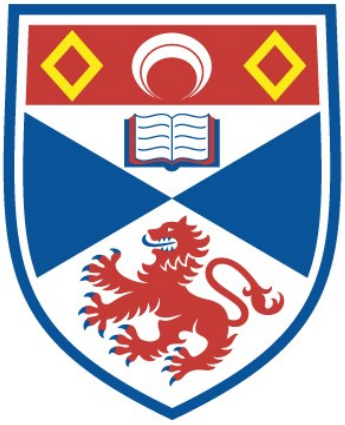
EXPLORING COMPETENT PROFESSIONAL PRACTICE: A SOCIAL PRACTICE THEORY APPROACH

Siobhan Dumbreck

A Thesis Submitted for the Degree of PhD
at the
University of St Andrews



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Exploring Competent Professional Practice: A Social Practice Theory Approach

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This thesis is submitted in partial fulfilment for the degree of

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I, Siobhan Grainne Dumbreck, do hereby certify that this thesis, submitted for the degree of PhD, which is approximately 79,000 words in length, has been written by me, and that it is the record of work carried out by me, or principally by myself in collaboration with others as acknowledged, and that it has not been submitted in any previous application for any degree. I confirm that any appendices included in my thesis contain only material permitted by the 'Assessment of Postgraduate Research Students' policy.

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Abstract

During a medical consultation, the *right* answer in terms of medical knowledge from evidence within clinical guidelines, may not align with the *right* answer for an individual patient. This can create tension within a medical consultation between the delivery of patient-centred care and externally imposed performance measures. This thesis illuminates a way to differentiate between unwarranted variation from a well-founded, mandated evidence base versus exercise of professional judgement and use of alternative sources of knowledge.

This qualitative case study used a practice-based approach, and reflexive thematic analysis, to investigate how medical students use evidence-based knowledge within a consultation with an individual patient. This involved observation of teaching practice, and simulated consultations, then follow-up interviews with medical students, simulated patients and medical school tutors. This illuminated what is meant by competent professional practice and provision of patient-centred care. The thesis makes a methodological contribution by providing an alternative way of studying the complexity of implementation of evidence-based practice, as a social practice rather than a linear predictable practice.

This study showed the value of considering ethical principles to support the patient to co-construct the performance. Patient-centred care could be demonstrated by the medical student being explicit about connecting with meaning from within the practice of the patient, to respect patient autonomy and epistemic justice. This required attention to which practice, and which elements within practice were attended to, from within the bundle of multiple practices within any context at each point in time.

By teaching for connections, tutors support the competence of students to reflect on both the meaning element within the practice, and the material element within practice. The tutors can use feedback to support the students to use sociological imagination, to create a practice which is most meaningful for an individual patient, to provide patient-centred care within evidence-based medicine.

General acknowledgements

First, I would like to thank the medical students, staff, and simulated patients, who were generous sharing with me their valuable time, their honesty, and for their participation in and/or support for this study.

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Glossary of Abbreviations and Meanings

Abbreviation	Meaning
EBM	**Evidence-based medicine** - Evidence has been defined as information on which a decision or guidance is based. Evidence can be obtained from a range of sources, including randomised controlled trials, observational studies and expert opinion (for example, healthcare and other professionals, people using services, family members and carers).
GMC	**General Medical Council** – Governing body for doctors in UK. Role is to protect patient safety and improve medical education and practice.
GP	**General Practitioner –** Community or Family doctor.
NHS	**National Health Service** in United Kingdom.
NICE	**National Institute for Health and Care Excellence** - NICE's role is to improve outcomes for people using the NHS and other public health and social care services.
QOF	**Quality and Outcomes Framework** - A national incentive scheme for all GP practices in the UK that rewards them financially for how well they care for patients. Under the scheme, GP practices score points according to their level of achievement against a series of indicators, such as the percentage of patients with a new diagnosis of a disease who are referred for certain tests. NICE makes sure the clinical and health improvement indicators used in the scheme reflect new evidence and rising service standards.
RCT	**Randomised controlled trial** - A study in which a number of similar people are randomly assigned to 2 (or more) groups to test a specific drug, treatment or other intervention. One group (the experimental group) has the intervention being tested, the other (the comparison or control group) has an alternative intervention, a dummy intervention (placebo) or no intervention at all. The groups are followed up to see how effective the experimental intervention was. Outcomes are measured at specific times and any difference in response between the groups is assessed statistically.
SBAR	**SBAR** is a standardised format for verbal hand over of information to a clinical colleague and it is an acronym for: **S**ituation (what is going on with the patient), **B**ackground (what is the relevant context for the patient), **A**ssessment (what is the current problem), **R**ecommendation (what is the next step in the management for the patient).
Simulated Patient	**Simulated patients** are recruited by medical schools to act the role of a patient, according to a pre-written scenario which outlines their condition, to support the teaching of consultation skills of the medical students.

SECTION ONE: INTRODUCTION

Chapter 1 Introduction

In this thesis, I explored how a medical consultation was performed, to examine the intersection between evidence-based practice and patient-centred care, and what this means for professional practice. The findings illuminate a deeper understanding of what is meant by competent practice within a medical consultation. The particular interest was consultations within the General Practice setting as this reflects the vast majority (over 90%) of National Health Service (NHS) consultations in the United Kingdom (UK) (Kings Fund Report, 2011). Rather than assuming that the implementation of evidence was linear and predictable, I approached the study of practice as being social and relational, to explore how enactments were coordinated. Social Practice Theory was a suitable choice of theory to underpin this research, as it is a theory (or family of theories) which seeks to understand and explain the social and cultural world by analysing the repetitive practices in daily life (Shove, Pantzar and Watson, 2012). Practice theories focus on actions and what can be empirically observed or explicitly stated; rather than considering abstract concepts, for example, the motivation of an individual, or the power of an organisation (Nicolini, 2013). The Practice Theory lens differs from other social theories which might separate structure from agency, doing from knowing, or separation of the mind from the body (Shove, Pantzar and Watson, 2012; Nicolini, 2013). The practice-based approach can offer alternative insights into variations in how a practice is enacted.

1.1 Scope and Rationale

The organisational context for the research is one medical school, although I propose that the findings can inform broader considerations of professional competence. Discussion of the findings suggest that good practice is more than just competence. The practice-based approach used for this research highlighted the role of connections within professional practice and postulated that it was not about student competence *per se*, but that good professional practice involves co-producing that practice with the patient.

My interest in this area of research was fuelled by the observations that I made during my experiences teaching medical students. The spark for my interest in the topic for this PhD was ignited in 2015 during a session I was teaching within the Medical School, when there was variation in practice amongst medical students, as they used evidence-based knowledge within their consultations with individual patients. The struggle was particularly noticeable to me

during consultation training sessions where the *right* answer in terms of their medical knowledge from evidence from within clinical guidelines, did not align with of *right* answer for an individual patient. I have over twenty years' experience as a health care professional within the National Health Service (NHS). My role as a health care professional included extensive experience using evidence-based treatment recommendations within healthcare organisations, working at Health Board level, with clinical teams in General Practice, and with individual patients. So, I am also aware that this struggle is not something which is restricted to the training years.

Improving the quality of professional practice is an ongoing and central concern for policy makers and managers, as a publicly funded service it accounts for over 20% of total government spending, so demonstration of value for money is required (Scottish Government, 2021). Improving the quality of professional practice is also foundational for the professional bodies, clinicians and medical educators; for example, to improve outcomes for patients, to support patient safety, and support staff satisfaction and retention (General Medical Council, 2020). The General Medical Council (GMC) sets the organisational standards and requirements for all stages of medical education and training, this is set out within the document "Outcomes for Graduates" which states what newly qualified doctors must know and be able to do (General Medical Council, 2018). This defines what *good* professional practice is for medical graduates, in terms of knowledge, skills and professional values and behaviours.

During 2015, from a policy perspective within the Scottish NHS, there was also increasing criticism that a major source of funding for General Practice, the Quality and Outcomes Framework (QOF), was not leading to improvements in evidence-based practice. The QOF was a system of performance management and payment, with General Practitioners (GPs) paid for implementation of the *right* practice based on evidence-based guidelines and protocol. For example, payments for achieving specified objective outcomes, such as blood pressure treatment targets, for a pre-defined proportion of their patients. QOF contributed to the criticism of the "scientific bureaucratic model" of medicine wherein clinical decisions and medical practice are rooted in externally legitimised knowledge and practice, evidence-based guidelines, and protocol (Harrison, 2002, p.467). Although QOF was associated with initial improvement in incentivised processes of care and some intermediate outcomes, there was little further improvement after the third year of the scheme, and variations in implementation of evidence continued (Dornan et al., 2010; Ryan et al., 2016). At the end of 2015, QOF was abolished in Scotland (BBC, 2015). QOF had cost approximately £1bn per annum across the UK since it was introduced in 2004 (Kontopantelis et al., 2015).

This study was started at a time when Scottish Government policy for National Health Service for Scotland was changing. At that time, the first "Realistic Medicine" policy document had recently been published as the annual review from the then Chief Medical Officer for Scotland (Calderwood et al., 2017). "Realistic Medicine" put the person receiving healthcare at the centre of decision-making and creates a personalised approach to their care, and it was an approach that was well received by all stakeholders (Calderwood et al., 2017). The report stated that:

> Doctors need support in choosing, with their patients, not to apply evidence-based guidelines; the strength of guidelines can make doctors feel unable to deviate from them, driven by feelings of peer pressure, assumed patient demand, concern about litigation and an understandable emotional need to 'do something' in the face of long-term conditions. (Calderwood et al., 2017, p.12)

This excerpt from the report captures the focus of interest for this thesis, to investigate how evidence-based knowledge is used in practice, especially when the choice might be to **not** apply evidence-based guidelines with an individual patient. The construct of person-centred care has been shown to improve patient satisfaction and professional fulfilment, to save time, to increase compliance with prescribed medication, and to reduce the chance of the practitioner being sued (Stewart et al., 2003). But, as discussed by Armstrong (2002), treatment guidelines can lead to tensions emerging between a patient-centred care approach and the implementation of evidence-based medicine practice. Brennan, Greenhalgh and Pawson (2017), also described the application of medical knowledge into practice as being associated with multiple tensions which can contribute to variation in the uptake of the recommendations. So, with the policy background of "Realistic Medicine" (Calderwood et al., 2017), a focus for this research included an exploration of the person-centred aspect of medical student practice.

My own professional background shaped how I approached the research, how I framed the overarching research question of the study, and also my process of generating data. Therefore, a reflexive research approach was chosen, which is discussed further in Section Three of this thesis (p.79), within the chapters about methodology and methods of data generation and analysis. Next, I provide a definition of evidence-based practice and why implementation of evidence is problematic. Then the research purpose and research questions are stated, as well as the intended contributions of this thesis. This chapter ends with an outline of how the thesis is structured.

1.2 Statement of the Problem and Focus

This thesis considers the implementation of evidence as a social practice. Within the broad topic of implementation research, the focus for the research was the practice of medical students with individual patients within a medical consultation. A particular interest was to explore variation in practice, arising from the tensions between the implementation of an evidence-based treatment recommendation and a patient-centred care approach (Armstrong, 2002). It also explored what theoretical or conceptual considerations inform the design, planning, conduct and evaluation of implementation efforts.

The research focus was on these processes for practitioners at the early stage of development. Medical students have been chosen as subjects for this research, as studies have shown they could be better prepared for practice, as more prescribing errors are made by doctors in their first two years of postgraduate training (Ryan et al., 2014). There is a need to better develop medical students' expertise in the complex context of clinical practice during undergraduate education (Dornan et al., 2009). These studies concluded that errors were of complex causation, and that further qualitative investigation is warranted. Although the postgraduate training is generally hospital based, this complexity is also relevant for education within General Practice context too, highlighting a need for more research within this context (Wass, 2019).

The term "Evidence-based Medicine" (EBM) was coined in 1992, as an emerging new paradigm for medical practice (Guyatt et al., 1992). EBM defines the value of medical interventions in terms of empirical evidence from population-based data from clinical trials. Epidemiology provided mathematical estimates from population-based research of whether a clinical intervention does more good than harm (Sackett and Rosenberg, 1995). Treatment recommendations derived from large scale, intervention studies which involve objective measures and statistical analysis such as randomised controlled trials (defined on p.14 of this thesis), have been classified as stronger recommendations, than the weaker treatment recommendations derived from observational studies (Timmermans and Kolker, 2004). Observational studies are considered low quality (Oxman and GRADE Working Group, 2004), and the opinion of an individual clinician is considered just an "opinion" and not evidence (Balshem et al., 2011, p.401). EBM was introduced as a concept which **de-**emphasised intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stressed the examination of evidence from clinical research. Guyatt and colleagues described EBM as requiring new skills of the physician,

including efficient literature searching and the application of formal rules of evidence evaluating the clinical literature.

The concept of EBM was enthusiastically embraced by politicians and managers and "number-crunchers" as a tool of management, a quality assurance system (Charlton and Miles, 1998. p.372). The rise and proliferation of the EBM movement was also accompanied by a rise in implementation research, which has been defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices" to improve the quality of service delivery (Eccles et al., 2009, p.2). But the concept of EBM received resistance from clinicians, which prompted a refinement of the definition of the concept of EBM to better incorporate the value of an individual clinical expertise:

> External clinical evidence can inform, but can never replace, individual clinical expertise, and it is this expertise that decides whether the external evidence applies to the individual patient at all and, if so, how it should be integrated into a clinical decision. (Sackett et al., 1996, p.72)

The limits of EBM were described by Tonelli, (1998) as an epistemological gap between clinical research (which produces *evidence* derived from population data) and clinical practice (which uses *knowledge* with an individual patient). Within EBM, Tonelli argued that the individuality of patients tended to be devalued, the focus of clinical practice being subtly shifted away from the care of individuals toward the care of populations, and the complex nature of sound clinical judgement not being fully appreciated. Tonelli stated that despite its promise, EBM failed to provide an adequate account of optimal medical practice and a broader understanding of medical knowledge and reasoning was necessary.

Nearly a decade after writing that article, Tonelli (2006) wrote again that EBM was still struggling with the value and integration of other kinds of medical knowledge. Tonelli then suggested a casuistic alternative to EBM approaches which recognised that five distinct types of knowledge could potentially be relevant within a medical consultation. These different types of knowledge are empirical evidence, experiential evidence, pathophysiologic rationale, patient goals and values, and system features. The relative importance of each type of knowledge depends upon the circumstances within each consultation. Tonelli emphasised that the skilled clinician must weigh these potentially conflicting evidentiary and non-evidentiary warrants for action, employing both practical and theoretical reasoning, in order to arrive at the best choice for an individual patient (p.248). This skill to balance each of these different kinds of knowledge, for an individual patient, is the focus for this research.

The ongoing criticism from clinicians, of the rationality of empirical evidence derived from clinical trials being prioritised over other information, especially information from the individual patient, was articulated more recently by Heath (2016). Heath stated that medicine has exploited rationality at the expense of humanity, "clinical trials are deliberately aimed at showing average efficacy in a diseased group rather than optimum management for individual patients" (p.i5705). This is the problem of interest for this thesis.

By framing the use of knowledge (in the form of an evidence-based treatment recommendation) within the medical consultation as a social practice, I presented the need for a better understanding of different types of knowledge use, both in terms of the conceptual object and the ways of studying it, to reconceptualise (learning about) knowledge use from a Social Practice Theory perspective. By careful use of the term *knowledge* versus the term *evidence* within this thesis, the aim was to avoid privileging the empirical or experimental, over relational and systemic forms of knowledge.

Using a Social Practice Theory perspective, this thesis challenges various assumptions underpinning implementation research. By suggesting a broadened perspective and directing attention to the meaning-making required when practitioners engage with a practice, it emphasised the co-constructed and locally negotiated process of the practice. This also highlighted the role of practitioner reflection within this process. This research built upon the view that use of knowledge-in-practice is a social, relational, locally negotiated process, rather than a linear and predictable practice as often described in implementation research (Nutley, Walter and Davies, 2007; Nutley et al., 2019).

1.3 Research Purpose and Research Questions

The purpose of this thesis is to explore how evidence-based knowledge derived from population data is used in medical practice with an individual patient. With a focus on an evidence-based treatment recommendation and how it is used by medical students with individual patients during a medical consultation. The study explored factors which contribute to variation in use of evidence-based knowledge in practice. Using a practice-theoretical approach, this thesis used empirical examples of knowledge use in practice, to theorise the practice of evidence implementation. Social Practice Theory was used for theoretical, conceptual, and analytical guidance. The research also explored what this means in terms of the practice of the tutors within the medical school towards supporting the development of the competence of the medical students and their development as reflexive professionals.

Another area addressed by this thesis was the challenge of the, often implicit, assumptions made in implementation research. Alvesson and Sandberg (2011) describe the generation of research questions through a dialogic process which they term "problematisation". This process of problematisation, is a challenge of the value of a theory, idea, theoretical framework, or preunderstandings relevant in a domain. This builds upon the approach described by Alvesson and Kärreman (2007) who view theorising as a dialogue between theoretical assumptions and the empirical material to stimulate new lines of inquiry. Theorising in this thesis refers to empirically and theoretically exploring these phenomena based on a case study of local implementation of evidence within a medical school setting.

The overarching aim for the study was to gain a deeper understanding of how evidence-based knowledge is used in practice, and to explore how variation in practice is enacted. The research questions were:

- How do medical students use an evidence-based treatment recommendation in their emerging practice?
- How does use of a treatment recommendation vary in medical students' practice with individual patients?
- How can the practice-based approach inform us about competent professional practice?

1.4 Research Contributions

The thesis explores how a medical consultation is performed, to illuminate a deeper understanding of professional competence, and how competence is considered in practical terms. A deeper understanding of competence can be used to support the preparation of medical students for their future professional practice. This thesis also contributes to the field of implementation research, by providing deeper insight into how evidence-based knowledge is used within medical practice. This research considers how an evidence-based treatment recommendation is used within a consultation, to highlight the ways in which evidence-based practice is constructed, contested, and negotiated. In terms of practical contribution, the intention was to highlight factors which might influence this implementation process.

The thesis makes a methodological contribution by providing an alternative way of studying the complexity of implementation of evidence-based practice. A medical consultation is a complex bundle of deeply entangled social and material activities. By focusing on the social moment of the consultation as the unit of analysis for this research, Social Practice Theory

provided a useful research approach to explore this complexity. The area of social interaction and communication in Social Practice Theory has been described as insufficiently theorised (Keller, Halkier and Wilska, 2016). Theory has been defined as a statement of concepts and their interrelationships that shows how and/or why a phenomenon occurs (Goia and Pitre, 1990). A potential barrier to analysis of co-existing practices is the contradictory logics and different directions which may be present (Halkier and Jensen, 2011). The results from this thesis aimed to contribute to this literature. By paying attention to how the phenomenon of implementation is constructed and studied, this supported review of how implementation problems are being practically approached (Cohn, 2014). Alvesson and Sandberg (2011) described the utility of challenging assumptions and ideas as that it may lead to novel questions to investigate and understand a phenomenon. Rather than criticising the assumptions prevalent within implementation research as an academic field, the interest for this thesis was to take the approach of problematising. As described by Alvesson and Sandberg (2020), the problematising review regards reviews as an opening up exercise that enables researchers to imagine how to rethink existing literature in ways that generate new and better ways of thinking about specific phenomena.

1.5 Outline of thesis

Having stated the purpose and rationale of this research, this introductory chapter continues with an outline of the structure of this thesis. Section Two then establishes the theoretical background of the study, starting with Chapter 2, which problematises the predominant approach within the literature of implementation research, to set the scene for an alternative approach. Chapter 3 describes Social Practice Theory and the practice-based approach used within this thesis. This section concludes with Chapter 4, which provides background about professional competence. The literature review within this section locates the contribution of this thesis within these academic fields.

In Section Three, there is a description of how the data was generated and analysed, and the philosophical approach, which is fundamentally informed by practice as a philosophy. Chapter 5 provides an overview of the methodological approach, a social constructionist-interpretivist approach, and the qualitative case study, which includes the specific practice-theoretical concepts selected for this thesis to generate data. Chapter 6 outlines the analytical strategies employed, and why in particular reflexive thematic analysis is useful for this thesis.

Section Four then presents findings from the study. Chapter 7 considers findings related to the element of material within practice, and technical-rational practice. Chapter 8 considers

findings related to the element of meaning within practice, and how a consultation can be co-produced as a social practice. Chapter 9 considers competence and practice, and how critical reflection supports the development of competent professional practice.

Section Five builds on the foundation set by the preceding findings section, with the discussion and conclusion chapters. Chapter 10 provides an overview of the major themes generated and discusses the contribution of the research in relation to debates in the practice literature, the management literature, and the medical education literature. Lastly, in Chapter 11, a summary and conclusion of the argument is provided, the potential limitations, and avenues for future research.

SECTION TWO: LITERATURE REVIEW

Section Two of this thesis sets out the knowledge base which informed the generation of the research questions and methodology used, and to locate the contribution within its academic field(s). This includes the literature that the research has used, and the theories, concepts, and *a priori* definitions and assumptions made. The reason for these choices is stated to argue why the selected literature is important for this research, how the thesis extends or challenges existing research, and therefore why an alternative approach to research in this area is warranted.

Rather than offering systematic comparisons and analysis or spotting gaps in the literature that the thesis intended to fill, the problematising review approach was used to open a new understanding of implementation research (Alvesson and Sandberg, 2011). The problematising review approach is based on the following four core principles: the ideal of reflexivity, reading more broadly but selectively, not accumulating but problematising, and the concept that "less is more" (Alvesson and Sandberg, 2020, p.1).

The first part of this section, Chapter 2, considers popular approaches to implementation research and the study of variation in practice, with the related assumptions. Then, Chapter 3 considers an outline for an alternative approach, the practice-based approach. The third part of this section, Chapter 4, concludes with literature regarding how this relates to exploring competent professional practice, before looking more specifically in terms of supporting competence of medical students.

Chapter 2 Problematisation of Implementation Research

The overarching aim for this thesis was to gain a deeper understanding of how evidence-based knowledge is used in practice, to explore variation in evidence-based practice. Implementation research has been defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices" to improve the quality of service delivery (Eccles et al., 2009, p.2). There is a significant amount of literature about implementation research, which reflects the interest to achieve more evidence-based practice across all areas of professional practice (Nilsen, 2015). Implementation research addresses implementation interventions ranging from single interventions to more comprehensive policies, programs, or ways of working (Thomas et al., 2017).

Within the field of applied health related research, new findings are constantly being produced, but despite this these research findings are often not routinely found in routine healthcare practice; and so, do not then realise the potential for this research to improve practice to enhance health (Davies, Nutley and Powell, 2015). There is ongoing variation in the implementation of evidence-based practice

2.1 Knowledge-Practice Gap

The dominant approach within the implementation research literature has been to consider knowledge as an object to be implemented into practice. Evidence-based management is described as the science-informed practice of management, which involves "using scientific knowledge to inform the judgement of managers and the process of decision-making in organisations" (Rousseau, 2012, p.xxiii). The enduring problem of variation in the implementation of evidence-based practice has been described by implementation researchers as the research-practice gap, or knowledge-practice gap (Redman et al., 2015; Davies, Nutley and Powell, 2015). The central metaphor of the knowledge-practice gap implies that there is a clear separation between the spheres of knowledge and action (Walshe and Rundall, 2001). This gap metaphor treats knowledge as preceding action (Zundel and Kokkalis, 2010). It treats knowledge as a commodity to be stored, transferred, and replicated. A structured approach for designing tailored interventions is recommended, choosing strategies responding to identified determinants of practice (Baker et al., 2015).

Within healthcare, when considering the quality of evidence about knowledge of alternative clinical management strategies, randomised controlled trials are considered to be the most scientifically rigorous method of hypothesis-testing available (Guyatt et al., 2008). Randomised controlled trials are regarded as the gold-standard approach for evaluating the effectiveness of

interventions (please see glossary p.13 for further explanation). These randomised trials are designed to emphasise objective measurement and to eliminate as much bias as possible from the context of the interventions. Thereby viewing knowledge and practice as separate domains, with knowledge conceived of as a precursor to action. This presupposes a hypothesised or experimentally tested causal mechanism, an approach which has been critiqued as privileging science and rationality as the basis for decision-making (Craig et al., 2008).

The problem of the transfer of research findings into healthcare practice was described by Eccles and colleagues, as "The relative inattention to implementing what we know is costing lives" (2009, p.2). This frames the problem of lack of implementation, in terms of inattention by the practitioners. The results of implementation efforts have been mixed. About two-thirds of efforts fail to achieve the intended change (Damschroder et al., 2009), and about half have no effect on outcomes of interest (Powell, Davies and Nutley, 2018). Likewise, although QOF was associated with initial improvement in incentivised processes of care and some intermediate outcomes, these were not sustained, and variations in practice continued (Kontopantelis et al., 2015). Willis et al., (2017) described the variations in achievement of evidence-based, high-impact quality indicators in General Practice as enduring and inappropriate, and not explained by routinely collected patient or practice variables. Thereby framing the variations as unwarranted. These routinely collected variables could include data items such as process and outcome indicators from chronic disease register information required for the QOF pay-for-performance scheme, or other sociodemographic information (Willis et al., 2017). The tensions that the GPs described which were created between the performance measures and individual patient care, were also highlighted by others (Damschroder et al., 2014; Spence, 2016). There is also a need to research the unintended consequences from such performance measures (Elwyn, Frosch and Kobrin, 2015). Another way of looking at the problem, could be to reconsider what is meant by knowledge, and what is considered legitimate evidence, and to move beyond the consideration of knowledge as something which can be objectively measured (Dopson et al., 2003). Moving beyond this concept of knowledge being an object is discussed next.

2.2 Broader Conceptualisation than Knowledge as Object

Within the implementation research literature this conception of causal mechanism from knowledge to action was described by Antonacopoulou, Dehlin and Zundel (2011), as rooted in rationalist traditions. Within this process, the emphasis is upon knowledge considered as an object, and formal logical principles that involve cause and effect relationships which can be

identified, isolated, and put into practice at distinct spatial and temporal points. This has led to a proliferation of implementation strategies (Powell et al., 2012). Strategies which often suggest that effective implementation or transfer of evidence-based knowledge into practice can be achieved by overcoming barriers to its adoption or supporting enablers of its use (e.g., Jäger et al., 2017). A systematic literature review by Waeraas and Nielsen (2016) discussed how this knowledge object may be translated as it moves to recipients, a process thought of as facilitated by opinion leaders or knowledge champions.

To organise the proliferation of theories, models and frameworks related to implementation research, Nilsen (2015) devised a taxonomy. This taxonomy then formed the foundation for a scoping review of research relating to implementation of evidence-based interventions targeted to prevention and/or management of chronic diseases (Strifler et al., 2018). This scoping review considered knowledge translation broadly to include both implementation practice (i.e., implementing research evidence into practice) and implementation science, which they defined as "the systematic study of specified activities designed to put into practice activities or programs of known dimensions" (p.93). This scoping review found 159 theories, models, or frameworks, which had a limited evidence-base describing their use in practice, and only a minority of which were used more than once. A focus of implementation research has been the study of the effectiveness of implementation interventions. Implementation as a phenomenon appears to be conceptualised in terms of socio-cognitive behavioural constructs (Strifler et al., 2018), where implementation is understood in terms of behaviour change, to be enhanced by so-called behaviour change techniques (Michie, Van Stralen and West, 2011). The theories which are most frequently applied in conceptualising implementation are the Social Cognitive Theory by Bandura[1] (2005), the Transtheoretical Model of Behavior Change[2]

[1] Social Cognitive Theory states that when people observe a model performing a behaviour and the consequences of that behaviour, they remember the sequence of events and use this information to guide subsequent behaviours. So, learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behaviour. The emphasis is on social influence and its emphasis on external and internal social reinforcement.

[2] The Transtheoretical Model, also called the Stages of Change Model posits that individuals move through six stages of change: precontemplation, contemplation, preparation, action, maintenance, and termination. For each stage of change, different intervention strategies are most effective at moving the person to the next stage of change and subsequently through the model to maintenance, the ideal stage of behaviour.

(Prochaska and DiClemente, 1983), Rogers' diffusion of innovations[3] (2003), and the Health Belief Model[4] (Strecher and Rosenstock, 1997).

These concepts are either used in isolation or integrated in a growing number of other implementation frameworks and models (Strifler et al., 2018). These approaches to implementation research have been interested in rigorous and large-scale intervention development and have identified the behaviour of healthcare professionals and healthcare organisations as key sources of variance requiring improved empirical and theoretical understanding before effective uptake of research can be reliably achieved.

These are rationalist approaches and the problems which they create have been discussed by Antonacopoulou, Dehlin and Zundel, (2011) who suggest that this creates limits from specific modes of intervention of change, and so restricts potential methods of implementation. It puts limits upon interventions which put the required knowledge into practice. Approaches which presume a linear flow of knowledge to practice, have also been criticised as too simplistic by other researchers (Davies, Nutley and Walter, 2008). Tranfield, Denyer and Smart propose that "there is a need to recognise that evidence alone is often insufficient and incomplete, only informing decision-making by bounding available options" (2003, p.219). The need for more empirical research regarding the effectiveness of evidence-based practice has been highlighted (Swan et al., 2012). For example, further research could provide more insight into the nuance of how evidence-based practice unfolds as a decision process in practice in different organisational contexts (Reay, Berta and Kohn, 2009; Walshe and Rundall, 2001).

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[3] The Diffusion of innovation theory explains how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.). The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. It is through this that diffusion is possible.

[4] The Health Belief Model is based on the foundation that the two components of health-related behaviour are i) the desire to avoid illness, or conversely get well if already ill; and ii) the belief that a specific health action will prevent, or cure, illness. Ultimately, an individual's course of action often depends on the person's perceptions of the benefits and barriers related to health behaviour.

Greenhalgh and Wieringa (2011) call for a broader approach to study this area, suggesting a social practice view of knowledge which recognises different forms of knowledge and knowing. These different forms of knowledge include personal and tacit knowledge, or embodied knowledge (as described by Reckwitz, 2002), also alternative conceptions of sharing knowledge (as described by Brown and Duguid, 2001). Rather than considering knowledge as something which can be objectively measured, Greenhalgh and Wieringa promote "alternative framings which could add to the illumination and analysis of this complex field" (2011, p.508). Such alternative framings are discussed next to provide a broader perspective, to think of knowledge differently through a practice perspective.

2.3 The Practice Perspective of Knowledge

An alternative view of knowledge, beyond a simplistic uniform approach, has been articulated by Cook and Brown (1999). Instead of just considering knowledge as an object, they provide instead a model of "knowing *as* action" that illustrates knowing as an interactive and interdependent relationship between individuals and groups (1999, p.381). To better understand the gap between knowing and doing, they suggest moving beyond this perception of knowledge as a product, which they call the "epistemology of possession" (1999, p.383). This treats knowledge as something people possess, a knowledge object to be transferred from a producer and then applied in practice. Instead, they suggest knowledge is used as a tool in the context of situated activity, towards an "epistemology of practice" which incorporates the social and relational context (1999, p.381). Knowledge can therefore be conceived of as a social process, which is influenced by context and has the potential to be transformed (Nicolini, 2013). With a practice focus, the interactions by groups and individuals and their process of using specific tacit and explicit knowledge, can generate both knowledge and new ways of knowing. Clarity regarding the philosophical underpinnings of different perspectives, will have implications for understanding knowledge use and improving practice. Ferlie et al., (2005) emphasised the need to secure an epistemic fit between the knowledge and the context in which it is to be utilised. Rather than knowledge being considered an object, knowledge can be conceptualised very differently, as being created, constructed, embodied, performed, or collectively negotiated; therefore, the link between knowledge and practice can then be researched in more creative and critical ways (Greenhalgh and Wieringa, 2011).

The use of evidence in practice has increasingly been recognised as being social and relational rather than linear and predictable (Davies, Nutley and Smith, 1999). Best and Holmes (2010) categorised three types of strategies that aim to improve the connection between knowledge and practice, these are linear approaches, system approaches, and relational approaches.

Linear models tend to dominate knowledge-sharing practice (Davies, Nutley and Powell, 2015). The challenge of knowledge use in practice, is framed as a knowledge deficit in practice problem, with efforts to insert the missing information and to gain improved performance. The relationship between evidence, policy and practice is described as nuanced, dynamic, political, and contested (Boaz et al., 2019). By shifting the focus from evidence-based practice to evidence-informed practice, more space can be created to explore variation in practice. Systems models view knowledge as socially mediated and embedded within a network of actors and groups connected as multifaceted, emergent, and interdependent components within a system. Relational approaches focus on the interactions between people to transform one another's knowing, towards improving knowing in practice. Tooman, Akinci and Davies, highlighted this relational aspect of knowledge through their suggestion that "If knowledge is seen as a flow of information, then knowledge creation, diffusion and use look very different from when knowledge is seen as a socially constructed, context dependent fusion of know what, know how, and know why" (2016, p.26). Viewed through a relational lens, the enduring problem of research implementation into practice may be less surprising, especially in complex context of healthcare.

Knowledge Mobilisation

This process between knowing and doing is what is referred to as knowledge mobilisation. Nutley and Davies (2016, p.183) noted the growing body of literature exploring knowledge mobilisation which is concerned with the use (or lack of use) of research-based knowledge, rather than technical knowledge or practical wisdom. They highlighted a need for inclusive processes that enable evidence to be integrated with other forms of knowledge and ways of knowing.

Models of the research use process have been examined, from those that emphasise rationality and linearity, through those that explore a more complexity-informed systems-based view. A literature review conducted by Ward (2017), considered 47 knowledge mobilisation models, and found that assumptions about the nature of knowledge tend to remain unarticulated within the literature. Ward highlighted the potential for confusion about what it is that practitioners are trying to mobilise, how they might best go about it, and how it should be evaluated. This review emphasised the importance of clarifying the underpinning epistemic assumptions about the nature of knowledge and its relationship with practice. Ward concluded that different types of knowledge have different implications for how knowledge is mobilised. Her resulting framework considered three different types of knowledge, representing Aristotle's ancient distinction between episteme, techne and phronesis. Episteme

concerns scientific type knowledge, such as research findings or data; techne is technical knowledge, such as practical skills, experiences, and expertise; phronesis is practical wisdom, such as professional judgments, values, beliefs. There are persuasive arguments that research-based knowledge should not, and cannot, occupy a privileged position (Orr and Bennett, 2012). Nutley, Powell and Davies (2013), refer to the many debates about the nature and privileging of research-based knowledge, and for the need for this to be integrated with other forms of knowledge and ways of knowing in the process of being used. Within this thesis, the term evidence was focused on knowledge derived from empirical or experimental information, but care was taken to not privilege this over relational and systemic forms of knowledge.

Despite progress in understanding about knowledge mobilisation, those involved in health system improvement still struggle with how to make best use of evidence-based knowledge. There is growing recognition that the struggle involves complexity (Holmes et al., 2017). In 2012, Ward stated that knowledge translation is underpinned by a dynamic and social knowledge exchange process, but there are few descriptions of how this unfolds in practice settings. There is still a need to pay attention to how evidence is discussed, made sense of, negotiated, and communicated—and the consequences of different approaches. It has been stated that the science of implementation has offered little toward understanding how different implementation strategies work (Lewis et al., 2018). In her review, Ward (2017) stated that many of the models that she identified contained little detail about the specific methods for how knowledge was mobilised. Beyond the concept of tailoring the message to the audience, existing advice to academics does not help them navigate this complex system (Oliver and Cairney, 2019). By recognising the attributes of complex adaptive systems, this can be harnessed to support the continuous ongoing improvement of knowing in practice (Craig, 2020). This complexity is also recognised in the statement from Locock, that “success is contingent upon multiple factors, including the manner of implementation in each setting, and the specific local contextual factors” (2003, p.56). So, context is important.

Within the healthcare environment the complexity of the context of the practice also needs to consider that the mobilisation of evidence involves multiple decision-makers and stakeholders (Swan et al., 2012). A study by Wright et al., (2016) suggested that evidence does not speak for itself, and neither does it allow decision processes to be enacted without context-sensitive judgement. Their findings highlighted the need for further research “for a better understanding of the art of judgement that is core to situated expertise, as well as the different forms in which this expertise is enacted, encountered and valued in different contexts” (Wright et al., 2016, p.175).

This thesis contributes to this literature by focusing on a specific context and exploring the handling, adaption, and communication of a defined piece of evidence, to gain more insight into the nuance of how evidence-based knowledge is incorporated within practice. To explore variation in evidence-based practice. The next part of this chapter gives a specific example of an evidence-based treatment recommendation, and why this was chosen as a focus for this thesis.

2.4 Evidence-Based Guidelines and Performance Management

The National Institute for Health and Care Excellence (NICE) provides an abundance of quantitative evidence about clinical effectiveness and practice. NICE produces national guidance and advice about EBM for commissioners, practitioners, and managers across the spectrum of health and social care across the United Kingdom. This knowledge is disseminated through formalised tools such as audits, clinical guidelines, and protocols. Their guidance, advice and information service are provided for health, public health and social care and contain resources to help maximise use of evidence and guidance. The guidelines produced by NICE contain evidence-based recommendations which are developed by independent committees, including professionals and lay members, and consultation with stakeholders. These evidence-based recommendations have also formed the basis for development of quality standards and performance metrics for those providing and commissioning health, public health, and social care services to set standards which aim to improve care and reduce variation in current practice.

Evidence-Based Guideline Recommendation

The evidence-based guideline recommendation, which was used for the focus for this research, was related to treatment of high blood pressure. High blood pressure (hypertension) is one of the most important treatable causes of premature morbidity and mortality in the world. It is a major risk factor for stroke, myocardial infarction, heart failure, chronic kidney disease, cognitive decline, and premature death. In 2016, data showed that high blood pressure affected more than 1 in 3 adults in the UK. But only about half those people were receiving treatment for their high blood pressure. Of those people who were being treated for their high blood pressure, only about a third were gaining control of blood pressure to target levels (Zhou et al., 2019). The ongoing variation in practice despite the evidence base from research information, make this a useful topic to explore further for this thesis.

The guideline which contains this treatment recommendation is the NICE clinical guideline *Hypertension in adults: diagnosis and management - NICE guideline [NG136].* The aim of this

guideline was to reduce the risk of cardiovascular problems such as heart attacks and stroke by helping healthcare professionals to diagnose hypertension accurately and treat it effectively. Within NICE guideline NG136 there were many different recommendations relating to various aspects of blood pressure management. The recommendations within the guideline relate to five distinct aspects: measuring blood pressure, diagnosing hypertension, assessing cardiovascular risk and target organ damage, as well as treating and monitoring hypertension, and referral. The specific guideline recommendation chosen for the focus of this research was the guideline recommendation number 1.4.20, from NICE guideline *[NG136],* which recommends that people receiving treatment for hypertension (high blood pressure) should have a target clinic blood pressure (blood pressure measured in their GP practice or clinic) below 140/90 mmHg if they are aged under 80 years. This is shown in Figure 2.1:

Guideline recommendation number 1.4.20

Reduce clinic blood pressure to below 140/90 mmHg and maintain that level in adults with hypertension aged under 80.

Figure 2.1 Guideline recommendation number 1.4.20 from NICE guideline [NG136]

This guideline recommendation was chosen for the focus of this research because it has also formed the basis for quality standards used within the NHS.

Quality Standards and Performance Management

Quality standards from NICE are used as indicators to describe high-quality care in priority areas for improvement. NICE indicators measure outcomes that reflect the quality of care, or processes linked by evidence to improved outcomes. The standards can relate to diagnosis and investigations, treatment, and specialist referral. There are sixteen indicators relating to hypertension management but the one of particular interest for this research was the indicator with identity code NM53, from NICE Hypertension quality standard (QS28). This indicator uses the same evidence base as guideline NG136 recommendation number 1.4.20. This is shown in Figure 2.2:

NICE indicator identity code: NM53

The percentage of patients under 80 years old with hypertension in whom the last recorded blood pressure (measured in the preceding 9 months) is 140/90 or less.

Figure 2.2 NICE indicator identity code NM53 from NICE Hypertension quality standard (QS28)

NICE describe the utility of these clinical indicators, as being used to plan, and deliver services to provide the best possible care. The indicators can be used to identify where improvements are needed, to set priorities for quality improvement and support, to benchmark local performance against national data, to support local quality improvement schemes, and to demonstrate that local health systems are making progress towards recommended outcomes.

These evidence-based recommendations had increasingly been used as part of pay for performance schemes for General Practitioners (GPs), such as the UK's Quality and Outcomes Framework (QOF), whereby a substantial proportion of General Practice income depended upon achieving thresholds for drug therapy, or surrogate outcomes. The introduction of fixed quality targets, such as the QOF, have been shown to generate a pressure on GPs to move away from a model, which treats patients as individuals, towards one that privileges hard biomedical information, and ticking boxes (Checkland, McDonald and Harrison, 2007). By prioritising objective evaluation, policymakers have also been criticised for increasingly ignoring the unmeasured (Greenhalgh and Heath, 2010). An empirical study of clinical quality by general practitioners highlighted concerns that performance measures were measuring compliance with aspects of clinical work that were measurable, rather than recognising the personal needs and concerns of patients (Chew-Graham et al., 2013).

During 2017, the QOF was replaced in Scotland by a professionally driven, peer led GP Cluster Continuous Quality Improvement process; an approach which emphasises collaborative learning, and exchange of insights and support among a set of health care organisations. Rather than assuming that variation of the implementation of evidence within medical practice is unwarranted, this thesis aims to explore a deeper understanding of how evidence-based knowledge is used within medical practice with an individual patient.

2.5 Knowledge Use in Medical Practice with Individual Patients

Over recent decades, the practice and teaching of knowledge within the medical profession, has increasingly been based upon the EBM approach (Maggio et al., 2013; Zwolsman et al., 2012). This approach emphasises an objective foundation for clinical practice, to be more scientific and empirically grounded in order to achieve safer, more consistent, and more cost-effective care (see introduction, p.17). This positivist philosophy has been criticised for privileging quantitative over qualitative medical research, and for not recognising the needs, preferences and values of individual patients (Greenhalgh et al., 2014; 2015).

Despite the emphasis on objective measurements to generate evidence for recommendations for inclusion within guidelines, every guideline produced by NICE includes a statement at the

beginning of the guideline, that it is the practitioner's responsibility to incorporate preferences and values of their **individual** patients into their decision making (Figure 2.3 Statement from NICE guidance about Practitioner Responsibility regarding Guideline Recommendations, from https://www.nice.org.uk/guidance).

Your [practitioner] responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Figure 2.3 Statement from NICE about Practitioner Responsibility regarding Guideline Recommendations.

The challenges in practice of applying the treatment recommended from evidence-based guidelines, have been described by GPs as not always being appropriate or easy to apply within a consultation with an individual patient (Hansen, Walters and Howes, 2016). Similarly, other studies have described medical students experiencing dilemmas and challenges when learning to practice patient-centred care with evidence-based practice (Aper et al., 2015). At an organisational level, Engle, and colleagues (2021) identified some key characteristics of acute inpatient medical centres, that were able to provide medical care that is both evidence-based, and patient-centred, despite the tensions. The characteristics were that these medical centres emphasised expectations of both EBM and patient-centred care. These medical centres provided formal and informal institutional supports and structures regarding patient-centred care and EBM. These medical centres also fostered multidisciplinary, multidirectional approaches to care and communication that facilitated delivery of both EBM and patient-centred care (Engle et al., 2021). The study from Engle and colleagues was based in America, but the aspiration to deliver healthcare that is both evidence-based and patient-centred is also relevant within NHS Scotland and the policy background of "Realistic Medicine" (as discussed on p.17 of this thesis), to put the person receiving healthcare at the centre of decision-making to create a personalised approach to their care (Calderwood et al., 2017).

As stated in the introduction to this thesis (p.14), over 90% of NHS medical consultations in the UK occur within the General Practice setting (Kings Fund Report, 2011). The importance of the

relational and interactional aspects of care have been emphasised as being particularly pivotal within General Practice consultations and have an impact on patients' post-consultation satisfaction and enablement (Mead and Bower, 2000; Mead, Bower and Hann, 2002). This construct of patient-centred care improves patient satisfaction and professional fulfilment, saves time, increases compliance with prescribed medication, and reduces the chance of the practitioner being sued (Stewart et al., 2003). A reflective essay by Thomas (2006), described the need to weave together consciously or unconsciously these different forms of medical knowledge and knowing. A positivist philosophy alone is not enough, so different philosophical approaches are required to reveal the various aspects of how knowledge is used in practice. Rycroft-Malone et al., (2013), describe this as a gulf between the state of the science and the state of the art. Consultation skills training supports medical students to move appropriately between these different approaches to integrate knowledge from evidence-based medicine (EBM) with the patient's values and preferences (Stewart et al., 2003). This patient-centred care aspect of medical practice is an area of interest for this thesis.

The practical balance of scientific knowledge and experiential knowing in medicine is described by Montgomery (2005) as the overriding, if implicit, lesson of clinical education. Improving the quality of medical consultations is a central concern for policy makers, managers, and clinicians. Malterud (2001) highlighted that the art and science of clinical knowledge required evidence via qualitative inquiry, to go beyond questions and phenomena that can be controlled, measured, and counted. But the kinds of knowledge which are considered to provide valid foundations for healthcare choices and practices, and who decides, is highly contested (Brosnan and Kirby, 2016). For example, the context is important. An awareness of cultural differences in the conceptualisation of patient-centredness was highlighted by Lamiani and colleagues (2008), who highlighted the importance of exploring the patient's illness experience and handling the patient's emotions within a patient-centred approach. This cultural difference will have implications for how patient-centredness is conceptualised within different contexts (Mole et al., 2016). For example, a review by Mead and Bower, highlighted that the bulk of the literature on patient-centredness originates from General Practice, and that although there may be significant overlap with other contexts, this cannot be assumed (2000, p.1102).

The practicalities of doctoring and the practice perspective of knowledge use within the medical context has been described by Mol (2008), whose book explored the profoundly different logics between the logic of healthcare and the logic of patient choice. The idea of "good doctoring processes" was explored by Gordon, who described successful healthcare

provision involving “multiple interactions between diverse individuals, relationships, context and systems” (2017, p.238). Within healthcare, Wieringa et al., (2017) suggest principles for conceptualising evidence-based healthcare as a situated practice rather than as a sequence of research-driven abstract decisions. This resonates with Tonelli’s description that the skilled clinician must employ both practical and theoretical reasoning, to arrive at the best choice for an individual patient when devising a treatment plan (2006). This practice with an individual patient, provides a focus for this thesis; one of the overarching research questions is about exploring how use of a treatment recommendation varies in medical students’ practice with individual patients.

2.6 Summary of Chapter 2

This chapter discussed the literature that debates the enduring problem of variation in implementation of evidence into practice. The argument was built towards moving beyond the conceptualisation of knowledge as an object. Knowledge was conceptualised differently, as being created, constructed, embodied, performed, or socially negotiated. This allows the link between knowledge and practice to be researched in more creative and critical ways, to explore if empirical or experimental *evidence*, is given privilege over relational and systemic forms of *knowledge,* and to explore if the variation is actually unwarranted. To put the research into context, some background was provided about the particular piece of evidence which was used as focus for this research. The next chapter in this section explores an alternative approach to investigating evidence-based practice, a practice-based approach.

Chapter 3 A Practice-based Approach

The previous chapter problematised the assumption that the implementation of evidence-based practice is linear and predictable, and highlighted the need for a more social and relational approach to explore understanding of implementation research, and variation in practice. This chapter outlines an alternative approach used to answer the research questions for this thesis regarding the implementation of evidence, a practice-based approach which is informed by social theory. The meaning of a practice-based approach, both generally and in this thesis, are described next.

Practice theory is a theory (or 'family' of theories) which seeks to understand and explain the social and cultural world by analysing the repetitive practices in daily life. The benefit of adopting this conceptual approach is that it considers activities which can be observed and talked about as a central feature of practices. Schatzki has described a practice as an "organised constellation of different people's activities" (2012, p.13). Materiality also features within many descriptions of practice, for example, "as embodied, materially mediated arrays of human activity centrally organised around shared practical understanding" (Schatzki, 2002, p.11). Instead of considering a material as being a fixed static object, it can be considered as entangled with meaning, within a sociomaterial perspective. The approach seeks to resolve the conflict in classical social theory between collectivist structuralist approaches and individualist action theory approaches, which attempt to explain all social phenomena in terms of intentional individual actions. This is also referred to as the structure-agency debate. The sociomaterial analyses can accept the simultaneous existence of multiple ontologies which has useful implications for understanding education (Fenwick, Edwards and Sawchuk, 2011). Hence the benefit of choosing this approach for this thesis.

3.1 What is a Practice-based Approach?

One of the most comprehensive descriptions of practice was from Reckwitz, who described practice as consisting of several elements and their interconnectedness:

> A 'practice' is a routinised type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice … forms, so to speak, a 'block' whose existence necessarily depends on the existence and specific interconnectedness of these elements, and which cannot be reduced to any one of these single elements. (Reckwitz, 2002, p.249)

Management and organisational studies have described a practice turn in social theory (Schatzki, 2002; Nicolini, 2013; Corradi, Gherardi and Verzelloni, 2010). This turn is founded on the idea that organisational and social phenomena such as "knowledge, meaning, human activity, science, power, language, social institutions, and historical transformation occur within and are aspects or components of the field of practices" (Schatzki, 2002, p.11). So, knowledge can be studied as an aspect or component of practice. Although commonly referred to as Practice Theory, Nicolini (2013) described how a variety of terms such as practice idiom, idea, concept, or practice-based approach, are used to denote the principle of practice as a sensibility. For this thesis, the term practice-based approach was used. A broad range of approaches have been described as practice-based, but common to all Practice theories is the centrality of activities.

A social practice could be many things including teaching a class, doing the ironing, or a consultation with your doctor. A practice such as doing the ironing, could be a practice in itself, or considered as part of a broader constellation of related practices such as doing the laundry, or doing housework. A practice represents a pattern which can be filled out by a multitude of single actions reproducing the practice. It is recognisable as a practice, to the agent or the agents who carry it out, and to potential observers who are familiar with that community. A practice endures between and across specific moments of enactment; as Schatzki describes, a practice is "a temporally and spatially dispersed nexus of doings and sayings" (1996, p.89). The agent or the agents who carry the practice are described by Reckwitz as the **carrier** of the practice (2002, p.250).

