students viewed differences in clinical roles either as a source of new ideas or as a barriers to learning from others. Here, contextual structures for practice, norm circles and conventional learning epistemologies help explain why multi-professional CPD groups had different experiences of group discussion. Firstly, I viewed learners in the current study as a multi-professional, not inter-professional group because they all perform the same educational role in varied clinical specialties. Inter-professional groups involve different specialties working together, in different roles with the common goal of enhancing patient care (Braithwaite et al., 2016; Ebert et al., 2014). That is, inter-professional groups perform different, inter-related roles in the same context. Students in the current study perform the same role in different contexts. These different contexts introduce explanatory causal factors for learners’ experiences of group discussions.

Where students’ ‘formal’, contextual structures for practice were recognisable to others, clinical roles became salient in positive ways and discussions endorsed new norm circles for supervision. For example, participants in surgery and anaesthetics made multiple mentions of being “nuts and bolts” or “black and white” supervisors. They reported learning “softer skills” from medics and psychiatrists. This included an appreciation for different learning styles among trainees and the benefits of eliciting trainees’ prior experiences as well as their plans and concerns. Listening to others’ contributions to group discussions then was a rich source of new ideas for enacting the Educational Supervisor role within the same formal structures for training. Surgeons and anaesthetists reported becoming more reflective about educational approaches as taught and discussed on the module. They also perceived the value of including learner-focused, cognitive, and affective aspects in their supervisory conversations. Of note,
these supervisors may be responsible for the same trainee at some point because trainees rotate through placements in different specialties during their years of training. However, even where supervisors are not responsible for the same trainee, MMC structures for postgraduate training shape practice. Conventional learning with and from others in the CPD context was therefore supported by similarities in the formal training structures in the wider practice domain.

In contrast, dentists felt disappointed that perceived differences in practice domains meant discussions with medical supervisors were difficult. Unable to perceive common practices or goals during conventional learning, clinical roles became salient in disruptive ways, and this reduced meaningful engagement. One dental supervisor believed group discussions about supervision could be more fruitful if the module provided information about the medical training system. Outside the CPD, the formal, contextual structures shaping practice for doctors and dentists are different. The two professions are regulated by different bodies and do not work together to supervise the same trainee. Indeed, dental Educational Supervisors in the present study referred to these differences, noting in particular that dental ‘trainees’ who work with dental Educational Supervisors are in fact, fully registered professionals. This differs from postgraduate medical trainees. CPD conventional learning then, highlighted these differences. Whether applying theory to practice or wishing to respond to others’ questions and concerns, dental supervisors focused on differences in their professional context as barriers to meaningful engagement with the group. Indeed, one dental supervisor considered issues for medical supervisors to be irrelevant to her practice. Instead, dental supervisors report most of their learning occurred while reading alone, listening to tutors’ presentations and while drafting assessments. For dentists then, IoPP did not emerge from group discussions because of (perceived) differences in formal contextual structures for practice.

Findings here resonate with earlier studies of ‘professional tribalism’ which suggest that CPD tasks should highlight common goals and skills for mixed groups, leaving specialty specific learning to smaller groups (Braithwaite et al., 2016). Moreover, the application of Porter’s (2016) contextual structures and Elder-Vass’s (2010) norm circles helps explain why such
learner groupings may be beneficial. That is because causally efficacious social and cultural structures beyond the immediate CPD context influence learners’ experiences of CPD. On campus, staff decisions positioned students predominantly as CPD students and experienced practitioners. This led to teaching and learning strategies underpinned by assumptions that groups form and perform unproblematically to share discussions of experience. However, overlooking differences in clinical practice domains presented some students with difficulties during workshop group discussions and consequently a loss of learning and IoPP. The conceptual tools of contextual structure and norm circles used here then offer possibilities for enriching our understanding of postgraduate supervisors’ experiences of and engagement in group CPD activities. In particular, they help address calls in the literature to involve the practice domain in explanations of professional learning and IoPP (e.g., O’Sullivan & Irby, 2011; Steinert et al, 2016).

10.2.4 Balancing role saliencies supports deep learning and IoPP

Intra-personal online tasks balanced the student role with learners’ other roles and were reportedly the greatest source of IoPP. This is because module assessments and readings were individualised tasks, underpinned by reflective practitioner\textsuperscript{10} and self-directed learning epistemologies. As such, they reduced levels of ‘threat’ to normative expectations of students’ other roles and invoked intrinsic motivation to remain engaged. By intrinsic motivation, here I mean that learners chose a goal they valued and developed strategies to reach it (Bandura, 1986 in Kaufman & Mann, 2014). (Kaufman & Mann, 2014) They also devoted attention and energies towards achieving these goals (cf. Sorinola et al, 2015). Several students spoke of following reference lists or conducting library searches to “really look into” interesting subjects during the module. Reportedly, they did this because the subject(s) resonated with their

\textsuperscript{10} With the caveat that students, Deanery and academic tutors held different epistemologies of reflection.
existing or emerging practice-based concerns. Some students also recall making time to read and “even” enjoying it. Consequently, this self-directed learning developed into a focus for module assessments.

While causal explanations of students’ perseverance with readings and assessments should undoubtedly involve GMC requirements for revalidation in educational roles, further causal mechanisms also help explain manner of engagement and IoPP outcomes. As shown above, I find the self-directed nature of these tasks balanced role saliencies. That is, adult learning principles helped maintain student role salience amid competing pressures of a busy schedule off campus. Further, the intra-personal nature of the tasks also reduced the level of ‘exposure’ to judgement from peers and trainees, thereby reducing the ‘threat’ to the normative expectations surrounding consultant supervisor roles.

As intra-personal tasks, readings and assessments then involved fewer barriers and a much lower level of ‘exposure’ than group activities. While reading or writing essays, students were free from frustration or confusion at others’ role enactment or unfamiliar practice domains. While working alone, students were not expected to help others apply readings or reflect on their practice. Individual tasks also greatly reduced the threat of the ‘confess and address’ approach that I found in group work. This is because fellow module students are not involved if or when students question their own practice or acknowledge concerns. Findings show that this ‘safety’ engendered conceptual and consequential engagement for most students and critical engagement for two (cf. Gresalfi & Barab, 2011).

Most students reported conceptual and consequential engagement with readings and assessments (cf. Gresalfi & Barab, 2011). That is, they sought to understand how the meanings of learning theories studied on the module could provide solutions to problems or offer ‘better’ ways of supervising trainees. The safety of individual tasks permitted supervisors to reflect on their own problematic areas of practice. Students reported IoPP such as ceasing unsolicited feedback because this was damaging the training relationship, eliciting trainees’ prior learning histories and actively listening to trainees to better ascertain trainees’ learning needs, or curbing social relations with trainees to reduce bias during assessments of practice.
Furthermore, for two students, the safety of readings and essays supported critical engagement (cf. Gresalfi & Barab, 2011) that they had not achieved in group discussions. These two students questioned the utility of the theories and rejected the guidelines studied on the module because these could not help with their concerns about trainees’ poor experiences of supervision.

Readings and assessments then reduced the level of ‘exposure’ to judgement by juniors or peers’ and thereby posed much less public threat to students’ professional reputations (cf. Goffman, 1967). Only tutors were privy to these reflections. Furthermore, students reported that being able to request formative feedback on draft assessments greatly reduced their anxiety over assessment content. Participants were therefore able to go beyond merely ‘surviving’ the minimal requirements of the task. They were able to improve their practice as supervisors through CPD student activities. These findings align with adult learning principles and widespread agreement that self-directed tasks and assessments drive learning (e.g., Knowles, 1990) but role salience offers an additional, complementary analytical lens for examining how so.

Firstly, assessments and other tasks may drive deeper learning if they balance multiple, concurrent role norms rather than ‘threaten’ or diminish one set of norms in favour of another. Secondly, a question of balanced role salience entails exploring the interplay between contextual structures, epistemological assumptions, and role norms to offer complex, causal explanations of how assessment drives learning. Findings here then suggest that these conceptual tools offer a robust addition to a realist research tool kit for use in wider medical education settings.

10.2.5 IoPP is shaped by learners’ spheres of influence in the practice domain

Finally, this study has demonstrated that IoPP is constrained by a practitioner’s sphere of influence. It was able to do so by conceptualising workplace teams as instances of Elder-Vass’s (2010) organisation. These are social structures comprising formal hierarchical relations as well
as various enculturated norm circles which shape practice patterns. Professionals in organisations are not free to do as they please following CPD; they are enabled but also constrained by the very role they hold, its responsibilities within formal structures and inter-related role holders’ enculturated views of their practice. Through this focus on a practitioner’s embedded sphere of influence this study further heeds calls in the literature to understand how the workplace and colleagues who work there are causally influenced in CPD’s IoPP (e.g., O’Sullivan & Irby, 2011).

Findings show that neither conventional nor transformative learning gains alone suffice to drive practice changes. Instead, in organisations such as MMC training programmes or NHS staffing structures, a role-based sphere of influence plays a key part in shaping IoPP. This is exemplified by a comparison of three module students who attempted to change other supervisors’ practice in their workplaces. These supervisors reported their greatest sense of IoPP from the module as having a departmental wide reach. Their IoPP plans either fell within policy (Ella) or looked beyond policy (Richard and Cassie) for all Educational Supervisors in their departments. Ella requested all Educational Supervisors be encouraged to engage in learner-focused, educational conversations. Richard requested all trainees be assigned a mentor with no formal assessment responsibilities, in addition to their Educational Supervisor. Cassie intended that all Educational Supervisors meet regularly with their trainees throughout a placement and away from the practice context, to discuss anything of interest to the trainee, whether required by the e-portfolio or not. However, only Cassie, the supervisor who concurrently held a much more senior role in the NHS was able to introduce these practice changes. The two other Educational Supervisors who attempted to introduce department wide changes were unable to do so. Their plans were rejected by the Training Programme Directors as more senior decision makers in their organisations. This demonstrates that gaining new knowledge, skills or values during CPD does not suffice for IoPP. Neither in-depth knowledge of the Gold Guide policy document or the learning theories studied on the module were adequate to drive changes at work. Instead, the success of IoPP or otherwise was shaped by inter-related role holders in the organisation and the CPD participant’s sphere of influence in relation to these significant others. As well as cognitive, affective, and behavioural aspects
then, IoPP has a social-relational aspect. It involves other people in other roles, embedded in influential professional structures. In hierarchically structured workplaces, driving changes to team practice or looking beyond policy requires being or involving a colleague with an appropriate sphere of influence.

A practitioner’s role-based, sphere of influence then provides a new analytical tool for theorising the constraints and enablements on IoPP. Practice change emerges not only from CPD learning but is also contingent upon a practitioner’s (hierarchically organised) relations to others in the workplace. The current study then builds on Elder-Vass (2010) work which posits roles as bundles of norms. Here, findings show that part of that ‘bundle’ involves normative, shared expectations about the range of decisions and activities a role-holder may engage in or lead. A role-based sphere of influence then offers a way to understand how doctors working together enable and constrain each other’s practice. This has implications for CPD design and the intended nature of IoPP. For example, CPD stakeholders may wish to explore locally influential factors shaping a professional sphere of influence and to ask what changes may be needed to extend or ‘defend’ a practitioner’s sphere of influence.

The notion of a role-based sphere of influence developed here suggests that for educators to introduce changes to practice for wider team members, CPD content needs to look beyond learning theories and educational policy documents. Instead, engaging with other bodies of knowledge during CPD may help educators suggest or lead changes at the departmental level. That is, to bring about IoPP above the level of individual practice, CPD content needs to help learners negotiate inter-related spheres of influence. This resonates with work by O’Sullivan and Irby (2011) who recommended looking to quality assurance frameworks and theories on dissemination of innovations as CPD content. They suggested enacting these bodies of knowledge supports changes to clinical practice and therefore advocated applying similar principles to faculty development. The notion of a sphere of influence developed here adds further understanding to why additional bodies of knowledge studied during CPD may support IoPP beyond the individual practitioner or beyond policy recommendations. Different
theoretical knowledge is needed to help practitioners recognise, negotiate, and perhaps expand a role-based sphere of influence.

Moreover, through observations of supervisors’ practice in their workplaces, this study finds that spheres of influence are not fixed and impermeable but are subject to disruption by peers’ and juniors’ norm circles which develop in the formal social structures for practice. Findings show that IoPP that seemingly falls within a supervisor’s control is sometimes curtailed by the materiality of practice and by inter-related role-holders who have no formal, organisational seniority over a supervisor. Here, norm circles surrounding service delivery and learning in clinical practice impinged on an Educational Supervisor’s sphere of influence. These norms acted as barriers to IoPP even within an individual supervisor’s own practice. Supervision as a learner-focused, educational conversation was impeded because trainees prioritised clinical duties and therefore arrived late and left early. This was compounded by spaces for educational supervision typically being far from the ward or the clinic where trainees were working. Also, learner-focused, rich educational conversations were disrupted because Clinical Supervisors, fellow clinicians and administrators interrupted sessions. On occasion, other clinicians spent considerable time in the same room as the Educational Supervisor and trainee, disrupting their privacy. In addition, Clinical Supervisors occasionally called trainees away from educational supervision, ending the session abruptly. Exploring trainees’ concerns or difficulties was also impeded by a lack of private meeting spaces for such conversations, with supervision taking place in cafeterias, lunchrooms, or shared offices. One supervisor used the cleaners’ tiny storeroom in an attempt to offer privacy to trainees. This demonstrates that inter-related role holders view educational supervision as less important than learning in clinical practice or as non-confidential, administrative meetings. It demonstrates that the funding structures are yet to recognise educational supervision as an equally important aspect of postgraduate training since the location and quality of physical spaces are not conducive to sustained, private conversations. All of these influences impede IoPP even within a supervisor’s own sphere of influence.
To manage the influence of some of these disruptions, supervisors met with trainees before and after trainees’ shifts or on trainees’ days off. This challenges staff beliefs that IoPP derived from conventional learning leads unproblematically to better role enactment. Instead, this refinement to programme theory demonstrates that IoPP is patterned and emergent according to the presence and influence of colleagues in the workplace, the tasks they are engaging in, and the values they hold. Learning then is a necessary interim outcome for IoPP but does not consistently lead to practice change. The notion of a sphere of influence posited here causally involves colleagues, hierarchy and norm circles in patterning IoPP.

Based on the literature review, I believe this study makes a unique contribution to the literature in identifying a role-based sphere of influence. Grounded in Elder-Vass’ (2010) work on synchronic, relational emergence theory and organisations as causally efficacious structures, this conceptual tool offers medical education research a new lens for identifying further causal factors shaping IoPP. Role-based spheres of influence socially situate CPD students as practitioners in professional contexts and causally involve the materiality of practice, as well as networks of colleagues in the workplace in shaping IoPP.

10.2.6 Summary

The refined programme theory posited above provides answers to my research questions. In undertaking this study, I wanted to know what manner of IoPP staff intended and why, and how they envisioned CPD could bring that about. I also wanted to understand the student experience and their IoPP outcomes because my reflections on differences in learners’ workplaces suggested that a ‘one size fits all’ explanation would be insufficient. I wanted to know what worked for whom in which contexts and why (not). The conceptual framework applied and developed here acted as a lens and a sieve. It focused my attention on a select group of contexts, mechanisms and outcomes but intentionally let others slip out of view. Elder-Vass’s (2010) notion of causally efficacious organisations and synchronic, relational emergence helped me focus on patterns of IoPP which emerge from role-based interactions in
the CPD and workplace contexts. Furthermore, viewing the GMC, MMC and NHS staffing and funding structures as instances of overlapping contextual organisations showed that IoPP has complex causal explanations that begin before students enrol, continue throughout module interactions, and extend into everyday practice. These explanations involve stakeholders’ roles in, or reflections on, large scale social structures, also, local enculturated norms or norm circles for role enactment (cf. Elder-Vass, 2010) and staff and student agency in light of these (cf. Archer, 1995; Porter, 2017).

By focusing on epistemological assumptions underpinning participants’ tutor and student role enactment in the CPD context, this study helps address an important gap in the postgraduate medical education literature. It lends further support to earlier work in cognate fields that argues different approaches to teaching and learning have the potential for IoPP outcomes of differing natures. Importantly, the realist evaluation research design adopted here was able to identify different sets of epistemological assumptions among staff and students alike. And these were shown to have implications for the student experience and outcomes.

In focusing on the multiple social roles that CPD learners concurrently hold, this study makes a unique contribution to the postgraduate medical education literature through its identification and exploration of role salience. Viewing CPD students as more than just students brought into focus the normative assumptions related to experienced, busy, consultant supervisors and clinicians. Contextually contingent role salience influenced learners’ engagement in CPD and therefore IoPP outcomes. This offers a realist theory of oft-noted time constraints on professional learners’ engagement in CPD. Role salience also contributes additional understanding to learners’ perceptions of (un)safe or (un)productive learning environments. Here, learners indicated balanced role salience led to their most comfortable learning experiences and greatest sense of IoPP.

In observing and exploring supervisors’ actual practice in NHS workplaces, and through a focus on structures and role-norms, this study makes a unique contribution to the literature through its identification of a role-based sphere of influence. Roles within structures constrain and enable the range of activities that role-holders may lead or engage in. Consequently, here, IoPP
beyond policy recommendations or beyond an individual’s own practice was influenced by spheres of influence relatively senior to that of the Educational Supervisor. Moreover, IoPP in line with policy recommendations and at the individual practitioner level was not consistent. Instead, formal structures and norm circles ‘prompted’ inter-related role holders to disrupt a supervisor’s sphere of influence, thereby impeding IoPP on occasions. Relatedly then, spheres of influence suggest that educator development programmes focusing on educational policy or theory alone may be insufficient to consistently produce IoPP. Instead, other bodies of knowledge such as leadership theories may help practitioners extend or ‘defend’ their sphere of influence. Future research may wish to explore what works for medical educators in which contexts and why.

10.3 Limitations of the current study and suggested further research

As a realist, I am cognisant that this study sets out my current understanding of a glimpse at IoPP. The refined programme theory posited here is enabled and constrained by the context of this study including the time and location, my capabilities and resources, the situations of my participants and the prior knowledge we draw on, as well as the conceptual framework I applied and further developed for this study.

This study is situated in a particular socio-temporal context. This, along with my own practice-based research questions and values may facilitate the study of some mechanisms and outcomes, but obscure others. Research in other contexts may show how other mechanisms operate to produce different outcomes (cf. Pawson & Tilley, 1997). The causal mechanisms and the outcomes studied here may therefore be elaborated or challenged by future research elsewhere (cf. Fleetwood, 2017). Here, as module tutor and leader, I sought ways to understand my colleagues’ practice and my students’ needs in order to improve my own teaching practice. I have focused on the social situatedness of the module and all its members. I did so because I sought to understand if or how I should adjust the curriculum in light of regulatory body requirements, or enablements and constraints in the NHS workplace or CPD
contexts. Some contributions to this study by staff and students suggest future research may elaborate understandings of IoPP by examining professional and social life histories. In-depth exploration of students’ references to family members’ influences on learning and IoPP lay beyond the scope of this study, but could contribute further, enriched understanding of professional learning and IoPP. That is, research into ‘learner as family member’ could enhance theory and practice.