Different scholars have used the practice-based approach in different ways (Geiger, 2009; Corradi, Gherardi and Verzelloni, 2010). Feldman and Orlikowski (2011) described three ways that scholars have studied practices: an *empirical* focus on how people act in organisational contexts, a *theoretical* focus on understanding relations between the actions people take and the structures of organisational life, and a *philosophical* focus on the constitutive role of practices in producing organisational reality. An empirical focus of a practice lens can reveal micro-activities of an actor-centred approach to study ***what*** people do, studying it as situated doings mobilised by inter-actions among individuals within a pre-given context. Nicolini (2013) calls this a weak programme of practice research. Using a *theoretical* focus aspires to explain how practices are produced, reinforced, and changed, and the intended and unintended consequences of that practice. This focus answers the ***how*** of a practice lens, articulating "particular theoretical relationships that explain everyday activity" with the aim to develop Practice theories which can subsequently be used to study organisational activity (Feldman

and Orlikowski, 2011, p.1241). Lastly, a *philosophical* focus addresses the ontological and epistemological aspects of practices, taking practice as a "way of seeing" (Corradi, Gherardi and Verzelloni, 2010, p.268). This view assumes social reality to be made up of practices, and that the social world is brought into being through everyday activity, answering the ***why*** of the practice lens (Schatzki, 2002; Reckwitz, 2002). Such a philosophical focus reflects what Nicolini (2013) calls a strong research programme.

A strong research programme does examine the micro activities within the situated accomplishment of practices but takes as its point of departure the inquiry of how actors are entwined with others and things in specific *sociomaterial* practices (Sandberg and Tsoukas, 2011). The term sociomaterial was described by Fenwick, Edwards and Sawchuk, (2011, p.vi), to refer to the perspective where the material world is treated as continuous with, or entangled with, immaterial energies such as social relations and human intensities, not assumed to be separate from it. Within a sociomaterial practice, both the social and the material element within that practice are important. As described by Gherardi and Perrotta (2014), by focusing the analysis on how the elements of a practice are held together, the ways of doing are discovered. Instead of zooming in uncritically simply on the enactments of practices, a strong programme enquires why things are the way they are, and how practices enable and constrain the production of organisational life (Nicolini, 2013). Thus, the spaces between the elements of practice are just as important as the elements themselves. As described by Pickering, "Practice is where nature and society and the space between them are continually made, unmade, and remade" (1992, p.21).

This entwinement of the material and the social, means that things acquire meaning only against the background of practices in which they occur, highlighting the importance of context for practices. Phenomena cannot be made sense of in isolation from the practices as part of which they occur (Schatzki, 2002; Sandberg and Dall'Alba, 2009; Sandberg and Tsoukas, 2011; Nicolini, 2013). Consequently, viewing practice as a philosophy indeed suggests it is both ontology and epistemology. Ontology is defined as the worldviews and assumptions about the nature of reality that comprise the philosophical foundations from which researchers engage in inquiry (Varpio et al., 2017). Epistemology is the relationship between the researcher and the object or phenomenon of study (Varpio et al., 2017).

Practice theories are described as representing a distinct social ontology "The social is a field of embodied, materially interwoven practices centrally organised around shared practical understandings" (Schatzki, 2002, p.3). Practice is an ontology because, as indicated, it views

the social world to consist of practices; whilst it is also an epistemology because the world can only be known from within, through knowing-in-practice (Cook and Brown, 1999; Schatzki, 2002; Gherardi et al., 2019; Corradi, Gherardi and Verzelloni, 2010; Feldman and Orlikowski, 2011; Nicolini, 2013). Hence, from a philosophical perspective, rather than just zooming in uncritically on doings, other aspects of practice may be illuminated; for instance, the role and meanings of materials (e.g., Orlikowski, 2009; Carlile et al., 2013), or issues of agency, meaning and normativity (e.g., Schatzki, 2002).

In other words, not only does the practice approach attend to social life as a practical accomplishment in terms of what people do as part of their everyday practices, it also considers the accomplishment's effects, "how things get done, and how in doing, the ways of doing are discovered" (Gherardi and Perrotta, 2014, p.134). It considers how the elements of a practice are held together (or not) and illuminates aspects such as meaning, normativity, and competence, which in turn guide future instances of practicing. The concept of practices as the dynamic interconnection of elements, was further developed by Shove, Pantzar and Watson (2012), who conceptualised practice in terms of three elements (material, competence and meaning), and their interconnectedness.

This study used the Social Practice Theory approach from Shove, Pantzar and Watson (2012). This approach is described next, starting by defining practice and its elements, and how interconnections between these elements are an integral part of practice.

3.1.1 Defining Practice and its elements

The practice-based approach that has been used for this thesis was described by Shove, Pantzar and Watson (2012). Their position is that practices such as driving exist (or not) by people actively combining the elements of which these practices are composed. The three basic elements are *material* (including things, technologies, tangible physical entities, and the stuff of which objects are made, e.g., the car, the fuel, the highway code), *competence* (which encompasses skill, know-how, and technique e.g., changing gears, hazard perception, map reading), and *meaning* (in which are included symbolic meanings, ideas, and aspirations, e.g., freedom, consumerism, eco-friendly). Each of the three elements are described in more detail, with their related literature.

The element of material within practice

The term ***material*** as an element of practice refers to the tangible stuff deployed in the practice (Shove, Pantzar and Watson, 2012). It could be considered as an objective thing which can be measured. The material element used as a focus within this thesis was a treatment

guideline recommendation, from within an evidence-based guideline. A treatment guideline recommendation can be identified as a tangible object written within a clinical guideline document. The same treatment recommendation could also be used as part of written teaching material within a classroom. The same treatment recommendation could also be used within a consultation between a medical student and a simulated patient. Simulated patients are recruited by medical schools to act the role of a patient, according to a pre-written scenario which outlines their condition, to support the teaching of consultation skills of the medical students.

This thesis considers how this material element was used within the practice of a consultation, between a medical student and a simulated patient. The use of a simulated patient within this research allowed for standardisation with similar patient presentations which could incorporate this material element, and is discussed further within the Methods Chapter of this thesis (5.3 Methods of data generation, p.86). Where the implementation research approach (described in Chapter 2) considers materials such as a treatment guideline recommendation as a fixed object, the practice-based approach considers materials in different ways, and although a material within a practice may appear stable, it is not considered to be inert.

There are ongoing debates about the philosophical importance granted to materials, and what exactly constitute materials; from objects, things, to even our bodies (see Schatzki, 2012). At one end of the spectrum, particularly in the realm of Actor-Network-Theory (e.g., Latour, 2005) or post-humanism (Schatzki, 2005), scholars focus on the claimed agency of objects. They take the perspective to not privilege the agency of objects, nor human actors, but to assume that both participate in practice equally (Sandberg and Dall'Alba, 2009; Nicolini, 2013). Schatzki (2012), highlights that neither materials nor practice could exist in the absence of each other, which is why scholars (such as Orlikowski, 2007, 2009) speak of **sociomaterial** practices. As described by Latour (1993), no clear distinction is made between humans and things; together they can form a sociomaterial hybrid entity. Watson (2008, p.5) suggests considering that materials are "active, constitutive elements in the reproduction of daily life and social order," although emphasising that things do not shape practices in a strict causal way. At the other end of the spectrum, practice scholars such as Schatzki maintain that only humans carry out practices (2002, 2012). Although he does acknowledge that things have agential power, if such powers are defined in terms of making a difference rather than intentionality (Schatzki, 2002; Latour, 2005). From that perspective materials do exert a direct impact on human activity (Nicolini, 2013).

The material aspects of practices were highlighted by Vygotsky who described them as "artifact-mediated and object-oriented action" (1978, p.40). The role of objects in structuring and stabilising practical knowledge is a central theme of activity theory. Engeström (2005), introduced the term *knotworking* to emphasise that objects perform the practical function to knot relationships into enduring forms in a way that social networking alone may not achieve. These objects of activity also make changes possible according to the different situations. Some practice scholars do not specifically elaborate upon the material aspects of their studies (e.g., Giddens, 1984). By contrast, Nicolini (2013) emphasises the pivotal role that materials play as an essential, although an often neglected, role in practices. In general, practice accounts refer to materiality in an implicit way, in the form of things or objects (Engeström, 2005; Nicolini, 2011; Carlile et al., 2013). Shove, Pantzar and Watson (2012), summarise materials as things including objects, infrastructures, tools, and the body itself.

By focusing on one material object as an element within practice, this thesis aimed to explore the use of a treatment recommendation as a material element within the practice of a consultation, between a medical student and a simulated patient, to explore variation in evidence-based practice.

The element of meaning within practice

Meaning is explicitly treated as an element of practice, and not as something that stands outside of it as a motivating or driving force (Shove, Pantzar and Watson, 2012). So as stated earlier in this thesis (p.39), things acquire meaning against the background of practices in which they occur, their position in time and space (Schatzki, 2002). Shove, Pantzar and Watson, describe this in terms of "the social and symbolic significance of participation at any one moment" (2012, p.22). Hence the element of meaning could relate to concepts of "association, relative positioning, norms, values and ideologies" (Shove and Pantzar, 2005, p.47).

An historical example used by Shove, Pantzar and Watson (2012, p.150), to illustrate the linkage between material and meaning, is how a policy called the "Cool Biz" programme from the Japanese Ministry of the Environment changed the meaning of normal business clothing. To reduce carbon dioxide emissions into the atmosphere, government buildings would not be heated or cooled between twenty and twenty-eight degrees Celsius, and occupants would be encouraged to remove jackets and ties in the summer (Cool Biz) and wear more in the winter (Warm Biz). This resulted in a change to the meaning of normal clothing, as a means of changing the technologies (levels of air-conditioning), and competences (of dress and of

facilities management involved in the routine enactment of office life. This policy reconfigured the elements of practice.

This incorporation of meaning within a practice-based perspective, and how this differs from symbolic interactionalism, was discussed by Swan and colleagues, who stated:

> Practice-based perspectives provide important additional insights into the nature and role of objects in innovation. First, they illuminate the relationship between objects, knowledge, work practices, social groups, and social context. [...] Second, where symbolic interactionist views tend to stress the essentially individual nature of knowledge, practice-based perspectives make a distinctive contribution by differentiating those forms of knowledge that are acquired individually and those that are acquired collectively. (2007, p.1813)

The practice-based approach is therefore useful to explore the individual and the collective dimensions of knowledge use within a given context. It has potential to enrich our understanding of practices in organisations, particularly in circumstances of breakdowns and conflicting ethical values. Therefore, a practice-based approach can unpack meaning behind the epistemic-normative assumptions of *good* practices, or what is the *right* answer (Geiger, 2009). In any practice, there are multiple interpretations of what constitutes the right, or the appropriate and legitimate way to practice (Nicolini, 2013). Consequently, there is a push and pull effect between enacting practices as commonly deemed correct and appropriate, and performing more anomalous activities that may transcend and possibly re-establish the practice's social order (Lounsbury and Crumley, 2007; Geiger, 2009; Nicolini, 2013; Contu, 2014).

The consideration of *meaning* as one of three elements within practice, is useful to support thinking around how a *material* element (such an evidence-based treatment recommendation) is used in practice. Different social groups, for example patients versus medical students, may have different relative positioning, norms, values, and ideologies; and so, variation in practice is to be expected. The practice-based approach could support further insights about the power imbalance within the medical consultation, which Pilnick and Dingwall described as "the remarkable persistence of asymmetry in doctor/patient interaction" (2011, p.1374). They suggested that the research task might be better conceptualised by starting with a focus on whether and what functional purpose this asymmetry might serve (2011). Wass described the need for educators to open the borders between the sciences and the humanities (2017); and that compassion and empathy were the essence of the healthcare interaction and must be

nurtured (2018). Wass (2018, p.63) emphasised the role of meaning within the practice of teaching by stating that "Educating the mind without educating the heart is no education at all."

By focusing on one material object as an element within practice, this thesis aims to explore how the element of meaning is incorporated within practice for a defined context, to explore variation in evidence-based practice. This thesis explored how the element of meaning is incorporated within a practice with an individual patient, when collective knowledge (such as knowledge from a clinical guideline treatment recommendation) also has associated collective meaning. This also relates to the third element of practice *competence*.

The element of competence within practice

As the third element of practice described by Shove, Pantzar and Watson (2012), ***competence*** relates to the learned bodily and mental routines, including know-how, levels of skill, and ways of feeling and doing.

The element of competence interconnects with materials within practice. Practical knowledge is a form of competent reasoning and doing (Corradi, Gherardi and Verzelloni, 2010). Latour (1993) has described how skills are distributed and can be redistributed between people and products. So, knowing can be considered as a process, with learning taking place as things are done in the relationship between human and non-human elements**.** Rather than considering learning to be a phenomenon that takes place in a person's head, it has been described as a participative social process, beyond a cognitive and individual vision of learning, to a social and situated one (Wenger, McDermott and Snyder, 2002). These authors describe that the knowledge aspects of a job or a profession are transmitted, and in parallel perpetuated, through the sociality of practice. This perspective was described by Orlikowski, as knowing-in-practice, who suggested that "knowing is not a static embedded capability or stable disposition of actors, but rather an ongoing social accomplishment, constituted and reconstituted as actors engage the world of practice" (2002, p.249).

The element of competence interconnects with meaning within practice. Practice is more than what people do, but also *how* they accomplish the practice. Practices produce a collective *knowing how* that is constantly activated and enables organisational subjects to operate across temporal, geographical, political, and cultural boundaries (distributed organising) (Orlikowski, 2002). These regimes of activity are called practices when they have a history, a constituency, and normative dimension. Skills involve shared knowledge about what is good, normal, acceptable, and appropriate (and what is not) and learned, bodily and mental competence to

reach these standards to more or lesser extents. Schatzki (2002) has described how know-how does not only manifest in knowing how to act appropriately, but also knowing how to talk about, how to recognise, and how to prompt and respond to such actions. This conception of competence has implications for how competence is considered at an organisational level. Professional competence is discussed further in Chapter 4.

The preceding discussion about elements of practice has already highlighted how interconnections between these elements are an integral part of practice. Therefore, it is not just the elements, but also how they are connected (or not), that makes them recognisable as practices. The next part of this chapter expands on the distinction between practice-as-entity and practice-as-performance, and the importance of context when studying practices.

3.1.2 Practice-as-Entity

As described above, this thesis follows the work of Shove, Pantzar and Watson, (2012), to study practice in terms of the social, dynamic interdependent relationship of three elements: material, meaning, and competence. To turn practices into discursive objects, Shove, Pantzar and Watson, illustrate practices as distinct entities. Practices-as-entities evidently endure over space and time, which is why they are recognisable as practices. For configurations of elements that work, by stabilising them as a practice-as-entity, it enables researchers to talk about practice. It enables teachers to tutor students about practice. But they stress that it should not be forgotten that we are still talking about activities, not things. The term practice-as-entity refers to the practice as a structured organisation. But although a practice may stabilise into a recognisable entity, this stability does not equate with it being inert. The elements within practice-as-entity overlap and mutually influence and shape each other, as per the illustration Figure 3.1.

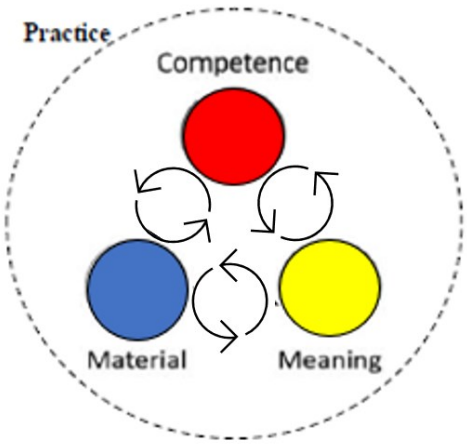

Figure 3.1 Interdependent elements of practice shape each other (adapted from Shove, Pantzar and Watson, 2012, p.32)

So, for understanding practices, the links between the elements are just as important as the elements themselves. Practices emerge, persist, shift, and disappear when *connections* between elements of these three types are made, sustained, or broken (Shove, Pantzar and Watson, 2012). They describe practices as consisting of elements that are linked together in and through performance. The bracketing of entities is typically done for analytical convenience, although this should not be at the expense of attending to the dynamic and relational practices that constitute such entities (Feldman and Orlikowski, 2011). The importance of the links when a practice is performed was highlighted by Shove, Pantzar and Watson, who stated that "practices emerge, persist and disappear as links between their defining elements are made and broken" (2012, p.21). This framing can provide a useful way to explore how the linkage between *material* things such as a treatment recommendation, and the *meaning* that an individual associated with that thing, is related to the overall practice. For example, to explore how a treatment recommendation is used in practice. These links are important for understanding variation when practices are performed.

3.1.3 Practice-as-Performance

Practices are inherently associated with a performative understanding of reality (Latour, 2005). The practice-as-performance can be described as the moment of doing in which the elements are integrated by practitioners in specific situations; and each enactment can be slightly different each time. Although the elements and their links (practice-as-entity) form a guiding structure there is ample space for variety (Warde, 2005). Constellations of elements form relatively stable and recognizable practice-as-entity that are reproduced and transformed when elements are integrated in different situations in the practice-as-performance. This recurrent relationship gives practices both their stability and inherently dynamic nature.

When considering practices-as-performance, variation is to be expected because practices are "internally differentiated on many dimensions" (Warde, 2005, p.138). The people, who may be the carrier of that practice, may have the same material (resources) and competence (technical knowledge and skill), but they may bring with them different meaning regarding that practice from their previous experience, or the values to which they aspire.

The practice-as-entity and practice-as-performance are so closely related that they constitute each other. Not only does entity order performance, but it also arises from this same performance (Shove and Pantzar, 2005). Because the practice-as-entity persists beyond situations of performance, it ensures a certain uniformity and continuity of performances over space and time. Variation in the elements or the links of the entity lead to change of the

performance (and entity) over time. But, if the practice-as-entity is not repeatedly performed it ceases to exist. Routinised courses of actions are knotted and kept together by other routinised actions or objects, or their combination, with the results of one performance becoming the resource for another (Nicolini, 2017).

The material element within practice contributes to the consistency of a practice over space and time, new materials can play a role in the transformation of practices; "as things are integrated into practices-as-performance […] so they are of consequence for the emergence [or transformation] of practices-as-entities" (Shove and Pantzar, 2007, p.148). However, the relationship is recursive, as described by Reckwitz as "Things transform practices, but through integration in a practice, things also come to materialise or incorporate knowledge particular to that practice" (2002, p.212).

The relationship with the context within which the practice is located was also highlighted by Ingram, Shove and Watson who describe this as "artefacts shape and are shaped by the **contexts** in which they are used" (2007, p.4). So, context is important for how practices are studied as it considers actors and things as always entwined with the social world as a relational whole. This implies that things cannot be understood in isolation from the context in which they take place (Schatzki, 2002; Sandberg and Tsoukas, 2011). An example could be a lecturer talking at the front of a lecture theatre filled with students, which is a different practice to that same lecturer talking in the middle of a supermarket. The practices and their sub-elements may only acquire sense when organised around an end or object. In a social theory of practice approach, interaction between person and material is viewed as situationally contingent, meaning that specific engagement unfolds in the emergent doing of practice (Watson, 2008) which is different in each situation. Orlikowski and Scott (2008) described the ensembles of elements within the performance of a practice, as being mutually dependent, and specific to the context. They emphasised that materials do not stand alone with certain inherent properties, but that their material characteristics and capabilities are relevant only in relation to specific situated practices (Orlikowski and Scott, 2008). A practice-based approach enables scholars to explore and understand the performance of organisational phenomena as they unfold within that context (Schatzki, 2012; Sandberg and Dall'Alba, 2009).

3.1.4 Practitioner as Carrier of Practice

Practitioners are considered as the carriers of practice (Reckwitz, 2002). A carrier can be an individual, or an organisation of groups, for example, the medical profession, or an individual medical student. People cannot have practices, practices are inherently shared, collective

achievements. Through repeated performance, practices become carried as bodily and mental routines, but not without reflection; people adapt, improvise and experiment. Reckwitz elaborated on this by explicating that:

> While homo economicus is conceived as a (semi) rational decision maker and *homo sociologicus* is depicted as a norm-following, role-performing individual, *homo practicus* is conceived as a carrier of practices, a body/mind who carries, but also carries out, practices (2002, p.256).

Performing a practice always requires adapting to new circumstances, as its accomplishment is neither mindless repetition nor complete invention. Another illustration of this recursive relationship was described by Nicolini and Monteiro, who used the example of skiing, stating "that skiing, and skiers emerge together in a practice and talking about one without the other makes little sense" (2016, p.118). This also accommodates the view that although many practices incorporate individual performances, in one way or another, multiple actors are involved in a practice (Sandberg and Dall'Alba, 2009). Reckwitz expands on the concept of multiple actions within a practice by stating that "a practice exists as a block or a pattern which can be filled out by a multitude of single and often unique actions" (2002, p.250). Every agent carries out a multitude of different social practices, the individual is the unique crossing point of practices, of bodily-mental routines (Reckwitz, 2002, p.256). So, what does this mean in terms of studying a practice? Practices as a unit of social analysis is discussed next.

3.2 Practices as a Unit of Social Analysis

Practice Theory represents a particular way of understanding society, a way that takes practices as the fundamental and smallest unit of social analysis. It is a way to systematically explore processes of transformation and stability within social practices and between them.

Within the academic literature, Practice Theory does not offer one coherent account. Practice theorists agree on some points, for example to take practices as a fundamental unit of analysis, but they disagree on many others, for example on the role material objects play in practices. Schatzki argues that "because human activity is beholden to the milieus of nonhumans amid which it proceeds, understanding specific practices always involves apprehending material configurations" (2005, p.12). The role of material things and technologies is a major theme within science and technology studies, a field which has several intellectual traditions in common with Practice theories. Latour describes materials as "in large part the stuff out of which socialness is made" (2005, p.114).

One of the challenges of studying practices is that there are always multiple practices happening at the same time. For example, teaching in a classroom could involve the overlap of timetabling practices, curriculum development practices, commuting practices of students, or even building maintenance practices. These practices exist within organised sets of actions, that practices link together to form wider complexes and constellations. Giddens thus described intersections of these multiple accomplishments as a nexus, which forms the "basic domain of study of the social sciences" (1984, p.2). In the field of practices, practices dynamically relate to each other in looser bundles or stronger complexes by sharing carriers, context, materials, and competences and can be viewed either as dispersed or integrated. Practices mutually influence each other, and understandings of space and time are formed in the relations between practices (Hui, Schatzki and Shove, 2017).

The conceptual framing provided by Shove, Pantzar and Watson, (2012) is useful for this study as it can also inform the analysis of multiple practices when elements provide overlap between practices. Shove and colleagues illustrate this with the example of driving and repair of machinery with the notion of masculinity providing a point of connection between the two practices. Figure 3.2 displays this in terms of the overlap of meaning between two practices, with the elements providing point of connection between practices.

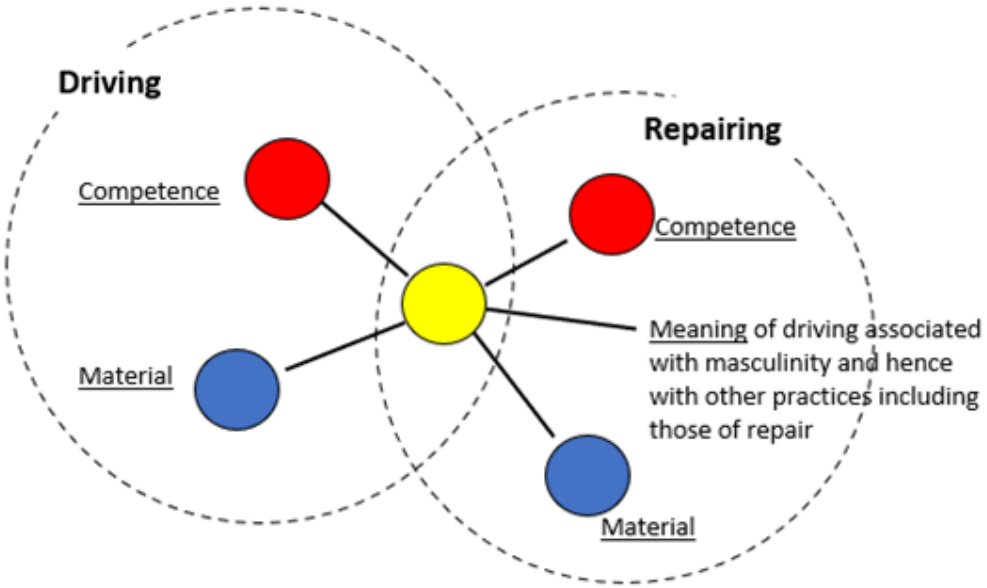

Figure 3.2 Elements providing point of connection between practices (adapted from Shove, Pantzar and Watson, 2012, p.37)

Routinised courses of actions are knotted and kept together by other routinised actions or objects, or their combination, with the results of one performance becoming the resource for another (Nicolini, 2017). In a comparable way, this might be illustrated by overlap of the

material element (e.g., a treatment recommendation written within a clinical guideline) which could provide a point of connection between practices. Thus, there is a philosophical shift, in which knowledge is not a statement about reality, but as an element within practice that interferes with other practices. Knowledge, as a material element, therefore, participates in reality.

The different practices may have the same practitioner (or group of practitioners) as the carrier of the practice, or the different practices may be carried by a different practitioner (or group of practitioners). Hui, Schatzki and Shove (2017) describe constellations and practitioners and the connections between them as the nexus of practices. For example, one practice could be student practice (carried by a medical student as an individual or group), the connected practice could be teaching practice (carried by a tutor, or teaching staff in general), the other connected practice could be patient practice, and so on (illustrated within Figure 3.3).

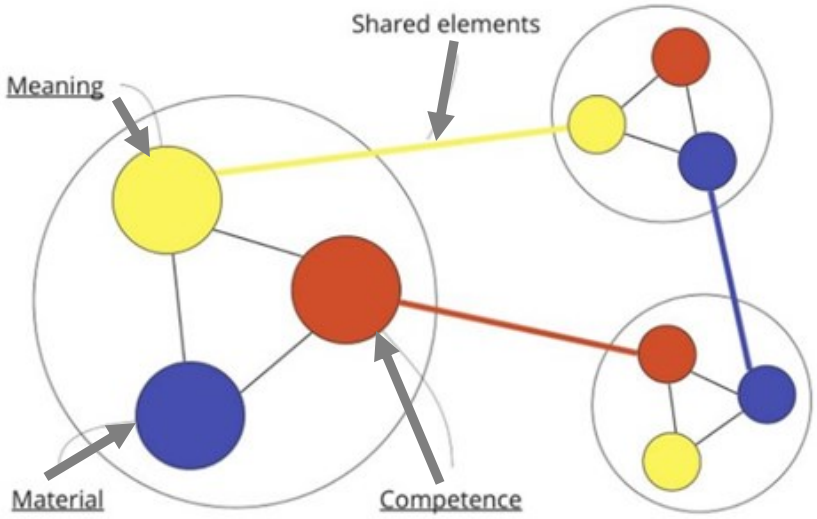

Figure 3.3 The nexus of practices: Connections, constellations, practitioners (from Hui, Schatzki and Shove, 2017)

Mol (2002) describes the practice-based approach, as the praxiographic approach. She described it as a way of performing research which has a focus on practice, to investigate what can be seen and heard, rather than more abstract notions such as culture (2002). This approach allows for associations and enactments to be made explicit, by allowing materials to be noticed, and not dominated by human activity or more implicit aspects such as motivation. When Mol describes the praxiographic approach, and she talks about the enactment of objects, she talks about reality being multiple; “Ontology-in-practice is multiple” (2002, p.157). She emphasises that there are “many entanglements in every action” (Mol, 2002, p.156). In

her book, *The Body Multiple,* she describes ontological multiplicity, that "*ontology* is not given in the order of things, but that instead, *ontologies* are brought into being sustained or allowed to wither away in common, day-to-day, sociomaterial practices" (Mol, 2002, p.6). In stressing ontological multiplicity, she states, "Reality is never so solid that it is singular" (Mol, 2002, p.164). This approach is useful within the complex environment of healthcare practices.

3.2.1 Nicolini Toolkit approach – Zooming in and Zooming out

Practice scholars study practices as the unit of analysis rather than focusing on pre-determined actors, and often use case study methodology to get as close as possible to the real-time accomplishment of practices (Schatzki, 2002; Levina and Orlikowski, 2009; Nicolini, 2011; Contu, 2014; Hibbert and Cunliffe, 2015). Nicolini (2013) describes how a practice approach is developed from a multiplicity of scholarly traditions that naturally exhibit different assumptions. So, Nicolini recommends studying practice in terms of a toolkit approach rather than adopting a specific theory of practice such as pragmatism[5] (Simpson, 2017), or structuration theory[6] (Giddens, 1984).

A toolkit approach is utilised by zooming in on several aspects of practice. Nicolini suggests beginning the inquiry by examining activities, before exploring the role of other aspects of the practice. Nicolini suggests that a practice lens can reveal notions about normativity and legitimacy, processes of learning, or other areas of practitioners' interest. The value of exploring connections within practice has also been explored by Feldman and colleagues; to study the relationships between these parts and the processes by which the parts change as a source of flexibility and change (Pentland and Feldman, 2005); and to improve communication (Feldman, Nadash and Gursen, 2001). Nicolini describes a toolkit approach to carefully utilise the diverse perspectives of different practice approaches in combination to appreciate nuances, yielding a novel understanding of practices, and organisational phenomena (2013).

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[5] Pragmatism research philosophy accepts concepts to be relevant only if they support action. Pragmatics recognise that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities.

[6] The theory of structuration is a social theory of the creation and reproduction of social systems that is based on the analysis of both structure and agents, without giving primacy to either. Giddens (1984) describes structuration theory more as "a sensitising device" rather than to use for empirical research.

This toolkit approach fits well with the conceptual framework of Social Practice Theory described by Shove, Pantzar and Watson, (2012), whereby the aspects of interest in the toolkit could relate to each of the elements within their framework i.e., material, meaning, competency (and their interconnections). Therefore, the research approach for this thesis involved zooming in on one element of practice, which considered a recommendation from a clinical treatment guideline as a material element of practice. Thus, the practice-based lens has implications for how competence or meaning are formed in practice.

The toolkit approach also involves zooming out, to follow aspects of practices and how they are connected to other practices in space and time, as well as to examine a practice's effects (Nicolini, 2011, 2013). Practices can be viewed as having a career that develops over time, involving various numbers of practitioners at various levels of commitment and competence. For example, the effect of enacting one practice could influence the conditions for another practice. Related practices are therefore mutually constitutive (Feldman and Orlikowski, 2011). This contributes to why the practice-based approach is useful and is discussed next.

3.3 Why Practice-Based Approach is Useful: multiple *right* answers

The study of knowledge use in practice, and practice-based learning has been a prominent area of research. It has been proposed that "if we want more evidence-based practice, we need more practice-based evidence" (Green and Glasgow, 2006, p.126). Evidence informed policy implementation, and evidence-based practice has been an ongoing area of interest over the past decades, especially regarding healthcare organisations (Davies, Nutley and Walter, 2008; Nutley et al., 2019). The practice approach reconceptualises the nature of knowledge. The conception of learning has shifted to the participation in practices, and knowledge is conceptualised as acquired through participation in practices. It is thus inherently social and shared rather than an object (Cook and Brown, 1999; Wenger, McDermott and Snyder, 2002; Gherardi, 2019; Nicolini, 2013).

Considering Mol's description of the praxiographic approach (2002, p.157), the enactment of a clinical treatment guideline recommendation within practice can have multiple realities. Mol describes ontological multiplicity as the permanent possibility of alternative configurations, and so explaining how variation in practice may come to be (2002, p.164). By tracing a material element, it is a way to see how different enactments are coordinated (Mol, 2002, p.71).

By studying the accomplishment of ordinary activities as they occur, the practice lens has been used in management and organisational studies to consider how matters such as social order, knowledge, institutions, identity, power, inequalities, or change result from or transpire

through practices and their aggregations (Gherardi, 2019; Schatzki, 2002; Hui, Schatzki and Shove, 2017). The strength of the practice approach is that rather than imagining abstract notions, the studies are firmly grounded in explanations of what is empirically observable, and then systematically tracing back phenomena to arrangements of defined elements that produce the activity of interest. By following an object, an element of practice, while it is being enacted (Mol, 2002, p.152). The focus is on the sayings and doings, to offer fresh insights into how the world changes and why it remains the same (Shove, Pantzar and Watson, 2012; Nicolini, 2013). For example, the study of decision making is turned into the study of decision-making practices. By representing these ordinary activities, alternative ways of doing and saying can then be explored (Eikeland and Nicolini, 2011). Reckwitz describes Practice Theory, as like other versions of social and cultural theory in that it offers a system of interpretation, a conceptual framework that comprises a certain way of seeing and analysing social phenomena, which enables certain empirical statements, and excludes others (2002, p.257). Reckwitz positions Practice theories in relation to other cultural theories, all of which "highlight the significance of shared or collective symbolic structures of knowledge in order to grasp both action and social order" (2002, p.246). So, theories of practice are distinct in their contention that the social is situated in practice.

A practice-based approach enables exploration of how problems are solved in practice, to illuminate the concept of competence in practice. Practices have a collective and normative nature. Practices are associated with a given community and domain of interest, which in turn keeps the practice alive by (re)producing it (Wenger, McDermott and Snyder, 2002). By studying these practices, it gives an insight into other aspects of these communities. Communities of practice such as a medical school, or the medical profession, provide the context to socialise newcomers and pass competencies to the next generation, and the dispositions and practical wisdom that comes with being part of an ongoing regime of activity. It also creates a forum which shapes a shared understanding about what counts as acceptable or normal for that community. Thus, practices and their normativity are apprehended together (Nicolini, 2013). Practice approaches foreground flow and sequence of the learning process, rather than focussing on discrete actions, motivations, and rational decisions of individuals (Sandberg and Tsoukas, 2011). Social organisation is a result of normative consensus, and the units of analysis are normative structures, such as values and social rules (Schatzki, 2002). The study of practices can surface the production of meaning and normativity (Schatzki, 2002; Reckwitz, 2002; Sandberg and Tsoukas, 2011; Nicolini, 2013). As practices are learned and performed, the mutual accountability among practitioners creates a sense of right and wrong,

and what is an acceptable way to perform a practice (Nicolini, 2013). Thus, zooming out to consider the elements of practice at an organisational level, the norms for that community can be investigated.

Practices also connect with other practices. What is it that causes certain routinised actions or objects to knot together, whereas others just slip past each other? Social Practice Theory has been criticised by some for not addressing issues such as power and justice (Walker 2014; Sayer, 2013). By contrast, Shove and Spurling (2013) argue that issues of inequality and moral values are central in Social Practice Theory. These assemblages empower certain courses of action over others. So, circuits of power are woven into the texture of practices (Nicolini and Monteiro, 2016). But because practices are fundamentally dynamic and indeterminant in nature, there will always be opportunities for resistance and change from those practitioners who carry those practices. Practitioners can either keep repeating the same actions, or they can reflect on whether it makes sense to do things any differently or use different resources in that situation. Practice approaches can explore the space for collective and individual agency and agents in their role as carriers (or not) of a practice. By tracing a material element (such as a clinical guideline treatment recommendation) within the practice it is a way to trace different *reals* (Fenwick, Edwards and Sawchuk (2011, p.181).

Social Practice Theory was used as a theoretical underpinning for this research because it helped to understand the concept of knowledge differently; it helped to make sense of the data. The framing of practice described by Shove, Pantzar and Watson, (2012) was useful for this thesis to conceptualise the social practice of the consultation between a medical student, and a simulated patient. By considering the data in terms of the interconnectedness (or not) of the practice(s), it supported the study of the practice. This provided a way to explore differences between consultations by the different students, and so to understand variation in practice. To provide a deeper understanding of variation in practice and how variation may be warranted. By looking at data related to the linkage between elements, this also helped to explore what is meant by competence; and what that might mean within the context of practice, for either the medical student or the simulated patient.

3.4 Summary of Chapter 3

This chapter has outlined an alternative approach to studying implementation of evidence, a practice-based approach informed by social theory. The meaning of a practice-based approach was described in both general terms and how it was used within this thesis. The conceptual framing provided by Shove, Pantzar and Watson, (2012) is useful for this research because it

helped to frame the concept of knowledge differently, to make sense of the data. When attending to practices as the unit of analysis, this approach accommodates that one does not examine one practice, but 'bundles,' or 'nexuses' of multiple practices at once. This is useful within the complex context of the healthcare environment. This approach also articulates the role of the carrier of a practice. Practitioners are considered as the carriers of practice (Reckwitz, 2002). A carrier can be an individual, or an organisation of groups, for example, the medical profession, or an individual medical student. A further benefit of the conceptual framing provided by Shove, Pantzar and Watson, is the inclusion of competence as a key element within practice, and so this approach aligns with the research questions for this thesis. The next chapter discusses competence in more detail.

Chapter 4 Professional Competence

The preceding discussion in Chapter 2, about the differing conceptualisations of the nature of knowledge, also has implications for how competence is viewed at an individual and an organisational level. The integral role of competence as an element within practice was described in Chapter 3. This chapter now explores what is meant by professional competence, and what that might mean within the context of practice. This provides background for the research question for this thesis about how the practice-based approach can inform us about competent professional practice.

4.1 Defining Professional Competence

The first part of this chapter provides a definition of profession, then describes a rationalist view of competence, before suggesting an alternative view of competence which incorporates the element of meaning within practice. Then medical competence is outlined.

4.1.1 Defining Profession

A Professional is a member of a Profession. Professionals are governed by codes of ethics and profess commitment to competence, integrity and morality, altruism and the promotion of the public good within their expert domain (Evetts, 2011). Professionals are accountable to those they serve and to society (Freidson, 2001). Traditionally a profession has been defined as a paid occupation, especially one that involves prolonged training and a formal qualification. A profession often has a systematic and scientific knowledge base, with education for professions largely limited to certain higher education programs (Dall'Alba and Sandberg, 1996, p.412). The process of educating for professions involves teachers introducing students to fields of human practice. The aim for teachers of the professions is to support students towards engaging in practice in ways characteristic of competent practitioners. Dall'Alba and Sandberg describe this through examples such as teaching students "how to learn to solve chemical problems as chemists would, to develop an argument in the way that historians do, or to approach patient care as physiotherapists, dentists, or doctors would" (1996, p.411). Traditional approaches for promoting competent practice typically view competence in terms of attributes, such as knowledge, skills and attitudes. This is a rationalistic view of competence and is discussed next.

4.1.2 Rationalistic View of Competence

In the management strategy literature of the 1990s, the concept of competence or competency was recognised as the complex interaction of people, skills and technologies that drive firm performance. Within this literature, Le Deist and Winterton (2005) highlighted the

inconsistent usage of wording around the concept of competence. The word *competence* generally refers to functional areas (i.e., practical, or operational areas) and *competency* to behavioral areas (i.e., social, or interactive areas). The concept of core competence has been described as a key organisational resource that could be exploited to gain competitive advantage (Le Deist and Winterton, 2005). This prevalent rationalistic approach was based upon a dualistic ontology, assuming that person and world are distinct entities, assuming the existence of an objective reality independent of and beyond the human mind (Schön, 1983). Schön described this conception of the epistemology of practice which treats professional competence as the application of privileged knowledge to instrumental problems of practice as "technical rationality" (Schön, 1983, p.xi). Thus, the phenomenon of competence was considered as two separate entities, namely, worker and work. The objectivistic epistemology implies objective, knowable work and consequent descriptions of work activities that are independent of the workers who accomplish them. Hence competence was viewed as consisting of prerequisite worker attributes and then subsequent work activities. This decontextualised content was then formalised and taught in professional education. It was assumed that educated professionals then later enter the appropriate practice container and are able to perform within it (Lave, 1991). In recent times, this technical rational approach has spawned competency-based medical education and the proliferation of entrustable professional activities as an assessment approach within medical education (Meyer et al., 2019). Boyd and colleagues (2018) described the conceptualisation of competency-based medical education as rooted in positivism and behaviourism.

The traditional view of competence development has been as a step-by-step process from novice to expert status (e.g., Benner, 1982; Dreyfus and Dreyfus, 2005). An example of research from the prevalent rationalistic school, is an observational study of variations in achievement of evidence-based, high-impact quality indicators in General Practice (Willis et al., 2017). These authors concluded that the enduring variations in the delivery of evidence-based care were inappropriate and unwarranted, and framed this as a lack of competence of the practitioner. The abstract nature of the categories of competence used in such studies tends to limit their utility, as these predefined aspects do not illuminate what constitutes competence in accomplishing work (Sandberg, 2000).

This technical rational approach assumes that practitioners can meaningfully be separated from their activities and the situations in which they practice. But the decontextualising of practitioners' competence is problematic in two ways. First, as practitioners' competence is a constitutive part of practice, it cannot be separated from practice. Second, as practitioners'

competence is largely achieved in practical consciousness, it cannot be completely decontextualised. The discrepancy between traditional scientific knowledge, and knowledge valued by practitioners, has been highlighted by Schön (1983) as a problem of decontextualisation.

Giddens (1984) argues that practice is neither constituted by an objective structure constraining practitioners' action, nor solely by the practitioners' subjectivity, as sometimes claimed. Rather, practice is inter-subjectively constituted through mutual understanding of a specific institutionalised order enacted by the practitioners (Giddens, 1984). This means that practice is not a fixed or static container, and instead it is a dynamic flow produced and reproduced by practitioners. Given this view of practice, at any one point in time, there is not one but many different practices. Hence variation in practice is to be expected. Not only is there variation in ways of enacting practice, but some of these may conflict with one another. For example, in medicine, a preoccupation with diagnosing and treating dysfunctional parts of the physical body, would tend to be inconsistent with taking a holistic view of the patient and the impact of an illness on that individual's life (Dall'Alba, 2004).

When researching variation within practice, a widening of the lens is encouraged (Fraser, Stewart and Jones, 2019), from a focus on what can be measured, ranked, or evaluated, to what can be experienced, and how it can be experienced. This requires an alternative view of competence, which recognises the social and intersubjective nature of learning.

4.1.3 Alternative View of Competence

The social nature of learning within medical education was discussed by Cruess, Cruess and Steinert (2018). Dornan and colleagues described this fit with social theories of learning as "Expertise is not simply a property that passes from teacher to learner, but a dynamic commodity that resides within communities of practice" (2007, p.89). By viewing competence as based on ways of experiencing practice, Dall'Alba and Sandberg (1996) argue that competence development should focus on enriching the experience of practice. They suggest a change in meaning structure for practice, which involves both a significant shift from one way of experiencing practice to another, as well as refinement (1996). Although competency affects performance, there is extensive evidence that the relationship is not direct, and other factors (the work setting, time, and motivation) play a key role in determining performance (Kak, Burkhalter and Cooper, 2001).

The development of human competence does not need to follow the linear progression from novice to expert that has traditionally been proposed. For example, two workers may be

identified as possessing identical attributes but may accomplish work differently, depending upon which attributes they use and how they use them. Rather than considering professional competence as consisting of two separate entities, a set of attributes possessed by the worker and a separate set of work activities, Sandberg (2000) adopted an interpretive perspective on professional competence. Sandberg examined assumptions underlying these theories at the metatheoretical level, ontological and epistemological level. From an interpretive approach, competence can be considered as person and work forming an inseparable relation through the lived experience of work, and so can generate new research questions about professional competence.

This thesis considers that practices are intersubjectively constituted, through mutual understanding of a specific institutionalised order, enacted by the practitioners with the patient (e.g., Nicolini, 2017). This interpretive approach aligns with the practice-based approach described in Chapter 3, whereby practitioners cannot meaningfully be separated from their activities and the situations in which they practice. Practices are neither constituted by an objective structure constraining practitioners' action, nor just by the practitioners' subjectivity (Giddens, 1984). The practice-as-entity described in Chapter 3 is not a fixed static container, it may be stable, but it is not inert. Practice-as-performance is a dynamic flow produced and reproduced by practitioners. When practice is viewed as intersubjectively constituted, competence is not decontextualised from practice but is a constitutive part of the social context of practice. This view accommodates the complexity of the healthcare context. As described in Chapter 3, this view of practice accommodates many different practices co-existing at any one point in time. Therefore, there can be variation in ways of enacting practice, some of which may conflict with one another. Competence is one element of practice, but it is not the only element. The practice of managing a disease may not align with the practice of coping with that disease (as an illness carried by an individual person), when taking a holistic view of the patient and the impact of illness on their life and the meaning of that practice for the individual patient. This thesis explores how competent practice also needs to relate to the element of meaning within practice.

4.1.4 Competence and the Element of Meaning

When considering the development of competence, Sandberg (2000) suggests that changing the basic meaning structure of workers' conceptions of their work is fundamental. This understanding of competence provides an alternative answer to the question of why some perform their work differently to others. Therefore, variation in performance is not primarily related to a specific set of attributes possessed by those who are regarded as the most

competent. Instead, the reason some people perform work differently to others may be related to variation in ways of conceiving of that work. This has implications for professional learning to address the learners' ways of conceiving of work that make up, form, and organise their knowledge and skills into distinctive competence in performing their work.

The importance for professional education of development of competence via participation in work-based activities was described by Teunissen et al., (2007). Their study explored the processes at work when medical graduates learn by doing, and the interactive processes of interpretation and construction of meaning which can lead to growth in personal knowledge. Likewise, Govaerts (2008) argues that enabling students to develop competence through experience of engaging in practice, is most closely directed to the aims of education for professions. From this interpretation of competence, it becomes clear that competence does not consist of generalisable knowledge, skills and attitudes. There is more involved. This view of competence development involves a change in the structure of the meaning within practice. This aligns with the practice-based approach described in Chapter 3 where competence is an integral element within practice, beside both the element of material and the element of meaning. These aspects or dimensions of competence take on meaning through engagement in and reflection on tasks, to lead to understanding of professional practice. Govaerts put it simply as "knowing is not enough for doing, nor is doing enough for learning" (2008, p.235). So good professional practice requires more than just competence, it also requires consideration of the meaning of that practice. This also highlights how competence is situational or context-dependent in character (Dall'Alba and Sandberg, 1996). With regards competence and the medical profession, the next part of this chapter provides some background about the General Medical Council which is the public body which sets the standards and expected outcomes for medical education and training in the UK.

4.1.5 Medical Competence

It is inherent in the definition of a Profession that a code of ethics governs the activities of each Profession (Freidson, 2001). Ethics requires behaviour and practice beyond the personal moral obligations of an individual. They define and demand high standards of behaviour in respect to the services provided to the public and in dealing with professional colleagues. Often these ethical codes are enforced by the Profession and are acknowledged and accepted by the community (Evetts, 2011). To meet the standards of good medical practice, graduates must make the care of patients their first concern. Patients must be able to trust doctors with their lives and health. To justify that trust, doctors must show respect for human life, and must make sure their practice meets the standards expected of them. The General Medical Council

(GMC) is the public body that maintains the official register of medical practitioners within the United Kingdom. Its chief responsibility is to protect patient safety and improve medical education and practice across the UK, by controlling entry to the register and suspending or removing members when necessary.

From medical school to postgraduate education, the GMC sets standards and expected outcomes for medical education and training in the UK, and acts when these standards are not met. They hold and evaluate a list of universities entitled to award a medical degree recognised as a UK primary medical qualification. The GMC provides guidance to describe the professional values and behaviours expected from any doctor registered with them. The GMC publishes the document *Outcomes for graduates* which sets out what newly qualified doctors, from all medical schools who award UK primary medical qualifications, must know and be able to do (General Medical Council, 2020). The outcomes expected of medical graduates are shown by the overview in Figure 4.1, arranged as three parts: the professional values and behaviours, professional skills and professional knowledge.

Outcomes 1 – Professional values and behaviours • Professional and ethical responsibilities • Legal responsibilities • Patient safety and quality improvement • Dealing with complexity and uncertainty • Safeguarding vulnerable patients • Leadership and team working
Outcomes 2 – Professional skills • Communication and interpersonal skills • Diagnosis and medical management • Prescribing medications safely • Using information effectively and safely
Outcomes 3 – Professional knowledge • The health services and healthcare systems in the four countries • Applying biomedical scientific principles • Applying psychological principles • Applying social science principles • Health promotion and illness prevention • Clinical research and scholarship.

Figure 4.1 Overview of Outcomes for Graduates (GMC, 2020)

These three parts within the *Outcomes for graduates* document, also match the three fundamental domains of the generic professional capabilities' framework, which the GMC publish to define standards for medical postgraduate education.

At the individual student level, the overarching outcome required of medical graduates is stated as:

> Medical students are tomorrow's doctors. In accordance with *Good Medical Practice,* newly qualified doctors must make the care of patients their first concern, applying their knowledge and skills in a competent, ethical, and professional manner and taking responsibility for their own actions in complex and uncertain situations. (GMC, 2020)

So, the competence of an individual doctor (or medical student) sits within the organisational structure of the profession, which is accountable to the broader societal expectations of that profession.

A practitioner must be technically competent but in addition to that, to be professionally competent, there are also legal and ethical expectations which must be considered as part of that professional practice. A literature review of epistemic cognition in medical education, recognised that medical learners are expected to integrate knowledge from different disciplines and make decisions in the midst of ambiguity (Eastwood et al., 2017). The literature review from these authors established a need for further investigation into the implications of epistemic cognition for humanistic orientations and ultimately for patient care, for example, to explore patient autonomy and other aspects of medical ethical responsibilities. Teaching within Medical Schools incorporates supporting medical students to practice the application of ethical principles, this is discussed next.

4.1.6 Four Pillars of Medical Ethics

Medical Schools teach about medical ethics, including frameworks such as the *Four Pillars of Medical Ethics* described by Gillon (1994). This framework illustrates the balance between risk, benefits, fairness, and personal choices to inform discussions with patients. The *Four Pillars of Medical Ethics* provides a framework which can be used to support analysis of the best action to take in each healthcare situation (Gillon, 1994). To use this approach, healthcare professionals must consider whether their actions are following each of these pillars. When considering a medical intervention, each of the four pillars should be considered, with no single pillar having a higher priority. The *Four Pillars of Medical Ethics* are illustrated in Figure 4.2.