Here, the overall research design shapes understanding in specific ways which may be elaborated or challenged by outsider or team-based research. As a close to practice study, conducted by a sole researcher, at particular locations and points in time, I provide only a limited view of a complex, emergent reality. Realist researchers believe in a pre-existing, pre-structured reality and realist studies seek to explain social life (Archer, 1995). To do so requires gathering multiple views or fragments of this reality to piece together an explanatory account (Emmel, 2013). Yet the chosen conceptual framework and the necessary boundaries of my temporal and physical location limit the view I can offer. To minimise this limitation, I have strived to involve multiple sources of data, collected in different contexts and to relate my actions, thinking and findings to existing research. This helps fit my glimpse of reality offered here into existing understanding of formal CPD’s IoPP. Nonetheless, conducting research with my own colleagues and students raises the possibility that participants attempted to please me with their contributions (cf. Denzin & Lincoln, 2011). Had I been an outsider researcher, particularly during interview, participants may have shared different perspectives with me. These may have provided different views of causally efficacious structural mechanisms and their interplay with people’s agency. However, I feel that the range of positive and negative emotions and experiences that participants shared with me suggest the current study was not negatively impacted by our close working relationships. Instead, it was shaped by it.

Observational studies of CPD workshops may extend findings. As I was fully engaged by delivering the module at the time of data collection, I was unable to observe module workshops and therefore relied on tutor and student self-reports as well as my own reflections. Exploring tutors’ facilitation and students’ participation strategies by audio or video recording
workshops may have made different findings possible. Nonetheless, by not recording workshops, I believe student and tutor interactions were more natural and this provided rich contributions to my study.

Involving other stakeholders during data collection could also extend findings. Due to a combination of my chosen focus and practical considerations of my own resources, I have not included Educational Supervisors’ trainees or other colleagues as participants in this study. Yet findings indicate multiple inter-related role-holders influence IoPP. Therefore, future studies may find it informative to involve such stakeholders to better understand other influences on IoPP. In particular, findings related to a practitioner’s sphere of influence and the extent of IoPP suggest the need for more understanding of how and why these spheres are created in relation to other role-holders, beyond explanations of organisational hierarchy. Future research may also ask whether and how CPD in educator development can extend a practitioner’s sphere of influence. Which bodies of knowledge may support Educational Supervisors to influence or change educational practices more widely?

Here, ethnographic observation made possible the finding that norm circles endorse a view of Educational Supervision as subordinate to clinical practice and learning. More in-situ observations of actual rather than simulated practice could contribute richer understanding of norm circles’ influence on IoPP. From this study, questions arise such as can or should inter-related role-holders’ normative views of educational supervision be changed? If so, how? What physical, financial, or cultural resources may be involved?

Finally, the development of a realist theory of formal CPD’s IoPP was limited by logistical constraints on my own and participants’ involvement. Firstly, I was unable to procure participants’ agreement to check transcripts or analytical memos. Due to busy schedules, participants declined such involvement. Therefore, I checked my understanding of situations and comments in-situ, during interviews and after observations. Nonetheless, some questions occurred to me in the later stages of this study because my thinking developed over time after iterative engagements with participant data. For example, I was unable to ask staff and students how they might feel about a more transformational model of CPD for Educational
Supervisors. A drawback of realist evaluation then, is that both stages of programme theory
develop over time meaning that further exploration of all emerging findings is not possible in a
single study. Future research may then see benefit in exploring whether and how those
involved in medical educator development negotiate or even resist the influence of
formalisation and standards which feels ever present in the context of this study and my
current practice.

10.4 Conclusion

In conclusion to this thesis, I reflect on how my earlier normative assumptions shaped the
beginning of my doctoral research journey and how inter-related role holders in this journey
have impacted on my own professional practice. I began with a concern that module content
may not be of use to all learners in their varied professional contexts because practical
differences and ‘system’ constraints might render some ideas irrelevant or infeasible. I also
knew I wanted staff and learners to tell me what they valued, what they found difficult and
why. This was the beginning of my journey in recognising my own world view as critical realist
and the influence of formal structures on my approach to teaching on the module.

As a newcomer to realism, I was at first enthralled with realistic evaluation’s use of the
Context-Mechanism-Outcome configurations. I felt it had powerful potential to address the
contextually contingent, patterns of events in medical education. However, in the realist
evaluation literature, I perceived inconsistent ontological underpinnings and a surface level use
of labels. Soon after, I turned to Bhaskarian critical realists such as Elder-Vass, Archer, Porpora
and Porter. The belief that groups of people can cause effects in the world resonated with my
life’s experiences. Subsequently, focusing on the influence of causally efficacious, contextual
social structures on practice (such as MMC), I discovered that scholars in the wider, cognate
fields of educator development had critiqued the limitations of CPD that focuses
predominantly on policy enactment. These works showed me that encouraging IoPP as
standardised practice often deployed transmission and application based, deficiency focused
approaches to teaching. I noted scholars’ published concerns that such approaches may curtail practitioner creativity or overlook their values. Consequently, I realised that my own, initial focus on learner values was limited to focus on what they valued among the transmitted content. Yet, despite these works and despite adopting a more learner-driven, reflective practitioner approach to teaching on other modules I taught at the university, I struggled to see how approaches other than technical rationalism could be appropriate on the current module. That is, in the current climate of national standards for postgraduate medical education and training and in the context of formal professional learning, I saw structure purely as a constraint that should be adhered to. I struggled to conceive of it as a stimulus for re-envisioning practice. Before data collection or analysis, I was unsure how learner-lead transformations of Educational Supervision could be possible. Today, I am grateful for the wiser, more experienced voices of the module staff and students who taught me to embrace complexity and diversity. I thank them for inviting me to their NHS workplaces, for the time they gave and insights they shared. Finally, I recognise and am grateful for the constant, encouraging support and thought-provoking questions that my supervisor so deftly offered throughout this research. These prompted me to reflexively deliberate hitherto unquestioned assumptions. They helped me situate my teaching and research practices in wider discourses so that I could perceive the inter-connectedness and complementary links between multiple approaches. My supervisor’s guidance helped polish my new critical realist window onto reality. From it, I now perceive complex, inter-related causes of IoPP as an emergent property of CPD. Going forward, I shall continue seeking ways to understand these so that I may better support my learners.
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Appendix 1. Ethics approval, University of Cambridge, Faculty of Education

RESEARCH ETHICS REVIEW CHECKLIST FOR FACULTY OF EDUCATION

The Faculty’s Three Stages of Ethical Clearance

**Stage 1** involves you in completion of this Ethics Review Checklist. This is the first stage of three. It will help you (and others) decide to what extent you need to become involved in the second and third stages. When you have completed it you (and the Faculty) will be in a position to make this judgement.

**Stage 2** will involve you in discussing any ethical dimensions of your research in some depth with your another ‘knowledgeable person of standing’; this is a very likely outcome of completing the checklist. Further details are provided in Section C.

**Stage 3** will involve you in obtaining formal ‘ethical clearance’ through the Faculty of Education’s procedures; some projects will need to proceed to this stage. Further details are provided in Section C.

Most of the questions on this checklist deliberately offer you just two answers (‘yes’ or ‘no’). You will probably find that you can answer many of the questions unequivocally one way or the other. However, sometimes you may wish there was an ‘it depends’ response category. If you find yourself in this position, please give the answer which suggests that, at this preliminary stage, there might be an ethical issue requiring more discussion at Stage 2.
RESEARCH ETHICS REVIEW CHECKLIST FOR FACULTY OF EDUCATION

Section A: Details of the Project

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Alison Wells (nee Devine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:Ad772@cam.ac.uk">Ad772@cam.ac.uk</a></td>
</tr>
<tr>
<td>Supervisor</td>
<td>Dr. Sue Brindley &amp; Dr. Yongcan Liu</td>
</tr>
<tr>
<td>Supervisor email</td>
<td><a href="mailto:Sb295@cam.ac.uk">Sb295@cam.ac.uk</a> &amp; <a href="mailto:yl258@cam.ac.uk">yl258@cam.ac.uk</a></td>
</tr>
<tr>
<td>Registration Report Title</td>
<td>A Realist Impact Evaluation of Blended Learning for NHS Educational Supervisors</td>
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Section B: Checklist

<table>
<thead>
<tr>
<th>Code of Practice relating to Educational Research</th>
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<tr>
<td>1a Have you read the <em>Revised Ethical Guidelines for Educational Research (2011)</em> of the British Educational Research Association (BERA)? (if you have not read it, the latest version is available at <a href="http://www.bera.ac.uk/researchers-resources/publications/bera-ethical-guidelines-for-educational-research-2011">http://www.bera.ac.uk/researchers-resources/publications/bera-ethical-guidelines-for-educational-research-2011</a>)</td>
</tr>
<tr>
<td>1b Is this Code relevant to the conduct of your research? If you have answered ‘no’, please briefly explain why:</td>
</tr>
<tr>
<td>1c Do you agree to subscribe to the Code in carrying out your own research?</td>
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</tbody>
</table>

If you have answered ‘yes’, please briefly list possible causes for concern below:

a. My own current, adult students will be invited to be actively involved in my research into my own practice and our university’s blended learning provision. However, to help my students choose whether to participate or not, and to subsequently gain their informed consent, I will ensure that potential participants “understand the process in which they are to be engaged, including why their participation is necessary, how it will be used and how and to whom it will be reported.” (BERA, 2011:5). In brief, I am asking for their help in evaluating and improving our provision for future students. I do not anticipate any detriment to arise from participation or non-participation in my research. For example, those who choose not to participate will not be treated any differently during the course of their module studies or grading of assessments. My invitation to participate will make this clear, as will my employing university’s QA processes (such as collection of student voice data at any time throughout studies and formal module evaluations). As researcher, I will continue to treat my individual participants “fairly, sensitively, with dignity, and within an ethic of respect and freedom from prejudice” (BERA, 2011:5), just as I treat them as their academic tutor.
Since my upcoming study will be a case of the dual role of teacher and researcher, I am maintaining a reflexive diary to raise my own insight into, and take measures to lessen, any negative impact of my study on my students, participants and colleagues.

For example, I recognise that my dual role introduces “explicit tensions in areas such as confidentiality and must be addressed accordingly” (BERA, 2011: 5). I will explain to participants that while my name and institutional affiliation would be made public during any presentations, academic reports or publications of my study, the anonymity of participants could be assured (unless they wish otherwise), as I will use a system of pseudonyms for people and workplaces involved. All participants will have the same roles (university student and NHS educational supervisor) therefore, I do not expect participants to be identifiable through named roles. Furthermore, personal identifying data about students is not released into the public domain by [redacted] University, thereby preventing the ‘mapping’ of reported findings against lists of students’ names. Nonetheless, I will reiterate to participants their right to withdraw at any time (up to a certain, pre-determined future date which far exceeds the end of data analysis, shortly before my final academic submission is due), by contacting a gate-keeper or me, whichever they prefer, without need to explain their decision, unless they wish to.
BERA (2011) warns that “social networking and other on-line activities...present challenges for consideration of consent issues and the participants must be clearly informed that their participation and interactions are being monitored and analysed for research.” (p.5). I will involve no deception or subterfuge on this matter. During the normal course of studies, my students discuss module readings online with each other and me, their tutor in a ring-fenced discussion forum to which only we have access. Therefore, I will make it clear to them that I will engage with their discussions in two ways: firstly, as academic tutor seeking to support their studies and secondly as researcher seeking to ameliorate our provision. As I intend to include a double hermeneutic loop within my analysis of participants’ online contributions, I will be sharing my initial analyses of each participant’s online posts with the person in question, asking for their input or interpretation of it. Any use of extracts from online discussions will be reported using pseudonyms for people and workplaces.

3a  Will you be analysing an existing data set that has already been collected by someone else?  No

3b  If you answered YES: can you confirm that the data you will be using is either

  Already available in the public domain for anyone to analyse

  Or

  You have been given permission by the owner of the data set to undertake your own analysis and results

11 this permission should only be given if the owner of the data can make it available for secondary analysis on the basis of the informed consent they obtained from their original participants
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<th></th>
<th>Question</th>
<th>Yes/No</th>
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<td>4</td>
<td>Will you be collecting your own research data for the study (through such techniques as interviewing people, observing situations, issuing questionnaires etc)?</td>
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<td></td>
<td>NB. If you have answered NO to this question, you may proceed to Section C and need not answer any further questions in this section.</td>
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<td></td>
<td><strong>Obtaining ‘Informed Consent’</strong></td>
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<td>5</td>
<td>Are you familiar with the concept of ‘informed consent”? (if you are not familiar with this concept you should first consult the following source: page 5 of the BERA guidelines above).</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>Does your research involve securing participation from children, young people or adults where the concept of ‘informed consent’ might apply?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Permission is likely to be needed to report any information about people or institutions that is not in the public domain, and which you have been able to obtain due to your privileged access to the research site(s) in whatever capacity</td>
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<td><strong>If you have answered ‘yes’ to Question 6 above, please answer the following questions.</strong></td>
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<tr>
<td>7a</td>
<td>Do you believe that you are adopting suitable safeguards with respect to obtaining ‘informed consent’ from participants in your research in line with the Code of Practice?</td>
<td>Yes</td>
</tr>
<tr>
<td>7b</td>
<td>Will all the information about individuals and institutions be treated on an ‘in confidence’ basis at all stages of your research including writing up and publication?</td>
<td>Yes</td>
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**Note:**

Professional work (such as teaching) can involve the collection of evidence to better understand problems/issues and to evaluate innovative practice - leaving practitioners with the question of when these activities become formal research requiring informed consent. This comment is meant to highlight how the collection of data for public reporting *beyond the institution* (e.g. *in a thesis*) should be considered as a key criterion for deciding when informed consent is required.
### 7c(i) Will all the information collected about the institution(s) where research is based be presented in ways that guarantee the institution(s) cannot be identified from information provided in the report?

No

Note: in a thesis written by a researcher about a research context where they have a publicly acknowledged role, it is difficult to disguise the identity of the institution whilst also providing the expected detail of the researcher’s relationship with the research context.  

### 7c(ii) If not, has the appropriate responsible person given approval for the research on the understanding that the identity of the institution cannot be protected in the report of the research?

Yes

### 7c(iii) Will all the information collected about individuals be presented in ways that guarantee their anonymity?

Yes

Note: a person with a named role, or having a specific set of reported characteristics that is unique in the research context, cannot be assured of the anonymity when the identity of the research site cannot be protected.

### 7c(iv) If not, have these issues been explained to the relevant participants (and appropriate gatekeepers in the case of children or other vulnerable participants)?

Yes

---

**The Involvement of Adults in the Research**

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13 At present the implicit assumption is that anonymity is always desirable*, and is always achievable. In many studies these assumptions are sound. However, a practitioner (e.g. teacher) reporting research into their own practice/institution in a thesis would normally need to be explicit about their professional relationship to the research context to give an authentic account of their research. As the staff lists of many educational institutions are in the public domain and often readily found by a web search, a thesis by a named member of staff allows the institution to be readily identified from the name of the thesis author.

Given that an institution can readily be identified, this also has consequences for the degree of anonymity that can be promised to participants - for example those with named roles such as Head of Year 11, Student Voice Coordinator, Head Prefect, etc, or those identifiable from detailed reported characteristics.

* Some institutions or participants may welcome being acknowledged by name in a thesis, and their views should be taken into account and balanced against other considerations.
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<th>Question</th>
<th>Answer</th>
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<tr>
<td>8a</td>
<td>Will your research involve adults?</td>
<td>Yes</td>
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<td></td>
<td>If you have answered ‘yes’ to Question 8a above, please answer the following questions; otherwise move to Question 9.</td>
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<td>8b</td>
<td>Will these adults be provided with sufficient information prior to agreeing to participate in your research to enable them to exercise ‘informed consent’?</td>
<td>Yes</td>
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<tr>
<td>8c</td>
<td>Will the adults involved in your research be in a position to give ‘informed consent’ themselves with respect to their participation?</td>
<td>Yes</td>
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<tr>
<td>8d</td>
<td>Will these adults be able to opt out of your research in its entirety if they wish to do so by, for example, declining to be interviewed or refusing to answer a questionnaire?</td>
<td>Yes</td>
</tr>
<tr>
<td>8e</td>
<td>Will these adults be able to opt out of parts of your research by, for example, declining to participate in certain activities or answer particular questions?</td>
<td>Yes</td>
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8b-8e: The Involvement of Children, Young People and other potentially Vulnerable Persons in the Research

| 9a | Will your research involve children, young people or other potentially vulnerable persons (such as those with learning disabilities or your own students). | Yes    |

9a: If you have answered ‘yes’ to Question 9a above, please answer the following questions; otherwise move to Question 10.

In educational and social research ‘informed consent’ regarding access is often given by a ‘gatekeeper’ on behalf of a wider group of persons (e.g. a head or class teacher with respect to their pupils, a youth worker working with young people, another person in an ‘authority’ position).

9b: Who will act as the ‘gatekeeper(s)’ in your research?

Please list their position(s) briefly below and, where this is not self-evident, describe the nature of their relationship with those on whose behalves they are giving ‘informed consent’. **The researcher cannot act as the gatekeeper (see 9g below)**
My research will involve my own, adult students who give informed, voluntary consent to participate. My PhD Supervisors, Dr. Sue Brindley and Dr. Yongcan Liu have agreed to act as gatekeepers, not in the sense that they will give informed consent on my participants’ behalves, but that they will act as points of contact for any participant who has comments, concerns or questions about the research that they would rather not discuss with me.