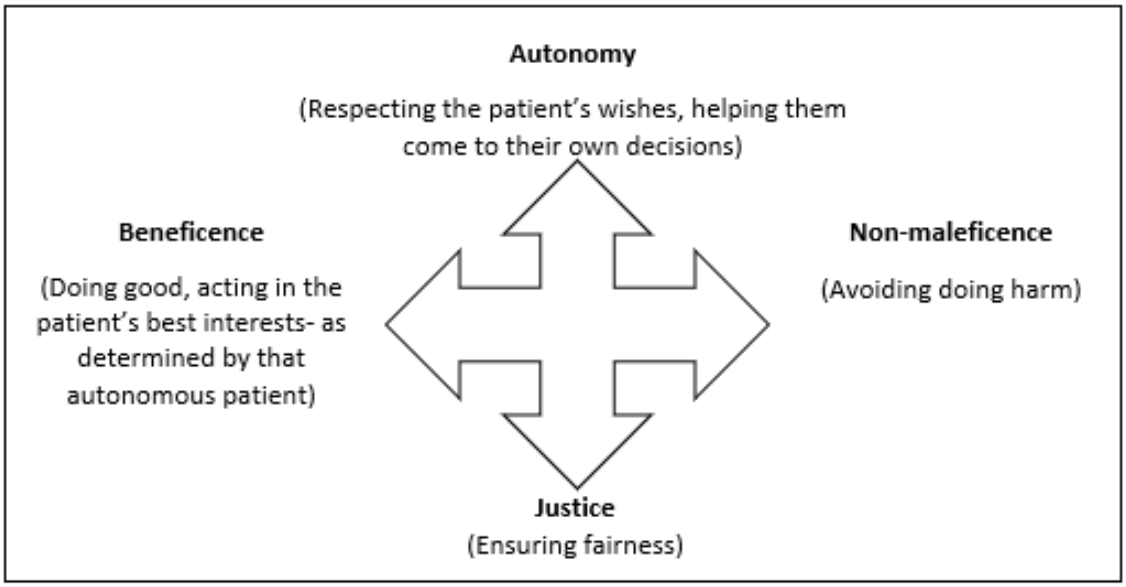


Figure 4.2 Four Pillars of Medical Ethics (Gillon, 1994)

More detail about each of these four principles are described:

- **Autonomy** (giving the patient the freedom to choose freely, where they are able). The principle that a patient has the right to choose what happens to their body. Autonomy means that a patient has the ultimate decision-making responsibility for their own treatment. A medical practitioner cannot impose treatment on an individual for whatever reason. Autonomy is important because we need to make sure that the patient is actively involved in their diagnosis and treatment – and not just deferring to their doctor.
- **Beneficence** (doing good). Beneficence means that all medical practitioners have a moral duty to promote the course of action that they believe is in the best interests of the patient, as determined by the autonomous patient him or herself.
- **Non-maleficence** (avoiding doing harm). Non-maleficence is the sister to beneficence. Non-maleficence states that a medical practitioner has a duty to do no harm or allow harm to be caused to a patient through neglect. Any consideration of beneficence is likely, therefore, to involve an examination of non-maleficence. Non-maleficence acts as a threshold for treatment. If a treatment causes more harm than good, then it should not be considered. This contrasts with beneficence, where all valid treatment options are considered and then ranked in order of preference.
- **Justice** (ensuring fairness). In the context of medical ethics, justice is the principle that when weighing up if something is ethical or not, we must think about whether it is compatible with the law, the patient's rights, and if it is fair and balanced. It also means that we must ensure no one is unfairly disadvantaged when it comes to access

> to healthcare. Therefore, balancing the rights of the individual within the context of the rights of that society.

Individual doctors (or medical students) are personally accountable for their professional practice and must always be prepared to justify their decisions and actions. Professional practice requires a holistic conceptualisation of competence which includes these ethical principles. But the challenges of applying evidence-based knowledge to an individual patient have been recognised, and Tonelli highlighted the philosophical limits of evidence-based medicine to call for a broader understanding of medical knowledge and reasoning for individual patients.

> The direct application of knowledge derived from population-based studies is likely to fulfil the goal of public health. The same application of the same knowledge to the individual, however, is problematic. (Tonelli, 1998, p.1236)

This thesis uses the medical ethics frameworks to explore ethical aspects of practice for individual patient care. Ethical competence was defined by Cheetham and Chivers (1996) as 'the possession of appropriate personal and professional values, and the ability to make sound judgements based upon these in work-related situations. A holistic conceptualisation of competence within professional practice is discussed next.

4.1.7 Professional Practice and Holistic Conceptualisation of Competence

When considering professional competence, appropriate personal and occupational values must be considered. The interconnection between the conceptual and operational aspects, and the occupational and personal aspects of professional competence is illustrated in Figure 4.3, as a holistic conceptualisation of competence.

	Occupational	***Personal***
Conceptual	Cognitive competence	Meta-competence
Operational	Functional competence	Social competence

Figure 4.3 Holistic Conceptualisation of Competence (Cheetham & Chivers, 1996)

Cheetham and Chivers (1996) defined each of these types of competence as follows: *Cognitive competence*, includes knowing underpinning theory and concepts, as well as informal tacit knowledge gained experientially, and including knowledge (know-that), underpinned by understanding (know-why); *Functional competence* (skills or know-how), are those things that a person who works in a given occupational area should be able to do [and] able to demonstrate; Social competence (behavioural competence, knowing how to behave) as a relatively enduring characteristic of a person causally related to effective or superior performance in a job; Meta-competence is concerned with the ability to cope with uncertainty, as well as with learning and reflection.

Within this holistic conceptualization of competence, beneficence and non-maleficence from the ethical framework will be underpinned by cognitive and functional competence. Autonomy and justice from the ethical framework will be underpinned by social competence and meta-competence. Meta-competence is discussed in more detail next, and the importance of reflection for development of professional competence.

4.2 Supporting the Development of Professional Competence

The first part of this chapter considered a holistic conceptualisation of competence and how this relates to medical ethics. The next part of this chapter considers what this means in terms of supporting the development of professional competence, to provide a foundation for one of the research questions for this thesis about how the practice-based approach can inform us about competent professional practice.

4.2.1 Educating the Reflective Practitioner

A key scholar regarding professional education and development of professional competence is Schön. Within his book *The Reflective Practitioner*, he argued for an epistemology of practice, which incorporated the creative skills of a practitioner to reflect-in-action, which he described as a practitioner "thinking what they are doing while they are doing it" (Schön, 1983, p.xi). These being skills required for the complexity and uncertainty of practice that practitioners would experience within their professional life. He also used the term knowing-in-action to refer to the sorts of know-how which can be observed in action "the knowing is *in* the action" (Schön, 1987, p.25). In highlighting lived experience, Schön emphasised that this self-awareness is essential to the development of professional competence (1995). This was then elaborated upon within his book *Educating the Reflective Practitioner* (Schön, 1987), which prompted the redesign of professional education, towards combining the teaching of applied science with coaching in the artistry of reflection-in-action. He argued that an

epistemology of practice should be based on reflection-in-action, rather than giving privileged status to systematic scientific knowledge. Treating professional competence, as the application of privileged knowledge to the problems of practice, was criticised by Schön as technical rationality (with the limitations as per discussions in Chapter 2). Schön emphasised the benefits of an educational setting which involved a reflective practicum, with the dialogue of coach and student taking the form of reciprocal reflection-in-action (1992). An incomplete understanding of reflection has been indicated at the level of educator, tutor, and student (Muir, 2007). Highlighting the need to be explicit about the process of reflection (Muir, Bruce and McConville, 2020). Reflection is considered a significant component of multiple disciplines and professional fields, including medical education and practice, but the literature does not provide a consensual definition or model for it (Nguyen et al., 2014).

The holistic model of professional competence described in the first part of this chapter, incorporates both the competence-based approach and the concept of the reflective practitioner, to include both the functional outcomes approach and the personal competence approach (Cheetham and Chivers, 1996; 1998). A modified epistemology of professional practice was suggested by Cheetham and Chivers (2000, p.383) which they argue offers a more pragmatic, accurate and balanced perspective on how professionals operate than either knowing-in-action, or technical rationality (as per Schön, 1983, 1987). The holistic competence model has also been represented as a tetrahedron, reflecting the unity of competence and the difficulty of separating cognitive, functional, and social dimensions in practice. The holistic competence model can be represented as a tetrahedron in plan view (Figure 4.4).

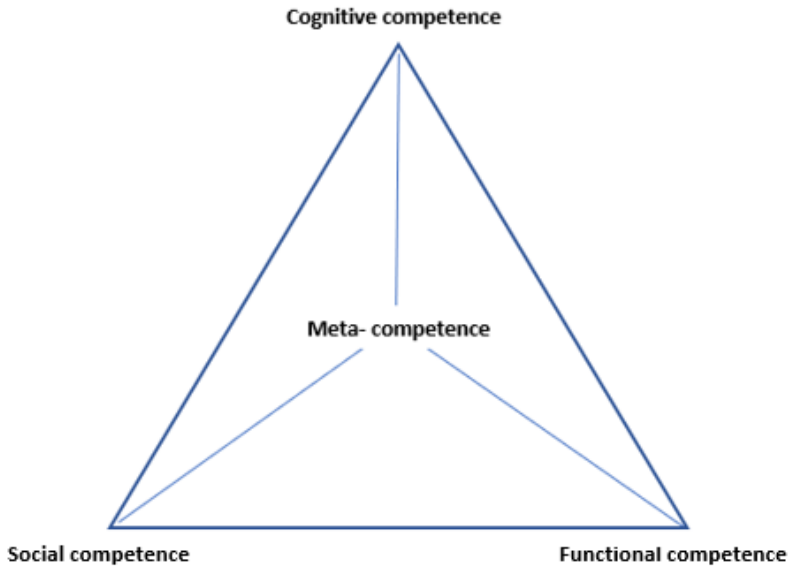


Figure 4.4 Multidimensional holistic model of competence (adapted from Le Deist and Winterton, 2005, p.40)

Reflection forms an integral feature within and around the whole model. Meta-competence is presented as an over-arching input that facilitates the acquisition of output competences at the base of the tetrahedron. Therefore, practical competences may be thought of as situated on the faces of the tetrahedron, combining elements of the dimensions of competence in varying proportions (Le Deist and Winterton, 2005).

Reflection has been described as a metacognitive process that occurs before, during and after situations with the purpose of developing greater understanding of both the self and the situation, so that future encounters with the situation are informed from previous encounters (Sandars, 2009). Kember and colleagues described reflection as leading to new perspectives and new belief structures (Kember et al., 2008). So, a metacognitive approach can generate richer experience, to make the difference between repeating standardised practice year after year, or evolving towards more experienced practice (Nichols, 2017).

The role that reflection can play regarding power between organisations or individuals, was highlighted by Siebert and Walsh (2013), to examine the potentially problematic role of reflective practice in work-based learning. These authors describe reflection as "a tool which can be used to individual advantage" and that reflection "allows for recognition of a broader range of knowledge, awarding validity to types of knowledge which have hitherto been undervalued" (p.176). The persistent asymmetry doctor patient interaction (Pilnick and Dingwall, 2011), was discussed above (p.44 of this thesis) in terms of the different meanings which a patient and doctor might attribute to a material element within practice. A systematic review and thematic synthesis of patient-reported barriers and facilitators to shared decision making also stated that knowledge is not power for patients (Joseph-Williams, Elwyn and Edwards, 2014). Power imbalance within a medical consultation can prevent shared decision making and patient-cantered care (Joseph-Williams, Edwards and Elwyn, 2014). This thesis aims to explore the interaction within a medical consultation and the role of reflection on both the element of material within the practice and the element of meaning within the practice. Hence to explore the value of incorporating considerations of the ethical framework within this study to illuminate the role of power within competent professional practice.

4.2.2 Practical Competence and Simulation

For professional education in particular, the goal is to prepare students for accomplished and responsible practice in service to others. This involves students mastering large bodies of knowledge and underpinning theory, in order to develop the cognitive competence that is expected. But as stated by Cooke et al., "the final test of their efforts, however, will be not

what they know but what they do" (2006, p.1341). To prepare for the complexities of practice, Fraser and Greenhalgh (2001) stated the need to educate for capability rather than for competence. They described capability as being more than competence; as being the extent to which individuals can adapt to change, generate new knowledge, and continue to improve their performance. Rees and Richards (2004) also suggest educating for capability to support medical students to cope with complexity and uncertainty within practice, rather than be restricted by outcomes-based education, which has been criticized as being decontextualised from practice (see p.59 of this thesis).

The practical competences situated on the faces of the tetrahedron (Figure 4.4), combine elements of the dimensions of competence in varying proportions. For example, the face of the tetrahedron between functional competence and social competence could relate to competence with sociomaterial practice (as described in Chapter 3 of this thesis). The ongoing challenge is to balance the development of the knowledge (cognitive competence- know why), the skills (functional competence – know how), and social skills in terms of personal and ethical competencies. The acquisition of output competences at the base of the tetrahedron is facilitated by the input of the development of meta-competence. The notion of meta-competence has been described as referring to "higher order, overarching qualities and abilities of a conceptual, interpersonal and person/professional nature" (Bogo et al., 2014, p.6). Meta-competence involves academic, emotional, analytical, creative, and personal intelligences. So, meta-competence includes the approach to tasks, professionalism, the ability to cope with uncertainty, as well as with learning and reflection as social practice (Dieckmann, Gaba and Rall, 2007).

The care and safety of patients is the priority, so it is not appropriate for students to practice within the context of the clinical environment without significant supervision in place. A range of simulation techniques have been developed to enhance learning and assessment of healthcare professionals in safe environments without compromising the safety of patients, while maintaining a high degree of realism (Khan, Pattison and Sherwood, 2011). Simulations are a technique to replace or amplify real experiences with "guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully sage, instructive and interactive fashion" (Gaba, 2007, p.126). Gaba highlighted the diversity and depth and breadth of simulation applications; including the type of knowledge, skill, attitudes, or behaviours addressed in simulation, or the purpose and aims of the simulation activity to research human factors. The value of simulations and the underpinning educational principles that lead to effective learning, were discussed by Motola et al., (2013). They

concluded that practical competences, and development of meta-competence, could be taught and assessed in simulated contexts, but they highlighted the need for further research (Motola et al., 2013). For example, qualitative studies based on interactional data of how uncertainty is dealt with in clinical consultations are scarce (Bhise et al., 2017). Hence the context for this thesis was the simulated consultation.

The consistent finding from studies is that clinical experience alone does not guarantee the development of clinical competence (Issenberg and McGaghie, 2013). Feedback and debriefing are a key part of the simulation process to support learning. Feedback is critical to effective learning using simulation, and it has even been suggested that without this simulation does not result in improvement in performance (Welke et al., 2009). Debriefing has also been described as the "heart and soul" of the simulation experience (Rall, Manser and Howard, 2000, p.516). The involvement of patients with feedback and learning could be considered as co-production. Co-production of competent practice is discussed next.

4.2.3 Learning with Patients – Co-production of Competent Practice

The clinical context is complex. The practice of medicine occurs within a complex adaptive system in which professional behaviour is context-specific, culturally sensitive, and not necessarily generalisable (Wass and Harrison, 2014). A patient-centred model, which accommodates this complexity, has been suggested by Bleakley and Bligh (2008) which shifts the locus of learning from the relationship between the doctor as educator and the student, to the relationship between patient and student, with expert doctor as resource. They illustrate this in terms of a dynamic activity system where changes in any one element can cause changes in all other elements leading to transformation of the system through time. It privileges neither teacher nor learner in isolation from the other, but privileges social processes in which clinicians, students and patients co-participate in triadic relationships (Bleakley and Bligh, 2008). The mutual benefit of this triadic relationship for student learning and patient care was also described in a phenomenological analysis of patient experiences (McLachlan et al., 2012). This co-participation of patients with student learning can be considered as co-production.

Co-production has been described in the media as the most radical of all approaches to National Health Service (NHS) reform (Malby, 2012). The definition of what counts as co-production within healthcare was explored by Filipe, Renedo and Marston, (2017). They proposed that co-production can be described as a way of working together to improve health and of creating user-led, people-centred health care services. The processes of co-production

can take many forms, including the co-design, co-evaluation, and co-implementation of services and service improvements by patients, clinicians, carers, and managers (Batalden et al., 2016). These practices could be with, or without, a research component.

Co-production as a mode of research, is illustrated within an example of public administration scholarship about the politics of co-producing academic-practitioner research (Orr and Bennett, 2012). Their research explored the "tricky issues that arise in co-producing research involving cooperative interactions between members of two communities that have distinct interests, expectations, and priorities" (Orr and Bennett, 2012, p.487); they described the potential for creative coalitions but also the possibility of the clash of cultures. The experiences and challenges of co-production in the public sector have also been explored by Fugini, Bracci and Sicilia (2016). Their research highlighted that the co-production approach assumes that service users are not passive recipients of care and recognises that they can be co-authors with professionals in the successful delivery of a practice.

Co-production in healthcare has been explored at the level of patient interactions with their healthcare professionals (Gilardi et al., 2016). This work highlighted the need to build relational models, in which the patient feels part of the healthcare team, and willing and able to continue self-care after discharge. This is especially the case for chronically ill patients where the relationship is longer term and involves repeated interactions with and between the professional staff. Gilardi et al., (2016) concluded that building such relational models should be explicitly addressed within education of healthcare professionals. They stated that "Co-producing a healthcare service requires that healthcare staff is able, available, and willing to engage in a co-productive consultation" (2016, p.90). Filipe, Renedo and Marston (2017), propose that co-production can be understood as "an exploratory space and a generative process that leads to different, and sometimes unexpected, forms of knowledge, values, and social relations" (2017, p.1). Key aspects within the different approaches to co-production are the relationships that allow co-production to happen and the new forms of knowledge, values, and social relations that emerge out of co-productive processes (Filipe, Renedo and Marston, 2017). The patient-doctor interaction has been explored from the perspective of the patient, to examine how the emergence of "the engaged patient" influences the autonomy of health professionals, relates to the rise of the internet as an alternative source of medical information, centres the role of patient-doctor interaction in public health epidemics, and contributes to health inequities (Timmermans, 2020, p.259).

To consider co-production related to the practice of teaching, there are multiple practices which exist within the clinical learning space, and the interrelationship between teaching, learning and patient care. Steven et al., (2014) highlighted the importance of feedback for the students to support their learning, with clinicians seen as managers of learning, rather than as teachers. Patient care created learning opportunities which were enriched when practitioners intentionally supported participants' learning. The interrelationships have been illustrated by a conceptual model (Figure 4.5).

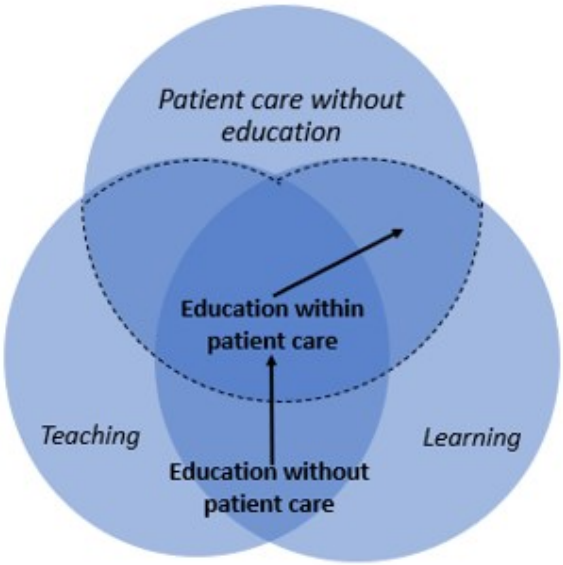


Figure 4.5 Relationship between teaching, learning and patient care (adapted from Steven et al., 2014, p.472)

The diagram shows overlapping interconnected relationships between the practice of patient care and the practice of education. The practice of patient care, indicated by the uppermost circle, overlaps the two components within the practice of education, teaching and learning indicated by the two lower circles. Students and teachers are seen as interdependent co-producers of learning, with the learning processes emphasised over outcomes. The two-part arrow charts a learner's trajectory into practice-based learning, and toward continued learning in independent practice. This conceptualisation is useful for this thesis, as it illustrates the relationship between carriers of practice within a teaching session, the student, the (simulated) patient and the teacher. This relates to the work from Schön, that feedback from tutors can support the students to reflect both in, and on, their practice (1983; 1987). Khan, Mosgrove and Wass (2021) advocate that patient involvement in curriculum design will result in a better understanding of how long-term conditions affect their physical, psychological and social health and of their journey through health care and community support services. Feedback to support reflection is discussed further next, and how it is of interest for this thesis.

4.2.4 Feedback to Support Reflection

The importance of reflection, as an essential characteristic for professional competence and ongoing professional development, is frequently noted in the literature, including within policy documents from the General Medical Council (GMC, 2009). Feedback on their observed practice is particularly valued by the medical students themselves (Schopper, Rosenbaum and Axelson, 2016). Salter and Kothari (2016) had called for a deeper understanding of reflective practice of medical trainees, and the integration of research-based information into negotiated knowledge-in-practice. Feedback can also support the students to create more specific action plans (Hart et al., 2019). The results from a qualitative case study have indicated that students, tutors, and educators have an incomplete understanding of reflection in medical education (Muir, 2010). Muir's study highlighted a need for more guidance and to allow time to reflect on both thinking and doing. The need for reflection to be of a critical nature was described by Boyd and Fales (1983), as being required to differentiate between those who merely become proficient in their learning and teaching, and those who are also cognitively or affectively changed by the experience. For example, to explore the affective aspects, Laughey and colleagues (2021) recently reviewed how medical school alters empathy.

The role of conceptual frameworks underlying critical reflection has been highlighted (Aronson, 2011). A systematic review of reflection and reflective practice in health professions education by Mann, Gordon and MacLeod (2009), concluded that the very nature of reflective practice made its quantification challenging. In order to support the development of curious, emotionally intelligent, and critically reflective practitioners, the philosophical underpinnings need to be recognised. This contrasts with a "reflective zombie" approach, of students who have been conditioned to follow prescribed thought steps rather than engaging in truly reflective behaviour, as described by de la Croix and Veen (2018). This highlights the element of meaning within the practice. If reflection is a useful and meaningful process, rather than a ritual, the learner will be empowered to reflect (Wass and Harrison, 2014). The next part of this chapter develops this discussion regarding teaching critical reflection, and how this relates to the process of supporting the development of reflexivity.

4.2.5 Teaching Critical Reflection to Support Reflexive Practice

Reflexivity involves the exploration of people's own "theories in use" (Schön, 1983). Reflexivity generally refers to the awareness and examination of one's own beliefs and judgments and how these may have influenced our practice. Specifically, it means questioning habitual ways of seeing and acting in the world, making sense of actions and events, constructing meaning within a practice, or resolving problems that are usually taken for granted (Cunliffe, 2003).

Varpio and colleagues defined it as the “self-critical sympathetic introspection and the self-conscious analytical scrutiny of the self” (2017, p.42). The value of reflexivity to produce insight into healthcare practices was described by a narrative review of literature on patient-centred care, which incorporated the insights from literature into a practice-based approach to work and organisations (Liberati et al., 2015). A practice-based approach can draw attention to the social and material aspects of the complex healthcare contexts. Reflexivity can help disentangle and bring to surface the tacit knowledge spread in everyday care practices and transform it into actionable knowledge, a type of knowledge that may support services improvement toward patient-centred care (Liberati et al., 2015).

A conceptual article about development of insights for teaching reflexivity through developing processes of critical reflection has been written by Hibbert (2012). This teaching process is illustrated within Figure 4.6, to show the four principles involved.

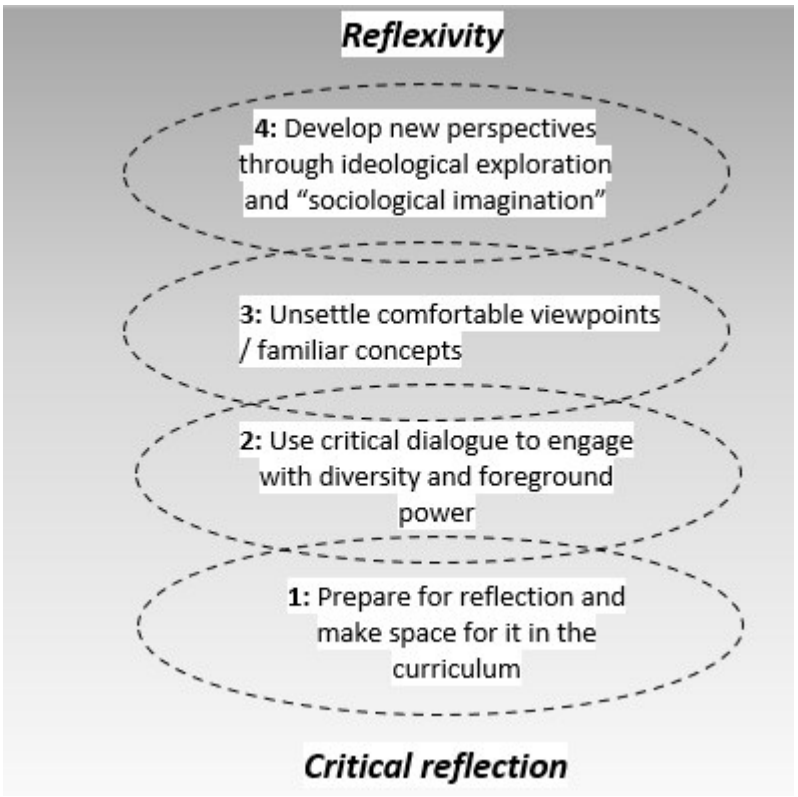


Figure 4.6 A teaching process for approaching reflexivity through critical reflection (Hibbert, 2012, p.820)

Reflexivity involves producing an interruption between the assumptions and the consequences of actions. This process described by Hibbert (2012) will be explored within this thesis, with a particular focus on a medical consultation scenario to explore space for reflection, use of

critical dialogue with tutors, to unsettle comfortable viewpoints and use sociological imagination.

Reflexivity is the ability to examine one's own feelings, reactions, and reasons for acting, and how this influences what one does or thinks in a situation. Considered within the context of this thesis, it could be considered as actively making connections with the meaning within one's own practice. Hibbert described reflexivity as a process which moves beyond critical reflection towards supporting ideological explorations and engagement with the "sociological imagination" (2012, p.817). Hibbert (2012) describes how sociological imagination helps students to reconceptualise themselves as relational beings, in the context of a plurality of social systems, and could be considered a more creative approach, to generate greater potential for innovation and improvement in practice. This more metacognitive approach can improve practice rather than just repeating standardised practice (Nichols, 2017). The viewpoints to be unsettled could relate to any of the carriers of the practice; within this thesis this could relate to the student, the (simulated) patient, the teacher, or the researcher. The support of ideological exploration completes the process of moving from critical reflection to reflexivity. This engagement with sociological imagination helps students to reconceptualize themselves as relational beings, in the context of a plurality of social systems (Hibbert, 2012, p.806).

This process of becoming a reflexive practitioner, was described by Myers as a process which can hurt your head:

> Becoming a reflexive practitioner can hurt your head. Normally, you fit a concept into what you already know. It is also an easy operation, what you are good at, and what you try first. But if the new concept is supposed to modify and replace the structure of what you already know, that's when it hurts. (2010, p.19)

So, reflexivity is not just a rational process, but also intrinsically involves emotion (Brown and de Graaf, 2013; Burkitt, 2012; Holmes, 2010). This process of supporting reflexive practice was explored by Hibbert and Cunliffe (2015) who concluded that there is no prescription for teaching reflexivity, it is rather a case of understanding how reflexive practice occurs and facilitating, and being responsive to, the process. These authors describe the use of *threshold concept* as useful to explore the disconnect between knowledge and practice, and to explore how ethical concerns are enacted. The term threshold concept was originally defined by Meyer and Land (2006), as a concept that alters the way we think about knowledge that is central to understanding a discipline. Within the field of management education, Wright and Hibbert

(2015) discuss how threshold concepts are used to help students to see things in new ways. The importance of the student perspective about teaching of evidence based management has also been highlighted by Wright and colleagues (2018). Hibbert and Cunliffe (2015) argue that a form of moral reflexive practice, drawing on an understanding of threshold concepts, is central to responsible management, and provides a gateway to transformative learning. By connecting moral reflexive practice with the notion of threshold concepts, Hibbert and Cunliffe (2015) extended the idea of a threshold concept from one that is transformational within an academic discipline, to a threshold concept that is transformational within learning and practice. Their conceptual argument leads to implications for management and professional education. This thesis was informed by their approach, and uses Social Practice Theory to explore both the element of material and the element of meaning within practice, to explore how ethical concerns are enacted.

In this thesis I argue that engaging with reflexivity allowed the elements within practice, including competence, to be made visible and to offer an opportunity to discuss and evaluate the implication of this for research and quality improvement actions. Within the practice of teaching, the scenarios are designed to support the students' learning regarding specific concepts. For this thesis, the concepts of interest are evidence-based practice and patient-centred care, so a relationally reflexive approach to practice is important to explore the process of co-construction and co-creation within and between all those involved with that interaction (Hibbett et al., 2014). Reflexivity can help trigger collective explorations of knowledge, values and meanings that inform everyday care practices, thus providing possibilities for enriching the concept of patient-centredness and for internal service development (Scaratti, Gorli and Ripamonti, 2009). By incorporating critical reflection and allowing an unsettling of comfortable or familiar concepts, a more reflexive approach was taken. Addressing the call for more understanding of dynamic reflexive practices, new insights can be brought into our understanding of how reflexive practice enables or constrains responses to the need for change, in different modes of practice that embrace or avoid responsibility (Hibbert and Cunliffe, 2015). The ways in which emotions and relationships influence how reflexive practices are deployed was described by Hibbert et al., (2019) who developed a categorisation of the modes of reflective practice associated with avoidance or engagement with responses to the need for change. Han, Ballester and Aarons (2021) describe finding alignment between numbers and values in medical education. They used the example of a study (from Greene and Lepper, 1974) of children who naturally enjoyed drawing during playtime, who were then offered incentives to continue drawing, but who then unexpectedly

showed much less interest and spent much less time drawing. Thus, highlighting the importance of intrinsic meaning within practice rather than extrinsic material rewards. Incentives had turned play into work.

In a comprehensive overview of the philosophy of medicine, Marcum (2008), outlines various models which provide a methodology of combining human values with evidence-based medicine. One such mutual model is described by Fulford, Ed and Carroll (2012) as values-based practice. The importance of reflection to decision and action within values-based practiced was described by Fulford (in Loughlin, 2014). The importance of the intangible physical, emotional, and spiritual aspects of illness in the healing process, were emphasised by Tonelli who stated that "to devalue the intangible differences between individuals is to devalue individuals" (1998, p.1237). Tonelli (2006) described a casuistic approach which, as well as including patient values, also incorporated system features: including resource availability, societal and professional values, legal and cultural concerns. There is a need for a better understanding of the process of how a shared understanding of a medical problem is reflected in treatment recommendations, and whether this is consequential for patient acceptance of treatment (McCabe, 2021). A recent study using conversation analysis of video recorded general practitioner consultations highlighted the importance of communication behaviours, such as the doctor using the patient's precise words about both medical and social issues, within clinical consultations (McCabe, 2021). This thesis builds on this literature to explore both the sayings and doings within the clinical consultation, to investigate how variation in practice may be enacted, and to consider competence in practical terms.

To explore this, a research approach which gives primacy to understanding local context in terms of knowledge, practice, and meaning is require, hence a qualitative case study approach was chosen (Nicolini, 2003). The methodology and methods used for this thesis are described further within Section Three.

4.3 Summary of Chapter 4

This first part of this chapter explored what is meant by professional competence, and what that might mean within the context of practice. By considering competence in practical terms, a holistic conceptualisation of competence, which considered technical competence in terms of cognitive and functional competence, but also considered the social and ethical aspects of professional practice. Chapter 4 concluded with review of literature regarding how this relates to supporting the development of professional competence and educating the reflective practitioner. Patient-centred care was introduced in relation to teaching, learning, and finding

alignment between numbers and values in medical education, and how recognising the importance of the element of meaning within practice relates to co-production as a concept. Then, the importance of feedback to support reflection and reflexivity within practice and teaching was described.

SECTION THREE: METHODOLOGY AND METHODS

The previous section of this thesis explored literature relevant to how the practice-based approach could be used to explore knowledge use, and what this approach could reveal about variation in practice and considerations of competence. This section now provides details about the research design which was developed to answer the research question. First, the philosophical assumptions guiding this thesis will be made explicit, and the relation with the theoretical background of the study and the research questions. The overarching aim for the study was to gain a deeper understanding of how knowledge is used in practice, to explore variation in practice. The research questions were:

- How do medical students use an evidence-based treatment recommendation in their emerging practice?
- How does use of a treatment recommendation vary in medical students' practice with individual patients?
- How can the practice-based approach inform us about competent professional practice?

Chapter 5 starts by stating my research philosophy, that the social world and reality are made up of and constituted in practices, which are in turn socially constructed (Cunliffe, 2008; Alvesson and Sköldberg, 2009). This is accompanied by an interpretivist epistemology which foregrounds the subjectivity of reality and the meanings of social phenomena (e.g., Bryman, 2004; Yanow, 2012; O'Gorman and MacIntosh, 2015). Then the methodology applied, of a qualitative case study, is outlined. Chapter 5 continues by describing the methods chosen to generate data for study, the sources of that data, and how these choices interrelate to form the foundation of the research design.

Chapter 6 follows on to describe how the dataset was then analysed via reflexive thematic analysis. For the reader of a qualitative study to have confidence in the findings presented, it must be clear how these findings were produced. The assumptions underpinning qualitative research contrast with positivist research which has assumptions of objectivity of knowledge and data converging towards a truth (Bryman, 2004). Bryman (2004) describes the quality of qualitative research in terms of the **trustworthiness** of the approach (as described by Guba and Lincoln, 1994). They suggest a framework for quality of qualitative research, which is made up of four criteria, *Dependability, Credibility, Transferability,* and *Confirmability* (Bryman, 2004, p.273). Dependability relates to the provision of clear and transparent accounts of how the data were generated and analysed (Merriam, 1988). To enhance the dependability of

qualitative research, a detailed account of the data collection process, the analytic approach used, and the steps taken during data analysis should be clear for the reader. The alignment of the research philosophy and research questions will be stated (Varpio et al., 2021). The various steps to meet the quality criteria relevant to interpretive research are described and discussed (Shah and Corley, 2006). Throughout Chapters 5 and 6, aspects of **trustworthiness** of the quality research approach are elaborated upon. Chapter 6 concludes with a description of this process to defend the legitimacy of the research methods of data generation and analysis (Varpio et al., 2017), and the rigour of the qualitative research approach in general terms (Varpio et al., 2021). More specifically the approach used to support quality in reflexive thematic analysis will be described as per Braun and Clarke (2020).

Chapter 5 Methodology and Methods of Data Generation

This chapter begins with a discussion of the philosophical assumptions pertaining to the research conducted for this thesis; the ontology and epistemology were interpretivist and social constructionist. The methodology chosen was a qualitative case study, this is explained, and the specific methods applied to generate the data, which were observation and interviews.

5.1 Research Philosophy

The discussion of research design begins by an outline of the philosophical assumptions which relate to the practice-based approach chosen for this research. Hence the *ontological* assumptions about the world and reality, and the *epistemological* assumptions about how the world and reality is known, and how these assumptions underpin this thesis. As suggested in Chapter 3, the concept of practice as a philosophy can constitute both ontology and epistemology. Considering practice as an ontology, the social world consists of practices, rendering them the fundamental unit of analysis when studying social phenomena (Schatzki, 2005; Rasche and Chia, 2009; Sandberg and Tsoukas, 2011; Nicolini, 2013). I perceive the social world and reality, consisting of and constituted in practices, as socially constructed (Cunliffe, 2008; Alvesson and Sköldberg, 2009). Related to this assumption of the practice idea that the world comes into being via everyday practicing, I perceive that the world is emergent rather than pre-given (Schatzki, 2002, 2005; Nicolini, 2013; Feldman and Orlikowski, 2011). In a practice-based approach, social reality is constructed through ongoing and recurrent engagement with the world in sociomaterial practices (Latour, 2005; Rasche and Chia, 2009; Alvesson and Sköldberg, 2009). This social constructionist study of practice is fundamentally subjective, and so multiple interpretations can be generated about the nature of social realities; both by the researcher and the research participants. Practices are therefore inherently contingent and thus generate multiple 'truths,' which will have implications for our experience of the practices as researchers (Sandberg, 2005). Thus, the concept of practice may also be regarded as an epistemology (Cook and Brown, 1999; Gherardi, 2012; Geiger, 2009; Corradi, Gherardi and Verzelloni, 2010).

The role of the researcher within a practice-based approach contrasts with the traditional social science approach to develop knowledge about the world. The traditional social science approach is based upon "a dichotomy of objective *evidence* from nature and subjective *preferences* from human society and culture" (Wieringa et al., 2017, p.1), which considers actors are detachable from the world, and that knowledge can be abstract, objective, and

absolute. For example, seeking to remove bias from researcher engagement with the world they research. By contrast a practice-based approach argues that the relational whole of practice considers that as actors we are always already entwined with the world (Schatzki, 2005; Sandberg and Dall'Alba, 2009; Sandberg and Tsoukas, 2011; Nicolini, 2013). So, from a practice-based approach and a social constructionist perspective, it follows that knowledge is situated and inextricably tied to practice; it comes into being through practice and is also known through practice (Gergen and Gergen, 2004; Nicolini, 2013; Alvesson and Sköldberg, 2009; Gherardi et al., 2019).

Actors cannot exist in isolation from their practices, and hence from the social world (Gherardi et al., 2019; Feldman and Orlikowski, 2011). As researchers, we are always participating in at least two practices at the same time, the ones we study, and the practice of representing what we study through our research techniques (Schatzki, 2005; Nicolini, 2013). Likewise, our research participants will also be re-presenting their reality during the research process. Thus, given my active role with the research, an *interpretivist* perspective is recognised, and a *reflexive* approach is required to critically reflect on assumptions which may be made (Nicolini, 2013; Rasche and Chia, 2009). Ybema and colleagues described an awareness of reflexive distance in relation to the distancing of oneself as a researcher from the researched in order to refresh one's sense of surprise to make the "familiar strange" (2009, p.112). Ybema also described examples of ethnographic work creating and conveying surprise through immersion rather than distancing found in studies describing tensions between front-stage appearances and back-stage processes (see, for example, Goffman, 1990).

Interpretivists assume social reality to be constructed through ongoing negotiation between people about the nature of this reality (Sandberg, 2005; Alvesson and Spicer, 2012). This interpretivist perspective rejects notions of an objectively knowledgeable social reality and instead stipulates knowledge to be constituted through lived experience of reality (Sandberg, 2005; Neyland, 2008). The aim, therefore, is to grasp the local and subjective, rather than standardised and objectified meanings of social phenomena; in terms of understandings and trends, rather than explanations and laws as would be the case in a positivistic approach (Bryman, 2004; O'Gorman and MacIntosh, 2015). It has been suggested that notions such as validity and reliability which stem from positivism, are not appropriate to be applied to interpretive studies (Sandberg and Alvesson, 2010; Yanow and Schwartz-Shea, 2015). Because there is not assumed to be one essential reality, the focus is not on what social reality is, but on how meaning is shaped socially and thus how this reality is constructed (Cunliffe, 2008),

assuming the construction itself to be social (Latour, 2005). This is reflected in the research questions that were asked within this thesis (see p.79 of this thesis).

As mentioned above, given my active role within the research process, both the gathering and the analysis of data was approached in a reflexive fashion (Cunliffe, 2003; Nadin and Cassell, 2006; Alvesson, Hardy and Harley, 2008; Nicolini, 2013; Alvesson and Sköldberg, 2009). Interpretivists consider that our descriptions and interpretations are always influenced by our specific cultural, historical, and ideological understandings of reality (Sandberg, 2005; O'Gorman and MacIntosh, 2015). The key positivist idea of ontological objectivity is based upon externality and detachment. By contrast, interpretivists consider that our 'subjects,' and at the same time ourselves as researchers, are entwined with the world of practice. There is therefore an ongoing need for us to question how we engage in constructing meaning, and also to check assumptions regarding construction of meaning with our research participants (Cunliffe, 2003).

The methodological approach adopted in this thesis, is the qualitative case study (Stake, 1995). This approach gives primacy to understanding local context in terms of knowledge, practice, and meaning (Nicolini, 2003).

5.2 Qualitative Case Study

Qualitative case study is an approach to research that facilitates exploration of complex phenomena within context, using a variety of data sources to follow elements of practice in the field (Emerson, Fretz and Shaw, 2011). A case is defined by Miles and Huberman (1994, p.25) as, "a phenomenon of some sort occurring in a bounded context." For this research, the phenomenon of interest was knowledge use in practice. The bounded context for this study was one medical school. The case considered the uptake of medical knowledge in practice as "a specific, a complex, a functioning thing" (Stake, 1995, p.2). The intent of the research was to gain insight and understanding of this phenomenon. Stake (1995) describes this type of approach as an instrumental case study. With instrumental case studies, the case is of secondary interest, and by detailing the ordinary activities and context for that phenomenon, the case plays a supportive role to facilitate understanding about deeper issues; for example, relating to the uptake of knowledge in practice in context. Therefore, findings could relate to expert practice, to professionalism, or to knowledge mobilisation in organisations in general. The value of case study as a suitable approach within medical education research was recently supported by Cleland, MacLeod and Ellaway (2021).

The qualitative case study approach aligns with my philosophical approach that we are inherently *entwined* with the world and the people we study, and that our research knowledge is developed through and in the practices which we seek to understand (Sandberg and Tsoukas, 2011, p.343). A qualitative case study can place the researcher directly in the setting studied, to become a participant and learn the practices of those studied (Van Maanen, 2011; Schatzki, 2005), requiring a reflexive approach. A reflexive approach is also compatible with the approach chosen for analysis of data generated, thematic analysis, which is discussed in Chapter 6. The reflexive thematic analysis approach described by Braun et al., (2019) which emphasises the importance of the researcher's subjectivity as an analytic resource, and their reflexive engagement with theory, data, and interpretation.

Placing boundaries on a case is important towards ensuring that the study remains reasonable and achievable in scope; but there is debate about how to place such boundaries. Stake (1995) believes that a case should be bound by time and activity. Miles and Huberman (1994) suggest that the boundaries are the context within which the case is situated. The single case will support exploration of multiple embedded units regarding how knowledge is used in practice within this medical school. The qualitative case study offers a wide range of choices regarding the investigative techniques applied; including methods which generate a variety of data from various sources such as documents, participant observation, interviews, and fieldnotes. This also heeds the advice from Nicolini (2013) to apply a multiplicity of methods to embrace the idea of multiple truths which stem from the Practice philosophy.

In summary, from an interpretive stance a qualitative methodology supports the focus on understanding relationships and meanings, rather than explaining principles as in a positivistic approach (Klein and Myers, 1999; Bryman and Bell, 2011; Alvesson and Spicer, 2012; O'Gorman and MacIntosh, 2015). The research approach for this study was a social constructionism epistemology within an interpretive theoretical perspective (see Figure 5.1). The methodological choice of case study was compatible with this perspective and with Social Practice Theory to guide this research. The practice-based approach provided theoretical, conceptual, and analytical guidance.

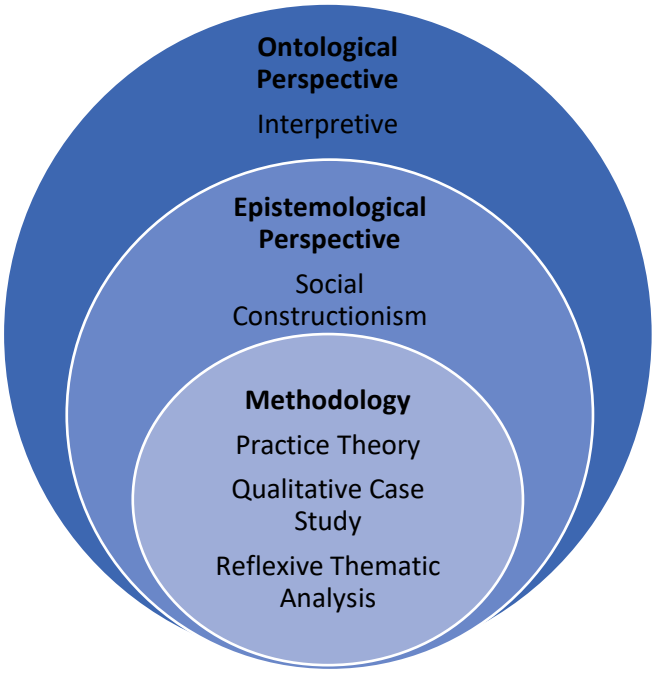


Figure 5.1 Research approach

As outlined in Chapter 3, Nicolini (2013) recommends studying practice in terms of a *toolkit approach*, this is discussed in more detail next.

5.2.1 Applying Nicolini's Toolkit Approach

Methodologically, a toolkit approach to studying practice highlights the importance of paying attention to multiple accounts, and the use of multiple modes of inquiry, such as interviews and observations. This aligns with the principal techniques for qualitative case study investigation, which include observation and interview (Merriam, 1988; Yazan, 2015).

Practices do not exist in complete isolation but are inextricably connected to each other (as described in Chapter 3). So, when attending to practices as the unit of analysis, one practice is not examined in isolation, but instead bundles, or nexuses of multiple practices are examined at once (Nicolini, 2013; Hui, Schatzki and Shove, 2017). The research approach for this thesis involved *zooming in* on one element of practice, which considered a recommendation from a clinical treatment guideline as a material element of practice. As well as *zooming in* to the consultation as the practice of interest, the research also *zoomed out* to the related practice of teaching, which involved that material element of interest. This was therefore a way to explore how the element of competence might be viewed within practices.

A focus for this thesis was the observation of an interaction between an individual student and a simulated patient enacting a defined consultation scenario. Each consultation between a medical student and simulated patient constituted an embedded unit. Such rich analysis

served to better illuminate the case, and the overall phenomenon of interest (Ellingson, 2009). Working within interpretivism, data collection methods were designed to explore the practice of research participants within the medical school context. The purpose of the next part of this chapter is to describe the methods of generating data.

5.3 Methods of Data Generation

The previous part of this chapter specified the philosophical assumptions made in this thesis and how they affected subsequent methodological and analytical choices. Next, the methods and practicalities involved in generating data will be described. The research setting will be explained, then the practicalities involved in gaining access to local sites and conducting fieldwork in the organisational setting. As recommended by Nicolini (2013, p.16), the study of practice must start with zooming in on the real-time practicing, on the "accomplishments of practice," then zooming out of their relationship in space and time. So, the consultation between each medical student and simulated patient was first studied using methods of observation via video and audio recordings, followed by post-consultation interviews separately with each participant. This enabled rich data to be captured, which was supported by further data generated during fieldwork to zoom out to study the practice of teaching, along with interviews with medical school tutors. The aim of this chapter is to provide clear and transparent accounts of how the data was generated to enhance trustworthiness of the research practice. An overview of the data generation process is shown in Figure 5.2.

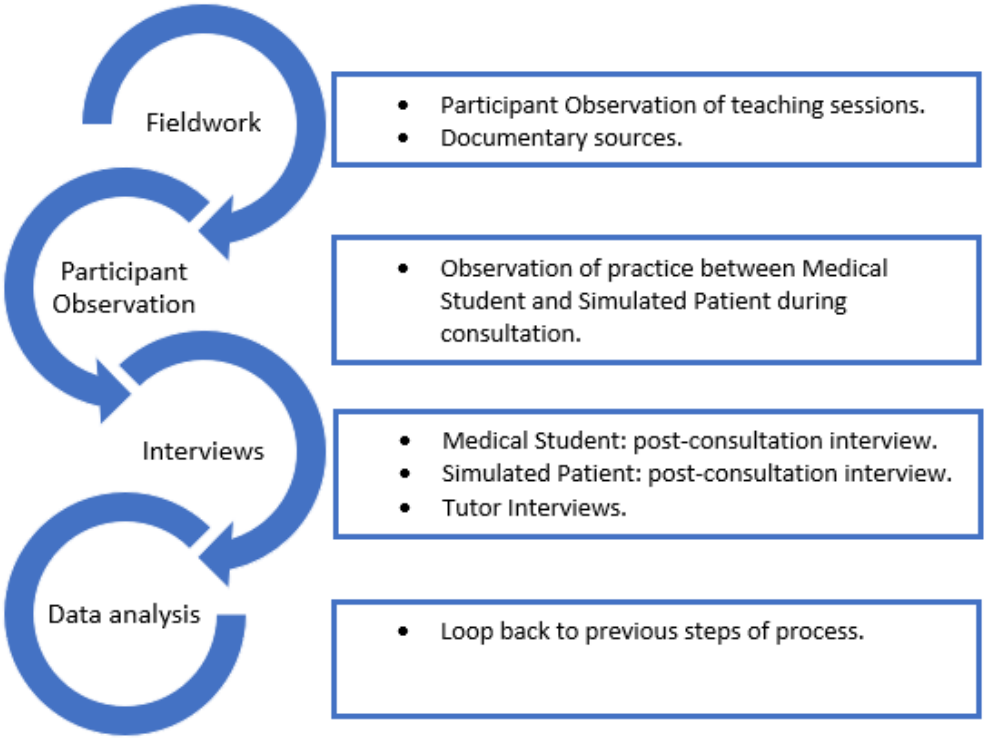


Figure 5.2 Process of data generation

It is important to emphasise that this process of data generation is iterative and fluid, looping back to previous steps of the process, rather than being strictly linear. The next part of this chapter gives further details about the methods of data generation, starting with methods of conducting fieldwork.

5.3.1 Conducting Fieldwork

An important focus for this research was to explore the practice of medical students with an individual patient, and the person-centred aspect within a consultation. Case-based studies utilise field-based research to explore the actual practice of participants as they conduct their daily activities. Many studies use ethnographic methodologies such as fieldwork, but do not necessarily have an ethnography as their final product (Czarniawska, 2007; Nicolini, 2013; Contu, 2014). This thesis used methods of observation with video and audio recordings, along with post-consultation interviews which enabled rich data to be generated; supported by further data from fieldwork observing related teaching practices.

The researcher is described as a participant observer when they join a community as a partial or full member, observing and participating in daily activities, asking questions, and partaking in conversation (Watson, 2011). The researcher enters and explores the field including using observational and interview techniques. When observing a teaching session led by another tutor, my role was more adequately described in terms of an observer-as-participant, since in these instances I acted as silent observer, though occasionally commenting, or being asked for my opinion on matters, which is what Czarniawska (2007) describes as shadowing. There are strengths and weaknesses with each method used to generate data. For example, the presence of the researcher may influence the data generated; hence the importance of the researcher writing fieldnotes, which also describe a record of observations, conversations, and interpretations to support critical reflection and reflexivity (Emerson, Fretz and Shaw, 2001).

Ensuring credibility of the research process involves establishing that the results of qualitative research are credible or believable from the perspective of the participant in the research. Observation of teaching sessions supported the initial design of the consultation scenario designed specifically for the research. Conducting interviews with the participants after the observation of the consultation, and seeking feedback from participants about preliminary analysis, sought to enhance credibility of the research process further (Silverman, 2005). Ongoing presence in the field also meant that tutors recommended other teaching sessions or workshops to attend as they were relevant to the research questions. The methods to bring together multiple forms of data and analysis, to clarify and enrich a report on a phenomenon,

were not trying to triangulate the findings to attempt to get close to a truth, but rather to engage with crystallisation as described by Ellingson (2009).