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<tr>
<td>9c</td>
<td>Will you be briefing your ‘gatekeeper(s)’ about the nature of the questions or activities you will be undertaking with the children, young people or other potentially vulnerable persons involved in your research?</td>
</tr>
<tr>
<td>9d</td>
<td>If another person (such as a teacher or parent of a child in your study) expressed concerns about any of the questions or activities involved in your research, would your ‘gatekeeper(s)’ have sufficient information to provide a brief justification for having given ‘informed consent’?</td>
</tr>
<tr>
<td>9e</td>
<td>If unforeseen problems were to arise during the course of the research, would your ‘gatekeeper(s)’ be able to contact you at relatively short notice to seek advice, if they needed to do so?</td>
</tr>
<tr>
<td>9f</td>
<td>Could your ‘gatekeeper(s)’ withdraw consent during the research if, for whatever reason, they felt this to be necessary?</td>
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<tr>
<td>9g(i)</td>
<td>Are you undertaking research into your own professional context/institution (e.g. with students in a school where you work)?</td>
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<tr>
<td></td>
<td>If you answered ‘Yes’ then you should identify (in 9b above) a suitable senior person who has agreed to act as an independent point of contact for participants to act as the gatekeeper, and answer the following two questions:</td>
</tr>
<tr>
<td>9g(ii)</td>
<td>Will you ensure that other people in the research context are aware of the identity of the gatekeeper?</td>
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<tr>
<td>9g(iii)</td>
<td>Will you take reasonable precautions to ensure that research participants (and where appropriate their parents/guardians) know that they should contact the gatekeeper (and not you) if they have any concerns about the research?</td>
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**Other Ethical Aspects of the Research**

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<tr>
<td>10</td>
<td>Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g., covert observation of people in public places)</td>
</tr>
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<td>Question</td>
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<tr>
<td>11</td>
<td>Will the research involve the discussion of topics which some people may deem to be ‘sensitive’? (e.g., sexual activity, drug use, certain matters relating to political attitudes or religious beliefs)</td>
</tr>
<tr>
<td>12</td>
<td>Does the research involve any questions or activities which might be considered inappropriate in an educational setting?</td>
</tr>
<tr>
<td>13</td>
<td>Are drugs, placebos or other substances (e.g., food substances, vitamins) to be administered to study participants or will the study involve invasive, intrusive or potentially harmful procedures of any kind?</td>
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<td>If you have ticked ‘Yes’ it is vital to refer the matter to the Faculty Research Office for onward reference to the University Insurance Section.</td>
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<td>14</td>
<td>Will blood, tissue or other samples be taken from the bodies of participants?</td>
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<td>15</td>
<td>Is pain or more than mild discomfort likely to result from the study?</td>
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<td>16</td>
<td>Could the research involve psychological stress or anxiety or cause harm or negative consequences beyond the risks encountered in normal life?</td>
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<td>17</td>
<td>Are there any other aspects of the research which could be interpreted as infringing the norms and expectations of behaviour prevailing in educational settings?</td>
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<td>18</td>
<td>Are there any other aspects of the research which could be to the participants’ detriment?</td>
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<td>19</td>
<td>Will the study involve prolonged or repetitive testing?</td>
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<td>20</td>
<td>Will financial inducements (other than reasonable expenses or compensation for time) be offered to participants?</td>
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SECTION C: Interpretation of Results

If any of your answers coincide with the response options having a coloured background, then you should assume that further discussion involving Stage 2 procedures is required because some aspect of your proposed research is likely to be 'ethically sensitive'. In practice, many issues can be resolved at this stage. Members of staff should be especially careful about research involving their own students (question 9g). If you have ticked 'yes' in response to one or more of questions 10 to 20, both Stage 2 and Stage 3 clearance will definitely be required.

Stage 2 Clearance

Any 'ethically sensitive' responses identified above should be discussed with a 'knowledgeable person of standing'. In the case of students within the Faculty, this person will, in almost every case, be the person supervising your research.

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<td>a</td>
<td>I have discussed the ethical dimensions of this research and, as outlined to me, I do not foresee any ethical issues arising which require further clearance.</td>
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<tr>
<td>b</td>
<td>There may be some ethical issues arising from this research. I think it would be prudent for the researcher to seek further advice and, possibly, Stage 3 clearance.</td>
</tr>
<tr>
<td>c</td>
<td>Ethical issues arise in this research which require further discussion; my advice is that Stage 3 ethical clearance should be sought.</td>
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Supervisor Name/ Signature

Sue Brindley/ Yongcan Liu

Date 20.12.16
Appendix 2. Informed consent sheet for module staff

Dear Colleague,

Please could I ask for your help with my PhD study?

Please would you read the information below about my study and your potential involvement. Then, if you wish to give your informed consent to be interviewed, please would you sign this form and return it to me so that I may keep it. I assure you that I will keep this form in a locked drawer to which only I have access for up to 5 years after I complete my PhD, and then after that time, I will shred and dispose of the paperwork.

ABOUT MY STUDY

I am conducting a realist evaluation exploring any impact that the module might have on students’ practice as Educational Supervisors. As such, my study involves comparing module staff’s hopes and intentions for change with students’ experiences and outcomes. Therefore, I would like to interview you as the first stage of my data collection. I will later be interviewing and observing our students at work. From this, I hope to gain a better understanding of the many enablers and barriers to implementing studies in the medical workplace. Ultimately, I hope this will inform curriculum design to some extent, but also inform tutors’ practice, especially my own.

My study has gained ethical approval from the University of Cambridge, Faculty of Education

OUR INTERVIEW

I would like to talk with you about module design and delivery to understand how it could influence our students' practice. To prepare, I have examined the validation (eVal) documents. From these, I have gleaned some initial ideas (termed a ‘Programme Theory’) and based on these, I have prepared a visual aid for our discussion which I will bring along on the day. As a member of the commissioning group and module tutor, I would like to ask for your help in enhancing this theory. I will ask you to please add in things that I have
overlooked. Also, please feel free to amend or completely remove any of my ideas. If you consent to be interviewed, I would gladly discuss any (non-confidential) aspects of the study that are of interest or use to you.

CONFIDENTIALITY AND FURTHER INFORMATION

I anticipate that our discussion will last about 45 minutes and I would like your permission to audio-record the interview so that I can later transcribe it. We will meet in a private classroom or office on campus, at your convenience. I will store the resulting audio file in a password protected cloud account. In the transcription, I will anonymise our conversation by assigning you a pseudonym. I will store digital transcriptions and any related documents in a password protected hard drive, and paper copies in a locked desk drawer.

I will keep data confidential and when discussing my study with my PhD Supervisors, will only refer to “my participants” or “my colleagues”. I will retain data for the next 4 years, or until I complete my PhD, whichever is soonest, unless you instruct me otherwise.

However, I will gladly share with you any data pertaining to your participation.

Eventually I hope to publish and present aspects of my PhD, but please rest assured that in any dissemination of my study, I will refer to you anonymously, using a pseudonym, unless you wish otherwise.

If you would like more information, please feel free to contact me at any time by phone, email or face to face. If you would prefer to discuss my study with my PhD Supervisors, please email

[supervisors names and email addresses redacted]

RIGHT TO WITHDRAW

If you agree to join in and later change your mind, you are entitled to withdraw at any time up to the date that I prepare the final draft of my PhD thesis for examination. Please notify me of your wish to withdraw via email, on the phone, or by contacting one of my
supervisors instead. I will respect your decision. I will neither ask for reasons (unless you wish to give them), nor try to dissuade you. I will completely delete any data we have generated together and remove any use of it from my study and thesis.

If you consent to participate, I hope it will be a useful experience for you and I would gladly discuss any (non-confidential) aspects of the study that are of interest or use to you. I will also gladly feedback to you my findings in due course.

If you would like to offer your voluntary, informed consent, please could I ask you to indicate this by completing and signing the box below and returning this sheet to me. I will then email you a scanned copy for your records.

Name:

Preferred email address for communications:

I hereby give my informed, voluntary consent to be interviewed for the study described above:

Signature:  

Date:

Thank you for your generous support of my study.
Appendix 3.  Informed consent sheet for module students, Cohort 1

Request for informed, voluntary consent to participate in an evaluation study

Dear module student,

Please could I ask for your participation in my PhD study at the University of Cambridge?

Using a realist evaluation, I am researching whether this blended learning module at [university name] can support your teaching and supervisory practices at work. And if so, how and why. In brief, that means I am interested in finding out what does or does not work for whom, in which contexts or circumstances and why (not).

If you are already an Educational Supervisor, please could I ask you to read further and consider giving your voluntary consent to join in?

My Study

I have designed a study which involves asking you, my module students, which aspects of your blended learning studies influence you to change, or want to change, your professional practice as an Educational Supervisor and why. And, exploring the contexts for Educational Supervision in the NHS.

I assume that you will find some aspects of module studies useful and may wish to implement changes at work because of them. Sometimes this will be unproblematic, but sometimes, due to the realities of NHS workplaces, you may not be able to implement those changes. I also assume that some aspects of our module studies may not have any impact on your practice at all. Still other aspects may offer reassurance that what you have been doing all along is best practice and to be maintained. I refer to these possibilities collectively as impact-on-practice. I hope my study will inform subsequent curriculum design for this module.

My study has gained ethical approval from the University of Cambridge, Faculty of Education
If you agree to participate, I expect that your involvement would last throughout the module, and ideally three months beyond. I would like to please ask that your involvement extends past the end of the module to allow me time to collect enough data. That is, from September 2017 to end of February 2018.

During your participation, I will ask that you please allow me to collect your module Learning Agreement, observe you during supervisory sessions at work and participate in a one one-to-one interview with me. Full details below.

Details of Your Participation

1) **Allow me to analyse your online module learning agreement** to develop my evolving theory of impact-on-practice. This involves me looking at your contribution to this module task for any indicators of how the module could bring about impact-on-practice for you in your context and why (not).

2) **Allow me to observe you in your workplace**, educationally supervising your postgraduate trainee(s), I ask that you please allow me to audio record your conversation while I observe and learn from your practice, and that you allow me to do this:
   a) once towards the end or just after your module studies (whichever is more convenient)
   b) and, if you agree, at least once more after the module ends, up to February 28, 2018

We will arrange observations at mutually convenient times. I will take a minimum of your time before and after my visit to observe, unless you wish to discuss the event more, in which case I am happy to spend more time discussing it face-to-face, over email or by phone, whichever suits your schedule best.

3) **Participate in an interview with me after your module studies have finished** to help me check the theory of impact-on-practice that I am building. I will explain how I am
finding the module can bring about impact-on-practice in the workplace and ask that you please:

a) let me know if my ideas resonate with your experience,

b) correct or amend any propositions that you feel do not (fully) apply to you and your context,

c) offer any propositions that you feel I have missed.

I am happy to share with you my (evolving) ideas about how the module is bringing, or could better bring about, impact-on-practice at any time.

Whether you opt to join my study or not, your experience as a module student, your access to, and professional relationship with module tutors and your eventual module grade will in no way be affected, positively or negatively. If you do not wish to participate, I completely understand and will not ask for reasons or try to persuade you otherwise.

Confidentiality and Further Information

Any data we generate together will only be accessible by you and me: My audio files and my emails are stored on a secure server and are password protected. However, I will gladly share with you any data pertaining to your participation, e.g., the audio recordings of your supervisory sessions.

I will keep data confidential and when discussing my study with my PhD Supervisors, will only refer to “my participants” and “their trainees”. I will retain data for the next 4 years, or until I complete my PhD, whichever is soonest, unless you instruct me otherwise. Eventually I hope to publish and present aspects of my PhD, but please rest assured that in any dissemination of my study, I will refer to you anonymously, using a pseudonym, unless you wish otherwise.

If you consent to participate, I hope it will be a useful experience for you and I would gladly discuss any (non-confidential) aspects of the study that are of interest or use to you. I will also gladly feedback to you my findings in due course.
If you would like more information, please feel free to contact me at any time by phone, email or face to face. If you would prefer to discuss this study with my PhD Supervisors, please email

[Supervisors’ names and email addresses redacted]

**Right to Withdraw**

If you agree to join in and later change your mind, you are entitled to withdraw at any time up to the date that I prepare the final draft of my PhD thesis for examination. You may notify me of your wish to withdraw via email, letter, on the phone or by contacting one of my supervisors instead. I will respect your decision. I will neither ask for reasons (unless you wish to give them), nor try to dissuade you. I will completely delete any data we have generated together and remove any use of it from my study and thesis.

If you would like to offer your voluntary, informed consent, please could I ask you to indicate this by completing and signing the box below and returning this sheet to me. I will then email you a scanned copy for your records.

Thank you for your time in reading this information sheet about my study.
Sincerely

[Signature]

Senior Lecturer, Postgraduate Medical Education and Part time PhD Candidate

My place of employment, email addresses and phone number redacted
Appendix 4. Informed consent sheet for module students’ trainees

Request for informed, voluntary consent to participate in an evaluation study

I would like to ask for your help with my PhD research. I am exploring whether and how a module at [university name redacted] influences Educational Supervisors’ subsequent teaching and supervisory practices. And why (not).

I am therefore asking my module students which aspects of their studies influenced them to change or want to change their professional practice. I assume that sometimes module students will find aspects of this CPD useful, but due to the realities of NHS workplaces, won’t be able to implement those changes. Also, that some aspects of our module studies will lead to changes in working practices while other aspects will not convince students to change at all. Still other aspects may offer reassurance that what module students have been doing all along is best practice and to be maintained. I hope my evaluation research will inform subsequent curriculum design and tutoring practices for the module in question.

My study has gained ethical approval from the University of Cambridge, Faculty of Education.

YOUR INVOLVEMENT

Your supervisor has kindly agreed to help me with my data collection and has agreed that I could observe their workplace supervision. I would therefore like to ask for your informed, voluntary consent to participate by allowing me to observe, audio record and take notes about the workplace teaching that your supervisor offers you. And the context in which s/he works. I will not interrupt or get involved in your session(s) with your supervisor.

If you agree to participate, I expect that your involvement would take the form of allowing me to observe your supervisor teaching you once and possibly once more at a later date, up to the end of August 2018. I do not anticipate needing to contact you any further by phone or email. If we do exchange emails, these will remain confidential between you and me. If
you do not wish to participate, I completely understand and will not ask for reasons or try to persuade you otherwise.

If you consent to participate, I will gladly discuss any (non-confidential) aspects of the study that are of interest or use to you. I will also gladly feedback to you my findings and outcomes from this research.

CONFIDENTIALITY

Any data we generate together will be accessible only by you, your supervisor and me (e.g., audio recordings of conversations and my notes about the environment). My audio files and my emails are password protected in a secure server. I will keep data confidential and when discussing research design with my PhD Supervisors, will only refer anonymously to “participants”. I will retain data for the next 4 years, or until I complete my PhD, whichever is soonest, unless you instruct me otherwise.

In the future, I hope to publish and present parts of my doctoral research, but assure you that, in any public medium, I will use pseudonyms to refer to any data pertaining to participants.

If you agree to join in and later change your mind, you are entitled to withdraw at any time, by simply emailing me. I will respect your decision. I will neither ask for reasons (unless you wish to give them), nor try to dissuade you. I will completely delete any data we have generated together.

If you would like more information, please feel free to contact me at any time by phone, email or face to face. If you would prefer to discuss this study with my PhD Supervisors, please email

[supervisors’ names and email addresses redacted]

If you would like to offer your voluntary, informed consent, please could I ask you to indicate this by completing and signing the box below and returning this sheet to me. I will then email you a scanned copy for your records.
Thank you for your time in reading this information sheet about my research.

Sincerely

[Signature]

Name:

Preferred email address for research related communications:

I hereby give my informed, voluntary consent to participate in the study described above:

Signature: Date:
Appendix 5.  Email request to arrange student interviews

An email sent to each student participant, from my work-based email address, towards the end of module studies, to arrange an interview about IoPP:

Dear [student name redacted]

Thank you again for so kindly helping me with my PhD. I really appreciate it. I was wondering if I could please interview you about the Educational Supervisor module? I’d like to gather your views on what impact - if any - it has had on your real-life practice. Don’t worry, I’m not expecting you to tell me everything we studied has been useful at work; I expect some of it was, some of it wasn’t and some of it could have been, but the realities of working in a pressured NHS mean you just can’t make the changes you want to.

I could meet you in a place and at a time that suits you and expect that we might talk for between 45 minutes to an hour. I’ll ask you questions about your experience on the module and at work, but I don’t have an ‘ideal’ answer in mind. I’d really like to learn from you. Also, please feel free not to answer any of my questions.

Please would you let me know if I could interview you some time in the near future? Thank you again for your continuing support of my PhD studies.

With sincere appreciation

Ali
Appendix 6. Sample of a theory gleaning interview transcript

INTERVIEWER: (Explaining programme theory. Explaining theory gleaning. Asking for Bob’s confirmation, expansion, correction of the programme theory, of ways in which staff hoped the module would change students’ practice).

BOB: I suppose the first thing that came to mind is that it wasn’t just a one-off process. It wasn’t that we had a clear idea of this is where we’re going to go. It was... like most things, it evolved. So...and I suppose the evolution started before..., well in my mind, it started even before we came to think about er er a university course [Interviewer: Aaah] So the whole thing started off, when I, when I, when I was first appointed as an Associate Dean, it was with er... the remit of developing the educator role in education as a result of the, I think it was 2006 was it? MMC? Modernising Medical Careers was published, so the role of the medical educator received a higher profile than it had done previously. Er, there always was a profile, in that, back in the day trainees – and I, myself when I was a trainee, went on a ‘Teaching the Teachers’ course [Interviewer: OK, yeah] but it was an afternoon of theory, how to run a lesson plan and that kind of stuff, it wasn’t particularly helpful for you as a medical educator in the workplace. Erm, so there was always that there in theory, but medical, MMC erm.. required that we expand the profile and the quality of medical educators, so that’s really where I was brought in. So, my starting point if you like was to improve the courses that were then running to something that was more appropriate for what I perceived to be the requirements of primarily trainees because as the Deanery, as the Deanery we were responsible for making sure that trainees turned out at the end of their training all right [Interviewer: yes, yes]; we had to support them to do it. 5:18 We weren’t primarily responsible for the consultants, they were the responsibility of their employers, the Trusts. Although we had inf, influence over that through our contracts with the Trusts, but we weren’t primarily responsible for that. So that was where I started from. And I started off, er [Team member name] erm ...er, who started off with me had an interest in er...e- e-

INTERVIEWER: eLearning?
BOB: eLearning and he was he was a student here and he had just started off as the FPD in his hospital in Rochdale so he had started running a little course of his own that he had devised, so we put our heads together and that’s, that’s what we started off with really an improvement on [Team member name]’s course [Both: laughter] that was our starting point. And an improvement on [Team member name]’s course that we would then put on the Deanery eLearning platform, so that was the starting point if you like, but of course you know, it evolved and we decided that a) we need to be able to reach a bigger audience than we, just the two of us could reach a) and b) we needed to have it quality assured.

[Interviewer: OK, yes.] So that’s where the, ‘Oh well perhaps we should go down the university route’ came in, so that’s that’s what that happened. So then when we went down the university route, erm...my initial, my big initial worries were that that was going to be too time demanding for many...many doctors [Interviewer: mmm, mmm]. So my personal er thoughts were er that we should have very minimal er credits, er very minimal university credits er to get the very basic qualification for everybody and then significantly more credits for those that wanted it thereafter. [Interviewer: I see, yep.] Erm, so that was my initial thoughts, that was my how I wanted to do it, but then 7:20 of course, we went through the er c-commissioning process and Edge Hill won the, won the tender and the way that Edge Hill put it together with the breakdown into the three modules of twenty credits made sense and they said ‘look we, to break it down into anything less than 20 credits is going to make it academically difficult, perhaps not demanding enough, etcetera, etcetera’. So the ante was upped, as it were, through the need to get the academic credibility [Interviewer: Right, ok!] So that, that’s where, that’s when we first broke it down into the Clinical Supervisor, Educational Supervisor and then the Educational Manager for three twenty credit modules. So that’s where that came from, not having set out on that route at all [Interviewer: at all], that’s where we ended up at. Erm, (pauses) but ultimately, what we were trying to do was as you’ve described really, although the actual mechanisms for achieving that came much more from the university staff than from the Deanery from the, well from the, from the, well from me or [Team member name], because that was the expertise they were bringing to the table. The expertise, well the expertise we were bringing to the table were the practical experiences the, the type of, the type of things
we wanted them to do because we knew what they weren’t very good at, so the things that you’ve mentioned. We knew that people weren’t very good at writing proper Educational Plans, we knew that people weren’t very good at writing proper Supervisor Reports. So they were, they were key things that we wanted to incorporate into the academic whole as it were. So that’s where the two, as you’d expect in a partnership, that’s where the two lots of expertise came together. So that’s, that’s really I suppose where it started, erm...

INTERVIEWER: And of course you were very familiar with the context that the doctors, our students worked in?

BOB: Yes, that’s right.

INTERVIEWER: More so than we were.

BOB: Yes.

INTERVIEWER: Where they worked and what struggles they faced in their daily work?

BOB: Yes, Yes! And that was, and I think remained, and still - if I was still involved probably still remains, it would be my biggest concern, what you've described really, is there a gap between theory and reality? I mean there is obviously in some places, more so in some places than others, but how, are we narrowing that gap? And you know, that’s what you’re trying to find out [laughs].

INTERVIEWER: Yes, I’m trying to find out – I’m trying to find better ways of narrowing it if we’re not narrowing it really. And I am noticing it’s getting harder and harder for our students to get time to study…[Bob: Right]…to even come here. Erm, and I think that even if we were theoretically to find why students take learning into the workplace, I think that one of the barriers that we’ll always find are the service pressures, contractual pressures, the tiring, busy, busy working day. And it’s getting... from students’ comments and emails, erm, it’s getting worse and worse, it’s getting harder and harder for them.

BOB: Yes, I accept that and I accept that that’s the reality for young people, I’m going to sound like an old fogey here [Both: laugh] but I do have a worry that the world at large, not
just in medicine, but I think medicine is just another example, the world at large er, expects more to be given to them and [Interviewer: yes] don’t expect to put so much into achieving a) and b) they demand a better work life balance and I think that’s a challenge, you know, to be very philosophical a challenge for the human race, but it’s certainly a challenge for the medical profession because to... to do well in medicine you’ve always had to go above and beyond and more and more people nowadays, I’m not going to say not prepared to, I don’t think that’s fair, but they do see the outside world as being increasingly important so they erect their own barriers more, or barriers is perhaps a bit, they set their own limits, not barriers, [Interviewer: yes] they set their own limits [Interviewer: yes] more and that’s a, that’s a bigger challenge

INTERVIEWER: I am really reassured to hear that though, because I’ve been thinking about it. [Bob: mmm] I think the same thing is happening in academia [Bob: mmm] to be a Professor you would have to dedicate your life to your studies, but more and more people are recognising, I want a work life balance [Bob: yep]. I want to achieve the Professorship, but I want to have all these evening and weekend hobbies and [Bob: yep, yep] I completely, I completely agree [Bob: yep, yep].

BOB: So I think that’s a real challenge and I think erm, I think there’s a expectation that real they, or somebody or the powers that be or whatever will create a framework that is a more idealistic framework for them to be able to achieve that within and of course, the real world doesn’t always work like that [Interviewer: No]. Er...and I think it’s probably more difficult for individuals within the system, despite what we talk about: Leadership, can come from anybody; I think it’s probably more difficult for that leadership to make change within the system because the system is very constrained [Interviewer: mmm, yes, yes] So yeah, so I do have that worry about it but I think there will always be some highly motivated [Interviewer: yes!], committed individuals, but I think they, the generality will probably never be be quite so and that, that remains a worry for me for these things [points at screen/Logic Model of PT] you know, the ‘reflecting on other people’s experiences’ I think is a valuable theory and er, my, my personal view is that I learnt a lot, and continue to learn a lot as to how other specialties did it. You know, having spent 20-odd, 30-odd years in my
specialty, that’s how we did it, seeing how other people did it differently is a bit of an eye opener [Interviewer: It is!] and creates, er, huge advantages [Interviewer: mmm, yes]. So I hope that really is still a real positive for these people, but my worry is that they will revert once they get back into their environment [Interviewer: yes!]. If there, if they’re small numbers of them, they will be overpowered by the overall system that stops them changing things. The counter side to that is one of the things we were trying to do with this, to create this, this critical mass of people who have been through the course, this critical mass of people who do think differently and once you get to that tipping point then eventually you will change something hopefully. Whether we’ve got anywhere near the tipping point, I don’t know.

INTERVIEWER: I think, I’ve always remembered you telling the students that ‘you’re part of the culture change, [Bob: mmm] you’re driving the culture change, we’re going for this critical mass’ [Bob: mmm]...I’m not sure we’re there yet, but that’s no reason to stop at all, au contraire, I’m still hearing my students talk about struggles [Bob: mmm] so that a phrase like ‘that’s all well and good, but...’ [Bob: mmm] erm, often comes up [Bob: mmm] but some of that is not necessarily, I don’t think, about time and the number of patients they have to see and how busy they are. I think some of it is to do with knowledge about education [Bob: mmm], erm, so for example, the students will say erm, ‘sometimes you just need to tell them, so, you know, you might write their Learning Agreement for them and give it to them and it’s a contractual obligation; they’ve got to do that’. So I’m really hoping that some of the things that we do can change their mindsets, so really, yeah, it’s about, it’s about teaching them a new discipline really, that education is, err a theoretical and a practical discipline, teaching them some new knowledge and some new skills and having them identify ways that they can use it in the workplace because we never – I think what concerns me is that we never go into the workplace. We study here in the classrooms and we study online and we don’t assess or evaluate or observe or go into their workplaces.

BOB: We did start that, didn’t we? - observations of practice [Interviewer: We did] er, and and it was interesting, erm, but the er the practicalities of that, the time required were the, were the very limiting factor, but having said that, as well, most people chose something
non-clinical. [Interviewer: they did]. Most people chose a lecture or a tutorial type scenario, [Interviewer: they did], erm, so you know...

INTERVIEWER: Again, I think that might have been because we didn't have the clinical staff that could go and observe [Bob: yep] and observe clinical practice. [Bob: Yes, absolutely, yeah, yeah...practical, practical reasons, yeah, yeah, yeah].

BOB: So although we, I mean originally we did set out with that intention when we set out the original intention was to very much have more clinical input to the teaching [Interviewer: mmm, mmm]. It was very much a fifty fifty [Interviewer: yes] but the practicalities were, I mean if you remember we tried very hard to recruit Clinical Tutors [Interviewer: yes] and involve them but it was extremely difficult [Interviewer: yes] extremely difficult for the same reasons – time.

INTERVIEWER: Would you say because I've been pondering this especially now we have very few clinical tutors and those that we have tend to be a Learning Set tutor online, it's it's really hard for them to get out of practice to come and teach a workshop or and meet the students. Originally, do you think that we wanted those Clinical Tutors to help convince our students 'Look, I'm a I am a clinician and an educator...' [Bob: Yeah] 'this can be done...' [Bob: Yeah, yeah] '...and here are the benefits to doing it'.

BOB: Yeah, yeah. I think that’s that was important, that was definitely one of the original thoughts. Yeah. Because I think if you talk to many doctors, particularly perhaps of my era, I'm sure there are other eras as well, they would, they find it difficult to conceive of education because it’s a different discipline, it's a social science not, you know, not an aca–erm, not a standard erm what would you call it not an ordinary science [Interviewer: like a hard science?]. So they are used to you know er rigid trials and p-values and all this kind of stuff and stuff that doesn’t sit within that kind of environment, they find difficult to accept to understand, believe in [Interviewer: value?] Yes, value, that’s right, so they do need someone that er who has been through that and can relate to it and demonstrate how it works or how it can work, er so I think having the kudos as it were of the clinicians is, was definitely part of the original plan to convince people of its value. For sure.
INTERVIEWER: Because even if all the educators were professors of education, they come from a different discipline from a different field and so there might, they might there might be an appreciation of ‘yes, you’re an expert in your field’, from our students looking at the professors, ‘yes, you’re an expert in your field, but that’s not my field’. [Bob: No, that’s right, that’s right]. So we needed those dual role people, didn’t we? Those...

BOB: Yeah and particularly people who were, I mean I was always seen as being on the other side, I think because I came from the Deanery, although I did always try to talk about ‘in my clinical practice’, but people always perceived you as being not mainstream because you were part of the Deanery. So it was most valuable to try and get people who were Educational Supervisors and people who were for want of a better term no more than Educational Supervisors. [Interviewer: mmm!] just ordinary, [Interviewer: yes!] you know, coal face Educational Supervisors [Interviewer: mmm, mmm] but that didn’t er, well we had one or two briefly but [Interviewer: practical difficulties, wasn’t it?] Practical difficulties yeah. So that was definitely part of the ethos to try and get it accepted.

INTERVIEWER: And the, …when we first started we had bespoke readings that we’d written for the students. [Bob: yeah] and reflection points and then questions about them. [Bob: mmm]. Do you think, I’m, I’m guessing that we did that so’s that we could make the reading … perhaps short, [Bob: yeah] rather than lengthy book chapters, [Bob: yeah] to make it kind of quick sound bites [Bob: yeah] with the essential information in there [Bob: yeah] but we wanted to have the students really critically judge it so we put reflection points in there and think about how they could apply it so we had them discuss together and share their ideas [Bob: yeah]. Am I, do you think, am I on the right lines?...

BOB: I think that was the idea. I think that whether that would be, whether the students were convinced by that I don’t know. You’ll find out I guess, but that was definitely the idea. Again, I think that readings were, it was thought that the reading materials should be kept to the minimum necessary really because of time constraints. And I think, the interaction at the workshops, most people did value that and I think, talking informally to people, most people did enjoy that and found that the most valuable. [Interviewer: Yeah]. Erm, the
interaction online er is just online I never really got the impression that people were that committed to

INTERVIEWER: No, same here, yep...I got the impression that it was, I don't want to say tick-box, but a series of monologues rather than a conversation [Bob: yes]. Somebody would post their contribution [Bob: yeah] and think I've done my bit now [Bob: yeah].

BOB: Yeah, very much so, very much so. I think possibly even more so in [other module] [Interviewer: Yes] but but but the same with [this module] really; it was seen as something that had to be achieved to get the [Interviewer: yeah] to get the thing done really [me: Yes]. And I think probably again, going to the bit about the feedback on the drafts for for assignments, I think people... my experience with that it was a minority of people asked for that feedback. Most people just wanted to get it done.

INTERVIEWER: Yes. And it was those who maybe wanted the merit or the distinction because maybe they had plans to have education feature more heavily in their role [Bob: yep] that they wanted the higher grades so [Bob: yeah] they asked for the feedback. And I think sometimes, there were those who just just wanted to pass and were so worried that they just didn't know how to [Bob: yeah] that they would ask for feedback, but it was kind of those two polar minorities

BOB: Yeah, yep, I agree. I agree. So I think but, so what we were thinking was still that [points to Logic Model on screen] but whether it actually worked out in practice that way... I suspect that most people wanted to get a few tips and hints as to how to do it a bit better and a qualification they they could put on their wall or on their appraisal or whatever er, and I guess, putting myself in their shoes, twenty years ago, perhaps I'd have been in that in that situation as well: "Can I improve my practice and can I satisfy the appraisal requirements?". [Interviewer: Yes] Well I suppose if you improve your practice then that's progress. [Interviewer: yes].

INTERVIEWER: So our idea of having them write essays, I guess we were hoping that it would be this iterative process of "Ooh, I've got a question about my practice, I'll go and
read up about it [Bob: mmm] I'll draft something, I'll ask my tutor for feedback, I'll redraft and then I've got this merit worthy [Bob: yeah] or distinction worthy paper that then I could pluck the lessons out of and use in practice. Maybe that was our idea, but, perhaps

**BOB:** Well it was certainly the idea. No, I think, think that I think most people looking back on it did find it valuable because it did make them reflect, looking into something in more detail so I, you know, although again as a student it would have filled me with horror, writing an essay, you know, I sympathise with them, but I think looking back most people would say that they learnt valuable lessons from it. And I don't know that there's any other way that we could have achieved the same goal.

**INTERVIEWER:** I think that's one of the things I've been pondering; it's because this is a university course er delivered in classrooms and online; how could we otherwise have achieved that goal? I've read a lot about continuing medical education and continuing faculty development, if you like, so the clinical-content education and then the education about education. And in the studies where it happens in the hospital, it's your own colleagues who are teaching you and then your own colleagues who observe you in practice and your own colleagues who informally observe you in practice and your own colleagues who follow up and they can see more clearly the changes to practice or the lack of changes to practice whereas I think we were looking for them on paper "I'm planning to do this differently, I...".

**BOB:** Yeah, yeah, no I accept that. Yeah, there's an obvious discrepancy in the value of something on paper and something in reality, I accept that, BUT I'm not convinced by the internal evaluation system. I feel that the whole appraisal system; the whole revalidation system in medicine which is a relatively new thing in fairness, but it's been going on a year or two now, but I do feel that it's too internal. I, my personal view when it was all started off and I was involved in getting it going in some shape or form in my specialty was that you needed external assessors, external appraisers, but that never came to be. Probably for financial and practical reasons. But I do think, erm, one of the most valuable things, when I was the Programme Director of Urology many years ago, one of the valuable things we used to do was drop round to other people's hospitals unannounced and call in and join a
ward round and so and so. And that was a very useful way of just seeing what went on in that hospital. [Interviewer: Yeah] You can't do that anymore.

INTERVIEWER: No? Not even clinicians?

BOB: Well no, because you have to get permission to be there, [Interviewer: right] you have to, you know, [Interviewer: yeah, yeah] health and safety and you know, your ID badge, you know you can't just turn up on the, and walk into somewhere, [Interviewer: yeah, yeah, no], you have to do that er and a) and b) time; it's a half day at the least, out. [Interviewer: yep]. Erm, but it was a valuable thing and it did lead to change in practice. Erm, other people will say the same thing even, in fairness, in my role at the Deanery, one of the things I had to change was individual specialties doing individual in inverted commas inspections of the hospital and making it part of the overall Deanery process because that's the only way it would be accepted. Er as authority er would be a practical thing to do and be an acceptable thing for the institution being inspected you know it has to be a planned thing really because otherwise you can have people dropping in there and everywhere, it's just not, not a realistic thing to do. SO there's a gap between what might be ideal in theory and what you can achieve in practice, so I think that getting them to do an essay, but having the essay focused on a particular type of problem that they want to try and improve or that they perceived they er, they would like to differently whether they get the opportunity in the future, I think that was valuable [Interviewer: yes] within those limits.

INTERVIEWER: So erm, we talked about the Deanery tutors and that the initial idea was very much about the dual role, role modelling and so that the students would see the value of it, appreciate it. And we talked about the compulsory readings being not not very snappy er- sound-bitey, but as brief as possible. Do you think that there could be any value in erm taking that idea of of convincing the students of the value by replacing the compulsory readings with published literature because that's been valued and accepted by a wide community, erm, and so it's almost taking that idea of erm "Here's a Deanery tutor who's role modelling to you that this is possible, that this is valuable, that this is accepted, that this is more wide spread than just this course, for example; might published academic readings serve that purpose to convince the students?"
BOB: Erm...I guess my concern about that would be to get the content that you wanted to deliver, you would need a large number of published papers or books or whatever, books, erm, and that would actually increase the amount of reading required, so I think that what the students were looking for and what we were trying to achieve was acceptance that they were being taught by experts and they were dependent on those experts to bring together for them a summary of the important ideas for outcomes but at the same time giving the independent minded ones the opportunity to expand that by giving them a reading list or giving them links or whatever so I think if we were doing it again, I think I'd probably still feel that that was the right way to do it because you try to cater for both groups of people, erm, yeah I can see your point and I guess from the educational perspective you can see an argument from that, but I think from a pragmatic point of view, to reach the masses, you probably need to have teacher directs as well as teacher provides, in my opinion. [Both laugh].

INTERVIEWER: Thanks Bob. I'm just going to check if there's anything else that I'd like to ask you about. The reason that I'm looking at this document is that the way that the realist interviews are are supposed to be structured is that we focus on this theory with a view to spotting gaps in it or fleshing out other points or striking off any. Do you think any of these points strike you as just way off and erroneous and irrelevant.

BOB: Well no. When you were going through it, I was nodding most of the time, I think. Yeah, yeah, yeah, so I think, I don't think any of them are way off. Er, I think most of them evolved and were tweaked a little bit as we went along, but they were always there from the start in some shape or form. I think some of them became obvious to us as we went on that some bits were more valuable and others less valuable and we've talked about some of those, haven't we? Erm, I think this is, well this point we've discussed that. So no I don't think there's anything that's wildly out or that I would disagree with [Interviewer: Thank you]. And I don't think there's anything major that I feel is missing either.

INTERVIEWER: OK. Thank you. thank you. So erm if I can I'd just like to ask you erm I think I wanted to ask you about the workplace-based factors and barriers in the NHS, but I think really we've covered that. [Bob: OK] erm and I also wanted to ask you about the
characteristics that we anticipated our learners having that we anticipated our learners having that might lead to them changing their practice or not, but I think really we've covered that. Could I just maybe check with you, erm, what you think it was that motivated our Educational Supervisor students to study the module? Because I'm aware that the Clinical Supervisor students not only were funded but I think it was compulsory for...

**BOB:** Compulsory in inverted commas [laughs].

**INTERVIEWER:** OK, if they wanted to be a Clinical Supervisor? or if they...

**BOB:** Yeah, yeah that evolved a little bit with time because erm the GMC tightened up the rules and regulations and so and so forth as we were going through this process, so we were kind of ahead of the game really but once the GMC erm published their latest requirements about supervisors we already had something in place to deliver that so and we the the GMC allowed each, you can say whether this is right or this is wrong, but they set a framework in place which everybody had to follow, but they allowed each individual erm Deanery er to decide how to deliver that [Interviewer:OK]. So we, we actually set out bar high in the NW by utilising the course that we had already got in place. Not many, if any other Deanery would have (...) a university level course They would have other courses maybe but ours was probably academically the bar was set probably the highest, but we were, you know we were widely erm er applauded for doing that around the country. [Interviewer: yes, yeah]. People would say we wish we had either the time, the money or whatever [Interviewer: yes] to do that...