Rather than using the term triangulation within this thesis, the term crystallisation was preferred, as described by Ellingson (2009). Triangulation refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena (Patton, 1999). Triangulation is more about the convergence of information from different sources to attempt to get closer to a truth, and so it has positivistic connotations (Guba and Lincoln, 1994). Ellingson developed the notion of crystallisation from work done by Richardson and St Piere (2005) who explain how crystallisation recognises that there are far more than "three sides" by which to approach the world. They describe the triangle as a rigid, fixed, two-dimensional object, whereas crystallisation is:

> Crystals are prisms that reflect externalities and refract within themselves, creating different colours, patterns and arrays casting off in different directions. What we see depends on our angle of repose – not triangulation but rather crystallisation. (p.963)

So, crystallisation accommodates multiple interpretations of a phenomena and "is informed by postmodernism, meaning that it presupposes that no truth exists *out there* to discover or get close to, but only multiple and partial truths that researchers (and others) co-construct" (Ellingson, 2009, p.22). Therefore, crystallisation also accommodates the reflexivity of the researcher being embedded within the inquiry process which eschews positivist claims to objectivity.

The total duration in the field, for the purpose of conducting this research, was nineteen months (October 2017-May 2019). There were fluctuations of intensity of research activity depending on participant availability relating to the curriculum. Van Maanen describes timescales for exit from fieldwork as being arbitrary (2011). Czarniawska (2007) suggested that an indefinite amount of time could be spent in the field and still new things could be learned. The biggest consideration regarding fieldwork duration for this research, was the pragmatic reasons regarding time constraints of the PhD. Whilst in the field, Nicolini's toolkit approach was used to go back and forth between theory and data, until it was determined that enough data had been generated to say something interesting about the research questions.

5.3.2 Research Setting and Gaining Access

The research setting was a School of Medicine at a Scottish University. The school employs about 150 staff on either full-time or part-time contracts, with some staff jointly employed by the University and the National Health Service (NHS). The school is active with both teaching

and research and engages students at both the undergraduate level and postgraduate level (both taught and research).

My background experience as a clinical pharmacist helped with the practicalities of gaining access. For over twenty years, as part of my clinical role, I have been involved with delivering and supporting education for a range of healthcare professionals at postgraduate level, and more recently an increased involvement with teaching at an undergraduate level. I was already familiar with the medical school curriculum, and I had existing contact with teaching staff. My knowledge of the field allowed me to phrase my initial requests for meetings to discuss gaining access, in a way that appealed to potential participants, or at least did not lead them to reject me immediately.

My familiarity with the research context did have advantages for the research process, but also disadvantages for the research process. For example, an advantage was that I was familiar with jargon used, and I had a sense of which staff members I should talk to, and what to say to get their attention. I had background knowledge about which teaching sessions would be more likely to involve the opportunity to observe the practice that I was interested in, where medical students were using evidence-based treatment recommendations with individual patients. This previous experience gave me a sense of how to structure my approach once research ethics consent had been gained. My familiarity with the research context also had potential disadvantages for the research process, in particular that I might not challenge the taken for granted assumptions about what I am hearing or observing. It made it more important for me to challenge taken-for-granted assumptions, for example to ask for examples of stated practice. The implications of this *insider* knowledge for participant observers of research studies have been described by other researchers including in healthcare settings (for example, Simmons, 2007; Carroll, 2009). Burns and colleagues described this in terms of the researcher requiring "navigation of the middle ground to draw on those aspects of 'self' required to negotiate respectful relationships with colleagues, whilst also ensuring the maintenance of an analytical degree of distancing" (2012, p.52). This meant that ongoing reflexivity within the analysis was even more important. I return to the issue of researcher reflexivity throughout this thesis.

There were two key requirements stipulated by the medical school regarding the research. The first was that access to participation must be open to all students in the target year groups. The second requirement was that students would not be unfairly advantaged or disadvantaged

by their involvement in this study. This is discussed next about the recruitment of participants, and the development of a consultation scenario for the research.

5.3.3 Recruitment of Participants

Recruitment of participants and formal data collection started after ethics approval was granted in October 2017. The Teaching and Research Ethics Committee for St Andrews University reviewed and approved the ethics application (see ethics approval letter in Appendix A).

Recruitment of Medical Students

It had been agreed with the medical school, that access to participation would be open to all students in the target year group of third -year undergraduates. Therefore, no more specific sampling strategy such as gender, were used to invite students to participate in the study. Fieldwork was conducted over a nineteen-month period and achieved a total of one hundred hours of data collection. The fieldwork observations of teaching practice included thirty-six group workshops each with a tutor, seven to ten students, and a simulated patient. Fieldwork observations of teaching practices also included thirty group tutorials each with a tutor, and six to eight students. These workshops and tutorials amounted observations of over two hundred and fifty partial or completed consultations with simulated patients, each of approximately five minutes duration. There were at least two hundred individual students involved within these observations of teaching practice, as some students may have been observed at multiple different sessions.

The in-depth study of the consultation scenario for the research involved medical students who were Year-3 undergraduates, aged in their early 20s, and involved four women and five men. No further data about the demography of individual students was collected [7]. Due to the number of participants involved, the provision of any further level of detail about the demography of participants (for example, ethnicity) could pose risks to confidentiality of individuals (HESA, 2018). Further, the medical school tutors described the ethnicity of medical students as being more complex than their stated country of birth. For example, many international students have attended schools within the United Kingdom and so it would be potentially misleading to make any assumptions about influence of ethnicity on practice for these students. This would, however, be an interesting area for further study, if a much larger

[7] Information from the University website shows that the percentage of women undergraduates within the School of Medicine is about 60% females each year, which is slightly above the national average for Scotland for Medicine and Dentistry undergraduates of 57% women (HESA, 2018).

data-set was drawn upon and where overall differences in patterns could be identified as having a causal relationship with, or be associated with, demographic characteristics.

Access for students to participate was promoted via advertisement on medical school notice boards. The target year groups for the research were medical students in their second or third year of undergraduate study, who had already received lectures and tutorials about the medical knowledge regarding the evidence-based treatment guideline of interest. At this stage of their undergraduate training, the students had also received consultation skills training, and support regarding the process of reflecting on how to implement this knowledge into practice. The simulated consultation training sessions that they have as part of their course are intended to promote a focus on the patient-centred aspects of the consultation. These teaching sessions were targeted to conduct the fieldwork, with a focus on viewing which knowledge is attended to during these sessions. This fieldwork to observe the medical students during these teaching sessions generated a significant amount of data. The tutors interviewed also highlighted numerous other options that could be explored to observe the students' practice related to the research questions.

Medical student recruitment for the individual consultation sessions for the research was slow and required an ongoing recruitment drive. The aspiration to conduct the research consultation scenario with groups of student participants had to be abandoned. Discussions with the students who had successfully been recruited regarding how to improve recruitment rates further, received the core response that by that stage in their university careers the students had learned to be very protective of their time. They stated that the potential benefit to them of extra consultation skills sessions had already been offset by increased accessibility to such extra opportunities directly through the medical school. Medical student recruitment, as participants for the research, remained open until further collection was no longer practical regarding the time which remained available before write-up of thesis was required. The ongoing feedback received via tutor interviews also reinforced the view that data generated from the existing consultations showed a good depth and range of practice for the analysis overall (Malterud, Siersma and Guassora, 2016).

Recruitment of Medical School Tutors

Tutors were recruited via a different process. They were approached directly, in conjunction with the communication skills module leader. All twelve of the tutors who were approached participated willingly and enthusiastically. There were six women and six men tutor participants. Again, due to number of participants involved, the provision of any further level

of detail about the demography of participants could pose risks to confidentiality of individuals (HESA, 2018). Initially a presentation was shared at one of the tutor meetings to explain the background to the study, and participant information sheets with researcher contact details were shared directly. The recent launch of the Realistic Medicine policy (Calderwood et al., 2017) provided an appealing perspective on the research, to reassure participants that the research aspirations were to do more than just reiterate longstanding conflicts and debates about problems with implementation of evidence-based practice. The focus of the questions for these interviews were around Realistic Medicine policy (Calderwood et al., 2017), and their perspective of relevant aspects of the medical school curriculum.

Further tutors were enrolled via snowball sampling, with tutors who had already been recruited then recommending others who were involved in similar aspects of the curriculum. These discussions with tutors supported the design of the separate consultation scenario from which to generate data with the recruited medical students and the simulated patients. Both formal and informal meetings with medical school tutors about the research were useful to highlight other areas of the curriculum or teaching, or other documents or artefacts that could be considered. Ongoing discussions about methods to generate data and approaches to analysis also supported researcher reflexivity regarding the generation of findings about the research. This input from tutors to support my reflexive process was welcomed and continued throughout the research process, including the analysis phase.

Recruitment of Simulated Patients

The simulated patients were recruited from members of the public via recommendations from the medical school tutors, following consent process, and they received training regarding the scenario via the same process as delivered by the Medical School prior to participation in teaching activities. There was a pool of three women used as simulated patients for the research consultation scenario, with an age range 25-55 years old. The use of a simulated patient within this research, allowed for standardisation with similar patient presentation, according to a pre-written scenario (Appendix B) this incorporated the same material elements, and could also outline the element of meaning for the patient (Glassman et al., 2000; Tamblyn, 1998).

5.3.4 Requirement for a Separate Consultation Scenario

A second key requirement for the research process in relation to student access was emphasised during my negotiations with the medical school, was that no medical students would be unfairly advantaged or disadvantaged by their involvement in this study. The main

effect of this requirement was that video and audio recordings of the medical student consultation to generate data, would need to be achieved by running a separate consultation scenario specifically for the research, rather than captured from an existing teaching scenario.

Consultation scenarios form one part of a range of simulation techniques which are used alongside clinical placements to enhance learning of healthcare professionals in safe environments (Khan, Pattison and Sherwood, 2011). The consultation scenario provided an opportunity for observation of an individual student's interaction, with a simulated patient who had been trained about a defined consultation scenario for the research. The scenario can be designed to contain material information about specific treatment options, and also to contain pre-specified information about the meaning and value of that treatment for the simulated patient.

The observation of the medical student consultation practice was then followed by an interview with the individual student involved, and a separate interview with the simulated patient involved. In a case study, multiple methods are often used to gain multiple perspectives (Stake, 1995). Such a rich analysis will serve to better illuminate the case, and the overall phenomenon of interest (Ellingson, 2009). Qualitative interviews were used to explore participants' perspectives after the consultation had been conducted. This captured the participant's meaning of the practice that they had been involved with rather than, as a researcher, just making assumptions of the meaning. The interviews were also an opportunity to explore which knowledge, or other material elements of practice were attended to, by participants as carriers of that practice. The feedback from medical school tutors about the consultation scenario development also helped to confirm that the content aligned with the curriculum. The feedback generated was useful, both as a source of data generation, and to strengthen credibility of findings generated during the analysis phase.

Therefore, although the development of this consultation scenario involved additional workload for the research, the consultation scenario also generated a rich source of data.

5.3.5 Development of a Separate Consultation Scenario

The scenario can be specifically designed so that the 'right' answer in terms of the treatment recommended by the evidence-based guideline, does not align with the 'right' answer from the perspective of that individual patient. Hibbert and Cunliffe (2015) describe the use of threshold concept as useful to explore the disconnect between knowledge and practice. The consultation scenario could be considered to be a threshold concept. Threshold concepts can be used to explore how ethical concerns are enacted (as per p.75 of this thesis), to help

students to see things in new ways and to explore the moral reflexive practice of the medical students (Wright and Hibbert, 2015). An important focus for this research was to explore the practice by medical students of the person-centred aspect within a consultation with an individual patient. Therefore, the scenario for the simulated patient for the consultation, was designed so that the practice recommended from an evidence-based guideline was not meaningful enough for that individual simulated patient to take the recommended treatment. The design of the consultation scenario reflects a similar scenario used within the medical school curriculum, and a copy of the briefing given to the trained simulated patients is shown for information in Appendix B.

The benefit of video and audio recordings is that the practice of interest can be viewed and re-viewed repeatedly, and different perspectives gained (Heath, Luff, and Svensson, 2007). Observation can capture the verbal and non-verbal aspects of the practice performance in the setting (Gordon et al., 2017; Ajjawi et al., 2020). The material aspects of the practice can also be considered in terms of how they are used, and what visible and invisible work do they perform. For example, the agency of a treatment recommendation from an evidence-based clinical guideline. The non-human aspects of the simulated consultation could include: a written recommendation within a clinical guideline, the texts written in the patient's medical notes, documentation from other healthcare professionals, or laboratory results. Also, organisational factors such as the time available for the consultation, the list of issues to be discussed for that patient on that day or in future consultations, resources available, or other legal or cultural restraints (Tonelli, 2006). The students, tutors, and simulated patients are already familiar with video and audio recordings which form an integral part of the teaching process to support reflective practice.

Observation enables a researcher to look afresh at everyday behaviour that otherwise might be taken for granted, expected, or go unnoticed (Cooper, Schindler and Sun, 2006, p.374). Methods of observation will reveal the practice of what research participants say and do as they accomplish their work. The simulated nature of the consultation in a training session can focus on various aspects of the social and the material and debriefing after the consultation can be provided with the students to gain a deeper understanding of how medical knowledge is used in practice (Fanning and Gaba, 2007).

During design of the study, thought was given to the observation of students being conducted within the actual clinical environment using real patients, compared with the use of the simulated environment and simulated patients. Lefroy et al., (2011) have described the role of

the simulated environment and the development of it for assessment activities. Ker et al., (2006) have outlined the realism of simulation in relation to the workplace of junior doctors. Therefore, it was decided to keep data collection within the medical school context, as it allowed for standardisation with similar patient presentations (Glassman et al., 2000; Tamblyn, 1998) in a safe environment across a wide variety of medical conditions and psychological profiles if required (Carney et al., 1999).

There are limitations to data generated from observation. Cohen (2000) highlights the selective attention of the observer: what we see is a function of where we look, what we look at, how we look, when we look, what we think we see, whom we look at, what is in our minds at the time of observation, or what are our own interests and experiences. Like other forms of data collection in the human sciences, observation is not a morally neutral enterprise. The researcher must be reflexive and self-critical about their own ability to transcend the partiality of any perspective of a setting (Mason, 2006). The ongoing interactions with the simulated patients were particularly useful to support my reflexivity as a researcher and will be discussed in more detail below (p.99).

5.3.6 Zooming in to Observation of Practice

The material element chosen as a focus for this research was a treatment recommendation from within a clinical guideline. The background to the evidence base supporting this recommendation has been described in Chapter 2 (p.31). The evidence taught to the medical students during their lectures, is that high blood pressure is associated with increased risk of having cardiovascular complications such as stroke and heart attack. Evidence has shown that treatment with anti-hypertensive medication can lower the risk of these long-term cardiovascular complications. The practice of a patient taking blood pressure lowering treatment, can result in a relative risk reduction of having these cardiovascular complications by between a third and a quarter (Wallis, Ramsay and Jackson, 2002). But in absolute terms the actual benefit of treatment depends on the baseline risk for the individual patient, i.e., a patient with lower baseline risk will gain a lower absolute benefit.

The treatment recommendation from the clinical guideline has been incorporated within a flowchart format from expert bodies such as NICE and British Hypertension Society (Figure 5.3). The medical students had already received teaching which included this flowchart, and so its use within this research complies with the participant access request from the medical school that there would be no new teaching. This flowchart can be considered to form a practice-as-entity, for the practice of recommending treatment for high blood pressure.

The value of using a simulated patient for the research meant that the blood pressure levels, and cardiovascular risk, could be defined in advance (Appendix B). The scenario designed for this research was that the simulated patient had a blood pressure and cardiovascular disease risk, at the level for which the evidence-based treatment guidelines states, to offer treatment with blood pressure lowering medication (hypertension flowchart Figure 5.3). The further value of using a simulated environment for this research was that the element of meaning within the practice for that simulated patient can also be defined in advance, within the briefing provided as part of the training for the simulated patient (Appendix B).

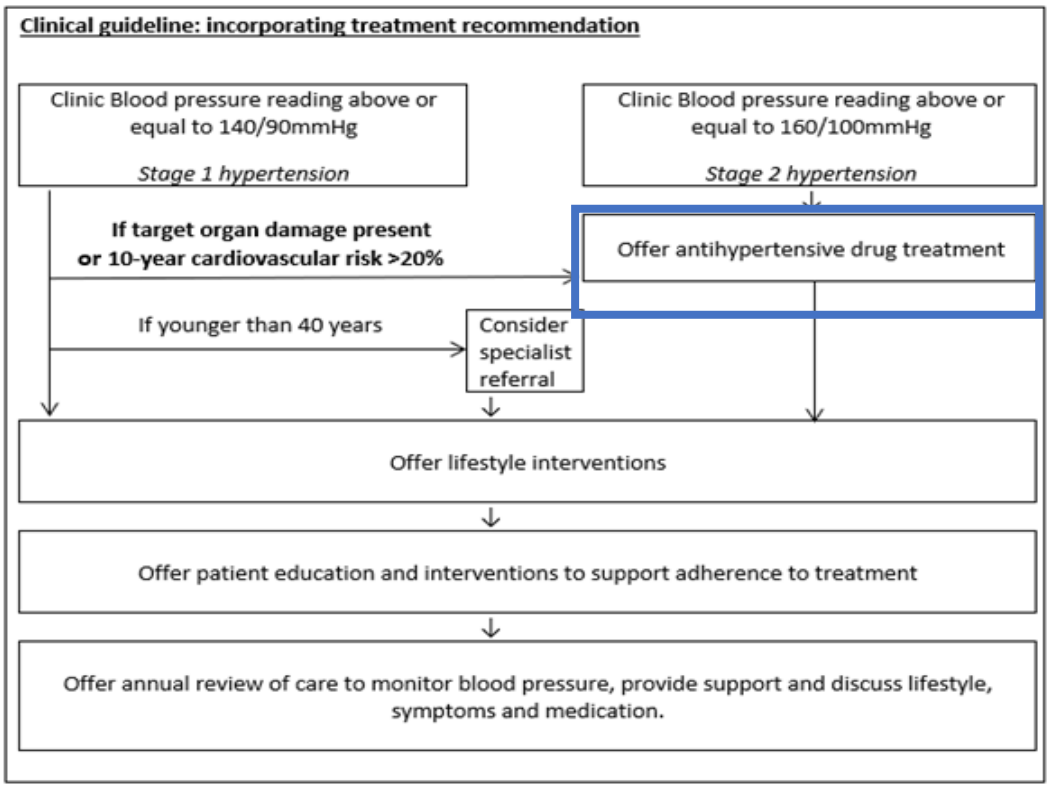


Figure 5.3 Hypertension Treatment Summary (NICE guideline NG127, 2011)

The scenario for the simulated patient for the consultation was designed so that the benefit of the treatment, was not meaningful enough for them as an individual to take the tablets when they were causing them such problems with side effects. The simulated patient had competence, in terms of their understanding about cardiovascular risk as their father had died of a heart attack, but the numbers relating to their own absolute risk were not worth it for them as an individual to take the tablets. This background information about the elements of practice for the simulated patient scenario are summarised within Figure 5.4. Each consultation was conceptualised as a co-constructed performance between the medical student and the simulated patient. As described by Lian et al., (2021) regardless of whether

the two voices align or not; each consultation is one story with the voices of both participants contributing to the same story, namely the one about the patient's illness.

MATERIAL:

Average blood pressure readings at clinic = 160/100mmHg. So, guideline recommendation is to offer antihypertensive drug treatment. Due to their high blood pressure, the simulated patient has a baseline risk of developing cardiovascular disease of 6% within a ten-year period i.e., on average 6 out of 100 people with the same level of risk, will have a cardiovascular event within a ten-year period. Taking tablets to lower blood pressure (but suffering side effects) will reduce this to 4 in 100 people will have a cardiovascular event over a ten-year period. Therefore, the absolute risk reduction, is that 2 out of 100 people will be saved from having a cardiovascular event within a ten-year period. All 100 people would be taking the tablets for those ten years, not all may have side effects.

MEANING:

The background provided for the simulated patient, stated that they had not been taking the tablets due to side effects, and so they had not re-ordered the medicine since it was started four months ago. Although the relative risk reduction from taking the tablets, reduces the chance of having a cardiovascular event by a third (from 6% to 4%), this was not meaningful enough for that simulated patient to restart taking the tablets and to suffer the side effects. The absolute risk reduction for them as an individual, was not enough, when it still did not guarantee that this would prevent an adverse cardiovascular event such as stroke or heart attack. They feel that they could be one of the 94 out of 100 patients who would **not** have had an event over those ten years anyway. Another 10 years down the line, the simulated patient may reconsider, when their baseline risk of heart attacks and strokes would be higher due to their increased age. In the meantime, they will continue to follow the lifestyle advice and will keep attending clinic for monitoring.

COMPETENCE:

The simulated patient understands about cardiovascular risk, as their father died of a heart attack. They work in a bank, so they understand numbers, and feel that for them as an individual the absolute risk reduction is not worth taking the tablets and suffering side effects. The preferred practice for the simulated patient would be to continue to **not** take tablets, but instead to follow the lifestyle advice to reduce their cardiovascular risk, and to keep attending the clinic appointments each year for monitoring.

Figure 5.4 Elements of Practice from within the Simulated Patient Scenario

5.3.7 The Consultation

The focused observations, of the individual medical student consultations with the simulated patients using the research scenario, and the post-consultation interviews, were carried out over the period (February 2018 – March 2019). The design and conduct of these focused observations were informed by the general fieldwork which had been ongoing since October 2017.

The participating students were each sent a copy of the flow chart (Figure 5.3) in advance and were also signposted to relevant aspects from their teaching about the treatment of hypertension. The knowledge content of these documents was checked with each student in advance of the consultation, and the purpose of the research was stated as being about how such information is used within a consultation. The situation for the scenario was introduced to the student by the researcher (as per Appendix B). The researcher told each student that the simulated patient was attending the GP Practice for their annual review at the Blood Pressure Clinic. The simulated patient had just been seen by the Practice nurse and was happy to chat with medical student prior to seeing the doctor, as they have been reassured that this will not take extra time before they saw the GP. Each individual student then had up to ten minutes to conduct the consultation with a simulated patient. Each consultation was recorded via video and audio. Then post-consultation interviews were audio recorded separately with each student, then with the simulated patient.

Tracing the knowledge about treatment of hypertension during the consultation, as a material element within the practice, helped to illuminate the multiple forms of knowledge which were present within the practice. It also helped to illuminate other material elements present within the practice. Shove, Pantzar and Watson, (2012), describes the element *material* to include things, technologies, tangible physical entities, and the stuff of which objects are made. By analysing which of these material elements were attended to (or not) within the practice, it helped to explore how the medical students used knowledge (or not) in their emerging practice. By tracing the material element of practice as the performance unfolded, it illuminated **who** could be conceived of as the carrier of the practice, "the unique crossing point of practices" (Reckwitz, 2002, p.256). This helped to show the contribution of the simulated patient to the performance, to show which elements were attended to and by whom. Thereby exploring the "remarkable persistence of asymmetry in doctor/patient interaction" (Pilnick and Dingwall, 2011, p.1374).

5.3.8 Post-Consultation Interviews with Students and with Simulated Patients

Interviews are frequently used methods in qualitative research (Denzin and Lincoln, 2017; Bryman, 2004; Cohen, 2013). By following up the observations of the consultations, with interviews with the participants involved (first the medical student, and then with the simulated patient), the data can be explored further, and initial interpretations by the researcher can be explored directly with the participants. As the research was seeking to gain insights and understandings behind the "front stage" practice, the interview would provide a more private and informal "backstage" setting to explore participants' perspective (Goffman, 1990). This backstage exploration would investigate the element of meaning within the practice of the various participants. The interviews were conducted in an integrated manner with the observations, each guiding the other. Observations and interpretations of events can be clarified and discussed further in interviews, whilst interviews in turn highlight aspects the researcher was not aware of before, to then investigate further observationally (Nicolini, 2013).

The medical students were interviewed, individually after their consultation. The simulated patients were also interviewed, separately to gain their individual perspectives on the interaction. Through building a rapport, with clear boundaries on confidentiality, it was hoped that disclosures about the processes that participants involved with, would be revealed. The questions used within an interview can explore what a person knows (knowledge or information), what a person likes or dislikes (values and preferences), and what a person thinks (attitudes and beliefs) (Tuckman and Harper, 2012). It is a way to generate data about the meaning elements within a practice (Van Maanen, 2011; Czarniawska, 2007). Nicolini described this to shed light on moral and normative dimensions of practices (2013).

Interviews have been described by Brinkmann and Kvale, (2015, p.5) as literally an "inter-view," an interchange of views between two or more people on a topic of mutual interest. Therefore, the qualitative research interview is a construction site of knowledge, which emphasises the social situatedness of research data. Indeed, Baker and Johnson, described interview as "a form of professional practice" (1998, p.229). They argue that the interview is a particular medium for enacting or displaying people's knowledge of cultural forms. They suggest that questions, far from being neutral, are couched in the cultural repertoires of all participants, and indicate how people make sense of their social world and of each other (Baker and Johnson, 1998, p.230). Kvale also highlighted the potential for interviews to

introduce a power imbalance into this construction of knowledge; hence the process of interviewing is better described not as data *collection*, but data *generation* (2006).

Following the observation of the consultation, the simulated patients were interviewed to explore their reflections on, and perceptions of, the interaction. Then separately the medical students were interviewed to explore their reflections on, and perceptions of, the consultation. This allowed exploration of issues around when the *right* answer recommended by the evidence may not align with the values and preferences written in the scenario for the simulated patient (Appendix B). The research investigated how these medical students themselves regard the process of knowledge use within the consultation. Following each consultation, the student and simulated patient were interviewed individually to have them narrate their reasons for making small choices. This can reveal key connections with how knowledge is (or is not) used in everyday practices, to explore a deeper understanding about the normative processes underpinning these practices (Schatzki, 2002; Geiger, 2009).

The interviews were semi-structured using an interview guide (Appendix C). Although, an interview guide can potentially provide some structure, as discussed by Mann (2016), the researcher still plays an active role within the process. The characteristics of this approach allow topics and issues to be covered, to be specified in advance, in outline form. This allows a flexible approach with no set order, so that information arising can be explored as it arises, and the interview can be free flowing using this outline with regards to depth and direction of questioning of topic areas to be covered. In this way, whilst participants are directed into the area of enquiry, the responses can be explored to probe what the respondent thinks and feels, and so to gain the participants perspective using an iterative approach.

The audio-recordings from the interviews were transcribed verbatim, and then linked with relevant reflexive memos or fieldnotes. A particular strength of this approach is that interviews can remain conversational and situated. The use of a guide to outline key topics will help the interviewer to address the research questions, and support transparency of the research process about data generation. Semi-structured interviews also give the opportunity for the exploration of contradictory and complex views. In contrast, a structured interview process would usually mean that participants responses could be more easily compared, but that unexpected issues would have been less likely to arise, since there is little room for variation (Fontana and Frey, 2003); hence why this approach was not chosen.

Another risk for researchers to be aware of, is that there is always a risk of respondents answering with what they think the interviewer wants to hear, termed the social desirability

effect (Guest, Bunce and Johnson, 2006). But as the interview was based on the student practice that had just been observed, this was less of an issue.

5.3.9 Zooming out to Practice of Teaching and Interviews with Tutors

Semi-structured interviews were conducted with twelve tutors. Most tutors had a background as a healthcare practitioner, and experience of the practical issues relating to evidence-based practice and individual patient care. The tutors were keen to participate in the research to explore how the medical students delivered patient-centred care when using evidence-based knowledge with individual patients. They were keen to explore a deeper understanding about how medical students were being prepared to practice Realistic Medicine (Calderwood et al., 2016).

The interviews with each tutor started by sharing an overview of the scenario used with the medical students. The scenario was outlined, in very general terms, as exploring when the right answer from the perspective of evidence-based treatment guidelines may not align with the right answer from the perspective of the simulated patient.

The interviews with tutors focused on their reflections concerning how medical students use knowledge in their emerging practice. The questions explored these participants views about the medical knowledge that these students learn, in terms of from national guidance, policy and the teaching, and when this may not align with the knowledge from the patients in terms of the individual patient's practice. The questions also explored their perceptions of the challenges this posed for the students, and what teaching they were aware of within the curriculum that addressed this area, that could be considered for the research. As these tutor interviews were being run concurrently with some of the individual observations of student practice, some of the potential themes were also able to be discussed with these tutors, to support or refute researcher reflections about the data generated.

5.3.10 Artefacts and Documents

As noted earlier, the case study approach accommodates the use of documents and other artefacts within the analysis. These included policy documents, news items, notes from fieldwork, or publicly available items used within the curriculum such as references, or checklists and other tools. The role played by these artefacts in practice will provide a way to trace the wider contextual factors, to zoom out to the level of curriculum or broader policy. Awareness about these artefacts was either via observations of their use within teaching sessions, or because they were offered from participants to demonstrate or further illustrate what was discussed during interviews. Sometimes participants would signpost documents that

they felt were relevant to research discussions during interviews. This material was then used alongside the transcripts and notes from these interviews or observations to further inform the analysis. The focus was on those items that participants valued, rather than conducting a systematic review to search for other such documents related to this practice area. If participants are not aware of these artefacts, the artefacts were not attributed to play an active role in changing practice. For example, the background reading for a student before a tutorial must be read, before it is reflected upon, discussed, then accepted or rejected. So, by tracing how documents and artefacts are mobilised (or not) in practice, a better understanding of their impact on practice will be sought.

5.3.11 Generating Fieldnotes

The process of writing fieldnotes and memos helped me to reflect on my identity as a researcher (rather than a tutor) and to improve my research practice. During a teaching session, the environment is already filled with written records in the form of students using pen and paper, or computers, or notes on background reading. The students were already familiar with the tutors' writing notes, to be used to support the students' reflective discussions about the sayings and doings observed with their practice. The simulated patients involved with the teaching sessions are also familiar with audio and video recordings, as these form an integral part of the teaching process to support reflective practice about the student simulated patient interactions.

Fieldnotes were written as much as possible during the day, ideally immediately after the interaction when recollections were fresh. This allowed statements and sometimes entire conversations to be written almost verbatim. At other times, handwritten notes had to be relied upon, and sometimes it was not possible to make notes until later. Quotation marks were used to clearly mark which statements were indeed verbatim from the participants, rather than just recollection of what was said. At the end of each day in the field, the fieldnotes were checked for comprehensiveness, unintelligible jottings were converted into real sentences, shorthand notes were written in full. An overview of each day was also added from my perspective, my general emotional state and responses to different situations and experiences as well as reflective remarks were added to the write-up (Miles and Huberman, 1994). Some parts of the fieldnotes were written as Word documents, but many others still sit in the notebooks and diaries filled during time in the field. Reflections concerning generation of themes and theoretical constructs were written up separately in analytical or theoretical memos (Emerson, Fretz and Shaw 2011). These were later retrieved, discarded, or developed further during the analytical process, as described further within Chapter 6.

My ongoing presence in the field, also provided opportunity for many informal discussions, when participants asked how things were going, and offered further thoughts on issues which had previously been discussed. I had a growing realisation that while organised meetings were important, they were certainly not the only venues where knowledge was shared; although it was important to check with the participants that they were still happy for the information to be recorded as data in fieldnotes. These informal discussions were particularly useful with some of the simulated patients, who seemed to benefit from having more time to reflect on some of the issues raised.

5.3.12 Researcher Reflexivity

There were limitations and difficulties associated with the process of data collection and engagement. Reflexivity is an attitude that a qualitative researcher adopts when generating and analysing data. A qualitative researcher must look at his or her own background and position to see how these influence the research process. Researcher reflexivity involves being explicit regarding assumptions made which might influence each step of the research process (i.e., selecting the topic, choosing the methodology, decisions on what is attended to and what is omitted, analysing the data, interpreting the results, and presenting the conclusions). It involves being able to critically reflect upon the values, and impact on the setting, and interpretations that are brought by the researcher (Cunliffe, 2003; Alvesson and Sköldberg, 2009; Silverman, 2011). Approaches used to support researcher reflexivity, included use of a sensitising framework (Figure 6.1, p.107), regularly keeping a diary about research choices made, about critically appraising researcher values and interests, or about embracing contradictions and tensions (Sandberg, 2005; Nadin and Cassell, 2006).

An example of a difficulty associated with the process of data collection and engagement was related to the slow process of recruitment of medical students as participants (as discussed p.90 of this thesis). Review of my entries recorded within my researcher diary, about my reflections during fieldwork, supported my reflexivity. These diary entries were useful to support my emotional reflexivity as a researcher (Hibbert, 2021). In particular, in relation to my feelings about the difficulties of engaging an adequate number of students, and about the depth and breadth of data that I collected with each student.

My reflection about these diary entries, in conjunction with the ongoing reflexive meetings with medical school tutors (many of whom were also research-active) helped me to realise that the thesis was not simply the data but rather my thinking about the data. By critically reflecting on my diary entries, and the ongoing reflexive meetings with the medical school

tutors, it supported my realisation that the amount of data generated was enough to inform my research questions. This aligns with the suggestion from Malterud, Siersma and Guassora (2016), that adequate sample sizes for qualitative interview studies are guided by the concept of information power; the more information the sample holds, relevant for the actual study, the lower the amount of participants is needed. Hence, within this thesis, the data generated from the observation of the consultation would be enriched by follow up interviews with research participants, to enhance the information power. There was an iterative process of fieldwork observations informing the post-consultation interviews, then informing further fieldwork observations. The reflexive approach then continued into the analysis of the data generated, via reflexive thematic analysis which recognises the active role of the researcher in the process. Reflexive thematic analysis is discussed next in Chapter 6 (p.108 of this thesis).

An example of a limitation associated with the process of data collection and engagement was my familiarity with the research site. As described in section 5.3.2, I had insider knowledge of the research setting used for this thesis; although this had benefits it also had potential limitations. To support the process of researcher reflexivity regarding this limitation, research participants were encouraged to engage in an exploration of aspects of practice to yield more nuanced reflections about initial researcher interpretations of the data (Finlay, 2002). By outlining examples of practice and cautiously offering an interpretation of this practice, then asking for participants to reflect and explain why they agreed or disagreed, this was a way to sense-check the potential themes that were being generated. Reflexive meetings have been described by Liberati et al., as useful for questioning the "taken for granted" (2015, p.33). The post-consultation interviews conducted with students, and the interviews conducted with tutors were a form of reflexive meetings. This was a useful strategy both to refine the research approach and to challenge any taken for granted assumptions that I might have had as an insider researcher (Carroll, 2009), and to encourage fresh perspectives. By sharing uncertainty about interpretations, this supported the participants to share their honest opinions and not just present polished talk during interview. Participants were enthusiastic to share their thoughts about the research topic (indeed, I had to stop one of the interviews with a tutor at 90 minutes, as there was another meeting to attend).

It follows from these reflections, that the data and knowledge that were generated from these interviews, and from those with the medical students and simulated patients as well, can be regarded as mutual sense-making and co-production of meaning between the participant and the researcher. My sensitivity to my own familiarity with the field prompted continual reflection on data generated. Highlighting the importance of listening closely to what

participants were saying; and just as important to reflect on what they were perhaps not saying. During fieldwork I sought participants' support to sense-check potential themes during the data analysis process. Researcher reflexivity was considered an ongoing process.

5.4 Summary of Data Sources

The study generated different forms of data to inform the research findings. An overview of the various sources of data is shown in Figure 5.5 below, with the various methods of data generation. Formal data collection started after ethics approval was granted in October 2017. The general fieldwork observations were carried out over a period of 19 months (October 2017-May 2019), with fluctuations of intensity of activity depending on the curriculum. The focused observation and interview of individual medical student consultations were carried out over the period (February 2018 – March 2019). The data generated encompassed fieldnotes from thirty-six workshop groups: each involving a simulated patient and between seven and ten students. There were also fieldnotes from a further thirty tutorial groups, each with six to eight students. These fieldnotes covered a total of over one hundred hours of observation. The fieldwork also generated several documents and artefacts including theoretical models for consultation skills teaching, or literature references for research or articles. Some of these were requested from participants, while others were given by participants on the expectation that they would be relevant (if they were publicly available). The interviews with tutors also ran throughout this whole period, starting in about June 2018, with more informal follow up interviews continuing until June 2019.

The fieldwork for this research included observation of teaching by medical school tutors of groups of medical students of workshops and tutorials. These teaching sessions were chosen during negotiation of research access, as being most suitable to inform the findings, as they involved medical students interacting with simulated patients to practice consultation skills. These observations of teaching sessions informed the design of the consultation scenario which was used for the focused observation involving the individual medical students with a simulated patient. These observations of teaching sessions also informed the development of the questions for the follow-up interviews with research participants; medical students, simulated patients and medical school tutors. As field work was ongoing, the initial findings generated from the consultation scenario developed for the research, could then be sense-checked with research participants, which enhanced the credibility of the findings. For example, the documents which were used to inform the findings (listed within table 5.5) were limited to those documents which participants felt useful for practice.

To facilitate in-depth analysis, four complete consultations were chosen for further inform the findings for this thesis. By choosing complete consultations for analysis it meant that context and meaning could be preserved, and the ongoing dynamics of the interactional flow could be captured. The choices of these four consultations were informed by the field work, which included observation of over 250 partial or complete consultations between medical students and simulated patients of up to about five minutes each (Figure 5.5, p.106). The choices of these four consultations were discussed with tutors, to confirm that they illustrated the range of the different types of practices observed during fieldwork, and the criteria evolved over time through an iterative process of discussion with the medical school tutor participants.

The data corpus used to inform the findings for this research project refers to all data generated. Interviews and focused observations of consultations were video-recorded and transcribed in full and uploaded onto NVivo. These transcripts were anonymised and stored under password protection within University of St Andrews online storage. A field diary was employed as a stand-alone document to record experiences in situ relating to researcher values and impressions and to support researcher reflexivity. These data were supplemented by field notes, and publicly available documentary information such as professional or policy documents. To analyse the data generated, thematic analysis was chosen as a method for identifying, analysing, and reporting patterns (themes) across the whole data set (Braun et al., 2019). The next chapter (Chapter 6) describes the approach to analysis of this data used and how this relates to the theoretical approach overall.

Data Source		
Student	• Focused Observation of consultation transcribed verbatim. Individual consultation 10-minute video recording for each student with simulated patient. • Post-consultation Interview transcribed verbatim (Duration range 20–30-minute interview with each student, total about 5 hours). • Fieldnotes.	**n=9 consultations** **n=9 consultations**
Simulated Patient	• Focused Observation of consultation transcribed verbatim. • Post-consultation interview transcribed verbatim (Duration range 15-40 minutes, total about 5 hours). • Fieldnotes.	**n=9 consultations** **n=9 consultations**
Medical School tutors	• Individual Interview with tutors transcribed verbatim, Semi-structured interviews. (Duration range 30-90 minutes, total about 12 hours). • Plus, additional exploratory meetings to negotiate access, and informal meetings for follow-up discussions.	**n=12 interviews**
Fieldwork: Curriculum, Observations and Fieldnotes	Teaching Groups - Practice skills training: • 36 x Group Workshops – each with 7-10 students and a simulated patient. • 30 x Group Tutorials – each with 6-8 students. • Fieldnotes, total over 100 hours over 19-month period These workshops and tutorials included observations of over 250 partial or complete consultations with simulated patients, each of about 5 minutes duration	**n=36 workshops** **n=30 tutorials**
Documents	Plus, Documentary analysis – professional and policy documents, including: • Annual report documents from Chief Medical Office NHS Scotland related to Realistic Medicine. • General Medical Council – 'Outcomes for Graduates' 2018. General Medical Council – 'Outcomes for Graduates' 2020. • NICE Clinical Guidelines: NICE guideline NG127 published 2011. (Updated NG136 published 28 August 2019).	**n=4 documents** **n=2 documents** **n=2 guidelines**

Figure 5.5 Overview of data sources

Chapter 6 Methods of Analysing Data

The purpose of qualitative inquiry, as described by Patton (1990, p.12), is to produce findings. So, the culminating activities of qualitative inquiry are analysis, interpretation, and presentation of findings. To analyse the data generated, thematic analysis was chosen as a method for identifying, analysing, and reporting patterns (themes) across the whole data set (Braun et al., 2019). This chapter describes the approach to thematic analysis used and how this relates to the theoretical approach overall.

6.1 Reflexive Thematic Analysis

Thematic analysis is a method that can be used to explore how particular social objects are represented or constructed in practice across various contexts within the whole data set. A theme describes something important about the data in relation to the research question, a pattern of meaning across a dataset. In addition to transcripts of interviews, the data set also included observations recorded in field diaries, from meetings and other encounters in the field (where ethical consent had been given by participants). Thematic analysis provides a method of analysing this variety of data generated from the case study across the whole data set.

The term thematic analysis has been used to describe several different approaches (Howitt and Cramer, 2011), and may be better understood as an umbrella term (Braun and Clarke, 2013). The approach to thematic analysis used for this research is described by Braun and colleagues (2019) as *reflexive* thematic analysis. Reflexive thematic analysis emphasises the importance of the researcher's subjectivity as being not just valid, but as a recognised resource (Braun et al., 2019). It allowed for meaning to be contextual or situated, and that reality or realities can be multiple. Thus, understanding that researchers look at data through their own lenses, and make interpretative choices throughout the analytic process including reflexive engagement with theory, data, and interpretation (Braun and Clarke, 2013).

With reflexive thematic analysis, coding is not *fixed* at the start of the process but is an organic and open iterative process (Braun et al., 2019). There is an active process of significant analytic work on the part of the researcher, to explore and develop an understanding of patterned meaning across the dataset. This iterative approach means that there is ongoing interpretation and analysis throughout the process, which needs to be articulated to enhance the transparency of the research approach, to reassure the reader that a rigorous approach has been taken (Bryman, 2004). The aim of reflexive thematic analysis is to provide a coherent and compelling interpretation of the data. The interpretive researcher has been described as:

> A storyteller, actively engaged in interpreting data through the lens of their own cultural membership and social positionings, their theoretical assumptions and ideological commitments, as well as their scholarly knowledge. (Braun et al., 2019, p.848)

The approach taken to analyse the data, and the identifiable and processual steps taken to interpret the data, are described next.

6.2 Six-Phase Approach

For the process of analysis, the "six-phase" approach developed by Braun et al., (2019) was followed. These phases are interdependent, and so the process is recursive and reflexive rather than strictly linear, it can be used flexibly, and different phases may even overlap (Ayres, 2008; Braun and Clarke, 2013). By discussing the analysis according to these six phases the aim is to support the reader to appreciate the ways in which the analysis has been conducted. The first of the six phases are f*amiliarisation with the data,* then there is *initial code generation*, then the process continues iteratively through *generating themes* from initial codes, *review of themes*, *theme definition and labelling*, and the *report writing.*

Phase 1. Familiarisation with the Data

Familiarisation with the data, was the first phase towards appreciating the data as data. Transcription of the data was started whilst fieldwork was ongoing, and reflective memos were made regularly in a research diary. By working iteratively between data, and the theory informing the research questions, the data could make connections between the participants, the data items, and existing literature. This abductive approach allowed empirical observations and existing theorisations to enhance each other to give a broad initial understanding and different perspectives about the data (Timmermans and Tavory, 2012).

Phase 2. Initial Code Generation

The second phase of the thematic analysis process starts to organise the data around similar meanings. Coding is a more detailed and systematic engagement with the entire data set, towards making sense of the data (Braun and Clarke, 2006). A *code* in qualitative inquiry, has been described by Saldaña as "most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language based or visual data" (2016, p.4). The process of initial code generation supports the viewing of the data from multiple perspectives, so multiple codes can be assigned to the same piece of text. Some approaches were useful for coding the transcripts of the consultations but less useful for example, when zooming out to consider the curriculum or policy documents.

The abductive analytic process was continued by working bottom-up from the data using In Vivo coding. In Vivo Coding uses codes which are short phrases or words from the actual language found in the qualitative record, "the terms used by [participants] themselves" (Strauss, 1987, p.33). Qualitative data has been described by Miles and Huberman as providing "thick descriptions" and which are "vivid, nested in a real context, and have a ring of truth that has strong impact on the reader" (Miles and Huberman, 1994, p.10). Patton (1990, p.390) contrasts these *indigenous* concepts, with the *sensitising* concepts that the analyst brings to the data. This broad-brush stroke approach has been described by Saldaña as *Holistic* coding (2016, p.166); it applies a single code to large units of data in the corpus, to capture a sense of the overall contents and the possible categories that may develop.

The process of code generation was started using pencil, highlighter pens, and printed copies of transcripts or documents, then computer software (NVivo) was used to help to manage the larger number of codes that had been generated. Pen and paper helped with the process of finding the headspace and time for inspiration to strike and insight to develop (Gough and Lyons, 2016). To keep track of how these codes evolved over time, memos were written regularly (Emerson, Fretz and Shaw, 2011; Tuckett, 2005). The memos provided a tool to support reflexive researcher practice (Nadin and Cassell, 2006), to guide analysis with regards the possible meanings of codes and how different codes may relate. These memos then contributed towards assigning meaning to these codes when they were later grouped into similar and related codes as themes, as described in phase 3 below. From these reflective memos, some of the possible factors influencing the thematic analysis, which could be considered as sensitising concepts were collated into a framework (Figure 6.1). The aim was to try to make such influences clear to the reader, to enhance the transparency of this study (Guest, MacQueen and Namey, 2012; Yanow, 2012). Although ironically this also showed how dynamic and fluid the entire process was, and that the relevance was particular for that context at that point in time.

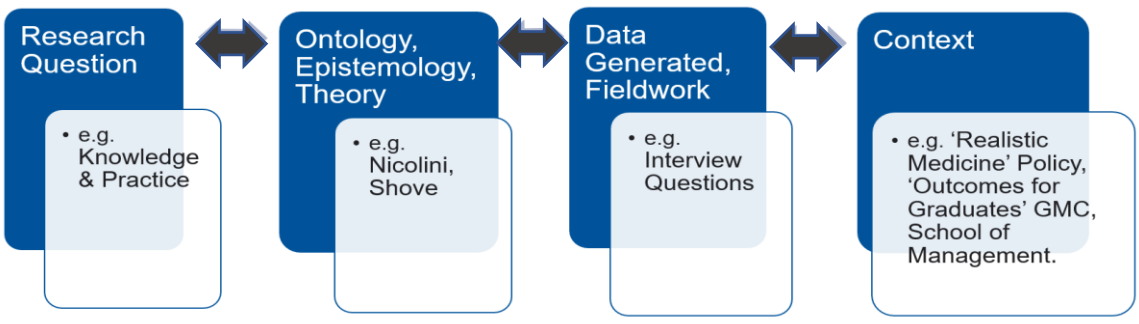


Figure 6.1 Sensitising framework: factors influencing thematic analysis

Phase 3. Conceptualising Themes

The third phase of this reflexive thematic analysis process collates the codes into potential themes, as patterns of shared meaning cohering around a central concept. Braun and Clarke (2020, p.13) describe codes as "entities that capture (at least) one observation or display (usually just) one facet," whereas themes, in contrast, are "like multi-faceted crystals - they capture multiple observations or facets" relevant to that potential theme. In reflexive thematic analysis a code is an analytic unit or tool, used by a researcher to develop (initial) themes. The process of generating themes was started by transferring all the manually developed codes into NVivo, as a data management tool, to help organise and examine relationships in the data. Guest, MacQueen and Namey, (2012) emphasise that although such software can increase efficiency of this process, the software does not do the analysis for you. This is summarised by Braun and Clarke (2013) that the themes are built, moulded, and given meaning at the intersection of data, researcher experience and subjectivity, and research question(s). So reflexive thematic analysis is particularly suited to studies involving primarily a single researcher (such as a PhD), as it is **not** based upon inter-rater reliability among multiple coders. The ongoing discussions between the researcher, supervisors, research colleagues and participants, were invaluable to support critical reflections on developing concepts. The themes that survived this part of the process were those that told a coherent, insightful story about the dataset overall, in relation to the research question.

This was the phase of the analysis that I found to be most challenging, as the researcher (Sipe and Ghiso, 2004; Corley and Gioia, 2011). The use of the software made the process feel less manageable for me. The generation of more and more codes with the software, increased the efficiency of coding but decreased the effectiveness from my perspective. There was more and more material, in terms of codes, but from my perspective, this meant they were further from the meaning within the data to conceptualise any themes. Figure 6.2 illustrates one of the multiple iterations of coding cycles via an NVivo hierarchy chart as a tree map of nodes compared by number of items coded. This was used to visualise the most common codes, or to merge similar codes, to inform the next iteration of coding. A tree map is a diagram that shows hierarchical data as a set of nested rectangles of varying sizes, with the rectangle size indicating the number of nodes coded. The tree map is scaled to best fit the available space so the sizes of the rectangles should be considered in relation to each other, rather than as an absolute number.

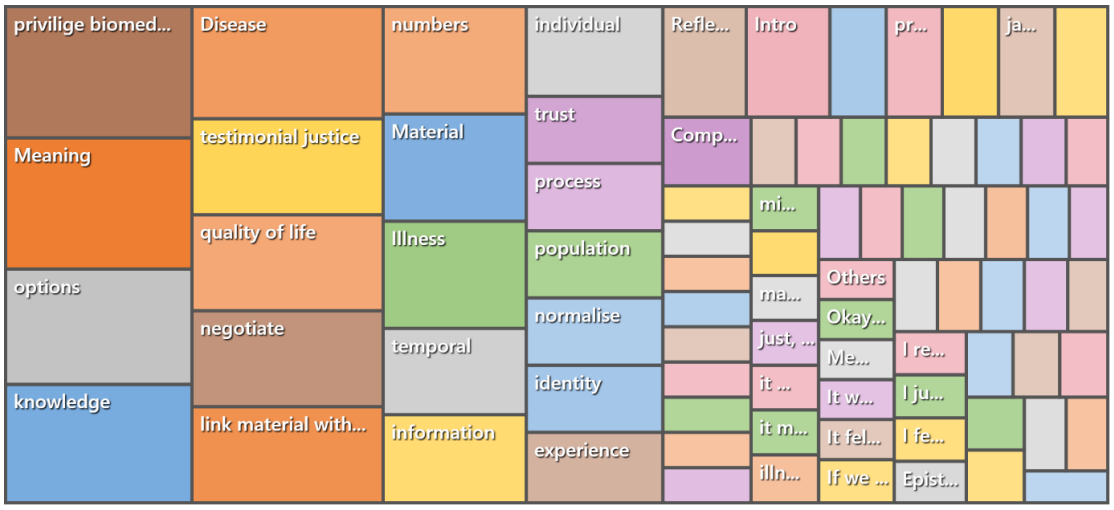


Figure 6.2 NVivo chart of nodes compared by number of items coded

Although this part of the research process was challenging, my reflections on this stage also reinforced the concept that data can be looked at through multiple lenses, to tell multiple different stories. As a reflexive researcher it is important to retain explicit awareness of these influences (Yanow, 2012), a process which was helped through the ongoing process of writing in a reflexive diary (Nadin and Cassell, 2006) and writing memos (Emerson, Fretz and Shaw, 2011).