**INTERVIEWER:** And the ideas. I remember going to London with [Team member name] to a conference and people saying to him “the ideas that come out of [Deanery name redacted] are just ground-breaking”.

**BOB:** Yeah. yeah. yeah. So I think er while we might have been exceptional to do it, I think we did it for the right reasons and were looked upon with some degree of envy really.

**INTERVIEWER:** So for the Educational Supervisor students - it wasn't compulsory in that...?
BOB: No, it wasn't compulsory. No, it wasn't compulsory. Well, they no, they the students that, I think we probably had two types of students, didn't we? [Interviewer: Yes, I think so]... We had those that were already in the Educational Supervisor role in hospitals, mainly young-ish consultants, with one or two more senior ones who wanted to improve their standing and improve their knowledge improve their abilities, so that was one group and then there was the second who were the trainees who wanted to make sure they had the qualification in place prospectively. They weren't necessarily going to apply some or even any, because some of those er practical skills or knowledge immediately although many of them would do it the next year. So I think probably two different groups there so in terms of motivation, hopefully the first group would speak for themselves: they wanted to better their practice. The second group were, I think some of them were genuinely motivated by wanting to do as good a job as they could when they got there, some of them were just motivated by the need to be able to tick the box, of having that qualification before they got there.

INTERVIEWER: For career progression...?

BOB: Well, for being able to be a supervisor when they were appointed as a consultant. [Interviewer: Yeah]. They, they would be seen, it would be more difficult for them to get a job without it and in fact, some, some of the more enlightened (?) some of the better hospitals who could be more selective about appointing consultants were putting things like this down as desirable characteristics on their person specifications. Er, obviously, some hospitals didn't have that luxury; they were short of specialties. [Interviewer: yeah, yeah, yeah] But some of the big teaching hospitals with competitive specialties would have these kind of things listed as desirable characteristics, so there was an incentive there to study, to boost your application at consultant level. So I think probably a) part of it motivation to do a better job, part of it to be able to boost your CV. [Interviewer: Yeah, yeah].

INTERVIEWER: I think, but that's, that's CPD isn't it? This is CPD. These people are already working and progressing in their career and wanting to do better. So erm, erm from scanning the literature I came up with reasons why students might be motivated and there
were things like mastery; they wanted to do a better job, it was related to the job, erm, it was a duty, I think maybe that's more the [module name] students but...

**BOB:** Yeah...I think there would be some duty. Some people will say I don't really want to do it this way, but if I'm gonna do it, I better, I better - it's my duty to do it to the best of my ability. There would be an element of that. I guess that's part of, part of...

**INTERVIEWER:** Some had the er, the purpose, they were driven to be educators and took satisfaction in it. [*Bob:* Yes, certainly]. So a wide range of motivations, I don't, [Bob: Yeah, I think so] It makes sense, doesn't it. I don't think we could say that there is just a very narrow range of reasons why students take the course?

**BOB:** No, no. I guess that's true of any course. Most things. Most courses.

**INTERVIEWER:** Yeah, it's human behaviour isn't it? It's complex.... (Conversation is winding down. We are getting tired). OK. Fabulous. Thank you so much. Erm, I did want to ask you about the module staff, but we have talked about those when we talked about the Deanery tutors and their role and what we were thinking in the, in the planning stages erm, and thank you very much because you've told me a lot about how the whole PG Cert. even came into being way before Edge Hill became involved. Could I ask you finally, what did you think in the beginning, or having developed and quality assured and taught on and assessed on the module, or anything throughout all the time, what ideally do you think 4707 students should be able to do differently and that might mean ‘better' or do things that they've never done before, or just be aware that they were doing things well in the first place. What ideally should a 4707 graduate do differently in the workplace, do you think?

**BOB:** Yeah, yeah. Well I think the biggest challenge, er as either a Programme Director or at the Deanery level was students, er trainees, who were failing in some shape or form. So Trainees in Difficulty. And the biggest problem with those was that they were not identified, they were not picked up. Usually because they weren't supported properly from the beginning. [Interviewer: OK]. So, you get off on the wrong track and you never get back on the right track. You don't get assessed properly, so you just get pushed on to the next
person. And then it's another year, it's a separate thing and it, so it goes on. So if everybody was able to set appropriate targets, to monitor those appropriate targets and to write an honest and realistic and supportive supervisor's report then the vast majority of trainees who got into difficulty wouldn't get into difficulties, and the few that were real problems because they were real problems would have been supported at an earlier stage and the few that needed to be weeded out would have been weeded out at an earlier stage.

[Interviewer: mmm, mmm]. So I think, that would be what we have hoped to achieve.

INTERVIEWER: So it really is the ES realising their role in that ARCP cycle, [Bob: yep] that quality assurance of PGME [Bob: yeah, yeah]. And does that go for the, I don't want to say 'the normal' or 'the regular' or 'the high flying trainee', were we thinking of those as well when we got round to developing this module, were we thinking well if a supervisor can create a good Learning Agreement and monitor it well and give constructive meaningful feedback and write the Report; was it kind of a by-product that that would also help regular or high-flying trainees or?

BOB: Yeah, I think to be honest, as we went along it became a perhaps a more important aspect, but right at the beginning, that probably wasn't at the forefront of our thinking. It was more about getting the bottom, you know, getting the bottom standards up really; raising the bar and getting the standards up to an acceptable level. I suppose in keeping with a competency based, you know, competency wasn't, we weren't really bothered about Aspiring to Excellence (laughs), we were just getting them to competence. So anything above that was a bonus (laughs).

INTERVIEWER: Thank you very very much for all of this information and for answering all of my questions.

BOB: I'm just relieved that I seem to have been able to contribute [Interviewer: Oh my gosh!] I was just worried that er, it's such a long time, 'cause it's nearly ten years ago that this all started [Interviewer: It IS, isn't it?!] isn't it, really. 2009 I think was the first module.

INTERVIEWER : So you will have been in planning and developing and...
BOB: Well I started in the Deanery in November 2007, so that's about nine and a half years ago. So that's when this bit started. And then, er 2009, we started September, so it must have been the early part of 2009 when we started sitting down as a Programme Board to work out the content and what we were going to do and why, bringing our ideas together, so it's quite a haze. Anyway, I can still remember some of it! (laughs).

INTERVIEWER: You can remember all of it! Thanks so much. That's really, really helpful. So erm, I don't, please don't feel obliged, but if you're interested, obviously I'm theory gleaning from you because I'm trying to build this programme theory that I will then go out and test against data collected from students, erm, because my aim is to, work out ‘This is what we wanted to do - if it's not happening how can we help it happen more efficiently, more effectively, better’... If you're interested, I'll keep you posted and let you know what I find out.

[End of recording].
Appendix 7. Sample of a programme theory testing and development interview transcript

**INTERVIEWER:** (I recap my research questions and the focus of my study. I set out the printed logic model and explain my Programme Theory to date. I explain my aim to build a realist theory of IoPP) ... So I guess I would like to just talk with you a bit about why maybe you use any of the things that you did, again because I'm interested in causality; like how did the module cause any influence on workplace based practice?

**ES:** Ok, ok so I think the thing that stood out for me and that I reflected on a lot, was the word ‘supervision’, we... I know that sounds... because I think we the way we do it is, you know before doing the module is that you have a trainee, according to the portfolio you have to meet them three times, and you have to do these extended structured learning events which take about 3 hours that's two hours observing them and an hour of feedback. And then that's really all of your meetings with them apart from the progression for the ARCP and that's really all you have to do beginning middle and end every year. [Laughs]. And so I kind of realised you know that really wasn't enough and the words supervision so I thought a lot about supervision and it being the ability for them to come and discuss what they are doing clinically in a safe place and the reading that I found interesting and the discussions that I found interesting was about I suppose the roles that I take in that and how to - almost you've just got to be quiet and let them talk to you rather than these being those structured meetings that we do where we kind of go through this checklist saying "have you done this, have you done this? How are you getting on with this duh duhduhduhduh" and that would be the meeting. So that's changed it quite a bit for me. Trainees are very surprised when I say to them “we need to meet, we haven't seen each other" And they go like “well, what have I done?” And I say “well let's just have some educational supervision. Would you like to bring some cases?” And they are a bit suspicious. Me wow.

**ES:** Because that doesn't happen it doesn't happen. So yeah I think I have really taken on board the word supervision being something. So my mum trained to be a psychotherapist and I remember that she always used to have supervision. And I think that's really relevant
to what comet you know trying to change my view of what supervision is. Me that's fantastic.

**ES**: Because she they have supervision as a psycho-therapist they have supervision the whole way through and I think that's really interesting that would be nice to have supervision. That that's actually what we should be doing for them, is giving them supervision as *practitioners* not just as, not just going through on your portfolio and all the tick boxing. It has to be done. It has to be done and it's our role as an Educational Supervisor but it's going beyond that I think that's what I have learnt from the module I need to go beyond that. You'd hink that would be obvious, but I think because there is so much that they have to do and it reflects badly on us if they haven't done it; that if they don't do it they will get a poor ARCP outcome then we will be - educationally look bad. The incentive is to get them through and provide the opportunities so that they can't turn around in the ARCP and say well I was never given this or that or,

**INTERVIEWER**: Fabulous so then please can I ask you said the readings and the discussions that I found interesting where about these approaches to supervision. [**ES**: yeah.] So I am hearing that you got this changed view of supervision from some of the readings and I think we read things like she says looking rapidly at the chart of module activities. Did things like their winners and dramas triangle?

**ES**: Yeah I found transactional analysis and Drama Triangles I found they were things that really stood out for me I had never really understood Grant's paper.

**INTERVIEWER**: no, she writes in such a strange way. [Laughs]. [**ES** laughs] ... doesn't she?

**ES**: Yeah, [laughs]. I thought the Johari Window was interesting. I had come across it before but I find that one a bit difficult concept because how do you know the unknown unknowns and The Unseen and so then I can't deal with it because nobody knows. The supervisor doesn't know it and they don't know it how are you going to find it. So I get it apart from that bit.

**INTERVIEWER**: Yes, yes, I see absolutely.
ES: I think learning agreements was interesting as well because I hadn't really thought about that. I think we do do it because we set a PDP at the beginning we do do it, but to think about it in another way was interesting.

INTERVIEWER: Thinking about it in another way?

ES: Yes so it's relevant. I already had my trainees for the year when I did the module. But I am about to get three new trainees in August so I need to think about that and is it just a PDP which will be led by them or will I do it differently?

INTERVIEWER: So if I can it's about first of all the approaches to supervision, obviously you've got a lot of that from readings. ES: yeah. Me because those were online readings so you've got a lot of that which is studying on your own really isn't it the online readings. Was there anything that anybody said about those topics online in those online discussions or was there anything at workshops that on those topics like winners and dramas triangle or transactional analysis,

ES: I don't really remember much of a discussion about transactional analysis. I felt that was something that stood out for me that didn't necessarily stand out for the group that I was attending with. I remember one person comment in the group but not a big discussion on it. One thing I remember from the groups that stuck with me was about how much supervision the psychiatrists say they have in their job they have one hour a week and they give them 1 hour a week. And I am kind of like wow wow! Yes you are given one hour a week to educationally supervise your trainee, but there's a lot of paperwork that needs to be done around supervision and that educational supervision also goes into attending maybe you know recruitment or panels or whatever, you know it isn't one hour a week for that trainee but I think that some trainees know we get that, and they think where's my hour a week?.

INTERVIEWER: Yes
ES: So that was interesting [laughs] so I don't know the answer to that. I don't know how much we should, but I definitely came away from that discussion thinking I need to up my game. I need to see them more frequently.

INTERVIEWER: So, can I ask you why? What was it? I have been going through the literature finding out about previous theories on why people who study might start using it in the workplace. Why did you feel that you needed to up your game?

ES: I think, suppose that was a useful discussion group about giving them time and buying into it. I felt that I needed to move away from what I had read and what we had talked about and move it away from just being I suppose just transactional in the terms of they come with a checklist. If I'm going to develop supervision, I think it almost goes on to be mentoring and coaching conversations. That you should be able to provide for your trainees and to do that you're going to need to meet them more frequently and I suppose just take it to a deeper level and you will both get more out of it, erm if we put more into it.

INTERVIEWER: Yeah because you would get to know them better too.

ES: Yeah I mean you have to write a report about them at the end of the year. I think I felt before that just being familiar with them on the shop floor and asking them how they are getting on, would probably be enough, but unless you invest the time, I think it's massive really, I think our specialty is so service delivery focused and it's so demanding. Trainees find increasingly that there is never any time for teaching on the shop floor. They are just asked to work work work work work. Keep the wait down, see the patients, just work work work work work. And they suffer for that and so, how can I give something back? I can't give back on the shop floor because we've just got to see the patients and get on with it but can I give them something back by spending more time off the shop floor?

INTERVIEWER: So, would I be off-kilter if it sounds like you are really valuing education and investing time and effort in education and moving away from tick-boxing, moving away from only monitoring requirements...
ES: Yes! Definitely to give a richer experience for the trainees. And I think that also that came about in the piece of work that we had to do, because you know we had to record something and I was thinking well... and you were very clear that it couldn't be a workplace based assessment or a checklist and I was thinking “right - that's going to force me to put it into practice” so it was really useful like that. It forced me to change. Yeah.

INTERVIEWER: That's really interesting...

ES: So as much as I hate doing the assignments, and they nearly finished me off! [laughs]

INTERVIEWER: I know, I hear you.

ES: Yes, they are necessary, and it was a really useful exercise [laughs] I found writing it up incredibly hard, but actually the act of recording it and thinking about what you're going to talk about in that session and how you’re going to approach it was really useful and finding what bit to analyse was incredibly hard.

INTERVIEWER: Yeah -because you are making those changes towards more holistic supervision?

ES: Yeah

INTERVIEWER: OK fantastic. Sorry that I am jumping around. [ES: No, it's OK]. You have also mentioned the learning Agreement the PDP and I think we talked about that in a workshop, didn't we?

ES: We did, in the first one, yeah.

INTERVIEWER: Again, do you feel that, was it you kind of thinking about and reflecting on your practice or was it something that a fellow student said, or tutor said. Like where did that impetus to rethink how you use PDP's come from?

ES: Well because we had to do learning agreement at the beginning didn’t we?

[INTERVIEWER: yeah]. Yeah, we had to commit to something. So, I think that was a good thing to do because it forced you to and engage with it to give it a try and think about how
you would do it with somebody. So maybe I’ll do that with my next trainees and say you know write something down before you come. Because it does force you to do it, it forces you to engage, and to think even if you haven’t done it before. So, I think that’s where it came from. And then I think there were three papers around that that we read.

[Interviewer: Yeah there was definitely one on learning outcomes, wasn’t there?] So, it was just a way I hadn’t thought of it before.

INTERVIEWER: Fabulous, thank you. Erm, do you think there was anything that we discussed online or that we talked about a workshop or you read in your independent study that could possibly have come into practice, as in you could see the need for it, the use for it, the value to it, but maybe there are barriers because you work in the NHS? We were studying in a university classroom, or on a computer, and you work in the NHS. [ES: yeah]. Was there anything that...

ES: Doesn’t translate? [Me yeah]. I’m trying to think about what we looked at and talked about. [Both look at chart of module resources and activities] [INTERVIEWER: we looked at the LCP cycle both three Topics studied on the module]

INTERVIEWER: You’ve been talking about those approaches to supervision, every now and again we talked about the collegial network those other members of the team colleagues, and we talked about the trainees and difficulty didn’t we? [ES: yeah]

ES: I think I suppose the biggest thing that I thought didn’t translate is what I’ve already said, it’s just the amount of time that you can put into supervision, like the psychiatrists can put in an hour a week, because it’s a very different job to mine. And you know I’m quite often working with my trainee at 2 AM, so getting our paths to cross when you’re on night shift takes quite a lot of planning, and you know we’ve talked about before about whether they come in in their own time, that’s something I’ve changed, because of the nature of our job I can’t really say in the middle of the shift off you go you know let’s have some supervision [laughs] we need everybody, so you know they do have non-clinical time, but if we can’t do it during that time I’ll say to them, in an hour before your shift but you can take that time back from that day come in do less hours that day and they seem quite happy

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with that [Interviewer: yeah]. That we've come to an arrangement, that there's a bit of give and take, to buy them some time otherwise trying to get diaries to coordinate, that is a difficult thing, so thought about it and I thought how can I make that better? Rather than them just having to come in in their own time. Because what I did as a trainee is different then what they are prepared to do and that's fine it's changed [Interviewer: sure]

INTERVIEWER: Did you have an educational supervisor?

ES: Yeah no you had a mentor which I presume is the same thing and they went through your portfolio with you but I don't know if it was, well yes it was formal you met every three months, yeah you did. But you very much did it around your own time around shifts. And that would never have been a concern. Whereas today it's very much concern for young doctors.

INTERVIEWER: Yes I hear that, from the people that commissioned this module, they told me a few, I don't want to say anecdotes, but reflections on experience, and they said oh I think it has changed since my day, [ES: Mmm, yeah]

INTERVIEWER: So may I ask you, I am getting very much the impression that the things that you have taken out of the module and brought into work really come from your individual studies, what you have read and thought about, the tasks that you had to do for the module, like the learning agreement and the interactional analysis. [ES:Mmm] and the readings, and then one particular fellow member the psychiatrist has obvious he had quite an impact on you [ES: laughs a lot], was there anything in the reflection points or the questions the ones that weren’t compulsory to share with anybody, they would usually come after reading, but we didn’t share them online, it was just you could think about them any which way you wanted. Did any of them have an impact?

ES: Probably if it was non-compulsory probably not [laughs]

INTERVIEWER: That's what I'm hearing a lot to be honest, thank you, that's what most people have told me they say I can't remember them. Somebody said to me I really don't
remember them and that means obviously they have impacted on my practice. [ES: yeah]
on my way of supervising

ES: I think you engage with everything that you have to engage with, so the online
discussions which make sure you’re on track and everything

INTERVIEWER: Whether any of those, because of had quite a lot of negative comments
about the online discussions [ES: Mmmmmmm, yeah], and people kind of have to rack their
brains to think of one that really influenced them. Occasionally somebody will say
somebody in my group said this. Was there anything that anybody said online that got you
thinking oh?