The conceptual framework provided by Social Practice Theory was particularly valuable at this stage. Braun and Clarke (2020) acknowledge that researchers do not work in a theoretical vacuum. Practice Theory, and in particular the work of Shove, Pantzar and Watson (2012), helped to make sense of the data. The scaffolding provided by the theory supported the move from semantic (surface, obvious, overt) codes towards more latent (implicit, underlying, 'hidden') codes (Braun and Clarke, 2020).

As the research moved iteratively between phase 3 and phase 4 of the analysis, some of the groups of codes which were being presented as themes were actually **non-thematic contextualising information** (Braun and Clarke, 2020, p.18). For example, codes related to Realistic Medicine policy documents (Calderwood et al., 2017), were more appropriate to be described via a topic summary providing contextualising information, rather than as a theme. Likewise, other provisional themes from codes relating to the *Outcomes for Graduates* documents were changed after review to become non-thematic contextualising information.

As depicted in Figure 6.1, theory and concepts engaged with prior to or during analysis, may impact the ways in which codes are generated, and thus ultimately how themes are crafted. Another researcher might develop a different sensitising framework and so develop a different

coding scheme and thematic overview and might ultimately draw different conclusions (Klag and Langley, 2012). The guidance provided by Braun et al., (2019) helped to support the understanding that the framework is not intended as a determinate list to delineate all possible influences. During the research, the framework evolved throughout and indeed through analysis, meaning that the framework constitutes a fluid and continuous reflective loop (Schatzki, 2005), hence the arrows between each of the factors.

The next phase of the analysis process *review of themes*, highlighted the value of theory to support the role of themes as being stories we tell about our data (Braun et al., 2019).

Phase 4. Review of Themes - Coding for connections

This fourth phase of reflexive thematic analysis involves an integrative approach of checking and re-checking if the themes work in relation to the coded extracts, and across the entire data set. During the months of generating and reflecting on the data, the relationship between the research questions, the data and the existing literature was continuously evaluated. Some theoretical perspectives came to shape the analysis of what was being observed, while others were discarded. Guest, MacQueen and Namey, describe theory as giving "direction to what we examine and how we examine it" (2012, p.8). In a similar vein, Braun and Clarke (2020, p.15) agree that codes and themes do not simply *emerge* from being buried within the data and suggest instead the term "theme generation". Howitt and Cramer state that, "coding and themes are synthesised actively from the data by the researcher; they are not located in the data as such but are created by the minds and imaginations of researchers" (2011, p.338). As researchers we develop themes, codes and meanings through our interpretations of data. It is an active process, and the data is generated by the researcher. Multiple scholars describe that these interpretations are, invariably influenced, wittingly or unwittingly, by certain convictions and assumptions (Cunliffe, 2003; Sandberg, 2005; Ayres, 2008; Yanow, 2012).

Social Practice Theory helped to realise an overarching approach of coding for connections. This helped to organise a meaning-based pattern of themes towards a narrative overview. In particular, the work of Shove, Pantzar, and Watson (2012), as described in Chapter 3. They approach the study of practice, in terms of the social, dynamic interdependent relationship of three elements: *materials, meanings, and competence* as illustrated in Figure 6.3. This helped to realise that many of the codes generated had been semantic codes closely related to these elements e.g., "medication" was a material element. Whereas codes related to "sociomaterial" were clustered around the arrows connecting the *material* and *meaning* elements within a practice and were more latent. The element *meaning* included coding such as symbolic

meanings, ideas, and emotions. This helped to refocus the research attention on the arrows between the elements to **code for connections**. This helped to illustrate how practices emerge, persist, shift, and disappear when *connections* between elements of these three types are made, sustained, or broken. This framing provided a useful way to explore how the linkage between *material* things such as a treatment recommendation, and the *meaning* that an individual associated with that thing, related to the overall practice. These links are illustrated by the circular arrows between the elements in Figure 6.3.

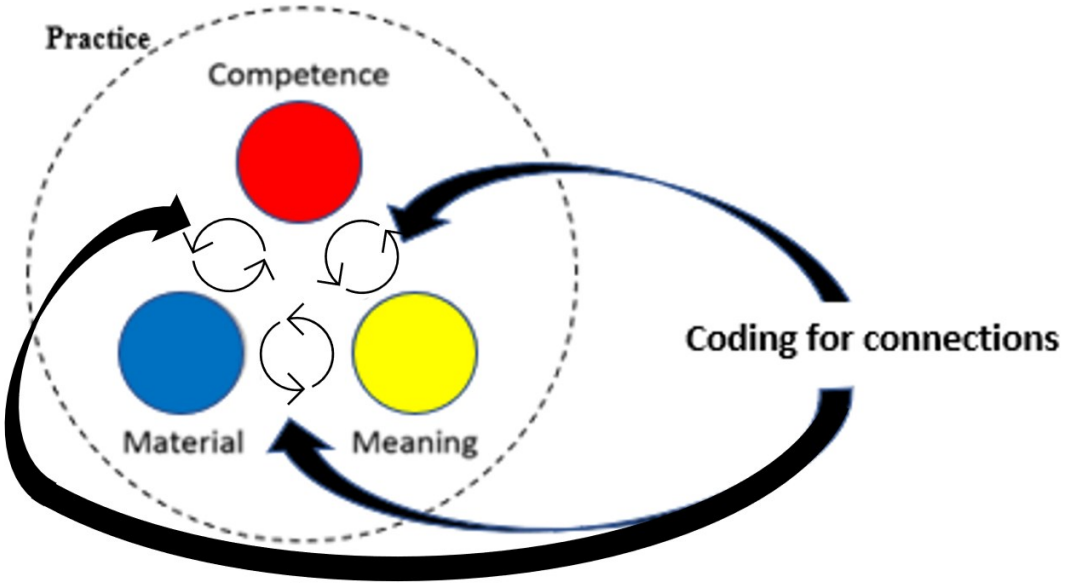


Figure 6.3 Interdependent elements of the Practice shape each other (adapted from Shove, Pantzar and Watson, 2012)

Phase 5. Theme Definition and Naming

The fifth phase of thematic analysis refines the themes and articulates what these reveal with regard findings. This then may result in further refinement of themes, re-allocating codes or sub-themes, splitting up or collapsing themes towards an overarching narrative. Based on Phase 4 of the analysis process, it is important that themes are clearly distinguishable (Howitt and Cramer, 2011). Analysis is not considered a separate stage, but an ongoing activity throughout the entire research process (Coffey and Atkinson, 1996). There is ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.

Fully embracing the notion of surprises and tensions referred to earlier (Greig et al., 2012), instead of seeking to avoid contradictions and tensions, or trying to remove them altogether, these should in fact be embraced towards gaining deeper insight. Connections between

findings and existing literature were explored, helped by ongoing discussions with research participants to consider different perspectives. As the final chapters for the thesis were starting to be written, the process of report generation also helped with theme definition and naming. This again emphasised the fluid and iterative process of reflexive thematic analysis. Phase 6 of thematic analysis report generation is discussed next.

Phase 6. Writing as Method

Writing about the findings generated, is the sixth phase in the process (Braun et al., 2019). This writing phase is also a scholarly process of analysis to make connections with the existing research and literature and the research question for the study. Richardson and St Pierre (2005, p.962) describe writing as a reflexive, creative, analytical process, with the writer, the writing product and the writing process deeply intertwined. Producing the writing often serves as a final test of how well the themes work individually in relation to the dataset, and overall. It includes revisiting the research question, notes from the earlier phases of familiarisation and coding, the lists of codes, and theme definitions to ensure that the final themes remain close to the data and answer the research question well.

When writing about the findings generated, each consultation was conceptualised as a co-constructed performance between the medical student and the simulated patient. Regardless of whether the two voices align or not, each consultation is one story, to the extent that the voices of both participants within the consultation contribute to the same story, namely the story about the patient's illness. Within each co-constructed performance, reciprocal exchanges between participants sayings and doings, will mutually generate meaning from each other. To preserve context and meaning, and to capture the ongoing dynamics of the interactional flow, four complete consultations received special attention within the writing of the thesis. To facilitate in-depth analysis, the findings chapters zoom in on four consultations which were chosen as *exemplar* illustrations of technical rational consultations or patient-centred consultations. The choices of these four consultations were informed by the field work, which included observation of over 250 partial or complete consultations between medical students and simulated patients of up to about five minutes each (Figure 5.5, p.103). The choices of these four consultations were also discussed with tutors, to confirm that they illustrated the range of the different types of practices observed during fieldwork, to exemplify a technical rational consultation or a patient-centred consultation.

Exemplar Methodology.

When writing the thesis, an *Exemplar Methodology* approach was applied as part of a useful process to pursue conceptual clarity and given the volume of empirical data. Case study exemplar research has been recognised as being useful to answer process-orientated and experience-orientated developmental questions in real-world settings (Bronk, King and Matsuba, p.5, 2013). An exemplar methodology approach has been defined as a sample selection technique that involves the intentional selection of individuals, groups, or entities that exemplify the construct of interest in a particularly intense or highly developed manner (Bronk, 2012).

A key point, regarding conceptual issues to consider when employing an exemplar methodology approach in empirical studies, is in relation to establishing clarity regarding *nomination criteria* used to qualify potential participants, or units of data, as exemplars (Bronk, King and Matsuba, 2013). Typically, the process of defining who and what an exemplar is, involves a number of steps. The nomination criteria is designed, nominators apply the criteria to identify a pool of potential exemplars, then researchers select a sample from that pool to include in the study. Bronk states that ideal nomination criteria should be as concrete as possible, they should be narrow enough to be descriptive of a particularly highly developed group of individuals, yet at the same time broad enough to capture a range of experiences and characteristics within the exemplary sample (Bronk, p.4, 2012).

So, one consultation was chosen, which exemplified a technical rational consultation, and an in-depth analysis was conducted of this single consultation. This is described within Chapter 7 of this thesis. Within each co-constructed performance of a consultation, reciprocal exchanges between participants sayings and doings, will mutually generate meaning from each other. Hence the whole consultation and follow-up interview was analysed as a unit, to preserve context and meaning, and to capture the ongoing dynamics of the interactional flow. The nomination criteria of a technical rational practice was based upon Schön's description of technical rationality, which describes a rationalistic approach to competence (described in p.57 of this thesis).

A second key point emphasised by Bronk, King and Matsuba (2013), when employing an exemplar methodology approach, is that once nomination criteria have been established, they should be shared with nominators who use them, to *identify potential exemplars*. Nominators typically include relevant experts. So, within this thesis, the potential technical rational consultations were discussed with the medical school tutors who were participants for this

research, to confirm that a credible consultation was used as an exemplar to best illuminate the construct of interest.

This exemplar technical rational consultation then provided bearings from which to navigate analysis of the rest of the data, to compare the consultation with a more normal consultation. Bronk, King and Matsuba, (p.9, 2013), describe examples of studies which include a normative group within an exemplar methodology approach, against which to compare exemplars. The consultation used as a focus for Chapter 8, described an example of a more normal consultation, a more patient-centred consultation. Again, the medical school tutors confirmed the credibility of the choice of this consultation as a normal example. The themes generated from the technical rational consultation were discussed with the medical school tutors to help to develop nomination criteria for a patient-centred consultation exemplar. This nomination criteria to identify a potential patient-centred consultation exemplar, was then confirmed with medical school tutor participants for this research. The patient-centred care consultation used as an exemplar for discussion within Chapter 9, was also confirmed with the medical school tutors as a credible choice.

An exemplar methodology approach underpinned the choice of the four complete consultations which received particular attention within the writing of the thesis. The constructs of technical rationality and of patient-centredness, as exemplar data themes, were observed throughout the rest of the dataset to various extents. The four completed consultations were chosen to best illuminate the construct of interest. Whole consultations were chosen, rather than describing excerpts from multiple different consultations, in order to preserve context and meaning and to capture the ongoing dynamics of the interactional flow.

6.3 Quality of an Interpretive Study

As introduced at the start of this chapter, for the reader of a qualitative research report to have confidence in the findings presented, it must be clear how these findings were produced. The aim of qualitative research is not to provide an overarching generalisable truth. As introduced at the start of this Section (p.78) the quality of qualitative research can be described in terms of the *trustworthiness* of the approach to incorporate dependability, credibility, transferability and confirmability (Bryman, 2004, p.273). Schwandt (2007) provided a summary about writing from Guba and Lincoln regarding criteria for trustworthiness of interpretations, which focused on authenticity criteria when judging the credibility of our interpretations of human actions. For example, prolonged engagement in the field has been suggested to improve credibility, although some argue that mere engagement is not sufficient

(Silverman, 2011). The key approach used within this thesis to support credibility is that of respondent validation, which involved taking the findings back to the research participants (Sandberg, 2005; Shah and Corley, 2006; Silverman, 2011). To do this, the interpretations of data such as themes generated were discussed regularly with research participants during fieldwork to ensure that they were credible. With reflexive thematic analysis, researcher subjectivity is conceptualised as a resource for knowledge production, rather than "a must-be-contained threat to credibility" (Braun and Clarke, 2020, p.8).

To support readers to evaluate the transferability of these finding, there should be enough details provided about the contextual richness, and uniqueness of the context from which the findings were generated (Bryman, 2004). Qualitative researchers are therefore encouraged to produce accounts that contain *thick descriptions* (Geertz, 1973) of the data. As described by Bryman and Bell, the *thick descriptions* were stated by Lincoln and Guba (1985), to provide others with what they refer to as "a database for making judgements about the possible transferability of findings to other milieux" (Bryman and Bell, 2011, p.275).

Finally, confirmability is concerned with ensuring that the researcher "has not overtly allowed personal values or theoretical inclinations manifestly to sway the conduct of the research and findings deriving from it" (Bryman and Bell, 2011, p.276). It is recognised that as researchers inevitably operate within certain beliefs, assumptions, and theoretical preconceptions (e.g., Cunliffe, 2003; Sandberg, 2005; Yanow, 2012). The criterion of confirmability relates to the level of confidence that the research study's findings are based on the participants' narratives and words. Confirmability is there to verify that the findings are shaped by participants more so than they are shaped by a qualitative researcher. Therefore, to support confirmability of research finding, an ongoing reflexive approach was used to assess my values and impact on the setting and interpretations (Cunliffe, 2003; Alvesson, Hardy and Harley, 2008; Silverman, 2011). Approaches included the use of my sensitising framework, regularly keeping a diary, as well as embracing contradictions and tensions to explore deeper meaning within the data (Sandberg, 2005; Nadin and Cassell, 2006). For example, with tabular presentation of interview transcripts, the fourth column of the table shows the researcher analysis of that part of transcription, to support transparency about the decisions that were being made in the research process. These details can help provide valuable insight for readers to understand how the themes were realised from the data.

6.4 Summary of Methodology and Methods

The preceding parts of this Section about research philosophy, data generation and analysis illustrate the overall research design which was applied to answer the research questions. This has been illustrated within Figure 6.1, factors influencing the thematic analysis. My research philosophy is based upon the view that practices are constitutive of the social world and hence social reality. At the same time, since this world comes into being via everyday enactments of practice, it is therefore socially constructed. Alongside this, research participants or researchers, are carriers of a practice and are entwined rather than separate from the world. Concurrently this means that there are multiple interpretations about the world, and that it can only be known through participation in it. So, in line with other practice scholars, an interpretivist approach to knowledge was adopted, suggesting that as part of the research there is interest in the possible and indeed multiple meanings of social phenomena. Thus, such a social constructionist-interpretivist philosophy, requires a qualitative methodology and a reflexive approach to both data generation and analysis.

A case study approach was chosen to address the research questions. Data generated included fieldnotes from over 100 hours of observations from fieldwork which extended to a period of 19 months. These workshops included observations of over 250 partial or complete consultations with simulated patients; each of about 5 minutes duration. This fieldwork then supported development of a specific scenario for a consultation, to provide focused observations for this research. This provided focused observations of nine individual consultations involving medical students and simulated patient, these were followed by semi-structured post-consultation interviews with nine students and the simulated patient involved. There were also twelve interviews with medical school tutors, plus other informal meetings. The case study approach also accommodates documentary analysis including professional and policy documents. Because of my close participation in the local setting, a reflexive diary and memos were also kept which were a particular support during data analysis.

To analyse the generated data, reflexive thematic analysis was chosen to emphasise the active role of the researcher in the knowledge production process, and it works well with the multiple sources of data generated via the case study approach (Braun et al., 2019). The six phases to this approach are interdependent, and the process is recursive and reflexive rather than strictly linear; it can be used flexibly, and separate phases may overlap (Ayres, 2008; Braun and Clarke, 2013). There is an active process of significant analytic work on the part of the researcher, to explore and develop an understanding of patterned meaning across the dataset. As suggested by Braun and Clarke (2020), this was found to be an organic and open

iterative process. The process started by familiarisation with the data set; this was an iterative process which occurred during the data collection and transcribing process. The next phase was to code the data set, after which the data was analysed for patterns and similarities to draft a preliminary set of themes. There was ongoing iterative review of these themes, and as fieldwork was still being conducted, these suggestions about preliminary themes were able to be checked with research participants. Thus, respondent validation supported the credibility of the research process by helping to review themes. Four consultations were chosen to zoom-in on for in depth analysis. They were chosen as exemplar consultations which reflected technical rational consultations or patient-centred consultations, informed by the range of the different types of practices observed during fieldwork, and confirmed by tutors to be credible exemplars.

The final phase of data analysis was writing about the findings generated. This involved revisiting the research question, the notes from the earlier phases of familiarisation and coding, the lists of codes, and theme definitions to ensure that the final themes remain close to the data and answer the research question well. This final sixth phase of producing the report was also found to be a scholarly process of analysis to make connections with the existing research and literature and the research question for the study. The findings are discussed within the next section of this thesis.

SECTION FOUR: FINDINGS

The findings section of this thesis contains three chapters which describe how the medical consultation can be understood as a social practice. The analytical framework provided by Social Practice Theory (Shove, Pantzar and Watson, 2012) describes practices as comprising various sets of materials, meanings and competences and their connections. By zooming in on these elements within the practice performed by different students, the consultation performances were compared, to explore the contribution of the different elements and the connection between these elements (Nicolini, 2013). By focusing on one material element within the practice, a treatment recommendation from within a clinical guideline, it illustrated how connections were made (or not) with other elements within or between practices. Therefore, even with the same material element within each practice, variation in practice performance can be explored.

Chapter 7, the first findings chapter, focuses on the practice of a single consultation performed between a medical student and a simulated patient. This practice was chosen as it exemplified a typical technical-rational consultation, which prioritised the material element within the practice rather than connection with the element of meaning within the practice carried by the simulated patient.

Then Chapter 8, focuses on the practice of a different consultation performed between another medical student and a simulated patient. The consultation included for analysis within Chapter 8, was chosen because it contrasted with the consultation analysed within Chapter 7, to exemplify a more patient-centred consultation. Across the whole data set for this research, most consultations were more like the consultation described within Chapter 8. During the fieldwork observations of teaching sessions involving consultations with tutorial groups of up to eight students, there would often be one or two of these students who had technical-rational aspects to their consultations of the type described in Chapter 7. These two consultations were chosen for the first two findings' chapters because they illustrate the variation within practice performance. By following a material element within the practice, it showed how connections were made with the element of meaning. The findings within Chapter 8, considered the connection with the meaning element within the practice, to show how the medical consultation can be understood as a social practice, and how meaningful connections can provide a foundation for shared decision making with patients.

Chapter 9, the third and final findings chapter, uses further empirical data from other consultations, interviews, and fieldwork, to explore and refine the provisional themes from these first two findings' chapters.

The potential themes, as patterns of shared meaning cohering around a central concept, were generated via an integrative approach of checking and re-checking if the themes worked in relation to the coded extracts. These potential themes were then included within the semi-structured interviews with tutors, and with simulated patients. Respondent validation supported the most credible themes across the entire data set. These findings contributed towards the formation of an overarching narrative about the medical consultation as a social practice, and how this relates to professional competence and patient-centred consultations, to explore variation within practice performance.

Chapter 7 Findings: Focus on Material: Technical-Rational Practice

This chapter focuses on a consultation chosen to exemplify a practice which prioritised the material element (the treatment recommendation from the clinical guideline). This consultation was chosen because, informed by the various consultations observed during fieldwork, it illustrated an exemplar technical-rational consultation. When writing these findings chapters, the use of the exemplar methodology approach provided as a way to pursue conceptual clarity in sociological analysis (as described on p.116 of this thesis).

During the fieldwork observations, of teaching sessions involving consultations, there would often be one or two students, within each group of up to eight students, who had technical-rational aspects to their consultations. By focusing on one material element within the practice and exploring whether connections were made with other elements within practice, it helped to show which elements were attended to and by whom. This exploration of what practice is being enacted, and by whom, is discussed next through analysis of a single consultation between a student and simulated patient.

7.1 Zooming in to the Consultation

This chapter starts by considering data from the initial part of the consultation between Medical Student 1 and Simulated Patient 1. By following this material element, the contribution of this element and the connection between other elements and other practices was explored. The consultations were transcribed, and excerpts are presented here within each table. The tables were formatted with the first column showing the time from the start of the consultation, the second column indicating who is speaking the transcribed words in the third column (MS1 referring to Medical Student 1, and SP1 referring to Simulated Patient 1), then the fourth column of the table is the analysis of that part of the transcription (formatting based upon Braun et al., 2019, p.854).

7.1.1 Which Practice?

The following excerpt from the initial part of the consultation between Simulated Patient 1 and Medical Student 1, illustrated the patient clearly stating that they do not like taking the tablets.

Time		Transcribed data	Researcher analysis
01:09	MS1	Uh huh, have you been feeling any discomfort regarding, err, your hypertension, err, the high blood pressure?	Student explores practice of treating blood pressure.
01:15	SP1	Not from having the high blood pressure in itself but just from the tablets I am taking for it.	Patient connects to practice of taking tablets.
01:20	MS1	Uh huh?	
01:22	SP1	I'm feeling really kind of rotten when I take them, I **really** don't like them.	Element of meaning within practice of taking tablets.
01:25	MS1	Uh huh, what was the problem, can you tell me a little bit more?	
01:28	SP1	Yeah, when I take them, I just feel really kind of dizzy, just sort of wool in my head and I get a bit erm, kind of, off balance when I am wandering around, I just have to sit down, ughhhh, I **really** don't like it.	Meaning within practice of taking tablets.
01:40	MS1	Mmm hmm, sorry to interrupt, do you remember the name of the drug?	Testimonial injustice. Block potential connection with patient's meaning. Prioritising material.

Table 7.1 Transcribed data from Consultation 1

This initial part of the consultation illustrated the practice of the medical student regarding gathering information about high blood pressure. For the simulated patient, the focus of the consultation could be more accurately described as relating to the practice of not taking the tablets. The simulated patient explained what it meant to them when they took the treatment, but the student continued to explore the material aspects of the disease treatment, rather than make connections with this meaning within the practice carried by the patient. The student even interrupted the patient's description of their difficulties of complying with the practice of taking the treatment. Although this was a polite interruption it re-prioritised the *material* element of the practice, by breaking the connection with *meaning* regarding the practice carried by the patient.

This prioritising of the material elements within the practice was shown again by Medical Student 1, later in the consultation.

Time		Transcribed data	Researcher analysis
02:10	SP1	And now that they are trying me on this new one.	
02:12	MS1	Mm hmm.	
02:13	SP1	But erm, yeah, again it's the same I just feel really dizzy, you know head's full of cotton wool, can't really think straight.	Meaning within practice of taking tablets.
02:19	MS1	Oh okay, Erm so other than that, have you had any other, erm, problems that you wanted to see the doctor for today?	Student brings it back to material.
02:29	SP1	No. There's nothing at all.	

Table 7.2 Transcribed data from Consultation 1

Analysis of this empirical data illuminated that the student missed opportunities to connect with other elements of practice more meaningful to that individual patient. By favouring the material element relating to the treatment recommendation, and by not actively connecting with the element of meaning from within the performance of the patient, it created a student-centred consultation, rather than a patient-centred consultation.

7.1.2 Co-located Practices, but Performance Lacks Meaningful Connection

The practice for the simulated patient was related to (not) taking the tablets (as per the scenario). For that simulated patient, as an individual, the preferred practice would instead be to continue to follow the lifestyle advice towards the related practice of cardiovascular risk management. By contrast, the practice of the consultation for Medical Student 1 continued to focus on just treating high blood pressure. Medical Student 1 performed a very structured objective history taking throughout the consultation, with a focus on the material aspects.

For example, the next extract of data shows how the student continued to gather material information. This data also illustrates the element of competence within the patient's practice in relation to their understanding about the benefits of the treatment of high blood pressure.

Time		Transcribed data	Researcher analysis
03:29	MS1	Mm hmm fair enough, so I guess, like, the blood pressure itself wasn't really affecting you, it was more to do with the drugs that you were taking that you are having problems with. Erm okay, so today you are back in because your second drug, the Losartan, isn't really settling well with you?	Student explicitly acknowledges issue for patient about practice of taking tablets.
03:46	SP1	No, I'm meant to be taking it every day, well the aim was first of all put me on I think it was I think 25mg and then work my way up to 50 and see if I could sort of settle with that, erm but…it just even at 25 I feel rubbish, and I know I'm meant to be taking it every day, but I can't take it if I'm going into work that day because then I just **can't** think straight, and I work in a bank, so I've kinda got to be able to think straight, but I just **can't** when I take it so don't bother on, on, you know, every other day.	Patient explicitly states that they do not want to take tablets. **Meaning** for them of that practice. Value relates to patient's quality of life, rather than longer term potential benefit.
04:16	MS1	Yeah, I understand, yeah, cause if like you'd rather not take it because you didn't really have a big problem with the blood pressure before, you didn't even notice it, and then this drug is kind of getting you all dizzy and stuff, well I see, errm, so before then did you ever have to like, come into hospital, err, with any like, you know, did you ever have to stay in a hospital for any other health conditions?	Explicit acknowledgement from student that patient does not want to take tablets.
04:42	SP1	No.	
04:43	MS1	No not, erm, do you have anyone else in the family that has the high blood pressure or?	Student prioritising material element again
04:50	SP1	Erm well, I mean my dad died a couple of years ago of a heart attack so he will probably have had high blood pressure, but he really didn't look after himself in that in that regard, and so, I mean I get that high blood pressure is a problem and particularly it being in the family, I get that why that is important, but you know unlike him I do try and look after myself, I don't really drink, I'm very much, err, I certainly don't	Patient demonstrates connection with competence regarding treatment, versus other options for healthy practices.

		smoke, you know I try and eat right, and certainly over the past year I'm trying to eat better.	
05:18	MS1	Mm hmm.	

Table 7.3 Transcribed data from Consultation 1

Analysis of data from Consultation 1, revealed multiple opportunities presented by the patient where the student could have made connections with the element of meaning within the practice of the patient. This was interpreted as the student repeatedly missing these potential connections with the element of meaning within the practice carried by the patient, by reprioritising the material element. The next example, from later in the consultation, illustrates the student prioritising the gathering of further material information (about drug allergies). This could be interpreted as an illustration of a thorough gathering of a breadth of material information during a consultation, but it could also be interpreted as another missed opportunity for the student to make connections with the meaning from within the practice of the patient.

Time		**Transcribed data**	**Researcher analysis**
07:11	MS1	Yeah, erm, and also, so, do you say you were working at a bank?	Material.
07:16	SP1	Yeah.	
07:17	MS1	Mm hmm, so how many hours would that be?	Material.
07:20	SP1	Cor, I'm in about three days a week, overall, but the hours are sort of here and everywhere really.	Lifestyle meaning. Is this stressful?
07:26	MS1	Mm hmm. Okay. And do you have any allergies?	Missed connection with element of meaning. Prioritised connection with material.
07:29	SP1	Nope.	

Table 7.4 Transcribed data from Consultation 1

This consultation was interpreted as two co-located practices, the practice of the medical student and the practice of the simulated patient, with the performance overall interpreted as lacking meaningful connection.

The consultation with Medical Student 1 was chosen for inclusion in this findings chapter, as it exemplified a technical-rational consultation. The scientific knowledge within the consultation was privileged, above other forms of knowledge including information from the patient. This was interpreted as a not being a patient-centred consultation, as other elements such as meaning from within the practice carried by the patient were not connected with. During fieldwork sessions, observing consultation skills workshops, these were the moments that tutors often used as learning opportunities to support students to perform more patient-centred consultations; this will be discussed further in Chapter 9.

7.2 Post-Consultation Interview with Medical Student 1

To explore further how the medical consultation can be understood as a practice between student and simulated patient, a follow-up interview was conducted separately with each student. The follow-up interview with Medical Student 1 provided an opportunity to continue to explore the different elements within the practice carried by the medical student, and to explore connections made (or not) with the elements within the practice carried by the patient.

7.2.1 Prioritise the Material - Technical-Rational Consultation

The following excerpts from the follow-up interview with Medical Student 1, were chosen to illustrate the element of meaning within the practice carried by the student, and to explore connections with the practice carried by the patient.

Time		**Transcribed data**	**Researcher analysis**
00:20	R	So, you have just had your consultation with Owena [pseudonym]…, so, yeah, tell me about what kind of things you have found?	Open question to see which element within practice the student responded to.
00:26	MS1	So, do you want me to like, I will go through the SBAR first, and then I will tell you about my thought process.	SBAR=Standardised format for handing over information.
00:32	R	Perfect, yeah.	Co-produced.

Table 7.5 Transcribed data from Interview with Medical Student 1

The initial analysis, that Medical Student 1 had prioritised material aspects during their consultation with the simulated patient, was reinforced by their choice to introduce another material element, the SBAR, into the follow-up interview that was conducted after the consultation. SBAR is a standardised format for verbal hand over of information to a clinical colleague and it is an acronym for: Situation (what is going on with the patient), Background

(what is the relevant context for the patient), Assessment (what is the current problem), then Recommendation (what is the next step in the management for the patient). Further details are shown in Appendix D. It is a standardised format for communicating information about patient care between healthcare professionals that is widely used in clinical practice (Müller et al., 2018). By virtue of a clear structure, SBAR calls for the provision of all relevant information, organised in a logical fashion, and is regarded as a communication technique that increases patient safety. The SBAR had been observed as a material element within the fieldwork of teaching sessions.

This part of the data was coded as co-produced, as it illustrated an example of a research participant co-producing the research with the researcher. The use of the SBAR format was not something that had initially been included in the research design. It proved to be a useful process with this student, so was continued to be used with other students. The SBAR format could be considered as another material element within the practice carried by the student. This structured format can connect the practice of consultation with the related practice of handing over information and can be written into a document as a material element (see Appendix D). This standardised format for handover of information was useful for the research because it surfaced how the medical student would use the information that they had gathered from the consultation, and which elements of that practice they privileged to connect with further practices.

SBAR feedback from Medical Student 1

Time		**Transcribed data**	**Researcher analysis**
00:34	MS 1	So, today I met Owena [pseudonym], a 43-year-old female, and she came in because she had an issue with her hypertension drug, erm causing, giving her some side effects such as dizziness. And it was quite hard for her to carry on with the medication because, erm she is working at a bank currently, erm she was diagnosed with hypertension a year ago, erm, and then initially prescribed Ramipril, but that gave her some dry cough, and some other side, like dizziness and side effects. So, she moved onto Losartan which is the drug that she is currently taking, but that is giving her some dizziness again.	SITUATION: **Material**: hypertension treatment. BACKGROUND: **Material**: history of presenting complaint. **Meaning** of taking tablets.

01:14	R	Okay?	
01:15	MS 1	So, she came in to see the doctor, and hopefully she will be able to change and get another drug alternative, erm. She hasn't had any significant health problem before she was diagnosed with hypertension. Erm her family history, her father died a couple of years ago from a heart attack, but her mum is well. Erm, she is not a smoker she drinks about a glass of wine a week.	BACKGROUND: **Material**: Past medical history, family history, lifestyle factors contributing to cardiovascular risk.
01:49	R	Okay?	
01:50	MS 1	Erm, she doesn't have any allergies, so, yeah and then when the nurse assessed the patient, she still had erm like high blood pressure.	ASSESSMENT: **Material**: high blood pressure.
02:03	R	Yeah, I can see you have got the readings there.	
02:06	MS 1	So, recommendations, will be, erm, hopefully she will get her drug changed, which will hopefully help her, like make it easier for her to take the drugs and get her high blood pressure taken care of. So that's my SBAR.	RECOMMENDATION **Material**: further drug treatment **Meaning** The meaning from within patient practice was not included in practice of handover.

Table 7.6 Transcribed data from Interview with Medical Student 1

This handover of information from Medical Student 1 about their consultation, reinforced the interpretation that the student had not prioritised information received from the patient during the consultation, especially the element of meaning from within the practice of the patient. The SBAR format made explicit the material information communicated during the consultation, but it also has the potential to make explicit the meaning element within the communication about the practice (or not communicated, as in this case).

Information about the element of meaning within the patient's practice that was gathered during the consultation, was **not** then included by Medical Student 1 within their practice of handover of information after the consultation. This was interpreted as Medical Student 1 not prioritising information received from the patient during the consultation, especially regarding the element of meaning. This absence of connection with the element of meaning within and between practices has been illustrated by Figure 7.1 below, to show relationships within and between practices (based on the work by Hui, Schatzki and Shove, 2017).

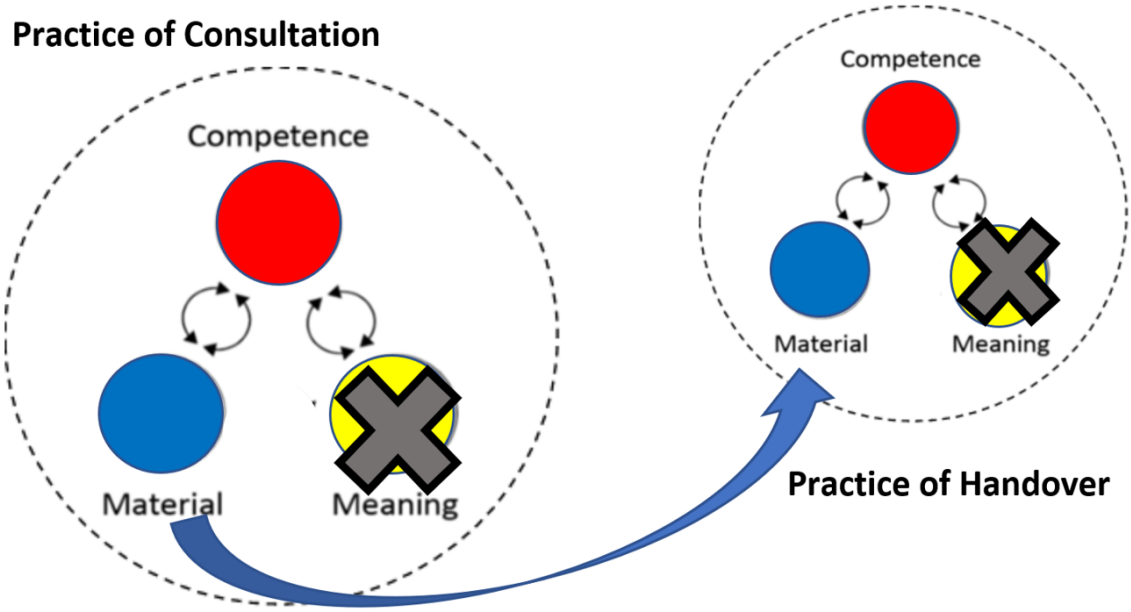


Figure 7.1 Absence of connection with element of meaning within & between practices (adapted from Hui, Schatzki and Shove, 2017)

The follow-up interview conducted with Medical Student 1, provided an opportunity to explore all the elements within the practice of the consultation. The approach to practice by Medical Student 1 was interpreted as being technical and rational (Schön, 1983). The post-consultation questions with Medical Student 1 attempted to explicitly explore connections with the element of meaning within the practice of the consultation. The post-consultation questions with Medical Student 1 also explored the role of the patient within the practice.

Time		**Transcribed data**	**Researcher analysis**
06:09	R	I suppose, I suppose, what might be achievable for her as a patient, from her story?	Attempt to explicitly explore linkage. With meaning (patient story).
06:16	MS1	Erm, well, when I was speaking to her, she did mention that, when she looked it up, there wasn't like, she got information that taking drugs will not necessarily like make her reduce her risk of getting heart disease, which is slightly like erm, err, what's the word like, it's slightly wrong information. I'd say it's **not the correct information**. And like erm, her having that idea is probably gonna stop her from taking a new drug if we prescribed it. So, I think we will try and like, if I were the doctor, I'll try and aim for	Material. Blocked competence of patient. Epistemic injustice. Privilege objective material information about disease.

		two things First, to definitely deal with the side effects so that she won't have any problems, erm after taking the drugs. And the other thing is to give her enough information of how erm, reducing her blood pressure taking care of her blood pressure is gonna, in future, reduce her risk of developing any other cardiovascular disease.	
07:20	R	Yeah, I think, I mean during the consultation, and she was saying yes, she understood the risks, and her father had had that experience as well, how did that feel for you, when her understanding of the benefits from taking the medicine didn't tally up with your understanding of the benefits?	Researcher stating patient competence and attempting to explicitly explore linkage with meaning.
07:47	MS1	Ermm, I always try to at first try to agree with the patient because most doctors will be like "*No, no, no drugs are the way to go*" and then the patient will automatically be like "*You guys are crazy about your drugs*" [laughs].	
08:04	R	[laughs].	
08:05	MS1	So, I try to like understand them first, and be like "*I totally get why you think this way*." But if I like, I didn't say much to that, because as a student we shouldn't give like such, erm, recommendation directly to the patients. But if I was a doctor I probably would have been like "*I totally understand, but actually, from all the research and all the like information out there, it actually does reduce the risk*." And if, I will probably try to scare them a tiny bit [laughs].	Student prioritising material information.
08:40	R	[laughs].	
08:40	MS1	By saying like, erm, but if you have uncontrolled high blood pressure it can lead to this, and that, and yeah then hopefully that will work for them.	Technical-rational.

Table 7.7 Transcribed data from Interview with Medical Student 1

During the follow-up interview that was conducted with Medical Student 1 after their consultation, the student's views about the different elements within the practice were explored. The responses from Medical Student 1 privileged the material aspects of practice. The student seemed to reinforce the view that there was one correct practice, even describing the understanding of Simulated Patient 1 as *"not the correct information*" (table 7.7). The part of the transcript above was coded as being an example of epistemic injustice. Fricker (2007) describes a distinctively epistemic type of injustice, in which someone is wronged specifically in their capacity as a knower. Epistemic injustice within the consultation, and with the practice of handover, is discussed in more detail next.

7.2.2 Trust the Material- Epistemic Injustice.

The practice of Medical Student 1 during the consultation did **not** connect with their practice after the consultation. Medical Student 1 did **not** incorporate the element of meaning within the practice of the handover. After the consultation, Medical Student 1 had recommended in their handover to continue with more drug therapy, despite not discussing this with the patient during the consultation. This was an important omission on the part of the student. As per the scenario, the preferred practice for the simulated patient would be to continue to **not** take tablets, but instead to choose to follow lifestyle advice to reduce their cardiovascular risk.

Consultation 1 had been coded as being an example of epistemic injustice (Fricker, 2007). During the SBAR handover, Medical Student 1 had communicated their own priorities rather than respecting the autonomous patient herself. Medical Student 1 had stated that the simulated patient's information was not correct. This illustrates hermeneutic injustice (Fricker, 2007) because the student did not value the simulated patient's interpretation that taking the tablets was not worth it to them as an individual. This was also coded as testimonial injustice (Fricker, 2007), because during their handover the student did not communicate the meaning for the patient about their practice of (not) taking the tablets. This was not fair to the patient, nor to the person to whom the student would be handing over the information.

During the follow-up interview with Medical Student 1 after the consultation, exploration of the element of meaning within the practice kept returning responses from the student regarding the material elements. Medical Student 1 continued to privilege the material information. This is illustrated by the following extract from the follow-up interview with Medical Student 1, where they recommend that by giving **more** information to the patient it would then change the practice of the patient.

Time		Transcribed data	Researcher analysis
16:32	MS1	But, definitely after speaking to the patient, err, I know that she has slight misunderstanding to her condition, and that I think definitely has to be, like changed either by a nurse, err,	Privilege medical practice versus patient practice.
16:45	R	Yeah?	
16:46	MS1	Or the doctor, err. Cause I feel like the, Oh! Compliance is the word! I have been looking for that word [laughs].	
16:54	R	[laughs].	
16:55	MS1	I think definitely, patient compliance has to be, that, like, patient, I think patient needs to **trust** the doctor, and like the medical like system itself, like they need to **trust** that the medicine's gonna work for them and it's gonna give them the benefit. I think maybe that's why lotta patients get like things prescribed and never really take the medicine, ya know?	Trust as a concept. Trust the material.

Table 7.8 Transcribed data from Interview with Medical Student 1

The student prioritised the material aspects of the practice. The concept of trust for Medical Student 1 was related to material information, to trusting the material. The approach by this student was that to support the practice of the patient, the response was just to provide more information, more material. The follow-up interview with Medical Student 1, to explore their reflections on the practice of the consultation, gained responses regarding the material element, not the meaning element within the practice.

Time		Transcribed data	Researcher analysis
17:50	MS1	So, I think that giving them correct, and enough information.	Privilege objective material.
17:55	R	Okay?	
17:56	MS1	And then **trust,** in terms of, err, like, we are trying to work for her benefit, and like trying to make her better in the future. I think would have been important. So, answering your questions on this err, was like initially I	Trust in objective material versus trust in performance. Objective regarding disease.

		just thought that, so this patient just wants another drug to change to, but after speaking to her it sounds a lot like she just doesn't want to take the medicine. So, I will try and, ermm, like, try and make her **want** to take the medicine, and also change the medicine for her especially.	This does not align with the patient feedback that they did not want to continue the practice of taking the tablets.
	R	Third time lucky?	Will more of the same material lead to a change in practice? No connection nothing changes.

Table 7.9 Transcribed data from Interview with Medical Student 1

This was interpreted as Medical Student 1 privileging the material information, rather than the broader conception of practice being comprised of the three elements (material, meaning and competence). Rather than addressing the meaning element for the patient, the student privileged the material aspects to prioritise more material information about the treatment.

7.3 Post-Consultation Interview with Simulated Patient

The follow-up interview conducted with the simulated patient after each consultation was an opportunity to explore the meaning of the practice for each simulated patient. This allowed continued exploration about how medical consultation can be understood as a social practice between student and simulated patient.

7.3.1 Lack of Connection

The follow-up interview with the simulated patient involved in this practice with Medical Student 1, described it as feeling one way.

Time		**Transcribed data**	**Researcher analysis**
	R	So, this is an opportunity for you to share your feelings of the consultation as you remember it, err, how was the consultation for you as a patient?	Explicitly exploring the element of meaning for patient within the practice of the consultation.
1:27	SP1	It felt very **one way**.	Interpreted as lacking connection.
1:32	R	Interesting.	

1:35	SP1	But it was just in the questions she was asking me; it wasn't always the most open to me sharing my **full experience**.	Interpreted as not incorporating all elements within practice.

Table 7.10 Transcribed data from Interview with Simulated Patient 1

When the simulated patient described the consultation as feeling "*one way*," and not the most open to sharing their *"full experience*," this could be interpreted as the practice not connecting with the element of meaning carried by the patient. To further explore the data gained from the follow-up interview with Medical Student 1 after the consultation, the views of the simulated patient were explored to see if the provision of more information from Medical Student 1 during the consultation would have supported their practice to take the treatment. The response from Simulated Patient 1 emphasised the importance for them of the meaning element within the practice.

Time		**Transcribed data**	**Researcher analysis**
13:28	R	Okay. So errm, if her [Medical Student 1] take home message was that "*You just need more information*," and "*You just need to **trust** in the medical information."* Do you think that that would be a constructive way forward for you?	
13:52	SP1	No [laughing]. I mean, I spent so long of that conversation trying to emphasise, I am informed. I have been informed by previous doctors and nurses in my health checks. I have gone off and done my own research to get information to show that the relative benefit of taking this drug is not actually significantly going to enhance my quality, or length, of life. And given the negative impact this is having on me; I do not think that is worth it. And I have made this informed decision. So, I was really trying to emphasise, "*I have information already, I have enough information, I have made this conclusion.*" And she [Medical Student 1] seemed to be like "*Yeah, that is a valid conclusion.*"	Competent. Material. Meaning – the potential benefit does not outweigh the adverse effects. Contradiction within practice of student.

Table 7.11 Transcribed data from Interview with Simulated Patient 1

The follow-up interview with Simulated Patient 1 was useful to support the analysis of the consultation that had been observed. Simulated Patient 1 reinforced that the element of meaning within the practice of taking the tablets could **not** be offset by more material information. As per the scenario, the patient was competent regarding the material element of practice about the treatment recommendation, and the relation of this to the broader practice of cardiovascular disease management. During the practice of the consultation, Medical Student 1 had focused on gathering objective material information, at the expense of making connections with the meaning element from the patient's performance. This highlighted the importance of the meaning element of this practice, because, without connection with the meaning element, the practice of the patient was not supported. By focusing on the material element, the resulting practice was described by Simulated Patient 1 as feeling "*one way.*" The response from Simulated Patient 1 reinforced the analysis that more information would not change their practice of not taking the tablets. To support the practice of a patient, there needs to be a connection with the meaning of that practice for that individual patient. Hence this could be interpreted as the patient feeling the lack of connection, to reinforce the interpretation as the consultation not being patient centred.

The findings discussed so far in this chapter zoomed in to the performance of a consultation, to explore the contribution to the consultation of the simulated patient and the medical student. For this chapter (Chapter 7), the focus was on a consultation which exemplified a technical-rational performance, which prioritised connection with material elements within that practice, rather than making connections with the element of meaning within the practice carried by the individual patient. The provisional themes that had started to be generated from the initial observed research consultations between students and simulated patients, and from other observations from fieldwork, are discussed next. As described in Chapter 6, potential themes are patterns of shared meaning cohering around a central concept which are generated via an integrative approach of checking and re-checking if the themes work in relation to the coded extracts, and across the entire data set. These themes were relating to the carrier of the practice, meaningful connection, prioritising the material, trusting the material, and human connection. The next part of this chapter zooms out to the teaching practice, to consider the themes which have been conceptualised thus far.

7.4 Zooming out to the Teaching Practice

The semi-structured interviews conducted with tutors from the Medical School focused on their reflections concerning how medical students use knowledge in their emerging practice. As these tutor interviews were being run concurrently with some of the individual

observations of student practice, this enabled some of the potential themes from the data to be discussed with these tutors, to sense check reflections about the data generated. These themes are explored further next, starting with consideration of what is the practice being carried, and by whom.

7.4.1 Theme of Determining Which Practice is being Carried

For the tutors, although the material element within practice was recognised as being valuable, the importance of attending to the practice of the patient was mentioned by all tutors in several ways. For example, Tutor 2 was explicit about the focus needing to be on the patient practice, they described the connection with the patient as being "the **most** important thing."

Time 53:53	**Transcribed data**	**Researcher analysis**
R	Yeah, like you said at the beginning, are we teaching them to be non-patient focused by using these checklists? And if so, what do we need to do?	
T2	Checklists give security, that we are not missing something. But they can cause you to miss the **most** important thing, the human being. Because once you start teaching checklists, people start to apply it. Any walk of life. Oh, there is a checklist, that means I must use it, because if I don't, I will be doing something wrong. Whereas your checklist is something to put in the back of your brain, that as you are talking to a person, yes you can tick things off in the back of your brain. So, okay they have given me information on that they have given me information on that, but what else. They don't ask the question but what does it mean? What does it mean to my patient?	Not prioritising the material. Human connection. Patient-centred care

Table 7.12 Transcribed data from the Interview with Tutor 2

This data illustrates that patient-centred care involves making meaningful connection within and between practices, not prioritising the material element over making human connection, and the consideration of who was the carrier of the practice. For patient-centred care, the focus needs to be on the patient's practice.

7.4.2 Theme of Prioritising the Material

The consultation used as a focus for this chapter involved Medical Student 1 prioritising the material element within practice. This technical-rational consultation was interpreted as two

co-located practices. During the interviews with tutors, this was a frequently referred to as a "tick-box approach" to describe when they observed the students focusing more on the checklists than the individual patient with whom they were consulting. This is captured by the following excerpt from the interview with Tutor 5.

Time 44:18	**Transcribed data**	**Researcher analysis**
R	Why do you think they get tick-boxy?	
T5	It is hard to tell. Because it is meant to be history taking, and objective, they need to tick the boxes. But did they think about the actual person sitting in front of them and the broader context, rather than just ticking the boxes? Not all of them were able to.	Technical-rational consultation. Balance material with meaning.

Table 7.13 Transcribed data from the Interview with Tutor 5

During the fieldwork observations, of teaching sessions involving consultations, there would often be one or two of these students who had technical-rational aspects to their consultations. These moments within the consultations, where the material elements are prioritised by the medical students, were often used as learning opportunities by the tutors to support student learning towards performing more patient-centred consultations. Tutor 5 even suggested that not all the students were able to perform these patient-centred consultations. Another excerpt from the interview with Tutor 4, elaborates on how the framing of the practice of the consultation might impact on how the practice was performed by the students.

Time 01:37	**Transcribed data**	**Researcher analysis**
R	What do you think they get from the clinical placements in the hospitals?	
T4	The expectations were to go and "Do your medical bit," rather than learn about the patient's life. You know the students are told they have to go into the social factors. But social factors with tick boxes, like "two-storey house, bus top nearby or doesn't drive." They are told to go and see a patient rather than talk to a person. And issues that are never discussed are things like "How much does that matter to you?	Framing of practice to be carried. Explicit about exploring meaning within patient practice.

Table 7.14 Transcribed data from the Interview with Tutor 4

This highlights that the practice of teaching can impact on the patient-centred performance of the student. For example, to frame it as a social interaction rather than to prioritise the material aspects of the practice. This could support a performance to encourage connecting with a person rather than ticking boxes and prioritising the material.