ES: [forcefully] No! I don’t think so. I think the difficulty is, as much as it is meant to be a
conversation, it isn’t. It isn’t. Everybody just gets on, does their own piece and goes phew
I’ve done that will move on. And so, the idea of how it should work doesn’t. And I don’t
know if that’s a reflection of the fact that everybody is so busy working rather than because
presumably it comes from students that have more time to discuss maybe or? [INTERVIEWER:
yeah]

INTERVIEWER: Yeah I think they are based on a theory that when we learn a professional
role we learn by watching others do it, by being able to talk to them about how they are
doing it and by going away and reflecting on what we’ve seen, and then having a go
ourselves and getting some observation and some feedback and then talking again and
round and round. But, that’s not always physically feasible and so technology can help out
in some ways to fill in some of the gaps because let’s say for example I’m not with you for
every day and you will never see me doing educational supervision and I will never come
and watch you doing educational supervision at work so those conversations that we could
have had if we were working together are supposed to be taken over by the technology but
it’s interesting that you say it didn’t feel like a conversation...

ES: No, no and if that’s how it should be I wonder if it would be better to be in smaller
groups? Smaller groups and somehow, we could meet each other and I know I understand
there are a lot of people doing the module but if you are in smaller discussion groups and you had all met at a module session then there might be a bit more of a feeling that people could ask each other.

**INTERVIEWER:** So, do you feel that there were names in that group that you...

**ES:** [definitively] never knew. I think, I don’t know if it’s okay to say this [**Interviewer:** no, please!] It is so varied the ones that are trainees that aren’t doing it (being an **ES**) and the ones that are doing it they are two different groups and I think it would be almost better if they were taught in different groups because yes I am going to hear their discontent with whatever, fine, but actually I am probably going to learn from people who have got the experience of being in the situation, how do you juggle this, how do you do this, what are your solutions for this conflict? Whereas for them it’s much more aspirational and that’s fantastic that they are learning to do it and they will go into it having thought about it [**Interviewer:** yeah],

**Interviewer:** Yes, I hear you loud and clear. It's a bit of an aside but at the time the module was developed trainees couldn't do it [**ES:** yeah] and it was two years ago that the GMC said that trainees should be developed in their educational roles earlier so we have let trainees coming and so you’re right absolutely, because this is a CPD module, **continuing professional development** [**ES:** yeah yeah], the people who are doing the role [**ES:** people who are doing the role] but actually we have got a whole group of almost preregistration educators, preparing for roles

**ES:** And I think that for me diluted the experience a lot. So I can see why they do module one and it gets them out a bit and they probably get a lot out of doing it. But if you’re not doing it

**INTERVIEWER:** Well my personal concern is, what if they’re not an Educational Supervisor for five more years will they remember all this?

**ES:** Yes, yes, yes, and that obviously made me very aware and wary in the group discussions face-to-face because it just makes you very uncomfortable because a lot of
people who were talking were trainees, the consultants were - and senior health professionals - were not talking, they were quieter.

INTERVIEWER: Yeah, I think sometimes it almost feels like a cathartic session for them

ES: Yep, a bit of a rant for them and “I've had this experience”, “they said this, they did that” and you just think [grimaces, rolls eyes] [INTERVIEWER: (picking up on ESs last comment) so how would you do things differently? (Meaning that this is what you would like to say to the trainees who are ranting)]

ES: [forcefully] exactly! Whereas I would have liked to have learnt from the experienced people in the room.

INTERVIEWER: I love that you said that, but I really do want to say that it upsets me that we didn’t facilitate that for you. Were there any times when you felt you got a nugget of learning from experience in the room?

ES: [takes time, ponders] Erm, I can’t think what, I kind of remember I think there was a female surgeon that was quite interesting, she was saying some interesting things about her experiences, but I think a lot of the learning came from you and the other facilitators, listening to what you said, because you know I’m interested to learn about the theory of it to bring and rather than, ... to bring into my practice, that’s what I was there to learn, expand my mind on it and think about it differently. Yeah rather than [laughs]

INTERVIEWER: Rather than listening to Trainees rant about their experiences? [laughs]

ES: [Laughs] Yeah! Yeah! Yeah!

INTERVIEWER: Yeah we’ve really got to do something about that [ES: yeah!]

ES: Yeah I don’t know what you do or don’t know if you run two sessions of what

INTERVIEWER: Yeah but something has to change doesn’t it? [ES: Yeah] Because I’m hearing you say really important things like sharing experiences sharing our experiences because you would have experiences that the surgeon didn’t [ES: yeah] and you could
share those new come away with twice as many ideas as before [ES: mmm] and if that’s getting thwarted by the juniors discontent... Yesyesyes, mmmm, fantastic that’s really useful information for me. So then could I please ask you, ... That made me realise, that makes sense, that makes me realise the thing that you took from the module came from your independent study because the opportunities to learn from others were thwarted.

ES: I think that yes that’s fair

INTERVIEWER: Would you mind having a look at some more hypotheses that I have taken from the literature, please? I have spoken to some other module students and one or two of these I am probably going to strike off because I’m becoming aware that they’re not really applicable to us but you have talked about the changes that you have made your practice, do you think it was appreciating the need to change or was the perception of applicability because you heard somebody talk about something and think yes that applies to my context.

ES: [Looks at visual aid. Takes time to think ] What does that mean?

INTERVIEWER: Oh sorry that’s my abbreviation it means impact on professional practice [ES: Okay]

ES: So do I say which ones I agree with?

INTERVIEWER: Please. Well which ones do you think you felt was the reason that you made all these changes that you’ve been telling me about. Do any of them particularly make you think ‘oh yes that was driving me’?

ES: I think you can appreciate the need to change by having done the learning of what or how you can improve what you do, I think it’s so applicable because Educational Supervision is a massive part of my job, you know? It’s a massive percentage of my work time is spent doing that, both one-to-one with my own Trainees but in my role as Head of School, I’m supervising masses of, so it was really relevant. I think obviously you do
whatever it was you had to do to become an ES, but this was new, reading papers and talking about it.

**INTERVIEWER:** Did you feel when you were reading the papers erm, that they were worthwhile that they were trustworthy? Did you feel like 'Oh yeah, this is good'?

**ES:** Yeah I think so, I mean I did a lot of the extra reading this module around the transactional analysis stuff, I found that really interesting. Erm, because I kind of felt like I wanted to read more on how to do it, and ideas of how and examples, so I read as much as I could around that. Yeah, I didn't, I'm quite bad – I kind of trust what I'm given. I'm quite bad at that, if it makes sense...

**INTERVIEWER:** But if it's coming from a University course...

**ES:** Yeah, I think you've vetted it and you're giving me something that's trusted and ...valued. So I'll read that and see what I can take from it. Rather than going 'Is this trustworthy?' I don't approach it like that. I read it and say 'Is it relevant?' [Interviewer: Yeah].

**INTERVIEWER:** Are there any on there that you thought, that's really not what was going on in my head, that's not really what got me to change?

**ES:** I don't think this professional...role-modelling increase confidence...no. Does this mean I kind of trust what you give me? (points at visual aid).

**INTERVIEWER:** Yeah, yeah, yeah. You know, kind of, erm -

**ES:** You're the module tutor, the module lead, you've put in stuff that's relevant.

**INTERVIEWER:** Yeah – or is it all nonsense? [laughs]

**ES:** I suppose with everything some of it will apply to you some of it won't, you'll take some on board, other bits you won't
**INTERVIEWER:** Thank you. Thank you for all your time. [ES: No, it’s fine]. Can I ask you - Do you feel like there was anything else going on in your mind or your heart when you decided I'm going to make the changes that you've told me all about, was there something different maybe that’s not on there that was going through your ....

**ES:** I think there is a **desire** to do it better, a desire to do it better and a desire to make the experience more beneficial for the trainees, so that they get more out of it.

**INTERVIEWER:** I thought that's what you were saying earlier when you were talking, I don't want to put words in your mouth but it sounded like you wanted to give them **more**.

**ES:** So much more! So because you feel you give them so little when you're working because you are there as a sound board or a support but you're not giving them what they want which...

**INTERVIEWER:** But like you said, you can't at the time.

**ES:** At the coal face! [laughs]

**INTERVIEWER:** Thank you so very much for answering all my questions and for giving me all this time.

**ES:** It's a pleasure. It’s fine, it's absolutely fine.

[End of recording]
Appendix 8. Sample student Learning Agreement for module studies

At the beginning of the module, students were asked to consider the syllabus and curriculum and then to post a Learning Agreement for their module studies. Students chose to do this either by typing in the Blackboard Journal space, or by uploading a document to it. Students were free to configure their Learning Agreement according to their own plans for engaging in module studies.

My Learning Agreement for Module [Module code and title redacted]

[Student name redacted]

<table>
<thead>
<tr>
<th>Number</th>
<th>Learning Objective</th>
<th>How it will be done</th>
<th>To be completed by what time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To compare the Gold Guide for Postgraduate Specialist Training in UK with the real-life practice of training and supervision and look at ways of improving practices which deviate from the guidance.</td>
<td>By comparing real life practice for my trainees with Gold guide and finding ways to implement the guidance in practice where it deviates.</td>
<td>June 2018</td>
</tr>
<tr>
<td>2.</td>
<td>Learn to help trainees formulate a learning agreement at the beginning of their posts.</td>
<td>Looking at literature for guidance on writing up a learning agreement and use it in practice.</td>
<td>End of March 2018</td>
</tr>
<tr>
<td>3.</td>
<td>Learn how to deal with a trainee in difficulty</td>
<td>Read relevant literature and guidance and reflect on it.</td>
<td>May 2018</td>
</tr>
<tr>
<td>4.</td>
<td>To complete the assessments required in this module</td>
<td>Read regularly as per the timetable recommended and participate in online and workshops’ discussions to help me do the assessments.</td>
<td>May 2018</td>
</tr>
</tbody>
</table>
Appendix 9. Sample observation of practice conversation transcript

**ES:** So, Lee I can view your thing, which is good for me because I don't have to ask you to send it to me. It's all on the e-Portfolio. So, yeah, I think this is what we wanted to talk about today because as I asked you earlier, you have a concern about your work-based assessments. So we have this traffic light system. So you've done some greens and there are some amber and some red so you're working through obviously amber and red. And so what do you think is the main barrier to doing this?

**Trainee:** I think for looking back on this assessment, it's possibly a little bit more my own fault. I should've been planning a little bit some of them throughout, over the months, but for some of them, I was a little bit challenged to get them as well. So that irrigation - I've got one of those. But usually by the time patients present at casualty, they've already had it irrigated and so I don't, I can't, unless I demonstrated on a volunteer, it's a big challenge to find a patient to do it on.

**ES:** Absolutely. I agree with you. And I like it that you - I mean, obviously, you're reflecting yourself that what, what is like, sometimes you have to organise yourself and you're in the first year and that's very good, that you are like understanding that these obviously need to be done at certain times. And so if we keep doing them as time goes, then that will be really good. So yes, I agree with you, you know, sometimes it's not easy to get those patients but yeah, if you just circulate the word around to all your supervisors and you know, they will keep looking, and even the nurses because they deal with all the triage all the patients. So if there's something, they get a call and they know you're around, they can call you and you can do that. And that becomes easier then. So I think you can talk to your triage nurse, and obviously all the doctors and tell them this is what you're looking for. So that would be good. Yeah. So and the others, you know, you know, you can get it done with your senior trainees as well and, you know, your clinical supervisors and even other people who can supervise and you know, if you'd like things like CBDs, and all you can make appointments, and they can look at their diaries and they can find the time so that you know, when you're going for them, so I think there's a way of doing it. Once you get into it, you you know how to get them done. And the ones which you can get done with your, you know, senior
Seniors registrars, you can get those done. So what do you think is going on well for you? - because you have been here for nine months.

**Trainee:** Yeah. I think clinically, I've kind of I've come along, so I've got a good handle on the assessment of patients now. And I've got a good idea of what to do with the simpler medical things. So like, (?) or even with any (?) patients need retreatment; I've sort of an idea of what what to do and what next steps are - surgically. I've been getting my numbers up. So I'm quite, not entirely happy but I'm satisfied that I'm okay at my level training for cataracts. I need to do some more reflections of my cataract complications. So I'll start putting those on the system as well.
Appendix 10. A-priori themes for initial coding

A-priori themes were drawn from the literature on education and realist causality. They served as ‘place-holders’ in the template: labels for sections of the template where related sub-themes could be added. These were applied to the curriculum document and to Deanery staff interviews.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Code</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphogenesis</td>
<td>Morph</td>
<td>Reasons why the module was created and the purpose it served.</td>
</tr>
<tr>
<td>Contextual structures</td>
<td>OCS</td>
<td>Causally efficacious (social) structures beyond the CPD which influence CPD design, processes or outcomes. May be formal or cultural.</td>
</tr>
<tr>
<td>Norm circles</td>
<td>NC</td>
<td>Enculturated / cultural causally efficacious social structures beyond the CPD which influence CPD design, processes or outcomes.</td>
</tr>
<tr>
<td>Educational Mechanisms</td>
<td>M</td>
<td>Normative or synchronic relations between students, staff and materials which shape the nature of learning as a process and outcome.</td>
</tr>
<tr>
<td>Outcomes</td>
<td>O</td>
<td>The nature of learning and IoPP outcomes intended by curriculum designers and tutors</td>
</tr>
<tr>
<td>Epistemological assumptions</td>
<td>EA</td>
<td>Staff’s view of knowledge and learning (for this module) and rationale for these assumptions, as evidenced by views of staff and student role and materials</td>
</tr>
<tr>
<td>Staff role</td>
<td>Ts</td>
<td>The responsibilities of those in the tutor role; what they do to support learning; how they teach. Tutor to student and tutor to materials relationships.</td>
</tr>
<tr>
<td>Student role</td>
<td>Ss</td>
<td>The expected approaches to learning for students on the module; what is compulsory and why? Student to student, student to tutor, student to materials relationships.</td>
</tr>
<tr>
<td>Materials</td>
<td>Mat.</td>
<td>Which physical and virtual materials are used and why?</td>
</tr>
</tbody>
</table>
Appendix 11. Themes developed from Deanery interviews

**Morphogenesis:** Reasons why the module was created; staff agency in light of overlapping structures in the wider context.

<table>
<thead>
<tr>
<th>OCS of MMC &amp; GMC</th>
<th>Training structures</th>
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<tbody>
<tr>
<td></td>
<td>Formal roles</td>
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<td></td>
<td>Regulations and standards for ES</td>
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<table>
<thead>
<tr>
<th>To improve courses:</th>
<th>Replace TTT days</th>
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<tbody>
<tr>
<td></td>
<td>Replace existing, small-scale online course</td>
</tr>
<tr>
<td></td>
<td>Offer quality assured, university level CPD</td>
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<td></td>
<td>Offer uniform experience across the region</td>
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<table>
<thead>
<tr>
<th>Outcomes - CPD for standardisation of practice:</th>
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</thead>
<tbody>
<tr>
<td>CPD as deficiency focused training</td>
</tr>
<tr>
<td>Bring everyone up to a (high) standard</td>
</tr>
<tr>
<td>Avoid trainees getting into difficulty.</td>
</tr>
<tr>
<td>Remove known deficiencies in</td>
</tr>
<tr>
<td>• Learning Plans</td>
</tr>
<tr>
<td>• Identifying struggling trainees</td>
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<tr>
<td>• Supporting struggling trainees</td>
</tr>
<tr>
<td>• Writing effective end of placement ES Reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff role: The responsibilities of those in the tutor role; what they do to support learning; how they teach. Tutor to student and tutor to materials relationships as Educational Mechanisms</th>
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<tbody>
<tr>
<td>Experts in content matter (not just slide readers)</td>
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<thead>
<tr>
<th>Student role: The expected approaches to learning for students on the module; what is compulsory and why? Student to student, student to tutor, student to materials relationships as Educational Mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquire and apply a theoretical underpinning for practice</td>
</tr>
<tr>
<td>Address own deficiencies</td>
</tr>
<tr>
<td>Discuss and share ideas for improving practice with other students</td>
</tr>
<tr>
<td>Really useful</td>
</tr>
<tr>
<td>Actively engage (not passively listen)</td>
</tr>
<tr>
<td>Uncomfortable shock?</td>
</tr>
<tr>
<td>Engagement</td>
</tr>
<tr>
<td>------------</td>
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</tbody>
</table>
| Engage regularly to achieve deep learning | Make time for CPD  
| | Multiple encounters with module content  
| | Provided materials are brief  |
| Take CPD to work | Apply readings at work  |

**Materials: Which physical and virtual materials are used, how and why? = Educational Mechanisms**

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert precis of external, codified knowledge</td>
<td>Quick, brief materials for busy professionals</td>
</tr>
<tr>
<td>Real materials relevant to the role</td>
<td>“To help you”</td>
</tr>
<tr>
<td>Asynchronous online discussion boards for continued engagement off campus</td>
<td>Not working well</td>
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</tbody>
</table>

**Barriers to learning in the CPD context and beyond**

<table>
<thead>
<tr>
<th>Barrier Description</th>
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<tbody>
<tr>
<td>Desire for own work-life balance</td>
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</table>
| Norm circles | Prior beliefs about the nature of knowledge and learning mismatch with module.  
| | Clinical background  
| | Uncomfortable, unusual experience for consultants to learn in this way  
| | ‘Face threat’  
| | Assessment by essay |

**Solutions to barriers**

<table>
<thead>
<tr>
<th>Solution</th>
</tr>
</thead>
</table>
| Role model tutors | Same sphere of influence as students  
| | Endorse new norm circles |
| Quick, brief materials for busy professionals |
| Relevance to role: CPD is helpful |
Appendix 12. Themes developed from Academic interviews

Key:
Black text indicates academics’ agreement with Deanery staff
Grey shading indicates no mention by academics
Red text indicates an addition by academics
Blue italics represent a later refinement to my thinking due to subsequent encounters with data

<table>
<thead>
<tr>
<th>Morphogenesis: Reasons why the module was created; staff agency in light of overlapping structures in the wider context.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MMC and GMC:</strong></td>
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<td></td>
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<tr>
<td><strong>Service delivery pressures:</strong></td>
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<td><strong>To improve courses:</strong></td>
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<table>
<thead>
<tr>
<th>Model of CPD and Intended IoPP Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPD for standardisation of practice:</strong> CPD as deficiency focused training, bringing everyone up to a (high) standard with a region wide reach.</td>
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<tr>
<td><strong>Reflective Practitioner model:</strong> CPD as an opportunity to share craft knowledge of the role through group discussions and individual reflection on experience.</td>
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<td><strong>Staff role:</strong> The responsibilities of those in the tutor role; what they do to support learning; how they teach. Tutor to student and tutor to materials relationships as Educational Mechanisms.</td>
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<tr>
<td>Activity</td>
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<tr>
<td>----------------------------------------------</td>
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<tr>
<td>Act as role models who have mastered both domains</td>
</tr>
<tr>
<td>Facilitate group discussions on campus and online</td>
</tr>
<tr>
<td><strong>Student role:</strong> The expected approaches to learning for students on the module; what is compulsory and why? Student to student, student to tutor, student to materials relationships as Educational Mechanisms</td>
</tr>
<tr>
<td>Acquire and apply a theoretical underpinning for practice</td>
</tr>
<tr>
<td>Discuss and share ideas for improving practice with other students</td>
</tr>
<tr>
<td><strong>Raise questions about practice</strong></td>
</tr>
<tr>
<td><strong>Use a wide variety of sources</strong></td>
</tr>
<tr>
<td>Actively engage (not passively listen)</td>
</tr>
<tr>
<td>Engage regularly to achieve deep learning</td>
</tr>
<tr>
<td>Take CPD to work</td>
</tr>
<tr>
<td>Bring work to the CPD (learning begins with experiential knowledge)</td>
</tr>
<tr>
<td><strong>Materials:</strong> Which physical and virtual materials are used and why? = Educational Mechanisms</td>
</tr>
<tr>
<td>Expert precis of external, codified knowledge</td>
</tr>
<tr>
<td>Real materials relevant to the role</td>
</tr>
</tbody>
</table>
Asynchronous online discussion boards for continued engagement off campus  |  Not working well  
|  Face saving  

### Barriers to learning within and beyond CPD

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Details</th>
</tr>
</thead>
</table>
| Time pressures    | Desire for own work-life balance  
|                   | Demands of working schedule                                             |
| Norm circles      | Prior beliefs about the nature of knowledge and learning mismatch with module.  
|                   | Clinical background  
|                   | Uncomfortable, unusual experience for consultants to learn in this way  
|                   | ‘Face threat’  
|                   | Confirmatory rather than questioning practice  
|                   | Online discussions  
|                   | Assessment by essay                                                     |

### Solutions to barriers

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Details</th>
</tr>
</thead>
</table>
| Role model tutors  | Same sphere of influence as students  
|                    | Endorse new norm circles                                               |
| Balance time pressures | Blended learning  
|                    | Quick, brief materials for busy professionals                           |
| Relevance to role: CPD is helpful |                                                                 |
Appendix 13. Merges in the template to address profuse codes

In preparation for student interviews, I reduced the number of themes in the template by merging those that were similar. Creating CMO in dyads lead to the formulation of the initial programme theory.

Key:
D: Deanery
A: Academics
M: Educational mechanism
O: Outcome (learning or practice change)
MD: An educational mechanism intended by the Deanery
MA: An educational mechanism intended by the academics
M2D: A subset educational mechanism specific to the Deanery
M2A: A subset educational mechanism specific to the academics

<table>
<thead>
<tr>
<th>Nature of IoPP and reasons (O &amp; M dyads)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O: <strong>Better role enactment</strong> according to national role remit, due to MMC and GMC.</td>
</tr>
<tr>
<td>D: <strong>Professionalisation of practice</strong>: convergence on an external standard for role enactment through an application of codified knowledge to correct deficiencies.</td>
</tr>
<tr>
<td>M: Conventional learning</td>
</tr>
<tr>
<td>A: <strong>Practitioner identified improvements</strong>: changes or additions to practice for locally appropriate, better role enactment, due to practitioner identified needs or interests.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module parts as educational mechanisms with expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>M: Workshop discussions</td>
</tr>
<tr>
<td>O: Group created ideas for better practice</td>
</tr>
<tr>
<td>M2D: Application of theory to practice</td>
</tr>
<tr>
<td>M2A: Emergent outcomes from group interests</td>
</tr>
<tr>
<td>M: Online discussions</td>
</tr>
<tr>
<td>O: Group created ideas for better practice</td>
</tr>
<tr>
<td>M2D: Application of theory to practice</td>
</tr>
<tr>
<td>M2A: Emergent outcomes from group interests</td>
</tr>
<tr>
<td>M: Compulsory readings</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>O: theoretically underpinned practice</td>
</tr>
<tr>
<td>M: Optional reflection points</td>
</tr>
<tr>
<td>O: Personalised improvements to practice</td>
</tr>
<tr>
<td>M: Compulsory summative assessment</td>
</tr>
<tr>
<td>O: Improved practice through</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Student - student relationships</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>M: Socio-constructivism (Build on existing knowledge by sharing ideas)</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Student - tutor relationships</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students as experienced professionals</td>
</tr>
<tr>
<td><strong>MD:</strong> Expert transmission. Role model new norms. Guide the way to identified goal.</td>
</tr>
<tr>
<td><strong>MA:</strong> Facilitate learners’ exploratory inquiries wherever they go</td>
</tr>
<tr>
<td>Student - material relationships</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td><strong>Regular engagement</strong></td>
</tr>
<tr>
<td>Provided (via the VLE and in workshops)</td>
</tr>
<tr>
<td><strong>Source of ideas for IoPP</strong></td>
</tr>
<tr>
<td>M2D: Starting and end point for learning and IoPP. Matching practice to materials.</td>
</tr>
<tr>
<td>M2A: One of many sources to consider during inquiries. Not necessarily a starting point.</td>
</tr>
</tbody>
</table>
## Appendix 14. Staff Programme Theory

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMC has formalised the educational supervisor role. Practitioners need support to meet requirements.</td>
<td>1. A standards-based, deficiency focused, award bearing model for regionally uniform practice. (Deanery) 2. A reflective practitioner model with emphasis on group discussions for practitioner identified, locally appropriate IoPP. (Academics)</td>
</tr>
</tbody>
</table>

### Tenet 3: Sustained engagement for deep learning

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous provision ineffective:  * Passive learning  * No reinforcement</td>
<td>Multiple, active learning tasks requiring personalised connections over time lead to meaningful understanding of practice change.</td>
</tr>
<tr>
<td>Learners are busy at work.</td>
<td>Flexibly timed, blended learning with feedback and support reduces likelihood of disengagement. Compulsion ensures engagement.</td>
</tr>
</tbody>
</table>

### Tenet 4: Role models and authentic tasks to address workplace barriers

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners are unfamiliar with education as a discipline. Learners may perceive changes are beyond their ‘reach’. Administrative use of ePortfolio and ARCP Reports limit developmental conversations.</td>
<td>Educationally qualified Educational Supervisors as tutors role model the feasibility and benefits of blending two practice domains and making changes.  Critiquing authentic materials questions implicit norms and endorses new ones. The use of actual materials helps narrow the theory practice gap.</td>
</tr>
</tbody>
</table>
Appendix 15. Themes from student Learning Agreements and interviews

Key:
- Black text indicates agreement with staff
- Grey shaded, black italics indicates no mention by students.
- Red text indicates an addition by students
- Blue italics represent a later refinement to my thinking due to subsequent encounters with data

<table>
<thead>
<tr>
<th>Nature of IoPP and Reasons</th>
<th>IoPP matches module studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better role enactment</td>
<td>Professionalisation of practice:</td>
</tr>
<tr>
<td></td>
<td>“Effective supervisor”</td>
</tr>
<tr>
<td></td>
<td>Increased confidence in role due to knowledge of policy &amp; theory</td>
</tr>
<tr>
<td></td>
<td>GMC influence</td>
</tr>
<tr>
<td></td>
<td>Formal role structures</td>
</tr>
<tr>
<td></td>
<td>Additional supervisory acts as recommended in module studies</td>
</tr>
<tr>
<td></td>
<td>Removal of existing practices indicated as inappropriate by module studies</td>
</tr>
<tr>
<td>Practitioner identified improvements:</td>
<td></td>
</tr>
<tr>
<td>From readings</td>
<td></td>
</tr>
<tr>
<td>From reflection for assessment</td>
<td></td>
</tr>
<tr>
<td>From experienced supervisors</td>
<td></td>
</tr>
<tr>
<td>From experienced tutors</td>
<td></td>
</tr>
<tr>
<td>From trainee accounts</td>
<td></td>
</tr>
</tbody>
</table>

| Transformation of the purpose and goals of Educational Supervision: Practices not included in module studies that address ES concerns for trainee experiences of supervision | Beyond or differs from guidelines, regulations, or module content |

<table>
<thead>
<tr>
<th>Extent of IoPP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Within own individual practice</td>
<td></td>
</tr>
<tr>
<td>Involves team or department</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Success of IoPP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Student identified judgement criteria</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Educational mechanisms and expected outcomes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M: Workshop discussions</td>
<td>Usefulness to sustain engagement</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>O: Group created ideas for better practice</td>
<td>M2D: Application of theory to practice</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>M2A: Emergent outcomes from group interests</td>
<td>Frustration (with open-ended input)</td>
</tr>
<tr>
<td></td>
<td>Listened quietly</td>
</tr>
<tr>
<td>M: Online discussions</td>
<td>Usefulness to sustain engagement</td>
</tr>
<tr>
<td>O: Group created ideas for better practice</td>
<td>M2D: Application of theory to practice</td>
</tr>
<tr>
<td></td>
<td>Disappointment with tutor-led, structured discussions</td>
</tr>
<tr>
<td></td>
<td>Difficult in mixed specialty groups</td>
</tr>
<tr>
<td>M2A: Emergent outcomes from group interests</td>
<td>Frustration (with open-ended input)</td>
</tr>
<tr>
<td></td>
<td>Listened quietly</td>
</tr>
<tr>
<td>M: Compulsory readings:</td>
<td>Usefulness to sustain engagement</td>
</tr>
<tr>
<td>O: Theoretically underpinned practice</td>
<td>M2D: Quick and easy acquisition of theory for practice</td>
</tr>
<tr>
<td></td>
<td>Reinforced knowledge</td>
</tr>
<tr>
<td></td>
<td>Deep engagement in prep. for workshops and assessment</td>
</tr>
<tr>
<td>M2A: Source of practitioner identified, useful outcomes</td>
<td>In prep. for personalised focus for module assessment</td>
</tr>
<tr>
<td>M: Optional reflection points</td>
<td>Zero engagement</td>
</tr>
<tr>
<td><strong>O:</strong> Personalised improvements to practice</td>
<td>cannot recall incorrect identification</td>
</tr>
<tr>
<td><strong>M2:</strong> Privately questioning practice further on points of interest</td>
<td></td>
</tr>
<tr>
<td><strong>M:</strong> Compulsory summative assessment</td>
<td></td>
</tr>
<tr>
<td><strong>O:</strong> Improved practice through...</td>
<td></td>
</tr>
<tr>
<td><strong>M2D:</strong> Correct application of theory to episodes of prior practice to address own deficiencies</td>
<td>Ss selected focus</td>
</tr>
<tr>
<td><strong>M2A:</strong> Individualised inquiries into points of interest or concern to understand and improve own practice using a range of sources</td>
<td>Really useful Very 'painful' Made time Tutor guidance helpful after struggles</td>
</tr>
</tbody>
</table>

**Student - student relationships**

| **M:** socio-constructivism (build on existing knowledge by sharing ideas) | Frustration Confusion Face saving Difficult due to differences Seniority Clinical Useful with experienced others Source of reassurance |
| **M2D:** Share experiences of better practice to help others meet a standard |  |
| **M2A:** Stimulate discussion of student-identified points of interest, co-create new ideas |  |

**Student - tutor relationships**

<p>| <strong>M:</strong> Role-model guide with experienced learners |  |
| <strong>M2D:</strong> Role model dual expertise as a medical educator; offer new norms, guide the way | Disappointing approach Limited critical reflection Needed different groupings Favoured approach Structured focus for:- Presentations Discussions Helped with assessment struggles |
| <strong>M2A:</strong> Facilitate learners’ exploratory inquiries wherever they go | Disappointing approach Needed more explicit guidance Needed more explicit goals |</p>
<table>
<thead>
<tr>
<th><strong>Student - material relationships</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
</tr>
<tr>
<td>Easy access</td>
</tr>
<tr>
<td>Source of ideas for IoPP</td>
</tr>
<tr>
<td>D: Starting and end point for learning and IoPP. Matching practice to materials.</td>
</tr>
<tr>
<td>A: One of many sources to consider during inquiries. Not a starting point.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Barriers to learning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity design</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Logistical arrangements</strong></td>
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<td></td>
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<tr>
<td><strong>Norm circles</strong></td>
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<tr>
<td><strong>Time pressures</strong></td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Solutions to learning barriers</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Activity design:</strong></td>
</tr>
<tr>
<td>Encourage others to reflect on new ideas</td>
</tr>
<tr>
<td><strong>Time pressures:</strong></td>
</tr>
<tr>
<td>Foreground student role</td>
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<tr>
<td></td>
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<tr>
<td><strong>Norm circles:</strong></td>
</tr>
<tr>
<td>Saving face</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Barriers to IoPP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior role holders</strong></td>
</tr>
<tr>
<td><strong>Staffing structures</strong></td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
</tbody>
</table>

**Solutions to barriers**

*(None apparent in student interviews)*
Appendix 16. Themes from observations of practice

For observations of practice, I developed a new template due to the difference in context for data collection. The theoretical framework for the study continued to underpin the search for and organization of themes.

<table>
<thead>
<tr>
<th>THEMES FROM OBSERVATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IoPP: Supervision as developmental conversations</strong></td>
</tr>
<tr>
<td><strong>Physical strategies</strong></td>
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<tr>
<td><strong>Verbal strategies</strong></td>
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<tr>
<td><strong>Barriers to IoPP</strong></td>
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<tr>
<td><strong>Training structure</strong></td>
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<td></td>
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<tr>
<td><strong>Room quality</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Room location</td>
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<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Inter-related role holders</td>
</tr>
<tr>
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<td></td>
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<tr>
<td>Minimising Barriers</td>
</tr>
<tr>
<td>Timing of sessions</td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Interruptions</td>
</tr>
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<td></td>
</tr>
</tbody>
</table>
### Appendix 17. Student Programme Theory

**Key:**
- Tenets of staff initial programme theory (IPT) presented in blue
- Areas of productive alignment between students and staff shaded green
- Additional information that enhances understanding without challenging IPT not shaded
- Areas of unproductive misalignment between students and staff shaded red

<table>
<thead>
<tr>
<th>Original tenet 1: Conventional learning for better role enactment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical rational IoPP within own practice</td>
<td>Behaviours added or removed from practice</td>
</tr>
<tr>
<td></td>
<td>Increased confidence due to codified knowledge</td>
</tr>
<tr>
<td></td>
<td>Student selected focus of IoPP from provided content</td>
</tr>
<tr>
<td>Technical rational IoPP shared with team</td>
<td>Blocked by senior role holders</td>
</tr>
<tr>
<td>Transformative IoPP involving others</td>
<td>Changes to the nature or purpose of the ES role that do not match module content and challenge policy.</td>
</tr>
<tr>
<td></td>
<td>Focus on trainee experience in structures</td>
</tr>
<tr>
<td></td>
<td>Blocked for ES by senior role holders</td>
</tr>
<tr>
<td></td>
<td>Possible for ES as senior role holders</td>
</tr>
<tr>
<td>Students re-oriented epistemologically due to internal and external influences</td>
<td>MMC and GMC formalisation of the ES role caused students to re-orient towards learning from transmission, to:</td>
</tr>
<tr>
<td></td>
<td>Check practice aligns with policy</td>
</tr>
<tr>
<td></td>
<td>Learn codified knowledge for career progression</td>
</tr>
<tr>
<td></td>
<td>Conventional learning was inadequate to address students’ concerns about trainee experiences in formal structures. The re-orientated away from module approaches to transformative learning.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Original Tenet 2: Group discussions as a mechanism for learning and IoPP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students expect and prefer transmission-based facilitation in the formal CPD context</td>
<td>Open ended conversations cause</td>
</tr>
<tr>
<td></td>
<td>Confusion (no goals)</td>
</tr>
<tr>
<td></td>
<td>Frustration (too much student talking time)</td>
</tr>
<tr>
<td></td>
<td>Loss of learning</td>
</tr>
<tr>
<td>Students prefer Tutor determined boundaries</td>
<td></td>
</tr>
<tr>
<td>Specific goals from tutors</td>
<td></td>
</tr>
<tr>
<td>Sharing ideas for and from practice was difficult face to face and online</td>
<td>Groups are too large</td>
</tr>
</tbody>
</table>
Role salience: Mixed groups caused students’ other roles as supervisors and clinicians to become more salient than their student role. This led to loss of learning and IoPP:
- Trainee presence caused supervisors to avoid discussing own practice (remaining taciturn or posting last)
- Trainee’s lack of experience in role caused supervisors disappointment
- Supervisors taught trainees generic principles or listened quietly
- Perceived differences in medical and dental systems made application of theory to practice difficult

Original Tenet 3: Sustained engagement for deep learning

<table>
<thead>
<tr>
<th>Blended learning was useful for busy professionals</th>
<th>Neither fully traditional nor fully online CPD would sustain engagement. Difficult to get time away to study on campus Disengage from VLE without contact and support Provision of materials via VLE was helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement was patterned according to learning context and role salience</td>
<td>Students engaged meaningfully in readings and assessments Students engaged strategically in groups on campus and online</td>
</tr>
<tr>
<td>Strategic engagement in online discussions had multiple causes</td>
<td>Competing demands required students to ‘weigh up’ how and when to minimise student activities. This was made possible because: Technical rational nature of the task plus one-point score does not engender ‘chatting’. Confessional nature of the task prompts face-saving. Students briefly share aspects of own practice that align with literature and others. Student sphere of influence blocked students from encouraging others to exchange more ideas Optional activities were bypassed</td>
</tr>
<tr>
<td>Students engaged meaningfully with compulsory readings</td>
<td>Student role salience was balanced with other roles by intrapersonal studies with a performance-based outcome. Students read: To prepare for workshop role-plays and case-based discussions To prepare for module assessment on self-selected foci Further on points of interest related to practice concerns IoPP derives largely from readings and assessments</td>
</tr>
</tbody>
</table>
| Students engaged meaningfully in assessment process | Student role salience was balanced with other roles by intrapersonal studies. Despite struggles, students persisted because:  
Formalised roles require validation through CPD (evidence of attendance at this module is inadequate. Students need to pass)  
Self-selected focus was of interest to student’s own practice. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original Tenet 4: Role models and authentic tasks to address workplace barriers</strong></td>
<td></td>
</tr>
<tr>
<td>Experienced tutors were helpful</td>
<td>They challenged students’ thinking about practice and helped students engage in a new discipline, especially essay writing.</td>
</tr>
<tr>
<td>Authentic assessment task linked to IoPP</td>
<td>Students report IoPP from analysing an episode of practice more so than from discussing paperwork during workshops.</td>
</tr>
<tr>
<td>Authentic impersonal task linked to IoPP</td>
<td>Students report IoPP from a case-based discussion on a ‘Trainee in Difficulty’ involving a typical (not personalised) scenario.</td>
</tr>
</tbody>
</table>
| Formal structures in the workplace constrain IoPP | Trainee as service provider limits time for supervision.  
Trainees arrived late or left early.  
ARCP requirements provoke tallying at last meetings because supervisors need to prepare a report on portfolio evidence. Module places emphasis on reports.  
Changes to training structures render requirements unclear and therefore developmental conversations about them difficult. |
| Norm circles in the workplace constrain IoPP | Educational supervision is viewed as a subordinate activity:  
Clinical Supervisors interrupt meetings  
Colleagues interrupt meetings  
Rooms are inadequate to promote an image of supervision as important. |
| Sphere of Influence shapes IoPP | Changes to own practice that match policy are possible for ES.  
Changes that involve team members yet match policy are blocked by senior role holder’s disagreement.  
Changes that involve team members and challenge policy are only possible for ES with another, more senior role. |
## Appendix 18. Findings as a CMOc Table