7.4.3 Theme of Multiple 'Right' Practices

When exploring the concept of patient-centred care with the tutors, and variation in practice, they frequently responded that there can be multiple *right* practices. This is exemplified by the following excerpt from Tutor 5, who highlighted that there can be multiple *right* practices, depending on the element of meaning within the patient's practice.

Time 41:44	**Transcribed data**	**Researcher analysis**
R	One student, within the research scenario, despite them asking about the patient's perspectives, at summary, they did not include any of this in the handover. So how do we assess that?	Epistemic justice. Connection.
T5	Well, I just think, the way these [teaching] scenarios are made up, gives a real opportunity to show the students that there can be multiple different ways of doing the 'right' thing. The worries and concerns that a patient might have will have an impact on how their treatment is done. That is part of the reason why these sessions are so important. It is that you have two people with the same problem, and they have different concerns, and that will determine their treatment plan. For example, if they are the carer for a housebound husband, that will have an impact on the treatment plan suggested. That will be a way to see if the student has not just heard it, but have they listened? Have they been able to incorporate it into the next step? Does that make sense?	Multiple 'right' practices. Connect with meaning. Variation with meaning will give variation in practice. Meaningful connection with related practices.

Table 7.15 Transcribed data from the Interview with Tutor 5

This response was typical across the data from tutor interviews. This 'right' answer for an individual patient relates to the element of meaning from within the practice for that individual patient. The variation with meaning will give variation in practice performed.

7.4.4 Theme of Determining the Carrier of the Practice

The findings discussed so far in this chapter have helped to illuminate which practices were being enacted. The next part of this chapter gives examples of data generated from interviews with the tutors, relating to the practice performed within the consultation, and who is the carrier of the practice.

Regarding the practice of taking the tablets (or not) each day, the patient is the carrier of **their** practice. They are the ones who decide to implement the management plan. The importance of recognising the role of the patient as the carrier of their practice was illustrated by the following comment from Tutor 3.

Time 23:53	**Transcribed data**	**Researcher analysis**
R	Why was that teaching session useful do you think?	
T3	For me, it showed the point that you are only going to get a shared, and adhered to, management plan if you have already elicited the patient's ideas, concerns, and expectations.	Patient as carrier of their practice. Connect with their meaning

Table 7.16 Transcribed data from the Interview with Tutor 3

For a chronic medical condition that is managed by medication, ultimately it is the patient who implements the management plan in terms of taking the tablets each day (or not). So ultimately the patient is the carrier of the practice of managing their condition. As Tutor 3 states, the key is to connect with the ideas, concerns, and expectations of that individual patient. This highlights the importance of connecting with meaning from within the practice carried by the patient.

The role of the medical student as a crossing point of practices, connecting the practice of the patient and the practice of developing a shared management plan, was also described by Tutor 2.

Time 80:44	**Transcribed data**	**Researcher analysis**
R	That touches on, back to what we said before about informed consent, and what would they [the students] be happy documenting and writing down?	
T2	It is trying to make everyone aware of the responsibility. We have got to teach the students they are responsible for their actions; the patient is responsible for their actions. We can't solve every problem.	Connection between carriers of practice.

	But by discussion of this with the patient you can come to a consensus. And actually, your patient's opinion may not be your opinion, but you know what? That is alright!	Responsibility. Autonomy. Epistemic justice.

Table 7.17 Transcribed data from the Interview with Tutor 2

This highlights the issue of patient autonomy, and the importance of recognising epistemic justice within practice. Connecting with meaning within the practice of the patient was a key aspect of the performance of the consultation. The interview with Tutor 8 contained a summary of the overall purpose of the practice of the consultation, which emphasised meaningful connection with the individual patient.

Time 46:58	**Transcribed data:**	**Researcher analysis**
R	So, is that how you would summarise the purpose of the consultation?	
T8	Our job, as a professional, is to have the **knowledge** to make the objective assessment, to provide the information in a way that is comprehensible and **meaningful** to that **individual** patient, and then to **engage** with them in planning the action.	Professional carrier of the practice of the consultation. Connection. Meaning.

Table 7.18 Transcribed data from Interview with Tutor 8

This excerpt from Tutor 8 summarises that the practice of the professional is to have the knowledge (**competence**) about the information **(material** element), and to **connect** this in a **meaning**ful way to the individual patient. So, suggesting an explicit role of the professional is to **connect** with the patient in the related practice of planning the next step. But importantly they need to connect meaningfully with the individual patient, to co-produce the consultation with them.

7.4.5 Theme of Co-producing the Practice

The theme of co-producing the practice involves making meaningful connection with the individual patient in that consultation. Throughout the fieldnotes, patients had highlighted the potential for medical students to improve the connection with what the practice meant from the patient's perspective. Throughout the fieldnotes, patients had commented on the over-emphasis by medical students about the material aspects. This is exemplified by the following excerpt from fieldnotes, from a teaching session when a patient shared their own real-life story about what it is like to live with a chronic painful condition.

Excerpt from fieldnotes:	Researcher analysis
Tutor asks: Patient Partner what advice they would give to the students, to support the development of the medical student's consultation skills. **Patient Partner reply:** "Listen to your patients!" "I am knowledgeable about my condition. I have learned how to live with it. I know how to manage my symptoms day-to-day. I do come in regularly to get my check-ups, and to get my blood levels checked. I have a good relationship with my consultant who trusts me to manage my tablets according to my symptoms. I tell them [at the clinic] my symptoms are fine; I will alter the dose with my symptoms." "It annoys me when I get a new doctor who tries to tell me that the levels are up from my blood tests, and they need to increase the dose of my tablets. It really annoys me if they do not listen to me and try to treat me as a number!" "I am not a number! I am a person. Do not treat me as a number!"	Epistemic justice. Competence within patient practice. Trust and connection with patient practice. Co-produce plan. Doctor-centred Prioritise material. Lack of Connection. Epistemic injustice. Person-centred care.

Table 7.19 Excerpt from Fieldnotes

This highlights, again, the importance of connection with the meaning within the patient's practice to support the theme of patient-centred care.

Across the whole dataset, the tutors did state that the material element within practice was important, but that it was **not** more important than the element of meaning from within the patient's practice. The tutors would emphasise that there was not one "correct" answer and that it depended upon the meaning within the practice for an individual patient. The following excerpt from Tutor 10 was typical.

Time 18:50	Transcribed data	Researcher analysis
R	One of the other tutors, described it I think as "*Values-based medicine*." He described it as a two-footed approach - this is the evidence, and this is incorporating the patient's values.	

T10	And it is not one size fits all, and that we need to judge that. And I think genuinely asking patients, and saying "*there are some options here, do you want me to explain all the potential options, or do you want me to suggest what I think is the way forward?*" Then you can take it from there. And again, it is about giving them some choices, and giving them some time to think about it, and giving them some information away with them so they can actually genuinely come back, and time to change their mind if they want to.	Material is not absolute. Connect with practices over time. Space.

Table 7.20 Transcribed data from the Interview with Tutor 10

The interpretations of data, such as themes generated, were discussed regularly with research participants during fieldwork. This respondent validation helped to ensure that the findings were credible. These responses from research participants provide evidence for this thesis, that the findings are shaped by participants, more so than they are shaped by a qualitative researcher. This highlighted that there needs to be a balance between evidence-based practice and patient-centred care, which involves being explicit about options for that practice, and epistemic justice to value each patient's autonomy respecting their right to choose, as an individual, the practice which is most meaningful for them, and to not be treated in a non-individualised way.

7.5 Summary of Chapter 7

This chapter focused on a material element of practice, a treatment recommendation, as a consultation was performed between a medical student and a simulated patient. The consultation used as a focus for this chapter was chosen to exemplify a technical-rational consultation. Within this consultation, scientific knowledge was privileged above other forms of knowledge, including information stated by the patient. This helped to illuminate what was the practice of interest and who was the carrier of that practice.

By analysing which material elements were attended to (or not) within the practice, it helped to analyse how the medical students used knowledge (or not) in their emerging practice. By following a material element within the practice, it showed how connections were made (or not) with the element of meaning. The consultation was described by the simulated patient as feeling one way. The analysis of the consultation and follow-up interviews with the simulated patient and the medical student, suggested the consultation represented two co-located practices between the student and the simulated patient, but with a performance that lacked

meaningful connection. Extracts of transcript where the student privileged material information, were coded as illustrating epistemic injustice, in which someone is wronged specifically in their capacity as a knower (Fricker, 2007). This was interpreted as an example of a consultation which was **not** patient-centred, as other elements such as meaning within the practice carried by the patient were not connected with. This contrasts with the consultation which is used for the next chapter (Chapter 8) which was interpreted as illustrating a more patient-centred consultation.

Respondent validation supported the most credible themes across the entire data set. These themes highlighted the concept of co-production of the consultation between the medical student and the simulated patient rather than having co-located practices, consideration of who is the carrier of the practice, and the concept of epistemic injustice if the material element within the practice is prioritised rather than meaningful connection within and between practices. These potential themes are explored further in the next chapter.

Chapter 8 Findings: How Consultation Co-produced as a Social Practice

This chapter is the second of three findings chapters and focuses on another consultation which was chosen to illuminate **how** the medical consultation can be understood as a co-produced social practice. Analysis of this consultation shows **how** meaningful connections can provide a foundation for shared decision making with patients.

The separate consultation included for analysis within Chapter 8, was chosen to illustrate a typical example of a more patient-centred consultation. This contrasts with the exemplar technical-rational consultation within Chapter 7. As described earlier within this thesis (p.112), these exemplar consultations provide bearings from which to navigate the analysis process, to compare exemplars against data from a normative group (Bronk, King and Matsuba, p.9, 2013). The consultation used as a focus for this chapter describes an example of a more normal consultation, a more patient-centred consultation. These two consultations were chosen for the first two findings' chapters because they illustrate the variation within practice, despite involving the same evidence base in terms of the treatment recommendation.

8.1 Zooming in to the Consultation – Co-production

The consultation with Medical Student 2 and Simulated Patient 2 was chosen as an exemplar of a more patient-centred consultation. By focusing on the material element of the practice, the treatment recommendation from the clinical guideline, it illuminated which elements within the practice were attended to and by whom. This consultation was interpreted as a practice co-produced between both the student and the patient, as a sociomaterial process. When connections were made with the element of meaning within practice, this illuminated how knowledge, in terms of an evidence-based treatment recommendation from a clinical guideline, can be considered as a sociomaterial thing within the practice of the consultation; it reconceptualised the consultation as a sociomaterial performance. The consultation discussed within Chapter 8, incorporated both the material element and the meaning element within the practice related to treatment of high blood pressure.

8.1.1 Co-producing Practice as a Sociomaterial Performance

Analysis of the data from the consultation involving Medical Student 2 revealed that the initial part of the consultation set the scene for the interaction, with an explicit invitation for the patient to co-produce the agenda for the performance of the consultation.

Time		Transcribed data	Researcher analysis
00:38	MS2	Okay, so erm, erm, I would like to talk a bit more about the hypertension that you are having right now, and do you have any major concerns, and what do you wish to get out of the consultation, with the GP today?	Material link meaning patient. Explicit invitation for patient to contribute to consultation.
00:51	SP2	Erm, I, I, aahh, erm, obviously I know,	
00:55	MS2	Yeah?	
00:56	SP2	Erm, that high blood pressure is not a, not a great thing.	Patient competent regarding disease.

Table 8.1 Transcribed data from Consultation 2

This introduction gave the opportunity for Simulated Patient 2 to communicate their understanding regarding the need to treat high blood pressure, to demonstrate the element of competence within their practice of taking the blood pressure treatment. This initial part of the consultation linked the material aspect of *hypertension,* with the element of meaning from within the patient practice, via the student's request for the simulated patient to share *"any major concerns.*" The consultation continued with Medical Student 2 exploring further the meaning element within the patient's practice of taking the treatment. Connections were then made between the treatment plan for the high blood pressure, and what the treatment meant to the simulated patient as an individual.

Time		Transcribed data	Researcher analysis
01:47	SP2	Erm, and then when I came back erm a few months later, I think about three months ago maybe, erm, they, they changed the medication, and I **did** try it, but again it's really, erm, it makes you feel a bit kinda like my heads stuffed with cotton wool kind of feeling, erm, so particularly on days when I'm trying to get into work, and I'm organising family it just doesn't work for me, you know, it's it's just really difficult, so erm, so, yeah, I haven't really been, I haven't really been erm, taking it,	Patient practice was regarding taking the tablets. The patient made connection with meaning regarding this practice.

02:20	MS2	Okay, like when you first take your first type of medication did you think, did you see a change in your blood pressure?	Student explored and connected with competence regarding treatment plan.
02:28	SP2	No. No.	
02:29	MS2	No?	
02:30	SP2	No, my blood pressure was fine, well it obviously wasn't fine, but for me I, I, it didn't bother me, you know I didn't have any symptoms or anything, well I still, well I only have symptoms when I take the medication.	Patient competence treatment plan versus meaning.
02:46	MS2	How, err, do you feel when you take the medication?	Explicitly explore practice regarding tablet taking.
02:48	SP2	**Oh**, like, like my, err, you can feel quite dizzy an, and you feel that it's really hard to kinda focus and maintain attention to stuff, and you know the medication is actually worse for me than anything to do with the blood pressure, the blood pressure doesn't cause me any bother.	Patient connects treatment plan versus meaning.
03:05	MS2	And on days when you don't take the medication do you feel any uneasiness or any unpleasantness?	Explicitly explore treatment and meaning.
03:11	SP2	No, no.	
03:12	MS2	Okay, just when you take the medication?	Explicitly connect with meaning.
03:14	SP2	Just when I take the medication.	

Table 8.2 Transcribed data from Consultation 2

Medical Student 2 supported the practice of the simulated patient regarding managing the blood pressure, by supporting the patient's competence to connect the material element of taking the tablets with the management of blood pressure. Medical Student 2 explored the meaning of the goal of the treatment plan, and what this meant to the simulated patient in terms of the meaning from the side effects of implementing that treatment plan.

The next extract of data from the consultation shows the connection between the practice of taking tablets and the related practice of managing cardiovascular disease. This illustrates the explicit connection between the practice carried by the patient and the practice carried by the student.

Time		Transcribed data	Researcher analysis
03:34	MS2	Okay, but erm, it is quite important to like follow-up, and like, take the medication on a regular basis, because you might not feel unpleasant but in the long run, I think it is important to adhere, err, to take the medication regularly.	Explicitly support disease competence.
03:52	SP2	[Sigh] I see what you are saying because obviously my mum, err, she has been on medication for blood pressure for a while (illegible), and my dad, he died, erm, of a cardiac arrest, erm, when he was quite young, erm, so I know the value, erm, of taking the medicine, I know that the risks of it, but,	Competence disease, but link to meaning for them as an individual. Link with practice of cardiovascular risk.
04:18	MS2	Yeah?	Space.
04:19	SP2	His diet was terrible, he never took any exercise, he was a smoker, and a drinker and, and I am **none** of those things, I don't do **any** of those things.	Competence disease. Link material for individual. Multiple overlapping practices.
04:26	MS2	Okay?	Space.
04:27	SP2	Since my blood pressure, since they told me, everybody's life is a bit more organised, erm, I am careful about my diet, I take regular exercise, and, and from what I understand just from looking at the websites and, and sorta magazines and things, erm, the, those effects are likely to be more effective for me at my age than the drugs.	Competence multiple materials related to cardiovascular risk.
04:55	MS2	As in like the exercises and, err?	Make connection with related practices to manage disease.
04:57	SP2	Yeah, and the fact that I have changed my diet and I'm doing exercise.	Competence multiple materials related to cardiovascular risk.
05:00	MS2	It's good that you change your diet and exercise, those are really good things.	Positive feedback regarding related practices.
05:04	SP2	Yeah.	

Table 8.3 Transcribed data from Consultation 2

This data illustrated that the simulated patient was competent regarding the practice of managing the disease (as per the development of the scenario). The patient knew that high blood pressure was related to longer term health problems (relating to cardiovascular risk). It also highlights that there were potentially multiple related practices to managing cardiovascular risk; modifiable factors such as healthy diet and exercise, and non-modifiable factors such as increasing age.

By focusing on one material element within the practice (the treatment recommendation from the clinical guideline) it illuminated the process within the consultation to show how the clinical performance was co-produced between the student and the patient. This showed how the student supported the practice carried out by a patient. Interpretation of the consultation involving Medical Student 2, was that this illustrated a patient-centred consultation, where there was an ongoing process by the student to connect between this material element and the meaning element of the practice with the patient as the performance unfolded between them. This consultation incorporated the material element of the medical disease, and it also incorporated the meaning within the practice of the patient regarding taking the tablets. This highlighted that there were multiple and sometimes contradictory flows of information within the process of consultation.

This consultation was a co-produced performance between the student and the patient which incorporated both the element of meaning and the material element within the practice as a sociomaterial process. This sociomaterial process was supported by the student allowing enough space within the consultation for these connections to be made the next part of this chapter explores this further.

8.1.2 Space to Connect with Elements within and between Multiple Practices

Medical Student 2 continued to explore and support the patient to be competent regarding the practice of management of blood pressure and connect with the broader practice of managing cardiovascular risk. The practice of the student incorporated enough space within the consultation for the patient to co-produce the practice with the student.

Time		**Transcribed data**	**Researcher analysis**
05:05	MS2	That will definitely help to decrease the risk of having like hypertension, and from hypertension you might have other problems and cardiac problems too.	Competence disease material.
05:10	SP2	Yeah.	

05:11	MS2	From the fact that your, your blood pressure is a bit high, and from changing diet you can prevent further complications which is good.	Competence disease material.
05:16	SP2	Uh huh. Which makes me think that taking the drugs,	
05:21	MS2	Mm hmm?	Allowing space to connect.
05:22	SP2	isn't really as important you know?	
05:23	MS2	Okay?	Space.
05:24	SP2	The fact that I do, I do understand that.	Competence disease material.
05:25	MS2	Yeah?	Space.
05:26	SP2	But for **me**, I can do those things and I feel the positive benefits,	Link with meaning.
05:31	MS2	Yeah?	Space.
05:32	SP2	from them, 'cause I've lost a bit of weight, and because it's nice being outside. But erm, whereas the drugs for me, at the moment, they just make me feel rotten.	Link with meaning.
05:40	MS2	Okay, so you feel dizziness?	
05:43	SP2	Yeah.	
05:44	MS2	Is it the dizziness or the headache?	
05:46	SP2	It is both of those things cause it just, it just makes it really difficult.	
05:49	MS2	And those side effects started the first day after you take the drugs?	
05:56	SP2	Yeah, I think it took a couple of days to come on but it ahaa, but it was, it was related to the drugs, so,	
06:03	MS2	Okay?	Space.
06:04	SP2	So, **my** feeling is that those other things I can do in my life, are likely to have more,	Meaning.
06:11	MS2	Okay?	Space.
06:12	SP2	positive,	
06:12	MS2	Mm hmm?	Space.

06:13	SP2	effects in preventing me from having a stroke than taking the drugs **at this stage.** I mean I don't necessarily say that's forever, but, err, at the moment I don't know that,	Temporal aspect. Space to connect with practices in the future.
06:24	MS2	Mm hmm?	Space.
06:25	SP2	the gains for me are worth it.	Practice as individual patient.

Table 8.4 Transcribed data from Consultation 2

This creation of space within the consultation, contrasted with the consultation with Medical Student 1, where rather than creating space, there were examples when opportunities for connections to be made were blocked, ignored, or *politely* interrupted. The space created by Medical Student 2 within their consultation allowed the simulated patient to connect the meaning of taking the tablets with the meaning of managing the disease. This also created space to connect with elements within and between multiple practices. Including space to potentially connect with practices in the future. For example, other practices which are related to a healthy heart such as diet and exercise. This created the opportunity to explore the meaning of these alternative practices for that individual patient.

Analysis of this interaction showed that there were multiple practices within the consultation, but that Medical Student 2 was still able to make connections with the material elements within the practice of managing the disease. The material aspects of the practice regarding the benefits of treatment of high blood pressure were not privileged but neither were they ignored. The element of meaning for that individual patient was recognised too, and so the performance as a whole was interpreted as being co-produced. This is explored further in the next extract from the consultation with Medical Student 2.

8.1.3 Balancing Practice to be Meaningful for an Individual Patient

This creation of space by the medical student within the consultation, allowed the simulated patient to contribute to the performance of the consultation, and allowed for a balance in the dialogue of the consultation regarding the elements within the practice. The consultation continued with sharing of information between the student and the simulated patient about the practice of managing the disease, the practice of taking the tablets, and the practice of managing cardiovascular risk. There was a connection between the material elements and the meaning elements of those practices.

Time		Transcribed data	Researcher analysis
06:27	MS2	Cos like normally, or in general, generally we are trying to like advise patients, to like definitely change their diet and lifestyle first.	Normally. Normal practice.
06:34	SP2	Mm hmm?	
06:35	MS2	And if we notice that after changing their diet and lifestyle, they are still raised in blood pressure, we are recommended to have, we, err, recommend them medication. So, like, on top of diet and lifestyle and medication, we hope to like bring down their blood pressure in the long run, so like it is stable all the time. So, like I know now you are still quite young, and there is still a long way to go, and like you don't want to like have any other health issues in the future.	Material. Contextualised in terms of general information, but still allowing space for individual patient. Also introducing temporal context.
06:59	SP2	Yeah.	
07:00	MS2	It is better to prevent now, than to cure later. So,	Meaning.
07:04	SP2	Yeah, I mean I do see that, but I do think that, err,	
07:06	MS2	Yeah?	Space.
07:07	SP2	you know, you are talking about me being on some kind of drug for 30 or 40 years?	Temporal context.
07:13	MS2	No. Like, hopefully by ermm, this drug, by being on this medication for a period of time you will bring it [blood pressure] down **plus** your lifestyle changes. Then if we see a stable change in the future, with the medications, under the normal recommendation of high blood pressure, so we can then, by that time we can like, I think it is okay now for you to withdraw from the medication. But from now, from what we have seen from the level of your blood pressure, that it is best for you to go onto the medication, for now, first, and see how your blood pressure go in the future. And see then, oh maybe it's time to take it off.	Normal. Connect with other practices. Connect with practices in the future.
07:44	SP2	Right, so it's not, err?	

07:45	MS2	It's not like a lifelong thing that you have to take for 40 years maybe 50 years.	Meaning. Temporal context.
07:49	SP2	Yeah, cos that's what I am thinking, cos I mean, at my stage you'd be doing it for the next 40 years.	
07:50	MS2	Yeah, I understand that.	
07:55	SP2	and, and the side effects for me at the moment, are just not worth the, the, the gains.	Meaning.
07:59	MS2	Yeah.	Space.

Table 8.5 Transcribed data from Consultation 2

The space created by Medical Student 2 within the consultation, allowed critical thinking through dialogue (Hibbert, 2012). This dialogue for critical thinking, was framed by Medical Student 2 in terms of *normal* practice. But this was not prioritised above the practice of the individual patient.

The concept of space for discussion within the consultation, also related to temporal space to allow connection with multiple consultation practices over time. To create space to connect with practices in the future.

Time		**Transcribed data** (continued from Table 8.5)	**Researcher analysis**
07:59	MS2	Yeah.	Space.
08:00	SP2	If I am doing other things that are gonna to be more positive, cos I think, ya know the risk, I'm only reducing the risk, the risk factors I am not **curing** myself. I'm just reducing my risk factors, so it's not it's not the same as you know, the same as antibiotics or something like that, when it's actually gonna cure something.	Practice of managing cardiovascular risk factors.
08:19	MS2	Yeah, but like, this medication, it gonna definitely bring down the blood pressure, and like in the future, if it stable and below like the higher blood pressure, then we are like happy to take the medication off, so it's not like you have to take it for the rest of your life.	Material. Space to connect with practice in the future.
08:36	SP2	Oh, I see.	Supporting reflexivity of simulated patient.

08:40	MS2	So, did you, did you thought that you had to take it for the rest of your life?	
08:45	SP2	Err ah, I don't think anybody had really kinda explained it in that way [illegible].	Balance. Create space for critical reflection.
08:52	MS2	Okay, yeah, is there any other concern, do you think that you would be like happy to go on with this medication?	Link to practice (taking the tablets).
08:54	SP2	I'm not, I'm not sure,	
08:55	MS2	Ah okay, but you'll try?	Explicit question.
08:57	SP2	Err, I'm no, no I'm not necessarily happy to try it. I'm, I'm, I think I'll, I'll give it some, err, I have thought quite carefully about this, and I am not sure that at this point in my life that that is the best option. I think that having talked about it we are talking risk factors rather than absolutes, and I think that there are other things that I can do with my life other than taking the drugs.	Link to practice (taking the tablets). Blocked by patient.
09:27	SP2	So, no I am not really, I'm not really happy. I'm not happy with the idea continuing on with the drugs. The side effects for me don't add up to anything that would help.	Meaning material. Explicit answer.
09:41	MS2	Mmhmm, erm, can I know more about your lifestyle changes, that you have been changing?	
09:47	SP2	Well, well yes, I've just being a lot more careful about what I eat, erm and also careful about what I drink, I didn't drink a lot before, but I am a lot more cautious now.	
09:58	MS2	How's your diet daily?	

Table 8.6 Transcribed data from Consultation 2

There was a balance in the dialogue between the student and the patient. The patient was still able to share the dialogue to block the practice of taking the tablets, as per the extract of data (at time 08:57). The patient could still connect with other practices, such as the practice of managing cardiovascular risk factors (at time 08:00). An important aspect was that there was an explicit question regarding future practice of taking tablets, which received an explicit answer.

The balance to the conversation was particularly illustrated by the summary that Medical Student 2 provided to the patient at the end of the consultation. Medical Student 2 started

this summary with an explicit request for the patient to contribute to the co-production of the summary. This emphasised that the priority for Medical Student 2 was regarding patient-specific practice.

Time		**Transcribed data**	**Researcher analysis**
12:55	MS2	Okay, thank you, so I will just do a quick summary, and, if I get any information wrong just correct me.	Explicit request for patient to co-produce summary to promote balance.
12:59	SP2	Okay.	
13:00	MS2	So, you came in to have a blood pressure check-up, and the main concern is that it your blood pressure keeps increased. And it still stays quite high, although you have changed your medications and although you are not really happy with the medication due to all the side effects. And although you have changed all the lifestyle changes, which has had a positive effect, and you think that is more important than having the medications because they are causing more trouble than not having it.	Material and meaning and connection with other practices. Especially meaning of taking tablets, or not.
13:22	SP2	Yeah, yes.	
13:23	MS2	I will definitely talk to the GP about your concern about the medication, erm, do you think you might wanna change to another kind of medication, or?	Connect with related practices.
13:32	SP2	Erm,	
.13:33	MS2	Which has no side effect, or lesser side effects?	
13:32	SP2	No, I think at the moment I am, I am happy, more happy without the medication at the moment I think, that is my way of looking at it.	Block practice. Explicit answer re future practice of taking medication.
13:47	MS2	Okay, I will pass on all the information to the GP, and I'll see what he thinks, and you can talk to the GP after.	Connect with related practices.
13:37	SP2	Thank you.	
13:58	MS2	Okay, thank you.	

Table 8.7 Transcribed data from Consultation 2

These responses by Medical Student 2, reinforced the connection between the material aspect of the practice of taking the tablets, and the meaning element regarding the side effects this caused for the patient. The consultation unfolded as a sociomaterial performance, allowing connection between the material aspects of the disease and what this **means** in terms of the practice of the patient. Importantly this also created space for Simulated Patient 2 to block the practice of taking the tablets (this was discussed further during interviews with tutors, Section 8.4 of this thesis). The balance within this consultation between Medical Student 2 and Simulated Patent 2 contrasts with the epistemic injustice suggested from analysis of Consultation 1.

8.2 Post-Consultation Interview with Medical Student 2

The sociomaterial performance by Medical Student 2 was consolidated through a strong connection with the practice of handover, which also respected the connection between the material aspects of the disease and the element of meaning within the practice(s) carried by the patient. The sociomaterial performance incorporated the social aspects for that individual patient.

SBAR feedback from Medical Student 2

Time		**Transcribed data**	**Researcher analysis**
00:00	R	Okay, so, the SBAR?	
0:04	MS2	Okay, so today I have talked to a patient named Owena [pseunodym], age 43, a female patient, so she has come here today for an annual recall visit for hypertension check-up and from what I understand she was diagnosed with high blood pressure a year ago, and she was on the medication Ramipril but that was stopped due to side effects and currently she is on Losartan 50mg daily, but her major concern is that she has a lot of side effects due to this medication too and she is **not** really happy to continue this medication for the long run, and she is more positive about changing her lifestyle and diet rather than having the medication, that is her main concern. On Assessment, er, the blood pressure readings today were still quite high 164/102, 168/100 and 158/98	Material. Practice of patient. Meaning within patient practice. Prioritised alternative practice for patient.
0:53	R	Yeah?	

0:54	MS2	And recommendations: I am not too sure, erm probably keep check on her blood pressure more regularly since she is not really keen on having medication,	Future practice. Included meaning element for patient.
01:05	R	Yeah?	
1:06	MS2	And probably start new medications, but she is not really keen on that idea either.	Explicit about patient's ideas of practice.

Table 8.8 Transcribed data from Interview with Medical Student 2

Within the practice of the handover, Medical Student 2 prioritised the patient's preferred practice of lifestyle measures to reduce cardiovascular risk, rather than the practice of taking tablets. Medical Student 2 recognised the importance for the patient of the meaning element within this alternative practice, which contrasts with the epistemic injustice suggested from analysis of Consultation 1. In contrast with Consultation 1, there is connection with the element of meaning within and between practices.

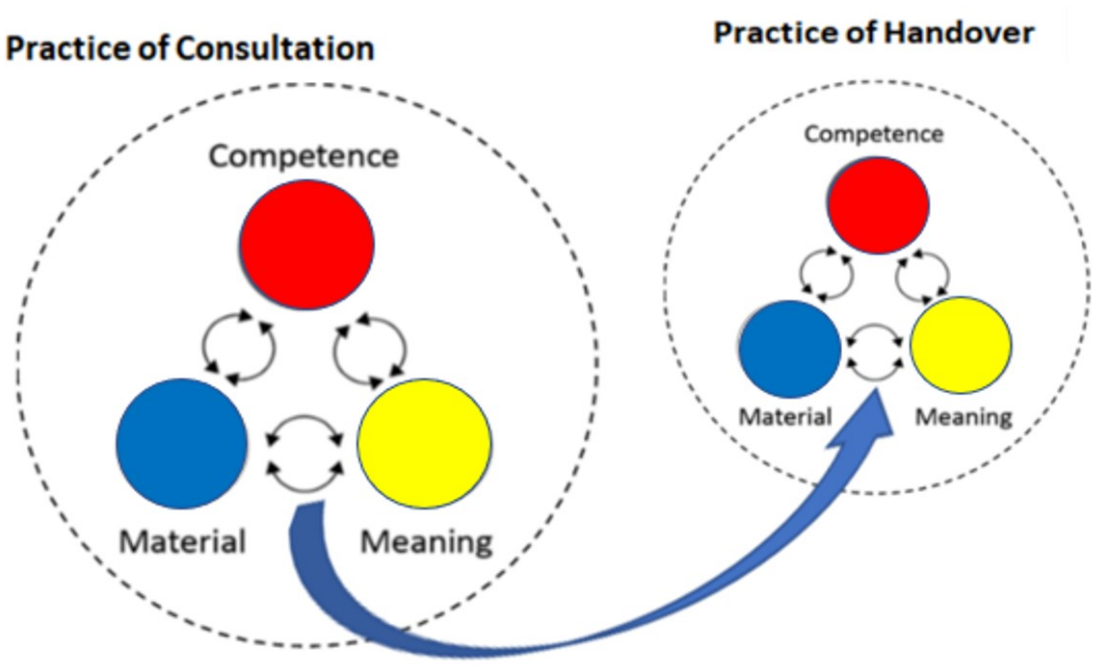


Figure 8.1 Connection within & between related Practices with Medical Student 2 (adapted from Shove, Pantzar and Watson, 2012)

The practice-based approach makes explicit the element of meaning within the practice. The arrows between the elements illustrated within Figure 8.1, signify this connection within and between the related practices of the consultation and the practice of the clinical handover. Medical Student 2 respected the testimony of Simulated Patient 2, and they also respected the

competence of Simulated Patient 2 to make decisions about their practice. This was explored further in the follow-up interview with Medical Student 2.

Time 04:34	**Transcribed data**	**Researcher analysis**
R	Yeah, did you erm, did you struggle with, err, knowing for instance the, the guideline recommendation and what the evidence from that says, versus what the patient, when she was talking about her illness experience of living with it, err, did you find that challenging?	
MS2	Yeah, sometimes.	
R	How, I suppose, how do you, how do you manage that?	
MS2	At the time I would just have a **listen** to what the patient says, and try to have like the best balance, of like, **her** not feeling too upset with the medication, rather than to try to like **make** her **have** the medication.	Space. Testimonial Justice.

Table 8.9 Transcribed data from Interview with Medical Student 2

During the post-consultation interview, Medical Student 2 reinforced the concept of balancing practice to be meaningful for the individual patient. Importantly Medical Student 2 stated that they would act on this information communicated by the patient, and not "*make*" the patient "*have the medication*." Student 2 did not prejudice the credibility of what the speaker said, so enacting testimonial justice to co-produce the performance.The practice had a balance between the elements, with the material aspects of the practice regarding the benefits of treatment of high blood pressure not being privileged, within the performance which still connected with the element of meaning within the practice for that individual patient. Medical Student 2 acknowledged that even with the same material information there would still be variation in practice within and between individual patients.

Time 13:57	**Transcribed data**	**Researcher analysis**
R	And with evidence-based medicine, and with all the guidelines, and with all of this type of information that you get, how **easy** is that to do, when you're dealing with population type information, that does not align with individual patient that's sitting in front of	

	you? I suppose it is just to explore some of these areas and see what the challenges are…	
MS2	It is so hard, to like, when patients from different backgrounds, different populations, different areas, who have different levels of knowledge, different ideas on how much they know and how much they will adhere to it.	Multiplicity. Variation in patient's ideas and competence.
R	Yeah?	
MS2	And it might change from time to time, it **is** really hard.	Temporal.
R	Yeah, it is.	Variation in practice.

Table 8.10 Transcribed data from Interview with Medical Student 2

By contrasting the consultations with Medical Student 1 and Medical Student 2, it helped to further refine the themes. These were the theme of co-producing practice as a sociomaterial performance, the theme of balance between elements of material and meaning, and the theme of space within and between practices. Data from the post-consultation interview with Simulated Patient 2 helped to further explore these themes.

8.3 Post-Consultation Interview with Simulated Patient 2

Whereas the simulated patient from Consultation 1 described the process as feeling "*one way,*" by contrast, the simulated patient from Consultation 2 described the process as a "*positive experience."*

Time 0:00		**Transcribed data**	**Researcher analysis**
	R	This is an opportunity for you to share your feelings of the consultation as you remember it. So, how was the consultation for you?	
0:20	SP2	It was a **positive experience**, and I did feel that that was someone with whom I had had a relationship with, that I would then **trust** the advice that was then given at the end of it.	Connection. Trust.
0:31	R	Mmm hmm?	
0:32	SP2	And I would feel that I could go back, which I think is really important. And one of the things about your health practitioner, is that you want an established	Space temporal. Connection.

		relationship with them, you want to go back to somebody you feel, because you don't have to re-tell the whole story.	
0:50	R	Yeah. So, you said 'trust,' err, what aspects, what made you think of the word trust?	
0:56	SP2	Errrm, she **listened** to me, and she kind of understood the multifaceted nature of my life, that there were different things going on. Erm, and she wasn't trying to give me a linear decision before I had explained some of the things that were important to me. So, I think that was really a, a positive thing.	Multiple practices. Multiple elements. Not tick-boxy. Connect with meaning.
1:21	R	Do you think that is something that is something that can be taught, do you think that is a quality of a person, or do you think that is something the medical school can support?	Connection with teaching practice?
1:28	SP2	I do think that. I do think that is something they can be taught. Because one of the things was, that she created enough space for **me** to be reflective, but at the same time I felt that she was being reflective, as well.	Space. Space to connect.
1:41	R	Okay, And what things, what kind of space?	
1:43	SP2	I think in the **pace** of the conversation was one of them. So, it wasn't like she was firing bullets at me, of facts and information. There was a pace to it. And I felt that she, that there was a fair balance and that I said things and then she said things, and there were pauses in between. Erm, and there was a natural flow to the, there was a point to the conversation. And it was a shared point to the conversation. She wasn't going off in one direction, while I was going off in another.	More than material. Space. Balance. Space. Co-production. Same direction.

Table 8.11 Transcribed data from Interview with Simulated Patient 2

The data from this excerpt of the post-consultation interview with Simulated Patient 2 reinforced the theme of co-producing practice as a sociomaterial performance, the theme of balance between elements of material and meaning, and the theme of space within and

between practices. The simulated patient described the co-produced consultation in terms of the performance going in the same direction.

Time 02:39	**Transcribed data**	**Researcher analysis**
R	Yeah. One thing that has come through, that some of the tutors have said, is that when they think out loud that helps the conversation.	
SP2	Yes. Because that means that, for me that would have helped keep us moving in the same direction together. And you can challenge a little bit of, not that I mean you should challenge a doctor, but you would be reassured that you could correct any assumptions she [the doctor] would be making, and you can say that seems to be right. So yes, that would be helpful.	Co-production. Tick box.

Table 8.12 Transcribed data from Interview with Simulated Patient 2

The comment from Simulated Patient 2 "*you would be reassured that you could correct any assumption she* [the doctor] *would be making*," highlighted the value about being explicit about power imbalances within the consultation. The persistent asymmetry in doctor/patient interaction described by Pilnick and Dingwall (2011) recognises the need for awareness about potential asymmetry within the consultation, and the importance human connection with that patient as an individual, rather than prioritising the material elements and ticking boxes.

Time		**Transcribed data**	**Researcher analysis**
05:40	SP2	I would say that that particular student **definitely** responded on a human level.	Human connection
05:46	R	And what qualities were you aware of?	
05:49	SP2	Erm, like a said before, the pacing and things like, to be honest the quality of the eye contact, **that** was really important, that she was looking at me when I was speaking to her. I found that really reassuring that she was using lots of the non-verbal signals, things like nodding and lots of encouragement for me to go on, they were all there. I have been in other consultations where the person has been looking at the computer, and looking for the computer prompts, about whatever prompts comes up, and that has been less, erm, of a shared experience. I	Human connection Human connection vs connection with other material elements.

		did feel in those circumstances, I was some **body** that they were waiting to figure out which selection they should give me, and not particularly as an individual, rather that I was just a problem to be solved.	Being treated as a material object.
0:50	R	Mmm. There is a lovely quote from one of the volunteer patients who comes in, and she has had experiences with her actual condition, where she feels she has been treated as a number, rather than as an individual. They treat her pain condition to a number, and she has said to them very clearly that "*I am not in pain at the moment, I know my symptoms, that number is within the normal range for me. It might not be within the normal range for your average patient, but for me it is normal*."	Individual. More than just the numbers.
07:29	SP2	Yeah, that is exactly what I mean. To be treated as an individual. And then what happens is that you do not wish to go back to that person, because you don't feel a particular affinity, or trust, or whatever. Then you begin the patient journey or the treatment journey with another person because you think, och, they are not listening to me	Affinity, trust. Listening. Connection.

Table 8.13 Transcribed data from Interview with Simulated Patient 2

The simulated patient described aspects within the consultation which contributed to this human connection, including basic aspects of non-verbal communication such as the importance of eye contact. Overall, the post-consultation interview with Simulated Patient 2 reinforced the theme of co-producing practice as a sociomaterial performance, the theme of balance between elements of material and meaning, and the theme of space within and between practices. Data from zooming out to the practice of Teaching explored these themes further.

8.4 Zooming out to the Teaching Practice

During fieldwork observations of consultation skills workshops, the tutors often highlighted the importance of gathering information about the patient's perspective. The teaching materials included the Calgary Cambridge Guide shown in Figure 8.2. This guide can be considered as a practice-as-entity used within the teaching. The framework includes the

management of material elements in terms of the biomedical perspective and the element of meaning within the patient's perspective.

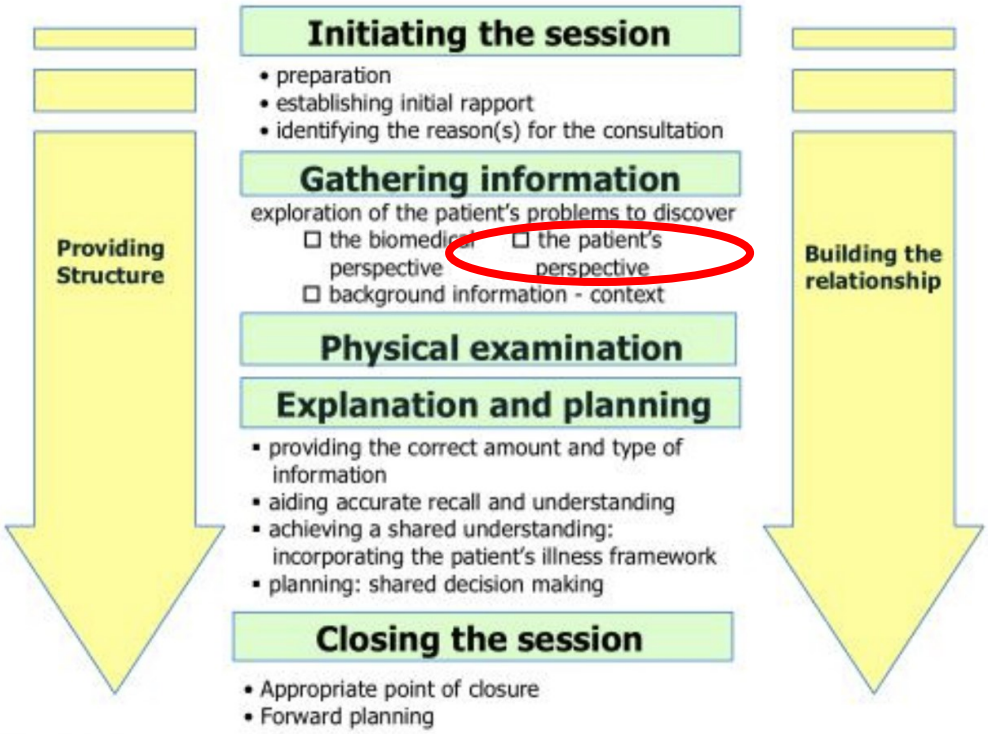


Figure 8.2 Basic Framework of Calgary Cambridge Guide for Medical Consultations (adapted from Kurtz, Silverman and Draper, 2005)

8.4.1 The theme of Co-producing Practice as a Sociomaterial Performance

The themes already discussed within these findings chapters which are related to the element of meaning within the practice, are the theme of meaningful connection within and between practices, and the theme of human connection. The theme of co-producing the practice as a sociomaterial performance can be considered as an overarching theme. These concepts were explored further during the interviews with the tutors.

During fieldwork observations the patient's perspective was often referred to using the acronym "ICE," which relates the patient's ideas, concerns, and expectations (Snow, 2016). For example, Tutor 7 talked about this in their interview, they also talked about the importance of connecting the patient's perspective within the practice of decision-making to co-produce the decision.

Time 37:42	Transcribed data	Researcher analysis
R	You say there is too much material, in terms of too many guidelines, how do you deal with that at a patient level?	
T7	I suppose when we are teaching them to apply some of their skills, talking about medical students, and when we are teaching them to go through history taking and when we get to that ideas and expectations, and we get them to think about how are they going to talk about management and where do we go from here, and how do we ensure that that person is involved in that planning. I suppose that is the bit where we want them to talk about options, and for them to feel like they are central to the decisions that are made. So that decisions are not just being made 'about' them but that decisions are made 'with' them.	Meaning for patient. Patient's practice. Co-production.
R	"No decision about me, without me"	

Table 8.14 Transcribed data from Interview with Tutor 7

The interviews with tutors gave an opportunity to explore how this connection with meaning could be made within the practice of the consultation. The practice of Medical Student 1 was interpreted as being very structured consultation, and had gathered information about the patient's perspective, but they had not then connected this meaning with other elements or practices. As discussed in Chapter 7 the tutors described this as the student being "*tick-boxy*." This contrasts with the practice demonstrated by Medical Student 2 who made meaningful connection within and between practices rather than prioritising the material elements. The contrast between these two consultations illustrated that the checklist approach can impact on human connection. An article written about the gathering of a patient's perspective described the problem of this tick box approach in terms of "an acronym can't build rapport; it's just another checklist" (Snow, 2016, p.3729).

The importance of the connection with meaning from within patient practice was highlighted by Tutor 7.

Time 13:23	Transcribed data	Researcher analysis
R	So, how do you get beyond the checklist?	
T7	Because we want to be able to teach them the basic structure of gathering information, and then I think it is really valuable to think about then, as their confidence builds in a simulated situation, throwing	

	into a scenario where maybe the patient is really concerned about a family member at home, rather than them being concerned about their chest pain they are having and their shortness of breath. Or more concerned about their cat that they have left at home. Throwing that into a scenario and getting a student to **think beyond their checklist** and their structured history taking, to reprioritise what they need to address, "*I can't miss that*." That is real, that is real life, they are not gonna have people with neat issues one problem at a time. They need to be thinking about what matters to the person, they need to be thinking about they are not necessarily gonna have one presenting complaint, they may have five and they need to pick out what one actually is the key priority at the moment, what is important to the person.	Broader related social practices. More than the material link with meaning. Multiple practices, prioritised by meaning for patient.

Table 8.15 Transcribed data from Interview with Tutor 7

Tutor 7 had explained the difference, as thinking beyond the checklist. They described the difference between ticking the box and connecting with person as an individual. They highlighted the importance of prioritising the practice in relation to what matters to the person. They also highlighted that the element of meaning may be within a related practice. Later in the interview with Tutor 7, they highlighted the need to explicitly connect with what was important for the patient. They emphasised the need to be **explicit** with connection, to explicitly connect with elements within patient practice, including the meaning of the practice for that patient.

Time 42:07	**Transcribed data**	**Researcher analysis**
R	So, for me in an OSCE, you would tick that they [Medical Student 1] had explored the [simulated patient's] ideas, concerns, and expectations, but,	
T7	but it depends on how they interpret that, because, I have found in some situations I have said, "*So what do you think about this person? You have come to this bit now, where you are thinking about ideas, concerns and expectations, and feelings and effect on patient s life. What do you think that is? What information have you got?*" and they will say "*Well actually listening to them, this has come through*." So,	Co-production. Meaning. Explicitly connect with elements within

	they have picked up things, but have they actually verified it with the person?	patient practice.

Table 8.16 Transcribed data from Interview with Tutor 7

Although the connection with meaning from within patient practice has been highlighted as important, the tutors also emphasised the need for a balanced approach.

8.4.2 The theme of Balance Between Elements of Material and Meaning

The theme of balance between the practice to be meaningful for an individual patient was also found within the interviews with tutors.

Time 22:58	**Transcribed data**	**Researcher analysis**
T10	You can have a patient that is refusing to take their medication, and your job is to try and explore that, and it may be that the appropriate thing to do, for that consultation is to accept that for that patient, that is their decision, it may not necessarily be guideline choice, but it is that patient's choice.	Balance. Explore meaning. Epistemic justice.
R	Do you think that is something the students struggle with?	
T10	I think we teach them well enough that I think they are able to respect that. And they are able to respect autonomy. And the ethics stuff, respecting autonomy I think we do well, and the series of lectures, and the tutorials, and the guided studies. I think that we are doing the science stuff, we are doing the guidelines and the perfect world thing, but I think it is the ethics is one of the areas where we explore the realistic aspect of it, and the respecting people's autonomy, and respecting their decisions, I think we do it well actually, certainly better than I had as a medical student. I think we do it well.	Balance based on ethical principles.

Table 8.17 Transcribed data from Interview with Tutor 10

When balancing the elements within practice, this tutor highlighted the incorporation of ethical principles when making connections within practice. This will be discussed in more detail in the next chapter relating to competence.

So, balancing and fine-tuning a practice for an individual patient is an ongoing caring process. This was reinforced by the following excerpt of data from Tutor 8, who acknowledges that

material is important but not more important than the element of meaning within the patient's practice.

Time 14:24	**Transcribed data**	**Researcher analysis**
R	So how do you get beyond the checklist?	
T8	How do you address that? I think we have a duty to inform, and to inform not by overloading with facts, but clear simple advice, I suppose in some situations people may feel patronised, so you have got to judge who you are speaking to. But we need to ensure that the person does know about the thing, that doesn't mean they have to agree with you, and it doesn't mean we just have to list things off, tick-box we have done our bit. It's a kind of discussion that sometimes we don't have enough time for, but to really tease out what they understand, and what value they place on it, and then it is not for us to make people feel bad or stupid for what they decide, but you can at times, if you have laid the foundation in terms of the relationship, you can then say to somebody, we may have to agree to disagree on that thing, but let's find a starting point, it may simply be let's leave it for now but maybe we will come back in six months and we can talk about it again, or come back to me if you want to discuss it further. So, you are not saying yeah, that is fine. And you are acknowledging that they have the right to make their decision for their lives, and it is not your pride, or your guilt, or your negligence provided you have informed.	Material is important. Balance. Build the relationship. Meaning for that patient. Epistemic justice. Connect with future practices.

Table 8.18 Transcribed data from Interview with Tutor 8

So, the performance of the consultation needs more than just the material, and needs more than just ticking boxes, to provide patient care. It requires space within the consultation to connect with the element of meaning within the patient's practice, and space to connect with future practices. The theme of space within and between practices is discussed next.

8.4.3 The theme of Space within and between Practices

By analysing how connections were made with elements within practice, this highlighted the importance of allowing space to connect with elements within and between practices. During fieldwork, the practice of creating space between practices by making connections with practices in the future was common in consultations observed. For example, in Table 8.18 the

tutor explained that they invite patients to come back if they want to discuss it further. Other examples from fieldwork were related to future consultations for monitoring, treatment or if the patient's condition changes. Tutor 8 talked about the importance of creating space to explore options.