<table>
<thead>
<tr>
<th>Staff Initial Programme Theory</th>
<th>Context</th>
<th>Mechanism</th>
<th>Interim and IoPP Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMC &amp; GMC</td>
<td>CPD module</td>
<td>Better role enactment according to policy</td>
<td></td>
</tr>
<tr>
<td>CPD module</td>
<td>Conventional learning</td>
<td>Region wide, professionalisation of practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application of theory to practice</td>
<td>Region wide, professionalisation of practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Practitioner-led reflection on experience</td>
<td>Locally appropriate, feasible IoPP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sustained engagement</td>
<td>Deep learning for IoPP</td>
<td></td>
</tr>
<tr>
<td>Norm circles: Learners’ biomedical backgrounds</td>
<td>New norm circles (provided by tutors and module activities)</td>
<td>Development supervision (rather than administrative)</td>
<td></td>
</tr>
<tr>
<td>Formal structures in the workplace</td>
<td>Discussion</td>
<td>Learning and IoPP</td>
<td></td>
</tr>
<tr>
<td>Workshops and Online Groups</td>
<td>Share ideas for application of theory to practice</td>
<td>Region wide, professionalisation of practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Raise concerns and questions about experience in the role</td>
<td>Locally appropriate, feasible IoPP</td>
<td></td>
</tr>
<tr>
<td>CPD Module</td>
<td>Assessment</td>
<td>Learning and IoPP</td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td>Corrected application of theory to an individually interesting area of practice</td>
<td>The removal of known deficiencies leading to theoretically underpinned practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Practitioner reflection on an individually interesting area of practice</td>
<td>Locally appropriate learning and feasible IoPP drawn from a range of sources.</td>
<td></td>
</tr>
<tr>
<td>GMC and CPD Module</td>
<td>Epistemological re-orientation</td>
<td>Professionalisation of the Educational Supervisor role</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transformation of the nature and goals of the Educational Supervisor role</td>
<td></td>
</tr>
<tr>
<td>Student Development of Programme Theory</td>
<td>Workshops, Online Groups and Role-based norm circles</td>
<td>Role salience</td>
<td>Strategic engagement due to threats to public image of professional roles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meaningful engagement, learning and IoPP due to saliency of others’ role as experienced practitioner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Readings and Assessments</td>
<td>Meaningful, ‘private’ engagement with an area of</td>
<td></td>
</tr>
<tr>
<td>The workplace</td>
<td>Sphere of influence</td>
<td>interest leading to learning and IoPP</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Successful IoPP for supervisor’s own practice within policy guidelines</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Successful IoPP for team’s practice, beyond policy guidelines for those supervisors with a wider sphere of influence</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unsuccessful IoPP for team’s practice, within or beyond policy guidelines for those supervisors not having a wider sphere of influence</td>
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</tbody>
</table>
## Appendix 19. Explanatory Adequacy - An addition to the quality criteria for realist research

<table>
<thead>
<tr>
<th>Quality criteria</th>
<th>Report Section</th>
<th>Quality criteria</th>
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</table>

### Quality Criteria

<table>
<thead>
<tr>
<th>Quality criteria</th>
<th>Report Section</th>
<th>Quality criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TITLE</strong></td>
<td></td>
<td>1. Ensure the study title identifies it as a realist evaluation</td>
</tr>
<tr>
<td><strong>ABSTRACT</strong></td>
<td></td>
<td>2. Provide an abstract which states the evaluand, purpose of the evaluation; evaluation question(s) and/or objective(s); evaluation strategy; data collection, documentation and analysis methods; key findings and conclusions</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td>3. Rationale for evaluation: Explain the purpose of the evaluation and the implications for its focus and design</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td>4. Programme theory: Describe the initial programme theory (or theories) that underpin the programme, policy or initiative</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td>5. Evaluation questions, objectives and focus: State the evaluation question(s) and specify the objectives for the evaluation. Describe whether and how the programme theory was used to define the scope</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td>Beyond description: Explain how the initial programme theory was developed. Was retroductive thinking involved?</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
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<td></td>
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<tr>
<td><strong>INTRODUCTION</strong></td>
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</tbody>
</table>

392
<table>
<thead>
<tr>
<th><strong>Methodological trustworthiness</strong></th>
<th><strong>Ontological appropriateness</strong></th>
<th><strong>Contingent validity</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Ethical approval: State whether the realist evaluation required and has gained ethical approval from the relevant authorities, providing details as appropriate. If ethical approval was deemed unnecessary, explain why</td>
<td>7 Rationale for using realist evaluation: Explain why a realist evaluation approach was chosen and (if relevant) adapted</td>
<td>8 Environment surrounding the evaluation Describe the environment in which the evaluation took place</td>
</tr>
<tr>
<td><strong>(Programme internal)</strong> Contingent validity</td>
<td>9 Describe the programme policy, initiative or product evaluated Provide relevant details on the programme, policy or initiative evaluated</td>
<td>Describe the environment in which <em>the programme</em> and its evaluation took place. State and justify whether or not the surrounding environment is considered a causal factor in outcomes. If so, how so. For example, are social structures in the wider context accorded ontological status?</td>
</tr>
<tr>
<td>Methodological trustworthiness</td>
<td></td>
<td>10 Describe and justify the evaluation design.</td>
</tr>
<tr>
<td>Give an account of what was planned, done and why, at least in summary form or as an appendix, in the document which presents the main findings. If this is not done, the omission should be justified and a reference or link to the evaluation design given. It may also be useful to publish or make freely available (e.g., online on a website) any original evaluation design document or protocol, where they exist.</td>
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<tr>
<td>Triangulation of data sources and collection methods</td>
<td>11 Data collection methods Describe and justify the data collection methods – which ones were used, why and how they fed into developing, supporting, refuting or refining programme theory Provide details of the steps taken to enhance the trustworthiness of data collection and documentation Address triangulation. Include reflexivity: was the evaluation close to practice research. How did the data collector’s relationship to the evaluand influence the study?</td>
<td></td>
</tr>
<tr>
<td>Data, method &amp; theory triangulation for Construct validity</td>
<td>12 Recruitment process and sampling strategy Describe how respondents to the evaluation were recruited or engaged and how the sample contributed to the development, support, refutation or refinement of programme theory</td>
<td></td>
</tr>
<tr>
<td>Construct validity</td>
<td>13 Data analysis</td>
<td></td>
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<tr>
<td>Describe in detail how data were analysed. This section should include information on the constructs that were identified, the process of analysis, how the programme theory was further developed, supported, refuted and refined, and (where relevant) how analysis changed as the evaluation unfolded.</td>
<td></td>
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<tr>
<td>How do constructs align with and fully meet the ontological commitments of the branch of realism underpinning the study?</td>
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<tr>
<td>Justify why the process of analysis includes or omits retroductive analysis.</td>
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</table>

<table>
<thead>
<tr>
<th>Triangulation of data, method &amp; theory, including multiple people’s perspectives</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Details of participants Report (if applicable) who took part in the evaluation, the details of the data they provided and how the data was used to develop, support, refute or refine programme theory.</td>
<td></td>
</tr>
<tr>
<td>Include reflexivity: was the evaluation close to practice research? How did the data collector’s relationship to the evaluand influence the study?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methodological trustworthiness</th>
<th>15 Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present the key findings, linking them to contexts, mechanisms and outcome configurations. Show how they were used to further develop, test or refine the programme theory.</td>
<td></td>
</tr>
<tr>
<td>How do conceptualisations of Context and Mechanism align with and fully meet the ontological commitments of the branch of realism underpinning the study?</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Construct &amp; contingent validity</th>
<th>DISCUSSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Summary of findings Summarise the main findings with attention to the evaluation questions, purpose of the evaluation, programme theory and intended audience.</td>
<td></td>
</tr>
<tr>
<td>Justify the inclusion or omission of retroductive thinking.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Methodological trustworthiness,</th>
<th>17 Strengths, limitations and future directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>In what ways does the scope of the</td>
<td></td>
</tr>
</tbody>
</table>
### Analytical generalisability

**extent of analytical generalisability,**

Discuss both the strengths of the evaluation and its limitations. These should include (but need not be limited to): (1) consideration of all the steps in the evaluation processes; and (2) comment on the adequacy, trustworthiness and value of the explanatory insights which emerged. In many evaluations, there will be an expectation to provide guidance on future directions for the programme, policy or initiative, its implementation and/or design. The particular implications arising from the realist nature of the findings should be reflected in these discussions.

abstraction limit causal explanations? That is, what range of context was delineated for the current study and what structural, contextual mechanisms were therefore included or disregarded in causal explanations.

<table>
<thead>
<tr>
<th>Analytical generalisability</th>
<th>18 Comparison with existing literature Where appropriate, compare and contrast the evaluation’s findings with the existing literature on similar programmes, policies or initiatives</th>
<th>Use abductive reasoning. Justify the use or non-use of retroductive thinking.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical generalisability</td>
<td>19 Conclusion and recommendations List the main conclusions that are justified by the analyses of the data. If appropriate, offer recommendations</td>
<td>Identify the branch of realism underpinning this ‘realist approach’.</td>
</tr>
<tr>
<td>Construct validity</td>
<td>Consistent with a realist approach</td>
<td></td>
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<tr>
<td>--------------------</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>20 Funding and conflict of interest State the funding source (if any) for the evaluation, the role played by the funder (if any) and any conflicts of interests of the evaluators</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 20. The Pilot Study

Acknowledging that piloting increases rigour (Denzin & Lincoln, 2011), I conducted a small-scale pilot study from February to May 2017, involving one member of staff and three students. As my staff interview was with a very significant member of the team, I retained the data for inclusion in the actual study. I followed my intended research design from participant recruitment to data analysis in order to assess the practical and theoretical feasibility of my study. Here, I briefly outline key lessons I drew from piloting my design which influenced the main study.

LESSONS FROM THE PILOT STUDY

‘Chunking’ the realist interview

Piloting the realist interviewing technique as set out by (Pawson, 1996) and (Manzano, 2016) taught me that sharing a programme theory with interviewees takes time. In realist research, the programme theory is the unit of analysis (Pawson & Tilley, 1997). Interviews therefore revolve around discussing this theory. In my pilot study, I set it out in full before beginning to pose my interviewee questions about it. That is, following realist interviewing protocols which involve a teacher-learner cycle, I first assumed the teacher role and set out the (very early) programme theory so far. Therefore, in this first interview, I spoke at length before my interviewee had opportunity to respond. Consequently, I decided that during realist interviews, the theory needs to be divided into ‘chunks’, strands or tenets to allow the dialogue to be more responsive to particular utterances. In the current study, I refer to the ‘tenets’ of my programme theory. These are the principle ideas which combine to form the programme theory.

Reducing the research burden for participants through choice of method

Piloting showed me that two of my plans for data triangulation, namely ‘impact diaries’ and member checking of transcripts and analytic memos were overly burdensome on
participants, and I subsequently amended my methods. Participants declined my invitations to check transcripts or my initial analytic memos about them, citing work-life balance and kindly professing trust in my interpretations. Students apologised, often publicly during workshops, for not having written entries in their impact diaries and this risked ‘exposing’ their participation to others.

I was reminded to seek complex explanations of IoPP. While piloting, I learnt that observations of actual (not simulated) NHS practice necessarily happen according to the supervisor’s schedule not mine. This meant some participants were first interviewed then observed and others, the reverse. Reflecting on the concerns I felt about this was a useful reminder that this study is not underpinned by empirical verificationism. I need not interview first and observe later to ‘check’ participants had told me ‘the truth’. This helped me focus on situational factors and structural causes of IoPP.

Reconceptualising CPD programmes and their IoPP: A critical realist approach

Most importantly, my struggles with coding pilot study data around the CMOc lead me to offer an original, critical realist reconceptualization of CPD and IoPP as set out in Chapter Four. Trying to embody advice in the literature (Dalkin et al., 2015; Jackson & Kolla, 2012; Onyura et al., 2017; Pawson & Tilley, 1997; Sorinola, Olanrewaju et al., 2017) showed me I could not offer theoretically defensible findings without first establishing more rigorous ontological underpinnings for my study. This new framework then underpinned data collection and analysis for the current study.

EMAIL CONTACT WITH POTENTIAL PILOT STUDY PARTICIPANTS

At the beginning of module studies, at the end of the first face to face workshop, I informed the group of my plans for research and asked if any students would kindly volunteer to pilot my research design. I sent the following information to those who agreed to be contacted. After reading this, those who agreed to participate in the pilot study received and signed an informed consent sheet.

Information about my pilot study
Dear

Thank you for considering participation in my pilot study. I greatly appreciate your help in working out whether my planned methods of collecting and analysing data are the most appropriate ways for my eventual PhD study. Below are some initial details about my study and guidance on how you can participate.

What I am researching:

I want to find out what impact module studies could have on your professional practice as an Educational Supervisor. Based on a reading of the literature (of how education influences practice), I have defined impact on professional practice (IoPP) as a change to knowledge, skills, behaviours, attitudes and confidence levels. While changes to KSBA due to studying sounds familiar, I also found some studies which reported participants didn't change their KSBA, but instead reported feeling reassured by their studies that what they had been doing at work all along constituted good practice. Here, I have included 'change in confidence levels' (up or down) in my definition of IoPP.

Why I am doing this research:

For practical reasons: to better understand our students' realities and better shape our curriculum to support them.

For academic reasons: to understand the complex interplay between blended learning at university and impact on professional practice in the workplace; and to understand which features of localised contexts might inhibit or enable us to use learning; particularly how and why we do or don't use learning gained in Context A in Context B.

YOUR INVOLVEMENT:

In the early stages of my Pilot Study, I would like to ask you to participate in two activities:
Diary Keeping: In Blackboard you will see, in the left-hand side menu, a link to your own, private 'Pilot Study Diary’. No-one but you and me can see the entries you put in here. And I will keep it that way. (See screen grab below).

Please could I ask that you make notes in your diary of:

1. Any instances of module studies (potential for) influencing your professional practice as an ES
   a. a change to knowledge, skills, behaviours, attitudes or confidence levels
   b. what was the nature of this change? (something you’d like to try out, or already have, a change to the way you think about things, etc.)
   c. which feature of module studies influenced you to (want to) make this change?
   d. what enabled you to, or blocked you from, implementing these changes? (features of your own professional context: people, rules, regulations, resources, existing work patterns, your confidence, your beliefs or prior experiences, etc.)

2. Any feature of module studies that you just cannot envisage

Please don’t feel that your diary entries have to exhaustively address the points above. I appreciate you noting down as much as you can about the IoPP you are perceiving or experiencing but understand that you are busy and cannot write an essay each time you feel a change. Diary entries can be short (and you can always add to an earlier entry later on). Alternatively, please feel free to address other points, or discuss other ideas about IoPP, not included above.
Please could I ask that you start your diary keeping as early as possible during the module, as based on a literature review, I’m really interested in this learning ‘journey’ for module students (as opposed to a pre-test / post-test study design). For that reason, please could I ask that you don’t delete any earlier entries, but instead add to them (or leave them be), letting the nature of any changes unfold over time in your diary.

**Observation of Practice:**

Please allow me to observe you supervising postgraduate trainees in the workplace (but away from patients) as often as our schedules will mutually allow. I understand I will need permission from your TPD for this, and with your agreement, I will contact your TPD to request permission.

For the pilot study, I’m interested in observing you supervising through any (or all!) stages of the ARCP cycle. So, for example, if I could observe you doing an initial / start-of-placement supervision with two (or more) different learners; or observe you conducting an initial, mid-term and end-of-placement supervision with the same learner. Or any combination of these. I understand I will need permission from your trainees for this, and with your agreement, I will send you an informed consent form to pass to your trainees to request their kind participation and permission.

Depending on your preferences and schedule, I will either, observe unobtrusively and leave without disturbing your work, or stay behind to talk with you about my developing ideas.

In any case, I will share with you my ongoing analysis of the points we are uncovering together through a medium that causes the least disturbance to your working day, e.g., by email, or on BB in a private discussion space, or over the phone.

Later in my pilot study, I will ask for your help in critiquing my data collection and analysis methods. As this isn’t the focus of the early stage of my pilot study, I will write to you more about that later.
If you would still like to participate, please let me know and I will send you an Informed Consent sheet to sign and date. Thank you again for offering to help! I’m looking forward to uncovering some useful findings together!

Kind regards

My contact details redacted

THE PILOT STUDY LOGIC MODEL

This model was based on the predominant view of mechanism as programme participants’ resources and their reactions to programme resources as found in guiding seminal works (e.g., Pawson & Tilley, 1997). This conceptualisation of mechanism (and CPD programmes) was abandoned following the pilot study.

<table>
<thead>
<tr>
<th>Module Resources</th>
<th>Module Activities</th>
<th>Expected Student Reactions</th>
<th>Intended Learning Outcomes</th>
<th>Impact on Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>University classrooms</td>
<td>4 compulsory workshops</td>
<td>Sustained engagement</td>
<td>ILO 1</td>
<td></td>
</tr>
<tr>
<td>Blackboard &amp; Turnitin</td>
<td>Group discussions</td>
<td>Reflection on readings</td>
<td>ILO 2</td>
<td></td>
</tr>
<tr>
<td>Discussion Boards</td>
<td>Role play</td>
<td>Reflection on practice</td>
<td>ILO 3</td>
<td></td>
</tr>
<tr>
<td>Bespoke readings / Peer reviewed literature (PDFs)</td>
<td>Compulsory reading</td>
<td>Valuing Education</td>
<td>ILO 4</td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td>6 compulsory online discussions</td>
<td>Trusting tutor expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert tutors</td>
<td>Optional reflection points</td>
<td>Learning from peer input during discussions (online &amp; t2f)</td>
<td></td>
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</tr>
<tr>
<td>Peers &amp; peer input</td>
<td>Engaging with formative feedback</td>
<td>Perceptions of need / feasibility / relevance / applicability</td>
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<tr>
<td>Realia</td>
<td>2 summative assessments</td>
<td>Desire to embody professionalism</td>
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<tr>
<td>Certification / Qualification</td>
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