Time 22:52		**Researcher analysis**
T8	And asking for the patient's ideas, because they may actually be quite good, or they might be completely barmy, and you want to cover why I think they are barmy ideas.	Balance material and meaning.
R	"Doctor Google" and all that. What other kind of things, what are the benefits from doing that?	
T8	The benefits are you are disciplined to think through what the options are, instead of channelled into one course, and that immediately makes you more open to hear things from the patient, and the patient perhaps more open to share with you why, or what they are thinking. It gives, if the patient then knows you have got what they have been thinking, you are in much more of a position to, even if you don't change your mind, you might phrase it differently, which makes it more acceptable maybe to hear. Rather than the doctor just saying this, that, and the next thing, I'm just going to do this, and I don't care what they think.	More Space. Space to connect. Care.

Table 8.19 Transcribed data from Interview with Tutor 8

This creation of space within and between practices, allows the patient time to reflect upon the material or meaning elements within practice, time to allow the patient to make these connections.

8.5 Summary of Chapter 8

This chapter zoomed in on another single consultation between a medical student and a simulated patient. The consultation chosen for this chapter exemplified **how** the medical consultation can be understood as a co-produced social practice. Analysis of this consultation showed **how** meaningful connections made a more patient-centred consultation, which contrasted with the consultation in the previous chapter which was chosen as a more typical student-centred consultation.

The themes discussed in Chapter 7 were refined further within this chapter. The theme of co-producing practice as a sociomaterial performance incorporated the themes relating to carrier of practice, meaningful connection within and between practices, and the theme of human connection. The theme of balancing the practice to be meaningful for an individual patient, incorporated the theme of meaningful connection, and human connection. By exploring the concept of balance, it highlighted that although the material element is important, it is not more important than the element of meaning within the practice. This includes consideration of epistemic justice within the practice. By analysing how connections were made with elements within practice, this showed the importance of allowing space to connect with elements within and between practices. This created space within and between practices, to allow the patient time to reflect upon the material or meaning elements within practice, and time to allow the patient to make these connections. Importantly it highlighted the importance of being explicit about assumptions made within the practice.

This chapter concluded with the role of supporting critical reflection within practice towards the development of competent practice. Supporting critical reflection, by connecting with all elements within and between practices is discussed next, within the third and final findings chapter about competence and practice.

Chapter 9 Findings: Competence and Practice

The exploration of the empirical findings described in Chapters 7 and 8, used the elemental approach within Social Practice Theory (Shove, Pantzar and Watson, 2012), to illustrate the sociomaterial nature of the practice performed between the medical student and the simulated patient. These findings highlighted the role of connections between the elements within practice, with a focus on the connections between the material element and the meaning element of the practice. This chapter builds on this approach, to explore in more detail the third element within practice, this element is competence. This helps to explore what we mean by the concept of the *right* answer.

The holistic model of competence (Figure 4.4, p.66) described by Le Deist and Winterton (2005), provides structure to present the findings in this chapter. Exemplar empirical findings show how the elements of competence and material connect within the practice, to illustrate cognitive competence and functional competence. Then the relationship between the elements of competence and meaning were used to illustrate social and ethical competence, before meta-competence was considered as an overarching aspect of competence.

9.1 Cognitive Competence

As described in Chapter 4, cognitive competence includes knowledge about underpinning theory and concepts, as well as informal tacit knowledge gained experientially. Cognitive competence incorporates knowledge (know-what), underpinned by understanding (know-why).

9.1.1 Zooming in to Cognitive Competence within the Practice of Medical Students

Within this research, all the medical student participants had received, in advance, a summary of information about treatment for high blood pressure based on the teaching and lectures they had already received within the Medical School. Zooming in to explore the element of competence, the medical students were asked questions to assess their knowledge about this information prior to their consultation with the simulated patient. All students demonstrated cognitive competence regarding this knowledge. They knew what the blood pressure target levels were, they knew what the recommended medications were, and they knew that the purpose of reducing blood pressure was to reduce cardiovascular risk. They also knew that lifestyle modification reduced cardiovascular disease risk through changes related to alcohol, diet, and exercise.

9.1.2 Zooming in to Cognitive Competence within the Practice of Simulated Patients

Within the scenario used for this research, the simulated patients were trained in advance to be well informed about the material information relating to treatment of high blood pressure, and so had cognitive competence regarding this. The simulated patient also had cognitive competence about the related practice of reducing cardiovascular disease risk by means of lifestyle changes related to alcohol, diet, and exercise.

9.1.3 Zooming out to Cognitive Competence within the Practice of Teaching

By following the material element within and between practices, it enabled the research to zoom out to evaluate how this element related to cognitive competence and the related practice of teaching. This material element, the specific treatment recommendation for high blood pressure, was followed through fieldwork observations and interviews with medical school tutors. This material element has been written within a flowchart format from expert bodies such as the British Hypertension Society (Figure 5.3, p.94). This flowchart can be considered to form a practice-as-entity. This practice-as-entity has been used within this medical school, for example incorporated into lectures for the medical students. This material can also form the basis for exam questions to assess cognitive competence of the students about blood pressure treatment targets and blood pressure lowering medication choices. The practice of assessment is related to the practices explored within this research. Although the practice of assessment is out-with the scope of this thesis, it was still highlighted by many of the tutors during the interviews as a key driver for student learning with a focus on the scientific underpinning:

> *They really need to have a scaffolding for the evidence-based medicine. They need to know what the guidelines say or at least how to find them, because we are not expecting them to memorise them. But say with respect to drug therapy they should understand that there is some sort of stepwise process involved, and they know they will be assessed on that. So, they are very much working towards the science of the clinical guidelines, and things like that, so that is what they tend to study most.* (Tutor 6)

The tutors also highlighted the challenge of staying up to date with the volume of the evidence base available. The following statement from Tutor 10 encapsulated the frequent comments from the tutors of being overwhelmed with the guidelines:

> *It is not just one guideline per patient, they often have multiple different problems and there is lots of different guidelines that could potentially be applicable, and where do*

> *you start? What do you prioritise? And actually, will the patient actually take the medication as prescribed at the end of the day? Probably not in a lot of cases. That is my thoughts.* (Tutor 10)

A common response that was highlighted by the tutors during the interviews was related to the temporal nature of the knowledge base. Tutor 2 provided a typical remark relating to knowledge not being fixed, that it changes over time:

> *Yes, this is the evidence base as it stands at the minute, but if you look back over the last twenty years, ten years ago the evidence meant we were telling patients to do that, now we are telling them to do the opposite. The evidence is not 100% certain.* (Tutor 2)

This point was exemplified during the research by the revision of the guideline of interest for this study. The evidence base was reviewed, and an updated guideline was published at the end of August 2019 (NICE guideline NG136). This was after the students had participated in the research for this thesis. The updated guideline recommends that drug treatment should be considered if blood pressure is raised regardless of cardiovascular risk.

Overall, the tutors stated that the evidence base was an integral part of their practice, and that cognitive competence is important, but it should also be used skilfully:

> *My feeling is they have got to be delivered the scientific facts. I think you have got to have that, as a tramline as it were, and in your head as a framework to be able to fall back on the evidence base. Doing the best you can statistically, and medicolegally which is a big factor in the whole thing. But I think it is maybe, that at some point in that medical training you have got to allow them to realise, yeah you have got this framework, but you have also got to try and be fluid with it.* (Tutor 3)

So, as well as cognitive competence regarding knowing about that material element, functional competence is knowing what to do with that material and also how this relates to other elements within that practice and between related practices. The importance of functional competence within the practice of the consultation is discussed next.

9.2 Functional Competence

As described in Chapter 4 (p.66 of this thesis), functional competences (skills or know-how), are those things that a person who works in a given occupational area should be able to do [and] able to demonstrate. The scenario for this research involved a consultation regarding management of high blood pressure. By focusing on one material aspect of the practice, the

treatment recommendation from the clinical guideline, this highlighted functional competence within the practice carried by the student in terms of how they used that information. Functional competence within this scenario could include consultation skills, the skill of measuring a blood pressure, or the skill of calculating the cardiovascular disease risk of a person, taking into consideration things such as their blood pressure, whether they smoke, or other morbidities.

9.2.1 Zooming in to Functional Competence within the Practice of Medical Students

The consultations already discussed within Chapters 7 and 8 are useful to illustrate functional competence. As discussed in Chapter 7, Medical Student 1 performed a very structured objective history taking throughout the consultation, with a focus on the material aspects. This can be interpreted as Medical Student 1 demonstrating functional competence within the performance about incorporating the material element regarding the practice of blood pressure management.

The medical consultation follows a recognisable structure regarding gathering of information. This structure was often referred to by tutors during observations of teaching sessions and could be considered as a practice-as-entity. The basic structure of medical history taking is illustrated below, with examples from the scenario used for this research (Figure 9.1). The transcripts of the consultations were coded with these components of basic history taking constituting non-thematic contextual information. When the transcription of Consultation 1 was coded, the structure of the consultation mapped directly onto this order of the basic structure of medical history taking (Figure 9.1). This coding showed that during the consultation Medical Student 1 made strong connections with this structure, even politely interrupting the patient to return to the structure to privilege the material information within the practice of the consultation. Consultation 1 was interpreted as being a technical-rational consultation which prioritised the material elements within the practice. By contrast Consultation 2 did not follow such a rigid structure. Consultation 2 still covered all components of the history taking but was flexible with the order, and without interrupting patient. So, both consultations could be interpreted as illustrating functional competence of the medical student within the practice of the consultation in relation to the material element of the treatment of blood pressure. The practice-as-entity of the basic history taking structure did not need to be adhered to rigidly for a successful performance.

Components	Content	Example from research scenario
Presenting complaint	Reason for consultation. Could be initiated by patient or by practice for check-up.	e.g., Annual recall for nurse appointment at blood pressure clinic to check response to treatment.
History of Presenting complaint	Gathering of relevant information about presenting complaint.	e.g., Diagnosed high blood pressure 1 year ago.
Past Medical History	Gather information about other medical problems (if any).	Nil of note. Never been in hospital or outpatient.
Drug History	e.g., List of drugs currently taking (including dosage and how often they are actually taking them. Also, any allergies.	e.g., Started Losartan two 25mg tablets daily (not taking regularly). Had side effects from previous tablets (Ramipril). No known allergies.
Family History	Patient's family history e.g., diabetic, cardiac, genetic.	e.g., Mother well, father died from heart attack a couple of years ago but "Rubbish lifestyle."
Social history	Background information about patient. Occupation, caring responsibilities. Drinker, smoking and alcohol, recreational drugs.	Work part time in bank. Non-smoker, alcohol normal (reduced since hypertension diagnosis). Good diet. Not overweight.
Systems Enquiry	Gather short amount of information regarding the other systems in the body not covered in the history of presenting complaint.	No other medical history.
Patient's Ideas, concerns, expectations	What does the patient expect/ hope for from the consultation?	e.g., Simulated Patient's notes for scenario.

Figure 9.1 Basic Structure of Medical History Taking and Examples

If the related practice of cardiovascular disease risk management is then considered, there is a contrast in how the functional competence of the consultation is interpreted. Consultation 1 focused on connections with the material element regarding blood pressure management,

whereas Consultation 2 also incorporated material elements within the broader practice of cardiovascular disease risk management. For example, the focus for Consultation 1 was regarding blood pressure treatment, whereas Consultation 2 also explored diet and exercise. Also, with the practice of the SBAR handover Consultation 1 focused on blood pressure treatment, whereas Consultation 2 also explored diet and exercise. So, depending on the practice being considered the functional competence of these medical students could be interpreted differently, as Medical Student 2 also demonstrated functional connections within this broader practice. The consultation with Medical Student 2 also provided an illustration of functional competence to recognise the temporal aspect/context of the practice, to connect with related practices over time and space. Thus, consultations are not an isolated practice but was situated within an ongoing series of related practices.

9.2.2 Zooming in to Functional Competence within the Practice of Simulated Patients

Ultimately, the practice of managing high blood pressure, on a day-to-day basis, rests with the patient as they either perform the practice of implementing the treatment, or not. So functional competence is important regarding the practice of the patient, as well as the practice of the student. Within this scenario the simulated patients have cognitive competence about the material aspects of practice, but in terms of functional competence they do not connect with the practice of taking the tablets but connect instead with the practice of lifestyle modification to reduce their cardiovascular disease risk. The post-consultation interview with Simulated Patient 1 further explored the connection between material information and competence within practice.

Time		**Transcribed data**	**Researcher analysis**
13:28	R	Okay. So, errm, I suppose other aspects were, if her take home message was that "*You just need more information*," and "*You just need to trust in the medical information*." Do you think that that would be a constructive way forward for you?	
	SP1	Yeah. In which case I feel like me and them have very different definitions about what counts as medical expertise. Because, as I was saying before, for me being an expert means knowing the stuff, but also knowing how to apply that knowledge, to each and every case, which is always going to be different in however small a degree it is going to differ somehow, and you need to be able to do that, and that is a huge part of being an expert. But if	Cognitive competence of student. Functional competence of student.

		they are not doing that, then they are not behaving like an expert, and clearly, they are just viewing the first part of just having the knowledge, as that's being the expert. And I am like, no, the **application** of that also comprises expert practice. Which is really weird, because what I think they have got to do is recognise that the patient is the **only** expert in their own experience. So, in that scenario, I was the patient, so **I** am the expert in how these drugs are affecting me, in what this high blood pressure actually feels like, in what my lifestyle habits are, and how that is all linking together, and how I am feeling and what symptoms I am experiencing. She is not the expert; she can't be because she is not me. I am the expert of that. So, when you are then talking about medical expertise and linking it all together, she has to recognise that, and take on my expertise, in working out how to apply her medical knowledge as well.	Cognitive and functional competence of patient. Social competence connecting with practice of patient. Meta-competence.

Table 9.1 Transcribed data from Post-Consultation Interview with Simulated Patient 1

This was interpreted as illuminating that cognitive competence, with regard the material elements of practice, is important but also requires functional competence. As stated above, ultimately the practice of managing high blood pressure, on a day-to-day basis, rests with the patient as they either perform the practice of implementing the treatment, or not. Therefore, the performance needs to incorporate social competence to connect with the practice of the patient, because as described by Simulated Patient 1, the patient is the **only** expert in their own experience.

9.2.3 Zooming out to Functional Competence within Teaching Practice

Zooming out to the observation of the teaching practice allowed further investigation of the connections with the element of competence within the practice. This was relevant to the functional competence of **how** the medical students used knowledge in their practice during a consultation.

During the interviews, all the tutors described information gathering within the consultation, to be more than just ticking boxes. As described in Chapter 7, just ticking the boxes, and prioritising the material within the practice, results in a "technical-rational consultation". Many

of the tutors described the skill involved with applying an evidence base which was derived from population data when used for the care of an individual patient:

> *Whether we are considered to be doing a good job or not, is measured against the guidelines, which are statistically based across a population, and don't match the individual, who may have different priorities or different issues that are more important for them.* (Tutor 8)

The element of material information within the practice needs to be used skilfully. The material element within practice changes over time, but it can also be interpreted differently within different contexts. Many of the tutors described the variation in how the evidence base can be interpreted. For example, the American Hypertension Guidelines interpret the same evidence-base differently to produce different guidelines with different treatment thresholds, and clinical performance and quality measures (Whelton et al., 2017; Casey et al., 2019). The absolute evidence from the clinical guidelines needs to be considered in relative terms for each individual patient. This was described in many ways by all of the tutors but is summed up by a statement from Tutor 2: "*What you've got to teach the students, is that medicine is fluid. It is not black and whit*e."

So functional competence within a practice, which recognises the different applicability of the material element for an individual patient, can lead to variation in how evidence is used. Functional competence may also be considered in relation to the connection with the element of meaning for an individual patient.

Tutor 8 described the importance of not just having the knowledge but also having the ability to communicate that knowledge in a way that was meaningful to the patient, towards co-producing an action plan:

> *Our job as a professional is to have the knowledge to make the objective assessment, to provide the information in a way that is comprehensible and meaningful to that patient, and then to engage with them in planning the action.* (Tutor 8)

The skill involved with communication with an individual patient was also emphasised by Tutor 8, highlighting the difference between patient care and patient choice.

> *Just going back there a bit in the question of patient choice, it is vital how we express that* "it is your choice,*" because your choice can be "*I am enabling you to be in control of your life, and your decisions, and I am not judging you for it," *or it can be "*humph, it is your choice" *dismissive, condemnatory, judgemental, and like I do not really care you*

can do what you like. It really has to be an affirmative, understanding it is your life, and if this is what is best your you at the moment then let us go with that. (Tutor 8)

This balance between patient care and patient choice was described by Tutor 10 in terms of responsibility:

*It is almost as if we are passing on too much of the responsibility to the patient. That we are somehow interpreting being patient-centred, and having patient partnership, as just disowning any of our responsibility. And I think that is wrong, I think we do need to still take responsibility for decisions. Yes, it is a partnership, it is a negotiation, but I don't think we can just say to the patient well there are all these options available, it is up to you to decide. As a clinician, if it was appropriate, I will say to the parent, for example, "*If it was my child, this is what I would be thinking of doing, because, I am aware that there are other ways of doing it, and I am aware that if you speak to a colleague, they might see it in a different light, but if it was my child, and knowing what I know, this is what I would do.*"* (Tutor 10)

Tutor 10 also highlighted how practices could be connected over time, to illustrate how functional competence can also include the skill creating space to connect practices over time.

..it is about giving them some choices, and giving them some time to think about it, and giving them some information away with them so they can actually genuinely come back, and time to change their mind if they want to. (Tutor 10)

Overall, the interviews with the tutors described functional competence in terms of the importance of connecting with the practice of the individual patient, in particular the element of meaning within the patient's practice. From this perspective the incorporation of meaning from individual patients will result in variation in the way that knowledge is used in practice. The next part of this chapter builds on this exploration of social competence and how this relates to the incorporation of meaning from within the practice of patients.

9.3 Social and Ethical Competence

The following extracts of data were chosen to illustrate social and ethical competence within the performance of the consultations. Social competence can include personal and ethical competencies. Personal competency (behavioural competencies, know how to behave). Ethical competencies can be defined as the possession of appropriate personal and professional values and the ability to make sound judgements based upon these in work-related situations (Cheetham and Chivers, 1996).

9.3.1 Zooming in to Social and Ethical Competence within the Practice of the Consultation

The consultation with Medical Student 4 exemplifies the intersubjective nature of the medical consultation and the role of connecting with meaning within the practice, to illuminate the concept of social competence and ethical competence.

Zooming in to Social and Ethical Competence within the Practice of Medical Student 4

The consultation with Medical Student 4 was like the consultation with Medical Student 1 in terms of the student missing connection with meaning from within the simulated patient's practice. During the summary at end of consultation, Simulated Patient 4 had been explicit about what the practice of taking the tablets meant to her, and she had been explicit about her problems with the practice of taking the tablets.

Time		**Transcribed data**	**Researcher analysis**
8:34	SP4	Well, I was given the figures, and you know they show the statistics of improvement. Yeah, and I work in a bank, so I am used to figures. So that was okay, but for me it was miniscule, you know the benefit is so miniscule so that it really doesn't in my mind, justify taking something that is going to make me feel worse, on a daily basis.	Patient competent regarding material and meaning of practice of taking tablets.
8:56	MS4	Mm hmm. Okay. Err, not even trying a different class of drugs that might not have the same side effects?	Material.
9:02	SP4	No. No. Because I wouldn't know until I tried them. I wouldn't know about the side effects until I tried them so honestly, I wouldn't no.	Patient explicit about blocking the practice of taking different tablets.

Table 9.2 Transcribed data from Consultation 4

At the end of Consultation 4, the simulated patient was explicit about the element of meaning within their practice of taking the tablets. The benefit for them as an individual patient, from taking the tablets was not worth the harm caused in terms of the side effects. Medical Student 4 concluded the consultation with Simulated Patient 4 by confirming that they would include this element of meaning within the practice of the handover to the GP.

Time		Transcribed data	Researcher analysis
11:11	MS4	So, when I pass this information along to your GP, I will let him know that you are a little reluctant to trying a new medication.	Student explicit regarding communicating element of meaning.
11:16	SP4	Not a little, a lot [laughing].	Patient explicit.
11:18	MS4	Okay [laughing], err, but you will consider other lifestyle changes?	
11:23	SP4	Oh yeah.	

Table 9.3 Transcribed data from Consultation 4

Despite these explicit statements about connecting the element of meaning within the practice, these were **not** then communicated by Medical Student 4 during the related practice of the SBAR handover. This was explored further during the post-consultation interview with Medical Student 4.

Time		Transcribed data	Researcher analysis
2:38	R	Okay, so did the patient have any concerns?	Explore meaning from within patient practice.
2:39	MS4	She did not have any concerns or expectations, generally speaking, but I think it would be a good idea to explore further lifestyle options, and maybe try to persuade her to take a calcium blocker as well.	Not discussed during consultation. Not co-produced with patient.
2:54	R	Okay, so, do you think she would be likely to… do you think she would be likely to take more prescription?	Explore meaning.
3:00	MS4	Errm, I think, I think not, personally. Err, err, because, because she doesn't see symptoms, from her blood pressure.	Response was regarding material aspects rather than meaning aspects.
3:10	R	Okay?	
3:11	MS4	She saw where she is on the graph, as she explained it. But to her erm, the side effects of the meds outweigh the risks of the high blood pressure. So, I am not sure that she completely understands what hypertension would do.	Competence. Material balance with meaning.
3:24	R	Okay?	

3:25	MS4	So, I think she needs to either, this is going to sound horrible, but I think she either needs to be persuaded and convinced that this is an actual risk. So maybe even start, I don't want to say educating, but I think someone need to explain it in more detail, how hypertension could affect erm, a person, at that age especially, will scare them into taking the meds.	Epistemic injustice. Scare patient into practice.
3:46	R	So, the things that you think she would be up for are the lifestyle changes, and she is happy to come back for ongoing review with us.	Connect with future practice of patient.
3:55	MS4	Yeah, she is happy to talk with doctors and nurses, and with med students. Erm, and she is very happy to consider lifestyle changes.	
4:02	R	Okay?	
4:03	MS4	But she said she is very reluctant to trying new meds, which I think as a last resort, she could be scared into concordance with.	Prioritise material over meaning within patient practice.
4:14	R	Okay, okay, so we can, err, I will follow that up with her and make sure she is on the recall register.	
4:21	MS4	Yeah. If we find a way to convince her to try just with a small dose of like a calcium channel blocker, that she has not been on before, that may make a difference.	
	R	Okay.	Close of consultation.

Table 9.4 Transcribed data from Post-Consultation Interview with Medical Student 4

This extract was coded as illustrating epistemic injustice to reflect the lack of credibility that the student demonstrated regarding the patient's capacity to know about the practice of taking the tablets (this was discussed in Chapter 4, with reference to Fricker, 2007). Within the scenario used for this research, the simulated patient was cognitively competent regarding the practice of taking the tablets. As described in Chapter 4, beneficence is defined as being determined by the autonomous patient him or herself (Gillon, 1994). But Medical Student 4 prioritised the material element from within the medical practice rather than the meaning

element from within the patient's practice, this was interpreted as the student disregarding this patient in their capacity as a knower. Medical Student 4 had suggested providing further material information to *scare*, or *persuade*, or *convince* the patient into the practice of taking the tablets. Medical Student 4 did not demonstrate ethical competence. Medical Student 4 had prioritised the medical practice rather than making connections with the patient practice.

Zooming in to Practice of Simulated Patient 4

The post-consultation interview provided an opportunity to further explore with Simulated Patient 4 whether different delivery of material would vary the practice.

Time		**Transcribed data**	**Researcher analysis**
11:11	R	So, within the consultation you emphasised your resistance to taking any more tablets. Do you think you could be scared into taking more tablets?	
11:16	SP4	No. The numbers that I saw would not scare me into taking the tablets. The side effects make it **more** scary to take them than not. I made that clear to the student. They can't have missed me telling them what I thought [laughing].	Patient explicit. Balance of meaning and material.
11:18	R	Okay [laughing].	

Table 9.5 Transcribed data from Post-Consultation Interview with Simulated Patient 4

The material element of the numbers about the potential benefit of treatment were important to the patient's practice, but **not** more important than the meaning element within their practice. Ultimately the practice of taking the tablets is carried by the patient. Thus, highlighting the importance of connecting with both the material and the meaning elements within the practice carried by the patient. The student did not co-produce this consultation with the simulated patient. Medical Student 4 did not incorporate the element of meaning from within the practice of the patient and so did not recognise the autonomy of the patient within the practice. This was interpreted as **not** demonstrating ethical competence, as autonomy is one of the four pillars of medical ethics (Gillon, 1994).

This extract of data illustrated the importance of connecting with meaning element within practice to support ethical competence. The next part of this chapter will continue to explore social competence within the performance of the medical consultation, and the need to

balance the connection between material element of practice **and** the meaning element within practice.

9.3.2 Zooming out Social and Ethical Competence within the Practice of Teaching

Zooming out to the practice of teaching allowed further investigation of the connections with the element of competence within the practice. The following extracts of data were chosen as relevant to social and ethical competence. Within the practice of a consultation the element of material is important, but not more important than the element of meaning. The following extracts of data were chosen because they illuminate the importance of connections with the element of meaning for ethical competence.

For the observed teaching sessions, most of the support provided by the tutors was to encourage the students to make stronger links with the element of meaning from within the practice of the simulated patient. During the interviews with tutors, a recurring theme was the tutor's frustration when the students did not respond to patient cues, or when the students gave priority to the material element within the practice. The following comment was typical of the comments from tutor interviews:

> *Checklists give security, that we are not missing something.* ***But they can cause you to miss the most important thing, the human being.*** *Because once you start teaching checklists, people start to apply it. Any walk of life. "*Oh, there is a checklist, that means I must use it, because if I don't, I will be doing something wrong*." Whereas your checklist is something to put in the back of your brain, that as you are talking to a person, yes you can tick things off in the back of your brain. But they don't ask the question, "But what does it mean? What does it mean to my patient?"* (Tutor 2)

The problems with the tick-box approach by students were highlighted above in Chapter 8 (p.165 of this thesis). When the tutors were asked about teaching approaches to overcome the tick-box approach by students, their responses incorporated abstract terms such as supporting the students to "build rapport" or regarding "empathy." When asked to elaborate upon this the tutors would often respond by talking about supporting the students to respond to patient cues. One of the most comprehensive responses was from Tutor 8:

> *I think we have a duty to inform, and to inform not by overloading with facts, but clear simple advice, I suppose in some situations people may feel patronised, so you have got to judge who you are speaking to. But we need to ensure that the person does know about the thing. That doesn't mean they have to agree with you, and it doesn't mean we just have to list things off, tick-box we have done our bit. It's a kind of discussion*

that sometimes we don't have enough time for, but to really tease out what they [the patients] *understand, and what value they place on it, and then it is not for us to make people feel bad or stupid for what they decide, but you can at times, if you have laid the foundation in terms of the relationship, you can then say to somebody, we may have to agree to disagree on that thing, but let's find a starting point, it may simply be let's leave it for now but maybe we will come back in six months and we can talk about it again, or come back to me if you want to discuss it further. So, you are not saying yeah, that is fine, and you are acknowledging that they have the right to make their decision for their lives, and it is not your pride, or your guilt, or your negligence provided you have informed.* (Tutor 8)

This response from Tutor 8 has been discussed above (Chapter 8.4.2) to illustrate balancing the material element and the meaning elements within practice. It has been included here again to illustrate ethical competence within practice in terms of how explicit it is about respecting patient autonomy.

Analysis of the fieldwork observations of teaching practice were frequently related to supporting the students regarding social and ethical competence. The interaction described below, from fieldnotes from an observation of workshop session with Tutor 9, was a typical example of a tutor supporting the social and ethical competence within the practice of the medical students. The feedback was from the tutor to one of students after their interaction with a simulated patient during a consultation skills workshop.

Two sides of the same coin

Fieldnotes from observation of workshop session observing Tutor 9	**Researcher analysis**
Tutor: That phrase worked really well: "*What have the doctors told you already about the condition?*" That was a good open question. So, for the next bit. You've got some great stuff about the disease, but what about that patient? That person? The information you've gathered, how does it all relate to that person sat in front of you?	**What went well:** Good exploration of competence regarding material. What reflecting upon, balance of material versus meaning. **Even better if:** Explore more about meaning for individual patient. Human connection?

It's like you have done half of the consultation so far. Now you need to go back and do the other half. It's like **two sides of the same coin**. Need both. Let's think through some of the cues that the patient shared during that section, what were their ideas, their concerns…Let's pick up on those cues… **Student a:** One of the students mentioned a comment/cue from the patient about their feeling of embarrassment about having the condition and taking their medication (insulin injection for diabetes treatment). That student admitted they hadn't stopped to think about that before. **Student b:** Another student shared their own experiences of being a patient, in particular when they felt that the doctor was just working their way down their list of questions rather than actually trying to find out what it was like for them as a person living with that condition: "*He was just not interested in **me***."	Creating space within practice for supported critical reflection. Balance. Supporting critical reflection. Sociological imagination. Responding to patient cues. Human connection. Exploring different options. Multiple practices. Engagement with views of the 'other.' Exploring uncertainties within the classroom – trust in tutor, connection with tutor. Practice of teaching. Connection with meaning. Feedback supported reflection-on-action. Student as teacher. Lack of human connection.

Figure 9.2 Fieldnotes from Workshop session observing Tutor 9

The interaction described within Figure 9.2 was a typical example of a tutor supporting the social competence within the practice of the medical students. The example highlights the importance of feedback to support the connections within and between practices. The feedback followed the usual format of *what went well* within the interaction, followed by suggestions about how to continue with *even better if*. The tutor created space within session by pausing the consultation to reflect on action. The tutor supported the student to critically reflect upon the practice. The tutor supported the student to reflect upon both the element of material within the practice and the element of meaning within the practice. The importance of incorporating the element of meaning from within the patient's practice was emphasised by

this tutor as being the other half of the consultation. By supporting the student to connect with meaning from within the patient's performance this supported the social competence of the Medical Student to co-produce the consultation with the simulated patient. By highlighting the balance between the meaning element and the material element and describing them as "*two sides of the same coin*" to not prioritise either element over the other, the tutor also supported the ethical competence of the medical student.

The tutor supported the competence of the medical student to connect with the element of meaning within the practice of the simulated patient. Figure 9.3 provides an illustration of the connections of elements within and between practices.

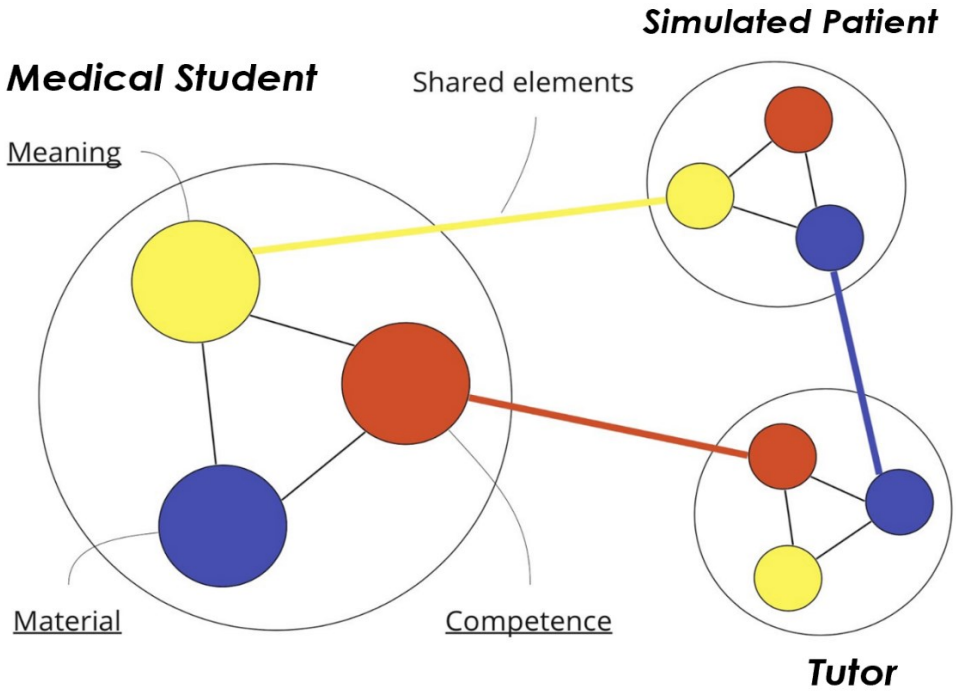


Figure 9.3 Connections Within & Between Practices (Adapted from Hui, Schatzki, Shove 2017)

During the conduct of this research, it was not until the write-up stage of the thesis that the use of the pronoun "*we*" by some of the students was recognised. For example, Medical Student 8 used the pronoun "*we*" both within the consultation and during their SBAR handover. The significance of the use of this pronoun by Medical Student 8, to describe the performance within the consultation, emphasised the social nature of their co-produced practice. This prompted checking of the data from within other consultations, for use of the pronoun "*we*." Other students who had also used the pronoun "*we*" had also had their practice coded as demonstrating social and competence. This was interpreted as an indication of co-production of the performance.

If there is no connection between these practices, then the consultation will just be co-location of different practices rather than a co-produced performance. Tutor 5 described the fundamental aspect of this connection was related to the student listening to the patient:

> *By Year 3, the students, on the whole, are amazing in terms of being able to take a history and listening to the patient. And that is fundamental. Listening. You find that that is a big problem in first year. Because they are so focused on what **I** have to do, then what **I** have to do next, and that is what is going on in their head. And they are not really listening, because so busy thinking about what comes after that.* (Tutor 5)

The importance of active listening was a feature of many of the responses from the tutor interviews. Many of the simulated patients also described the human connection they felt with the students in terms of feeling listened to, to actively incorporate what was important for them as an individual. This was described by Tutor 5 as a competence that the students can develop by year 3. Although, Tutor 4 also described this as being something that was also present in first year students too:

> *I come across a lot of first year students who already have the gift of…I wouldn't call it listening, I would call it imagining being the other person.* (Tutor 4)

The concept of "*imagining being the other person"* is described further in the next part of this chapter about meta-competence.

9.4 Meta-Competence

These findings chapters conclude with a discussion of meta-competence, in relation to how a practice does (or does not) become performed. As described in Chapter 4, meta-competence overarches other competences (cognitive, functional, and social), and includes communication, the ability to cope with uncertainty, as well as with learning and reflection (Cheetham and Chivers, 1998). The following excerpts of data were chosen to illustrate **meta-competence** in relation to the performance of a consultation, in terms of supporting the connection between all the elements within and between practices. The post-consultation interviews directly explored the student's reflections, this was enriched with feedback from simulated patients to consider the conceptual and professional underpinnings of the performance in relation to meta-competence.

9.4.1 Zooming in to Meta-Competence within the Practice the Consultation

The following excerpts of data from the consultation with Medical Student 8, were chosen to consider meta-competence. The performance with Medical Student 8 was chosen as a typical

example of a consultation where strong connections are made with **all** the elements within and between the simulated patient's practice. Medical Student 8 explicitly explored the connection between the material element within the practice of high blood pressure management, the connection with the related practice of cardiovascular disease risk management, and the connection with the element of meaning from within the simulated patient's practice. By focusing on the material element within the practice, it illuminated which practice within the constellation of related practices was attended to, and the connections made with other elements within those practices.

The performance of Consultation 8 was co-produced between Medical Student 8 and Simulated Patient 8, with the student supporting the patient to make the connection between knowledge relating to high blood pressure management and cardiovascular disease risk management. The excerpt below shows that as well as functional competence, through connection with material elements within the practice, the student also demonstrated social and ethical competence by incorporating the element of meaning from within the patient's practice to co-produce the performance with the patient. Medical Student 8 supported the competence within the practice carried by the simulated patient.

The following excerpts from Consultation 8 illustrate how a consultation can be co-produced through connecting with elements within and between the constellations of overlapping practices. Medical Student 8 started the consultation with an explicit invitation for Simulated Patient 8 to contribute to the agenda for the consultation, then continues the consultation by exploring explicit responses from Simulated Patient 8 regarding both material and meaning elements within the practice.

Time		**Transcribed data**	**Researcher analysis**
01:25	MS8	Okay, and it can be quite difficult to take these tablets if you are getting those sort of side effects?	Practice of taking the tablets.
1:28	SP8	Yeah.	
1:29	MS8	Have you been able to take them, sort of at the recommended dose?	Explicit exploration of material.
1:31	SP8	Well, on and off.	
1:33	MS8	Right. On and off?	Space. Explicit.
1:34	SP8	Yeah.	

1:35	MS8	What, err, what can you tell me about what that means?	Student explicitly explored patient's practice.
1:37	SP8	Errm, I don't take them when I am, on days that I am working. I work part-time. Erm, so I don't take them on days that I am working. And, sometimes I just, have days when I just don't take them. Because they are just not agreeing with me.	Meaning within practice of (not) taking tablets.
1:50	MS8	Alright. And erm, how do you feel about that? Do you, because obviously you are not getting the full benefits of the treatment. But at the same time if the treatment is causing you severe discomfort, it kind of balances out. So, would you like to be taking the normal dose? Or?	Explicit exploration of meaning. Explore balance of connection between material and meaning. Explicit exploration of material.
2:05	SP8	Errm. No. Not with the side effects, to be honest, no.	Explicit response.

Table 9.6 Transcribed data from Consultation 8

By focusing on which material attended to (or not), a deeper understanding about the practice was achieved. Medical Student 8 explicitly explored the practice of Simulated Patient 8, to explore the balance of the connection between the material and the meaning element within the practice for that individual patient. The balance of these elements within and between practices influenced which practices were supported, and which practices declined.

The next excerpt from Consultation 8 illustrates how this balance is explored during the performance of the consultation, in terms of the connection with the related practice of cardiovascular disease risk management and how Medical Student 8 explored and supported this related practice through explicit questioning about the material and meaning element within this related practice. Medical Student 8 supported the simulated patient to unsettle their comfortable viewpoints or familiar concepts, towards new perspectives through ideological exploration (as described in Chapter 4 with reference to Hibbert, 2012)

Time		**Transcribed data**	**Researcher analysis**
2:36	MS8	Alright. So, your high blood pressure, what effects do you think that has on you, long term, and short term?	Explicitly explored competence regarding disease and meaning. Temporal.

2:42	SP8	Errm, I know there is a risk of, a very, very small risk of heart attack.	Material benefit blood pressure and cardiovascular risk management.
2:49	MS8	Okay.	Create space.
2:50	SP8	But not big enough to merit taking something that is going to make me feel so bad, on a daily basis.	
2:56	MS8	Mm hmm. Okay. Erm, how small do you sort of see that risk as?	Explicit exploration of meaning of this material information for patient.
3:01	SP8	Well, I have looked up the statistics, and it is something like five percent.	Patient explicit regarding cognitive competence.
3:05	MS8	Right.	
3:06	SP8	Which to me isn't big enough to merit doing something about it.	Balance of material information and element of meaning within practice.
3:11	MS8	Okay. So about, say, one in twenty people who have your sort of blood pressure, in ten years, will have a heart attack. And you are okay with that? That is a risk that you are happy to take?	Explicit about material. Supporting competence through critical reflection of material element and balance with meaning.
3:24	SP8	Yeah.	
3:27	MS8	If it means that you are maybe not getting the side effects, on a daily basis?	Material (benefit) small. Meaning (side effects) big. Balance.
3:29	SP8	Definitely.	Explicit.
3:31	MS8	Fine. There are other things we could do, maybe, to look at reducing your blood pressure, reducing your risk further. Erm, can you tell me a bit about your lifestyle, and how you get on?	Explore connections with related practices. Supporting critical reflection of simulated patient.
3:41	SP8	Well, to be honest, I have erm, made a few changes.	
3:43	MS8	Mm hmm?	Space.

Table 9.7 Transcribed data from Consultation 8

This illustrates that information is important within a practice, but not more important than the element of meaning within the practice, with the balance being defined by the elements carried by the autonomous patient. Medical Student 8 was explicit about supporting the cognitive competence of the simulated patient through critical reflection of the material

element within the practice. Medical Student 8 was explicit with the exploration of the cognitive competence of the simulated patient regarding the material element of practice, exploring any assumptions rather than just accepting initial statements made. This process involved the student creating space for critical reflection within the practice of the consultation. The space was created within the consultation, and especially at the end of the consultation, when Medical Student 8 summarised with the patient the balance between the material and meaning elements within the practice. The following except illustrates that Medical Student 8 also created space for change in this balance of elements within the practice with follow-up consultations in the future. This illustrates how the practice of a consultation is connected with related practices over space and time.

Time		**Transcribed data from near the end of Consultation 8.**	**Researcher analysis**
07:14	MS8	And if maybe at your next consultation we are still looking at quite a high blood pressure, would you maybe then consider trying these different class of pills?	Explicit question.
08:21	SP8	Errm, I would consider it, but, mmm, I would prefer not to [laughing].	Patient supported to be explicit regarding their meaning of taking tablets.
08:28	MS8	You would prefer not to (laughing). Okay. Erm, and knowing the risk you are happy with that, and I don't want to try and change your perception or make you scared if you don't necessarily have to be, but that is over ten years and in the longer term it will build up a little more, and maybe if you changed your perception of risk, in the future we could then consider medication, but not now you know, we will see. So, does that sound alright to you?	Support patient regarding cognitive competence. Explicit regarding material element within practice. Ideological exploration. Social competence.
08:57	SP8	Yeah, yep.	
08:59	MS8	Of course, you will see the GP, who will check everything out. So, the goal is maybe drop your alcohol usage to weekends only. Err, maybe one or two glasses a day on the weekends to benefit the most. And we will meet up again, or you will meet up with the GP again, in say a month or two's time, and see how we are getting	Feedback process. Decision talk to incorporate material and meaning. Summary for patient.

		on, and see if there is maybe other changes, we could make to reduce your blood pressure?	
	SP8	Sure. Yep, that's good.	

Table 9.8 Transcribed data from Consultation 8

This student demonstrated their reflexive approach to practice through their ability to reflect on the meaning element within the patient's performance and to support the development of different, critical perspectives through ideological exploration. The elements from within this co-produced performance were ethically connected within the practice of handover, as illustrated by the next excerpt of transcribed data from the SBAR handover.

Time		**Transcribed data**	**Researcher analysis**
0:00	R	So, you have just seen Owena [pseudonym], tell me how that went?	
0:02	MS8	So, I have just seen Owena Mynd [pseudonym], she is forty-four years old, err, and she is just about to see her GP to review her hypertension treatment. I spoke to her beforehand and she has been struggling to adhere to her medication, erm due to side effects of dry cough and dizziness. Even when she has changed from and ACE inhibitor to an ARB. Err., and what we discussed was that we weren't going to put up with those side effects. We were going to try and drop the medication and try and make further lifestyle changes on top of the ones she has already made. Erm so we are going from maybe one unit a day to only at the weekends. Err, and we are going, she has already got healthy diet and not smoking. So, we will try and keep those trends up, try and drop the alcohol usage, and see how her blood pressure is in the future.	Co-produced. Connect with multiple practices. Meaning. "*we*"= co-produced.
0:55	R	And you have safety-netted that, with her coming back for review?	
0:59	MS8	Yes.	

Table 9.9 Transcribed data from SBAR Handover with Medical Student 8

Medical Student 8 co-produced the practice of the consultation with the simulated patient connecting with the meaning element within the patient's performance. The elements from within this co-produced performance were ethically connected within the practice of handover. The reflexive approach to practice of Medical Student 8 was demonstrated through their ability to reflect on the meaning element within the patient's performance and to support exploration and engagement with related practices which were more meaningful for that individual patient. This student also supported the simulated patient to develop of different, critical perspectives about related practices. This provision of support was explored further with Medical Student 8 in their post-consultation interview.

Post-Consultation interview with Medical Student 8

The post-consultation interview with Medical Student 8 highlighted trust as an aspect of the element of meaning within the performance of the consultation. Rather than considering trust as an objective thing, Medical Student 8 described the concept of trust more as being part of the process of the performance which unfolds during the consultation. The interview explored with the student the different ideas that patients may have.

Time		**Transcribed data**	**Researcher analysis**
10:05	R	Do you think the patient could make an informed decision to not take the treatment suggested?	Explore competence.
10:14	MS8	I think, my perception from the consultation was, that she had quite high health literacy, because she was making really good lifestyle changes, and that she was aware of what the five percent risk meant. Yeah.	Cognitive competence related to material element.
10:42	R	So, did you feel any tension, when in the SBAR handover you were saying she was **not** going to take the tablets?	Connection material competence.
11:04	MS8	No. It just means that she is enjoying her life less, and not really you know, getting any benefit from it.	Importance of meaning within patient practice.
11:24	R	Do you think giving her more information to her might have helped?	Explore balance material and meaning.
11:38	MS8	I think, the goal is not to try and get the patient to trust the information, it is to try and get the patient to trust you with information. The information is a tool to get the trust, it is not the goal. It almost feels as if like	More than just material. Trust as process.

		knowledge can be quite useless when you are trying to convince a patient to do something. Like if you go into any more detail, you are just wasting time, because what you really need to do is get the patient's trust, erm, and get them onboard with the treatment. Whereas, they don't really need to know all the details, they just need to believe that this is the right decision to make for them. Does that make sense?	Social competence. Connection between practices. Interpersonal.

Table 9.10 Transcribed data from Post-Consultation Interview with Medical Student 8

The ongoing connections built between Medical Student 8 and the simulated patient during the performance of the consultation were a sociomaterial process linking the material knowledge and the social meaning, in a manner that builds interpersonal trust. This student demonstrated sociological imagination, to explore different ideas that individual patients may have, to reconceptualise themselves as relational beings, in the context of a plurality of social systems (Hibbert, 2012). This variation in the element of meaning within the practice would lead to variation in performance despite being based upon same material element. Figure 9.4 highlights the importance of the connections between the elements within practices, and the dynamic nature of these connections. The dynamic nature of these connections was supported by the ongoing feedback throughout the consultations. By focusing on these connections within and between practises the student can support the practice that is most meaningful for an individual patient.

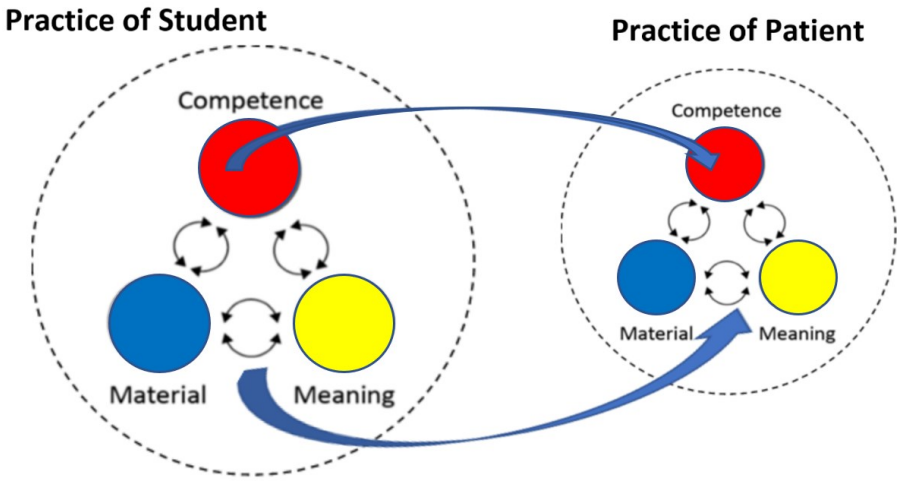


Figure 9.4 Connections within & between Practices Consultation 8 (Adapted from Hui, Schatzki, Shove 2017)

The connections between Medical Student 8 and the element of meaning from within the practice of the simulated patient, also supported the connection with the element of competence within the practice of the simulated patient. This strong connection was also felt by Simulated Patient 8 as highlighted by the following excerpt from their post-consultation interview.

Zooming in to Practice of Simulated Patient 8

Time		Transcribed data	Researcher analysis
03:00	R	How was that for you? The consultation as a whole?	
03:09	SP8	I just felt like they [Medical Student 8] were actually interested in me as a person, I was not just a patient. They were knowledgeable in the information, but, but it is kinda, it's more than that… they also knew how to make that into something that was meaningful for me, and for my life.	Rapport. Trust. Connect with meaning. Human connection. Critical reflection.
03:28	R	How do you think they did that?	
03:32	SP8	One thing that I noticed the student did, was that they did a lot of thinking out loud, which if you are sitting in a patient's seat, it helps to join up the dots with where the consultation is going and why they are asking some of the questions that they do. I got what he was saying. I wonder if that was what was helping make me feel more confident? Because I can then understand their thought process.	Connect via **feedback.** Connect. Support reflection.
03:48	R	So, you felt that they knew their stuff?	Competence. Material.
03:52	SP8	Yeah, but I mean it is more than that, I think it was also to do with the way that they do it. They had spent time finding out about my life, so yeah, err, I mean you can find out so much from Dr Google these days, but you need someone who actually knows the stuff to make the connections with what that means for you as an individual, which bits are relevant and all that. It is not about just having the knowledge it is about figuring out what to do with it. You want your doctor to not just know	More than cognitive competence. Functional competence. Human connection. Social competence. Critical reflection. Connect with meaning.

		the stuff but also know what is relevant for you. Dr Google can't do that.	

Table 9.11 Transcribed data from Post-Consultation Interview with Simulated Patient 8

The strong connection that Simulated Patient 8 felt with the Medical Student 8 during this consultation emphasised that it was more than just the material element, it was also the connection with the element of meaning for that individual patient. The statement from Simulated Patient 8 (at the end of Table 9.11) that "*Dr Google can't do that*" emphasises that communication requires more than just the knowledge. Medical Student 8 supported the simulated patient to critically reflect on the material element and related practices, using sociological imagination in a creative way to explore a practice that was meaningful for that patient as an individual for their life. Highlighting the importance of exploring connections with the element of meaning within and between practices.

Essentially, Consultation 8 was a demonstration of patient-centred care within evidence-based practice. Within the performance of the consultation, Medical Student 8 still incorporated the material element regarding the treatment recommendation from within the clinical guideline, but they did not prioritise this element over the element of meaning from within the practice of the patient. By supporting the simulated patient to connect with both the material and the meaning element within practice they also supported the patient's competence. This co-produced performance supported the practice that was most meaningful for that individual patient, the related practice of lifestyle modifications to reduce their cardiovascular risk. Supporting students to demonstrate competence regarding patient-centred care within evidence-based practice was explored further with the interviews with tutors.

9.4.2 Zooming out to Meta-Competence within the Practice of Teaching

The interviews with tutors explored their thoughts about supporting students to demonstrate competence regarding patient-centred care within evidence-based practice. During fieldwork observations of consultation skills workshops involving individual groups of up to eight medial students there may be one or two medical students who demonstrated competence like Medical Student 8. When tutors were asked to elaborate on what qualities they felt contributed to a student performing a patient-centred consultation, it was often described it as being **more** than just listening. The following excerpt from Tutor 4 describes this further.

Time 05:40	**Transcribed data**	**Researcher analysis**
T4	I wouldn't call it listening, I would call it imagining being the other person, for people to change their ideas around completely, and to see the purpose of looking at it from the patient's side, or the student's side, or the other person's side.	Reflexivity. Sociological imagination. Social competence.

Table 9.12 Transcribed data from Interview with Tutor 4

This extract illustrates aspects of competence which form a foundation for patient-centred care. It is more than just critical reflection, as Tutor 4 describes, it also requires imagination. This ability to see another person's perspective, to explore a practice that was meaningful for that patient as an individual for their life, involves using sociological imagination. Thus, requiring the student to be able to critically reflect, and support the simulated patient to critically reflect, on both the material element and the meaning element within the practice and related practices. This highlights the importance of students exploring connections with the element of meaning within and between practices in a creative way. The interview with Tutor 4 continued to explore whether this was a concept that could be supported within teaching:

> *I think it can be taught. I was taught. And I think it definitely can be taught. And I think the best people to teach, are the peers who are good. Because the example filters through, and so through the workshops if you develop that way of thinking through the group, they begin to realise that their peers are already thinking that way. I think that is more powerful than instructing.* (Tutor 4)

Examples of tutors supporting the critical reflection of the students, was also something that was prevalent throughout the fieldwork observations of teaching sessions. Many tutors gave the example of one specific tutorial session that students receive in their first year where they are encouraged to have a conversation, rather than a structured consultation, with a person who has a chronic health condition. The tutors described the positive performance of the students within this tutorial in terms of the empathetic approach the students demonstrated. The connection that the students developed with this person during the conversation meant they were able to describe afterwards as a group what that person saw of the world, what that person heard in their world, what made that person happy and what they wanted to achieve. As a group, the students were able to put themselves into someone else's position to try to

understand that person's world. This demonstration of empathy required their sociological imagination.

The process of the students learning the structure of the consultation, was described by some tutors as resulting in this structure getting in the way of the patient-centredness of the interaction. This was described well by Tutor 5:

> *You can see when they are not picking up patient's cues during the consultation. If a patient says they are worried, they don't miss the cues, they pick up on that. Or if they do miss the cues, you bring that up in the feedback you give them at the end. Ultimately that practice including the simulations, that's what leads to experience. Getting more experience, the easier it all becomes. So, that the mechanics of it, you don't need to think about it, once they are released from that, they can actually listen to what people are saying. So, it is hard at the beginning. They are concentrating on so much more than just taking a history, and it is all going on in their head, so they are not actually listening to what the patient is saying. So, it is a tight rope that they walk. But it does come, it does come in the end.* (Tutor 5)

The concept of being released from the mechanics of the communication resonated throughout the interviews with tutors. In one way or another, all the tutors mentioned the importance of responding to patient cues to support the development of patient-centred care, they used terms such as *developing rapport,* or *active listening.* All the tutors described the need to support the students to perform beyond the tick-box approach, and to connect with the individual patient. The tutors provided feedback to the students to support their reflections about the connections between these elements. The tutors also supported the students to provide feedback to each other. For example, during fieldwork observation of one of the consultation skills workshops, one of the tutors had supported a student who had reflected that their consultation had not been particularly good because it had not been structured enough:

> *Yes, sometimes they* [the patients] *do go off on a tangent about you know their dog or whatever, but that is down to the skill to bring them back from that, but not in a rude way. But, also for one of the patients, it was getting back to their dog was like their raison d'etre, and that was their aim for rehab. So, it was important, that was their motivation to improve their health outcome, so go with that. So, these things you don't find inside NICE and SIGN guidelines*. (Tutor 6)

Making these connections with the individual patient, to find out what is meaningful for them as an individual, was described by the tutors as resulting in multiple possible *right* answers. Hence variation in performance of practice is to be expected, even when working with the same evidence base. As Tutor 6 stated, knowledge is not all within the clinical guidelines. The tutors described the value of the students seeing this variation within their teaching scenarios:

> *The way these scenarios are made up, gives a real opportunity to show the students that there can be multiple different ways of doing the right thing. The worries and concerns that a patient might have will have an impact on how their treatment is done. That is part of the reason why these sessions are so important. It is that you have two people with the same problem, and they have different concerns, and that will determine, their treatment plan. For example, if they are a carer for a housebound husband, that will have an impact on the treatment plan suggested. That will be a way to see if the student has not just heard it, but have they listened. Have they been able to incorporate it into the next step? Does that make sense?* (Tutor 5)

The tutors supported the students, by providing them with feedback to support them to use sociological imagination (Hibbert, 2012), to critically reflect on the material element within practice and the meaning element from within the practice of the simulated patient. The tutors helped the students to explore diverse ways of considering the practice, to create a practice which is most meaningful for an individual patient to provide patient-centred care.

Within the consultation scenario used for this research, the inclusion of the SBAR handover made it explicit whether the student then made the connection with the related practice of handing over the information gathered during the consultation. By describing the next step, it made it explicit whether there was connection with both material and meaning element to illustrate competent practice. These connections with competence within and between practices illuminate the overarching concept of meta-competence and its relationship with learning and reflection.

9.5 Summary of Chapter 9

This chapter explored how the elements of competence and material were connected within the practice to illustrate cognitive competence and functional competence. Then the relationship between the elements of competence and meaning were explored to illustrate social and ethical competence, before meta-competence was considered as an overarching aspect of competence.

Cognitive competence requires material to be used skilfully relevant to time and space. The evidence base derived from population data needs to be tailored to individual circumstances, which relates to functional competence. Functional competence was important but required social competence too, otherwise the performance could be too mechanical resulting in two co-located practices rather than co-producing a performance which was meaningful for the individual patient. The medical consultation requires the student to be more than just cognitively and functionally competent for a professional performance. The student needs to do more than just demonstrate competence with the material evidence within the practice.

The consultation involves the practice of a minimum of two people and social competence is required to connect the practices. The student can support the cognitive and functional competence of the simulated patient by supporting them to make connections with the material element within practice. The student also needs to actively support connections with the meaning element from within the patient's practice and respect the patient's autonomy to give priority to what is most important for that individual patient. So, for competent professional practice the student also needs to demonstrate social and ethical competence. Meta-competence is an overarching concept regarding connections within and between practices. By creating space within the consultation and using feedback to support the simulated patient to critically reflect on the meaning of the practice, or related practices, diverse ways of considering the practice were explored. Sociological imagination helps to create a practice which is most meaningful for an individual patient and to provide patient-centred care within evidence-based practice.

Likewise, within the practice of teaching, the process of providing feedback to students was also important to support them to make connections with the elements within and between related practices. The tutors provided feedback to the students to support them to reflect on more than just the material element within practice. By creating space within the teaching session and supporting the students to critically reflect on the meaning of the practice, or related practices, the tutors helped the students to explore diverse ways of considering the practice. The tutors used feedback to support the students to use sociological imagination to create a practice which is most meaningful for an individual patient, to provide patient-centred care within evidence-based medicine.

SECTION FIVE: DISCUSSION AND CONCLUSION

This section includes Chapter 10, which provides discussion of the findings generated from the study, and Chapter 11, the conclusions of the study. Chapter 10 starts by outlining the specific focus of this study, with an overview of the themes generated through reflexive thematic analysis of the empirical data. This is followed by a discussion of how these major themes relate to the wider literature. Chapter 10 continues with a reflection on the choices within the methodology, then ends with a discussion of the theoretical and practical contributions. The section ends with Chapter 11, the conclusions of the study, the implications of the study and suggestions for potential areas of further research.

Chapter 10 Discussion

10.1 Introduction

The overarching aim for the study was to gain a deeper understanding of how evidence-based knowledge is used in practice, and to explore how variation in practice is enacted. The research questions were:

- How do medical students use an evidence-based treatment recommendation in their emerging practice?
- How does the use of a treatment recommendation vary in medical students' practice with individual patients?
- How can the practice-based approach inform us about competent professional practice?

The study employed a practice-based approach to generate data, with reflexive thematic analysis to generate themes from this data through an iterative process. The empirical contribution provides deeper insight into variation with enactment of evidence-based practice, particularly with respect to the role of knowledge, and also how competence is considered in practical terms.

10.2 Empirical Contribution: Linking Key Themes to Wider Literature

The empirical findings generated from analysis of the empirical data are described next, through three major themes related to successful implementation. One of the major themes is that the practice of interest needs to be a co-produced performance between those involved in carrying that practice, otherwise it is just a co-located practice. For successful implementation, there needs to be connection with meaning from within the practice for a

sociomaterial performance. Development of competent professional practice is supported by critical reflection by the carrier of that practice, of both the material element and the meaning element within that practice. These themes are now discussed as three parts, and then how they relate to the wider literature.

10.2.1 Co-producing a Performance rather than Co-located Practices

For successful implementation, the practice of interest needs to be a co-produced performance between those involved in carrying that practice, otherwise it is just a co-located practice. This theme encompasses consideration of what is the practice of interest, and who is carrying that practice.

Co-production

Within the study, an evidence-based treatment recommendation was considered as one element, a material element, within practice. By considering a practice as consisting of three elements (material, meaning and competence) this highlighted that connection with both the material element and the meaning element were important for co-production of the practice. Analysis of the empirical data from this study highlighted that if a material element was prioritised within practice, rather than connections made with meaning from within a practice carried by the patient, this resulted in a performance interpreted as two co-located practices rather than a co-produced sociomaterial performance. By tracing this material element within the performance of the consultation, it highlighted the difference between a student-centred versus a patient-centred consultation. If the student prioritises a material element within the practice, to transfer this information in a technical rational manner, it was a more student-centred performance. If the student connects with the meaning of that information for the individual patient, to co-produce a sociomaterial performance, it will be more patient-centred consultation.

These findings illustrate the proposal from Filipe, Renedo and Marston, that co-production can be understood as “an exploratory space and a generative process that leads to different, and sometimes unexpected, forms of knowledge, values, and social relations” (2017, p.1). Key aspects within the different approaches to co-production are the relationships that allow co-production to happen and the new forms of knowledge, values, and social relations that emerge out of co-productive processes (2017). Analysis of the empirical data revealed how connections made (or not) within this interaction, will result in variation in the practice enacted. There will be variations in the performance enacted depending on how connections

are made with the elements within and between related practices, despite involving the same evidence-based material element.

The empirical findings of this study build upon the research by Fugini, Bracci and Sicilia (2016), which explored experiences and challenges of co-production in the public sector. Co-production in healthcare has been explored at the level of patient interactions with their healthcare professionals (Gilardi et al., 2016). Their work highlighted the need to build relational models in which the patient feels part of the healthcare team and willing and able to continue self-care after discharge. These relational models would be particularly relevant for chronically ill patients where the relationship is longer term and involves repeated interactions with and between the professional staff. Gilardi et al., (2016) concluded that building such relational models should be explicitly addressed within education of healthcare professionals. They stated that "Co-producing a healthcare service requires that healthcare staff is able, available, and willing to engage in a co-productive consultation" (2016, p.90). The results from this thesis show that although many of the students co-produced their consultations with the (simulated) patients, there were still some consultations, or aspects of the consultations, within which they prioritised the technical-rational aspects within the performance. Hence there is scope within the practice of teaching to support these students to connect more with meaning within the practice carried by the individual patient, for a more patient-centred consultation.

Multiple Practices

By following this material element within practice, it also helped to determine which practice(s) were being enacted. For example, the material element of the treatment recommendation could be considered as a major part of the focused practice of reducing blood pressure. Alternatively, the same treatment recommendation, could just be considered a more minor part of the related broader practice of cardiovascular risk management. This consideration of how broadly or narrowly the practice of interest is defined, emphasised the value of ensuring clarity about what is the practice of interest. The practice of managing a disease, may not align with the practice of coping with that disease (as an illness carried by an individual person), when taking a holistic view of the patient and the impact of illness on their life. For example, for an individual patient, the enactment of the practice of taking a treatment for their blood pressure may not be the priority within their life at that point in time, they might have stress related to a possible redundancy threat, or erratic working hours, they may have other medical conditions such as diabetes or depression, which might be more of a priority regarding their healthcare practice.

The enactment of a clinical treatment guideline recommendation within practice can have multiple realities, depending on how broadly or narrowly the practice is defined. This builds on the description from Mol (2002) of the praxiographic approach which is discussed in terms of enactment of objects, and reality being multiple (described on p.51 of this thesis). Within this thesis, by tracing a material element (such as the clinical guideline treatment recommendation) within the practice it provided a way to trace different "reals" (Fenwick, Edwards and Sawchuk (2011, p.181). By tracing a material element, it provided a way to see how different enactments were coordinated (Mol, 2002, p.71). The results highlighted the importance of clarity about which practice is being attended to. If those involved within the consultation are attending to different practices, the practices will be co-located rather than being actively co-produced. There may or may not be overlap with these practices, and hence any impact on the element of competence of the practice of interest.

Carrier of practice

The clarity about **what** is the practice of focus, also informs **who** is the carrier of the practice. Professional practice often involves an interaction between the professional and their client (or patient), in which case there are at least two people carrying a practice. Thus, the medical student could be conceived of as the carrier of the practice, but also the patient could also be conceived of as the carrier of a practice. Reckwitz describes the carrier of the practice as "the unique crossing point of practices" (2002, p.256). By considering a practice as consisting of three elements, and studying the connections made between elements within and between related practices, it illuminated who was carrying the practice. For a practice to be co-produced, all carriers involved with that practice need to have mutual connections within that practice, otherwise these carriers will just have co-located practices.

Analysis of data revealed that connections made (or not) within and between practices, would result in variation in the enacted practice. The practice-as-entity is stable and recognisable as a practice, but it is not inert. There will be variations in the performance enacted depending on how connections are made with the elements within and between related practices. Depending on the context of the individuals involved in carrying that practice, there will be variation in the performance despite involving the same evidence-based material element.

The consultation scenario used for this study, involving the material element of the treatment recommendation, could be viewed as the practice of the medical student informing a simulated patient, or it could be viewed as the practice of the medical student supporting that simulated patient to take the treatment (or not).

An assessment of the practice carried by the student, of just informing the patient about the treatment recommendation, would just focus on the connection with the material element (information about the guideline recommendation). For example, the practice of informing the patient about the guideline recommendation for treatment, or the related practices of measuring blood pressure, or informing the patient about the broader practice of cardiovascular disease risk management, is a practice carried by the student.

By contrast, the practice of taking the tablets (or not) is carried by the patient. Within the scenario for the research, the medical student was competent regarding the material element, but the simulated patient was also competent regarding the material element. The variation in practice resulted from whether there was connection with the meaning element from within the practice of the simulated patient. The student could competently communicate material information about the medication, but unless they connect with what this means for that individual patient then there will be no overlap in the practices. Ultimately the practice of taking tablets, to reduce blood pressure, is carried by the simulated patient. To support the patient with the practice of taking the tablets, it would also require connection with the meaning element within that practice for that individual patient. The practice of avoiding side effects from taking tablets is carried by the simulated patient and will not change unless there is connection by the medical student, with all the elements within that practice.

The practice-based approach within this thesis provides empirical data to inform an explicit approach towards achieving this process. Part of this process is being explicit about who is carrying the practice. This involves being explicit about informing patients through connecting competence about material information, versus supporting patients to make connections with meaning from within that practice or related practices. This provides clarity that it involves more than just the practice of demonstrating the competence of the student to communicate the material information. Rather it involves the student supporting the practice of the patient, and the practice carried by that patient of taking tablets (or not).

The empirical findings from this thesis build on the descriptions from Mol (2008), about the practicalities of doctoring and the practice perspective of knowledge use within the medical context, her book explored the profoundly different logics between the logic of healthcare and the logic of patient choice. This thesis highlighted the importance of being explicit about the element of meaning within the practice for those carrying the practice, by being clear about what is the practice and who is the carrier of that practice. This is discussed further next in terms of how, and why, a practice is carried.

10.2.2 Connecting with Meaning within Practice for Sociomaterial Performance

This theme considers why and how a practice is performed, to show that a practice is enacted through connection with the element of meaning. For sociomaterial performance, there needs to be connection with meaning from within the practice. It highlights the importance of balance between the element of meaning, and material element within practice, towards ensuring epistemic justice. This theme emphasises that although the material element is important, it is not more important than the element of meaning within the practice.

Sociomaterial practice

Analysis of the empirical data for this thesis emphasised the value of being explicit regarding the meaning element within the practice, and not making assumptions that the practice will have the same meaning, or value, for all those involved within the performance. Analysis of the empirical data showed how connections were made with elements within practice, to highlight the importance of considering balance between the connections with elements within and between practices. Even with the same material element within a practice, the variation in how connections are made (or not) with the element of meaning will result in variation in evidence-based practice performed.

A sociomaterial performance of a practice is one which recognises the importance of both the social and material elements within that practice (Orlikowski, 2007, 2009). Sandberg and Tsoukas (2011), also describe how actors are entwined with others and things in specific sociomaterial practices. By focusing an analysis on how the elements of a practice are held together, the ways of doing are discovered (Gherardi and Perrotta, 2014). The empirical data from this thesis highlighted the importance of the element of meaning, as an aspect of the social, and how this element connects with the other elements within a practice. For Schatzki, Practice theories represent a distinct social ontology: “The social is a field of embodied, materially interwoven practices centrally organised around shared practical understandings” (2002, p.3). Orlikowski and Scott (2008), describe the concept of sociomateriality which signals those materials, such as technologies, do not stand alone with certain inherent properties but that their material characteristics and capabilities are relevant only in relation to specific situated practices. A practice-based approach enables scholars to explore and understand the performance of organisational phenomena as they unfold (Schatzki, 2012; Sandberg and Dall’Alba, 2009).

This thesis adds to the literature about sociomaterial practices. By following a material element within the practice, it also showed how connections were made (or not) with the

element of meaning. A performance which focuses on just the transfer of information in a technical rational manner, will vary from a sociomaterial performance which explores the meaning of that information between all those involved with that practice. The element 'meaning' is described by Shove, Pantzar and Watson, (2012) to include symbolic meanings, ideas, and aspirations. This illuminated how knowledge, in terms of an evidence-based treatment recommendation from a clinical guideline, can be considered as a socio-material thing within the practice of the consultation. In the scenario used for this research, the simulated patient as an individual, did not place the same value on this treatment recommendation as the student did. The average risks and benefits from treatment as stated in the clinical guideline were based on population data and did not necessarily mean the same thing to an individual simulated patient as they did to the student. The meaning within the practice of taking the tablets for the simulated patient, was that the daily side effects suffered from taking the treatment, was not enough to gain the possible benefit in the future from the practice of taking the tablets. The empirical data for this thesis illustrated that variation in the practice enacted, related to how meanings within that practice were specifically discussed and shared, rather than assumptions being made about that meaning. This connection with meaning within the practice for an individual patient resulted in a co-produced performance, not just co-located practices.

If a practice is not co-produced, with the value and meaning within the contribution recognised from all those involved in carrying that practice, then it could be described as having a power imbalance. The practice-based approach supported further insights about the power imbalance within the medical consultation which Pilnick and Dingwall described as "the remarkable persistence of asymmetry in doctor/patient interaction" (2011, p.1374). They suggest a focus for research, on whether and what functional purpose this asymmetry might serve (2011). The results from this thesis approach this concept of asymmetry, in terms of considering which practice is being enacted, and then by considering the element of meaning within the practice for the carrier of that practice. As described by Feldman and Orlikowski (2011) "The asymmetry of relations is fundamental to Practice theorising" (p.1243). The results from this thesis inform the practice of improving communication, by explicit consideration of the asymmetry of connections with the element of meaning within and between practices (Feldman, Nadash and Gursen, 2001). The importance of considering communication regarding the element of meaning, is particularly the case for the practice of managing a chronic healthcare condition, when management of that condition depends on the practice enacted by the individual patient. The patient is the carrier of the practice of taking the tablets each day.

Therefore, during the practice of the consultation, there needs to be balance in how elements are attended to include the meaning from the patient's perspective. There needs to be more than just connection with the material element, there also needs to be connection with meaning within practice for the carrier of that practice. Through consideration of the concept of balance, it highlighted that although the material element is important, it is not more important than the element of meaning within the practice This is discussed further next, in terms of epistemic justice.

Epistemic justice – The 'Why' of the practice

Analysis of empirical data for this thesis highlighted that prioritising a material element within practice, rather than making connections with meaning from within the practice carried by the patient, resulted in a performance interpreted as illustrating epistemic injustice (Fricker, 2007). Prioritising a material element within the practice resulted in two co-located practices rather than a co-produced sociomaterial performance. For example, when the simulated patient did not place the same value on the benefit from taking the tablets, and rather than trying to connect with the meaning of this for the simulated patient, the student suggested this could be offset by just providing more material information. These findings were interpreted as the student illustrating of epistemic injustice, one that wrongs an individual (the simulated patient) in their capacity as a knower (Fricker, 2007). When one of the students did not follow-up their consultation by handing over this information during the practice of their SBAR, this empirical data was interpreted as an example of testimonial injustice, where someone's conversational offerings are not given appropriate hearing (Fricker, 2007).

In any practice, there are multiple interpretations of what constitutes the right, or the appropriate and legitimate way to practice (Nicolini, 2013). For a consultation to be patient-centred, the practice has to explicitly connect with the meaning within the practice of that individual patient, rather than any assumptions being made about that meaning. A key point from analysis of the empirical data for this thesis, was the importance of being explicit about the element of meaning within practice, or any assumptions made, to explore **why** is that practice valuable for the carrier(s) of that practice. If there is an imbalance between the meaning attributed to the material element by different carriers of that practice, then there is potential for epistemic injustice if this is not made explicit. Thus, highlighting why the practice is worthwhile, to balance the practice to be meaningful for an individual carrier of that practice, and to be explicit about any assumptions made.

When considering epistemic justice and which knowledge and which practice to attend to, medical practice is underpinned by the interplay of law and ethics. The governing body for the medical profession in the UK, the General Medical Council, sets out the principles and values on which good practice is founded, including the medical ethics, and respecting the patient's autonomy. The professional ethical duty to respect patient autonomy, spells out the requirement to co-produce practice with the patient. For example, to differentiate between unwarranted variation from a well-founded, mandated evidence base or exercise of professional judgement or use of alternative sources of knowledge. Analysis of empirical data for this thesis showed the importance to practice of a balanced approach to ethical principles when there were lower levels of certainty or agreement with elements of practice, to co-construct practice with the patient.

This thesis showed how a practice-based approach can unpack meaning behind the epistemic-normative assumptions of good practices, or what is the right answer (Geiger, 2009). This thesis illuminated the value of using a scenario which could be considered as a threshold concept (as described on p.75 of this thesis). With the scenario being designed to sit at the threshold of meaning, it could be considered as a concept that challenges the way we think about knowledge within a discipline (Meyer and Land, 2006). This helped to explore how students see things in new ways (Wright and Hibbert, 2015) as a form of moral reflexive practice (Hibbert and Cunliffe, 2015).

10.2.3 Supporting Critical Reflection towards development of Competent Professional Practice

The findings concluded with the major theme of how critical reflection supports the development of competent practice. Analysis of empirical data for this thesis illuminated how allowing space for critical reflection, involving both material and meaning elements within practice, supports competent practice. By analysing how connections were made with elements within practice, this showed the importance of allowing space to connect with elements within and between practices. Creating space within and between practices, allowed the carrier of that practice time to reflect, upon both the material and the meaning elements within practice, and time to allow these connections to be made within their practice.

Critical reflection

Hibbert (2012) developed insights for teaching reflexivity in undergraduate management classes through developing processes of critical reflection, to help to further develop and refine theory and educational practice. For this thesis, the process described by Hibbert (2012,

p.820) was combined with the elemental approach of Social Practice Theory (Shove, Pantzar and Watson, 2012) to inform the process of supporting critical reflection, by focusing on connections with all elements within and between practices. The holistic model of professional competence described by Cheetham and Chivers (2000), added further structure to the approach.

Analysis of empirical data for this thesis illuminated how competent practice requires critical reflection involving both material and meaning elements within practice. Connections between the elements of competence and material within practice can illuminate cognitive competence and functional competence. The relationship between the elements of competence and meaning can be used to illuminate social competence. Meta-competence, as an overarching aspect of competence, can be considered in terms of critical reflection about how connections are made with all elements within and between practices.

Cognitive competence requires material to be used skilfully relevant to time and space. The evidence base will change over time as the latest information becomes available. Competent professional practice includes the requirement to stay up to date with the relevant material available. The evidence base needs to for the appropriate context, with the evidence base derived from population data tailored to individual circumstances. This tailoring to the individual context relates to functional competence. Analysis of empirical data showed that functional competence was important but required social competence too, otherwise the performance could be too mechanical resulting in two co-located practices rather than co-producing a performance which was meaningful for the individual patient. The medical consultation requires the student to be more than just cognitively and functionally competent for a professional performance. The student needs to do more than just demonstrate competence with the material evidence within the practice. They also need to be explicit about connections with meaning within practice and to not assume what that element of meaning is for the carriers of that practice.

The consultation involves a minimum of two people, and social competence is required to connect with carriers of relevant practices. The student can support the cognitive and functional competence of the simulated patient by supporting them to make connections with the material element of practice. The student also needs to actively make connections with the meaning element from within the patient's practice and respect the patient's autonomy to give priority to what is most meaningful for that individual patient. So, for competent professional practice the student also needs to demonstrate social and ethical competence.

Social and ethical competence is discussed next, then what this means in terms of meta-competence.

A Competent Performance involves connections with both material and meaning elements of practice

Competence is defined by Shove, Pantzar and Watson, (2012) as skill, know-how or technique. Social Practice Theory helped to illuminate what is meant by the term competence; by considering it as one of the three elements within practice, which requires interconnections with both the material and the meaning elements for a competent practice to be performed.

Analysis of the empirical data for this thesis showed that if there was only critical reflection about the knowledge, as a material element practice, connection with only this material element will lead to a technical rational performance. This technical rational consultation may be cognitively and functionally competent. But, for a socially and ethically competent performance, there needs to be connection with the meaning element within practice. For example, the patient's perspective, in terms of their ideas, concerns and expectations should be treated as than more than just a material checklist, and the meaning from within the practice carried by the patient, should be connected with related practices such as the next steps in that patient's management planning. The empirical data highlighted the need to be explicit about the element of meaning within the practice, and to not assume that the meaning will be the same for all carriers of the practice. For example, the professional values that medical students are developing may not align with the values held by an individual patient.

This builds on the work by Eastwood et al., (2017) which established a need for further investigation into the implications of epistemic cognition for humanistic orientations and ultimately for patient care. Wass and Southgate (2017) describe the need for doctors to understand the boundaries of the professional values they hold within themselves and the need for them to develop a deeper understanding of their own internal prejudices and conflicts. Wass and Southgate (2017) describe opening the borders between the sciences and humanities as being essential. The empirical data from this thesis illustrates a way to approach this to balance the sciences and the humanities within medical practice (Wass, 2018). Empirical data from this thesis highlights the importance of supporting reflection on both the material element and the meaning element within teaching practice.

Supporting learners to reflect is central to educating for capability within the complex context of healthcare (Fraser and Greenhalgh, 2001). But analysis of the data for this thesis showed the importance of critical reflection, and a systematic approach to attend to both the material

aspect and the meaningful context of knowledgeable practice. Rather than reflection this process could be better defined as reflexivity and is discussed next.

Meta-competence, Reflexivity, and the connections with elements within and between practices

Reflexivity is the ability to examine one's own feelings, reactions, and reasons for acting, and how this influences what one does or thinks in a situation (as described on p.75 of this thesis). As described by Hibbert (2012), sociological imagination helps students to reconceptualise themselves as relational beings. Sociological imagination involves the medical students imagining different options, to explore different meanings within practice, and to generate greater potential for innovation and improvement in practice. The results from this thesis reinforce the view that rather than just repeating standardised practice, a more metacognitive approach can generate more competent practice (Nichols, 2017).

This inclusion of the element of meaning, and the role of emotions and how relationships and making connections influence deployment of reflexive practice, was also explored by Hibbert et al., (2019). Their research developed a categorisation of the modes of reflective practice associated with avoidance or engagement with responses to the need for change (2019). The role of meaning within practice was explored within a study of emotional experiences within reflexive leadership development by Hibbert et al., (2018). The approach within this thesis was guided by an ethical framework to focus what is being reflected upon. Analysis of the empirical data described the value of integration of an ethical approach to support reflexivity. By supporting reflexivity, to consider the balance with both the meaning and the material element within practice and connect with competence within practice.

The data for this thesis showed that the medical school tutors supported competent practice by elevating reflection towards reflexivity, by stimulating collective explorations of knowledge, values and meanings that inform practice (Scaratti, Gorli and Ripamonti, 2009). The data highlighted the importance of being explicit about the element of meaning rather than making assumptions and being explicit about making balanced connections with all elements of practice to support epistemic justice for the carrier of that practice. Mol (2008) elaborated on the term *balancing* through a description of care as a practice, with the logic of care contrasting with the logic of choice. She states that the logic of choice has fixed variables, whereas the logic of care does not, instead it "suggests that attuning the many viscous variables of a life to each other is a continuing process" (p.62).

Meta-competence is an overarching concept regarding connections within and between practices. By creating space within the consultation and using feedback to support the

simulated patient to critically reflect on both the material and the meaning elements within the practice, or related practices, diverse ways of considering the practice were explored. Sociological imagination helps students to reconceptualise themselves as relational beings, in the context of a plurality of social systems (Hibbert, 2012). Thus, creating a practice which is most meaningful for an individual patient, and to provide patient-centred care within evidence-based practice.

10.2.4 Summary of Empirical Contribution

The empirical data from this study informed us about variation within evidence-based practice, and how competent professional practice is enacted. The case study focused on professional practice within early years medical training and how medical students could be better prepared for practice, as further qualitative investigation had been called for in this area (Dornan et al., 2009; Ryan et al., 2014).

The reflexive thematic analysis illuminated how supporting critical reflection contributed towards development of competent professional practice. Critical reflection required connection with all elements within practice, so as well as connecting competently with material elements within practice, there should also be connection with the meaning element within practice. Actively exploring the element of meaning for individuals involved with carrying that practice, this should be explicit and not assumed. This requires space to be created for connections to be made. There needs to be balance within evidence-based practice, to be informed by the material element but also for meaningful connection for the individual context and related practices. Making these competent connections requires attention to epistemic justice, to determine which practice is most meaningful within the multiple practices, within that context, depending on who is carrying the practice. The results also highlighted the value of sociological imagination to connect creatively with the element of meaning within related practices. Depending on how connections with the element of meaning are made (or not) for individuals involved, this can lead to variation with practice enacted even with same evidence-based material.

The following part of this chapter continues by describing the methodological, the theoretical, and the practical contributions from this study.

10.3 Reflections on Methodology

The overarching aim for the study was to gain a deeper understanding of how knowledge is used in practice, to explore variation in the practice enacted. The practice-based approach used for this study builds on the view that implementation of evidence is not a simple linear

process but is a social and relational process (Nutley, Walter and Davies, 2007). This approach was useful for this study because, rather than treating knowledge as an object, it was framed instead as a material element within a social practice. The study recognised the strength of the practice-based approach, that rather than imagining abstract notions, the studies are firmly grounded in explanations of what is empirically observable, and then phenomena are systematically traced back to arrangements of defined elements that produce the activity of interest.

A benefit of the approach described by Shove, Pantzar and Watson (2012), is that it includes description of practice-as-entities to turn practices into discursive objects. Their approach enables researchers to talk about practices, and teachers to teach students about practice. Rather than making judgements about goodness (or not) of performance, in terms of reductive normative notions. For this thesis, this approach supported understanding of how elements and their connections within and between practices contribute towards variation in practice enacted.

This research responded to calls for more creation and reporting of practice-based research (Green and Glasgow, 2006), and for more qualitative approaches to healthcare research (Greenhalgh and Heath, 2010). The choice of qualitative case study was useful, as an approach to research that facilitates exploration of complex phenomena within context, using a variety of data sources to follow elements of practice in the field (Emerson, Fretz and Shaw, 2011). This thesis provides a deeper insight into how evidence-based medicine is being understood and practiced, particularly with respect to the role of knowledge, and how competence is considered in practical terms. The medical consultation is a complex bundle of deeply entangled social and material activities. By focusing on the social moment of the consultation as the unit of analysis for this study, Social Practice Theory provided a useful research approach to encompass this complexity within the context of the healthcare consultation. By recognising the dynamic interconnectivity between the three elements within and between related practices, and by following an individual element of practice, a deeper understanding of how evidence is used in practice has been achieved. Thus, contradictory logics and different directions which may be present within co-existing practices were not a barrier to analysis (Halkier and Jensen, 2011).

Social Practice Theory provided a way to conceptualise practice to illuminate a deeper understanding of competence and add to the understanding of meta-competence in relation to student reflection, to add to the work of other scholars such as Bogo et al., (2014). The

approach described by Shove, Pantzar and Watson (2012) was enhanced by combining it with the concepts described by Hibbert (2012) to support reflexivity, to connect with competence within practice. This provides a refined methodological approach, especially when underpinned by the medical ethics framework. Incorporating this reflexive approach to practice helped to disentangle, and bring to surface, the tacit knowledge within the practice and how this is then used as actionable knowledge. Hibbert and Cunliffe (2015), describe the use of threshold concept as useful to explore the disconnect between knowledge and practice, and to explore how ethical concerns are enacted. They argue that a form of moral reflexive practice, drawing on an understanding of threshold concepts, is central to responsible management and provides a gateway to transformative learning. Their conceptual argument leads to implications for management and professional education. This thesis was informed by their approach, and further develops their approach by combining it with the approach described by Shove, Pantzar and Watson (2012).

The choice of reflexive thematic analysis (Braun and Clarke, 2020) was compatible within this methodology. The concept from Braun and Clarke (2020, p.18) of "non-thematic contextualising information" also helped analysis within the complexity of the healthcare environment, because it helped to sort which codes were more about the context. Explicit recognition of meaning as a distinct element within practice was supported by the consideration that reflexivity is not just a rational process, but also intrinsically involves emotion (Brown and de Graaf, 2013; Burkitt, 2012; Holmes, 2010). Therefore, codes related to emotion were also included within the analysis. Respondent validation supported the credibility of the research process by supporting review of themes, for example coding for connections was something that particularly resonated as useful to reflect the social interaction. This kind of research will not deliver absolute objectivity, but rather the aim was for it to be authentic and useful by those to whom it is most relevant (as described in Section 6.3, Quality of an Interpretive Study, p.113).

Single consultations were used as exemplars, within the methodology for this thesis. A key strength of exemplar studies is the way they include participants as collaborators, especially through the nominating procedures inherent within the methodology (as described in p.116 of this thesis). The concept from Schön of the technical rational consultation provided concrete nomination criteria for this exemplar (1992). The tutors were familiar with this concept from Schön as it is used within the curriculum, so they were able to operationalise the nomination criteria with ease, for example to identify potential exemplars during fieldwork in terms of the "tick-box" approach, and to confirm choice of exemplars used within this thesis.

Also, the interviews with participants considered their perspectives within the investigation and analysis, to incorporate their experiences, beliefs, values and meanings represented as seminal data (Bronk, King and Matsuba, p.6, 2013). These authors describe the utility of the process for operationalising complex constructs, such as care. Identifying and applying nomination criteria, with input from relevant and well-informed practitioners, allowed cultural and contextual norms to influence the operationalisation of the constructs to inform the nature of exemplarity.

Within this thesis, the initial identification and application of explicit nomination criteria for an exemplar patient-centred consultation was more challenging. Inclusion of a normative group, against which to compare data generated from exemplars, supported the process to develop nomination criteria. The themes generated though comparing data from technical rational exemplar with data from normative group, were discussed with the medical school tutors to help to develop credible nomination criteria for patient-centred exemplar.

So, within this thesis rather than making assumptions of rational action, the research explicitly explored the element of meaning for all those involved within the practice. The research showed that for a patient-centred consultation this should incorporate the element of meaning from within the patient's practice.

10.4 Theoretical Contribution

A theoretical contribution is described as that which moves a theoretical conceptualisation forward, and/or indicates new theoretical linkages, and which provides clear implications of theory for problem-solving. The dominant approach within the organisation studies literature is that learning, and competence consider knowledge use in practice as linear and predictable (as described in Section 2 of this thesis). The practice-based approach considers a more social and relational approach to explore the understanding of implementation research and variation in practice. This thesis adds to the organisational studies literature by illuminating how variation in evidence-based practice is enacted, rather than lamenting the ongoing evidence-into-practice gap which other research has tended towards (Redman et al., 2015; Davies, Nutley and Powell, 2015).

This thesis contributes to this literature by combining Social Practice Theory (Shove, Pantzar and Watson, 2012) with the holistic model of professional competence provided by Cheetham and Chivers (1996). This broader conceptualisation of competent practice provides a different way to consider performance management, to embrace variation in evidence implementation. This social relational view of knowledge use in practice allows performance management to

accommodate different enactments, with multiple *right* answers enacted even with the same material element of evidence. This provides an alternative way to research performance measures. By collaborating with patients, and recognising the co-existence of multiple right answers, this could achieve well-informed, preference-based decision making to lead to safer, more effective healthcare (Elwyn, Frosch and Kobrin, 2015). This also responds to the call for more theory about the area of social interaction and communication in Practice Theory (Keller, Halkier and Wilska, 2016).

Within this thesis, meaning was used as a key element within practice, towards understanding that human action is sociomaterial, and incorporates both social and material factors. This recognises that material is important, but not more important than the element of meaning within practice. So, rather than considering the persistent asymmetry in doctor/patient interaction as indicative of the physician's exercise of power and authority over the patient (Pilnick and Dingwall, 2011, p.1375), it can be considered differently. The results from this thesis support the literature which considers issues of inequality and moral values as being central in Social Practice Theory (Shove and Spurling, 2013). The Social Practice Theory approach enabled a focus on the practice rather than the individual carrier of the practice with the material element considering power in terms of epistemic justice (Fricker, 2007), and the balance with the meaning element reinforced by the medical ethics framework (Gillon, 1994).

The intertwined nature of practices, has been described as different practices intersecting, overlapping, and co-evolving in complexes and bundles (Shove, Pantzar and Watson, 2012). Co-existing practices may have contradictory logics and different directions (Halkier and Jensen, 2011). Social Practice Theory does justice to the notion that people are embedded in various enmeshed practices simultaneously (Keller, Halkier and Wilska, 2016, p.82).

Competence

The application of qualitative methods, that legitimise insights from the situated life-with-others of the researcher, was advocated by Hibbert et al., (2014), who describe the value of relationally reflexive practice, as a generative approach to theory development in qualitative research to inform how theory is applied. The findings from this thesis build on the holistic model of professional competence described by Cheetham and Chivers (2000), by combining their model with the practice-based approach. This illustrated that competent co-enactment requires reflexivity, through critical reflection on the material element within practice, but also on the element of meaning within and between related practices. By opening the decision-making process, by considering it in terms of the making of connections with elements within

and between practices, the findings also relate to the call for further research from Wright and colleagues (2016), in terms of the interrelationships between evidence-based management in practice and the carrier of that practice.

A systematic review of reflection and reflective practice in health professions education by Mann, Gordon and MacLeod (2009), concluded that the very nature of reflective practice made its quantification challenging; hence the value of the qualitative approach taken within this thesis to inform these discussions. Hibbert (2012) described a dearth of research focused on teaching reflexivity in undergraduate contexts. This thesis contributes to this literature to show that the linkage of Social Practice Theory with reflexivity can support teaching practice. This is discussed further below in terms of the practical contribution of this thesis. This theoretical contribution could be used to inform the study of competent practice of other professionals, for example the client-centredness the practice of legal or accountancy professionals.

10.5 Practical Contribution

The aim of the study was to explore how knowledge is used in practice to support the development of competent practice, so the findings are of a practical nature. Medical students in the early years of their training were chosen as a focus for this study as other scholars had highlighted that this warranted further investigation. For example, Ryan et al., (2014) had questioned how prepared medical students were for practice and further qualitative investigation is warranted. Also, Dornan et al., (2009) had highlighted a need to better develop medical students' expertise regarding complexity of practice.

Supporting competence

Social Practice Theory provided a conceptual framework to unpack the process of supporting competence within medical consultation and the process of making connections within the related practice of teaching. When considering practice as a performance, it emphasises that there are multiple practices which may be attended to within the social moment of a consultation. Different practices intersect, overlap, and co-evolve in complexes and bundles (Hui, Schatzki and Shove, 2017). Whereas the behaviour change view often treats knowledge use in isolation as discrete unity, the Social Practice Theory approach does justice to people being embedded in various enmeshed practices simultaneously. Analysis of the empirical data from this study showed the value of considering ethical principles and supporting the patient to co-construct the performance, and so which practice, and which elements within practice, were attended to.

The importance of reflection is frequently noted in the literature as an essential characteristic for professional competence, and the role of conceptual frameworks underlying critical reflection has been highlighted (Aronson, 2011). But an incomplete understanding of reflection has been indicated at the level of educator, tutor, and student (Muir, 2007). This thesis suggests a way to support a more structured approach to understand reflection, and so to support competent practice.

So, the findings add to the literature about being explicit about the process of reflection (Muir, Bruce and McConville, 2020), and emphasise the importance of being explicit about the element of meaning within the practice, when providing feedback for reflection. Tutor feedback to students about how connections are made with all elements within and between practices can use reflection to inform practice. Students, tutors, and educators have all highlighted that they value the opportunity to study through organised, structured and assessed reflection. Reflection is valued to enhance personal and professional development, the value of educational theory, continuing professional development, collaboration and enhancing patient education and practice (Muir, 2010). Results from this thesis showed that within the practice of teaching, assumptions regarding the element of meaning within the practice should be made explicit. When supporting student reflection, attention should be given to the balance of connections with both the material and the meaning elements within and between practices considered to support the development of competent practice.

The results from this thesis provide a practical contribution, regarding supporting competence of the students to reflect on both sides of the coin, to balance both the evidence-based knowledge and patient-centred care within medical consultation. Salter and Kothari (2016) had called for a deeper understanding of reflective practice of medical trainees, and the integration of research-based information into negotiated knowledge-in-practice. The flexibility of the practice-based approach can provide structure to empower the learner to reflect (Wass and Harrison, 2014). The results from this data and its analysis, help to make the process of reflection simple, accessible, and acceptable to students. By supporting the students to reflect on both the meaning element within the practice, and the material element within practice, it will support the students to use feedback to create more specific action plans (Hart et al., 2019).

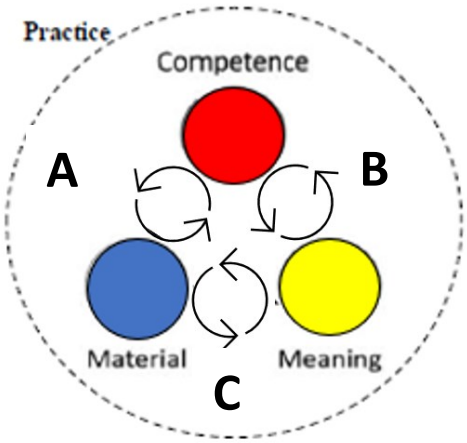
For competence to continue to develop there needs to be **space** within the curriculum for critical reflection upon both the meaning and the material aspects of the practice, including the practice carried by the patient. This requires that the tutor support the students towards

reflexivity. As highlighted by Hibbert (2012), this requires an unsettling of comfortable viewpoints and familiar concepts, which requires that tutors create a safe teaching environment to support this critical reflection, and development of the sociological imagination, towards reflexivity.

Teaching for connection

The practical recommendations from this thesis could be used to develop a plan to enhance teaching of consultation skills within undergraduate medical schools. The practice-based approach could use the three-element model to inform the practice of teaching. Medical school tutors could support the competent professional practice of the medical students, by using this model to illustrate competent practice and to teach for connections between elements within this model.

The first point which could be incorporated within a teaching plan is an illustration of the three-element model of practice. The visualisation of practice as consisting of the three interconnected elements competence, material and meaning (as per Figure 10.1), could be useful as a presentation slide to support the development of teaching and learning of medical students with their consultation practice.



A – Competent connection with Material element is important for technical rational competent practice.

B –Competent connection with the element of Meaning within practice (**B** is just as important as **A**).

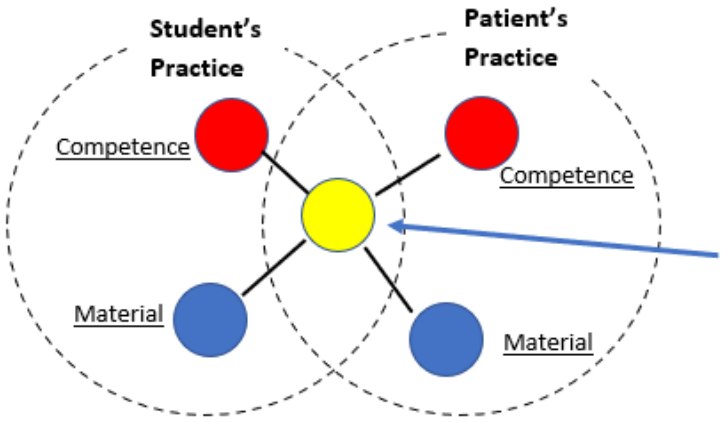
C – Competent practice requires balance with the connection with both Material and Meaning elements within practice.

Figure 10.1 Interdependent elements of practice shape each other (adapted from Shove, Pantzar and Watson, 2012, p.32)

When providing feedback to the students about their performance during a consultation with a patient, the results from this thesis highlighted that feedback provided to the students' needs to support them to reflect on more than just the material element within practice. By helping the students to visualise the connection between the elements of material and competence within practice, this can support them towards technical-rational practice. But for a more holistic conceptualisation of competent professional practice there also needs to be

connection with the element of meaning within practice. For example, the student needs to connect with the element of meaning from within the practice of the patient with whom they are consulting in order to demonstrate social and ethical competence. Therefore, in addition to cognitive and functional competence, related to connection with the element of material within practice, there also needs to be connection with the element of meaning within practice for social and ethical competence.

A second point which could be incorporated within a teaching plan is to highlight to the medical students that practices exist within constellations of related practices. During a medical consultation the practice of the medical student and the practice of the patient with whom they are consulting are related. If there is no connection between these two practices, there will be no change in practice by the patient; there will just be two co-located practices. The visualisation of a consultation as being co-produced, with the practice of the student and the practice of the patient being connected via overlap of the element of meaning within the practices, is shown by Figure 10.2. This figure could be useful as a presentation slide to illustrate how the element of meaning can provide a point of connection between practices.



Meaning of practice – Support provided for the medical student to co-produce the practice of the consultation with the patient, by encouraging them to connect with the element of meaning from within the practice of the patient.

Figure 10.2 Illustration of co-produced consultation with element of meaning providing point of connection between practices (adapted from Shove, Pantzar and Watson, 2012, p.37)

This highlights the importance of consulting for connections, and teaching to highlight the importance of these connections within a consultation. Within the plan to enhance teaching of consultation skills within undergraduate medical schools, the three-element model could also be used when providing **feedback** to the medical students about their consultation practice with a patient. A teaching plan could incorporate the process of providing feedback to students to support them to make connections with the elements within and between related practices. For a patient-centred consultation this should include connection with the element

of meaning from within the practice of the patient. to highlight the importance of the medical student ensuring that the practice is meaningful for the patient with whom they are consulting.

When teaching medical students to develop competent practice, tutors can highlight the importance of reflecting on these connections of elements within and between practices. For a patient-centred consultation there needs to be connection by the medical student with the element of meaning from within the practice of the patient. For competent professional practice there needs to be connection with both the elements of meaning and material, “both sides of the same coin”. The tutors can use the illustration of practice to support the medical student to reflect on both of these elements within their practice, that although the material element is important for evidence-based practice, it is not more important than the element of meaning from within the practice of that individual patient.

A third point which could be incorporated within a teaching plan, is regarding explicit assessment that the performance by the medical student has incorporated both the material and the meaning element within their practice. This highlights another practical recommendation from this thesis of the utility of the practice of the SBAR handover to support the teaching of the medical students about patient-centred consultations (as discussed on p.209 of this thesis). The practice of the handover makes it explicit whether or not the medical student has included the element of meaning from within the practice carried by the patient, to indicate how patient-centred their consultation was. If the medical student did not incorporate the element of meaning within the practice of the handover (as illustrated within figure 10.3), the practice would not be described as being patient centred.

For example, within a teaching session, the medical students could be shown video clips of consultations which include the practice of the consultation and then the associated practice of the SBAR handover for that consultation. One video clip could show a consultation and SBAR handover which does incorporate the element of meaning in the handover, the next video clip could show a handover which does not incorporate the element of meaning. The students could then be supported to critically reflect on the differences between these two video clips, supported by the conceptual framework provided by the three-element model. The students could be supported to compare examples of videos of medical consultations using the three element model of competent practice.

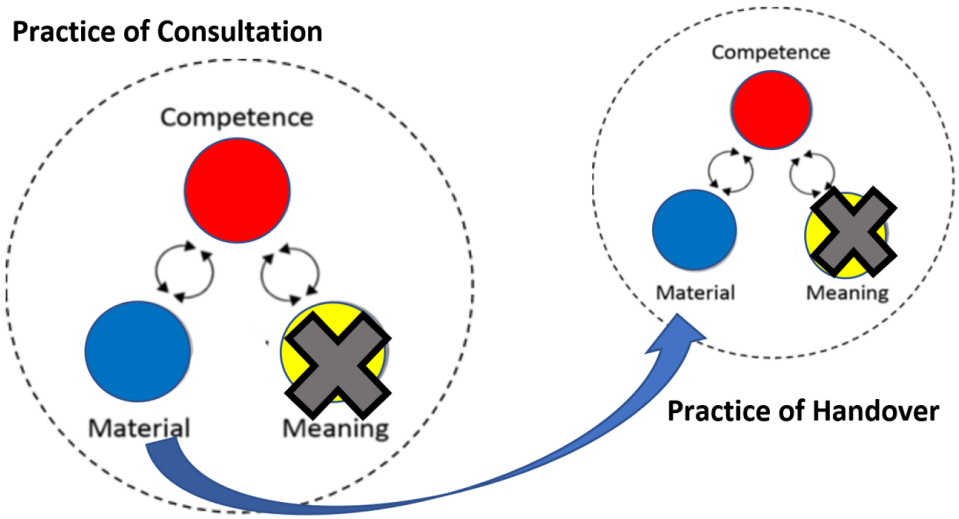


Figure 10.3 Illustration of lack of patient-centred consultation with absence of connection with element of meaning within & between practices (adapted from Hui, Schatzki and Shove, 2017)

Finally, a teaching plan to enhance consultation skills development and learning within undergraduate medical schools, could include supporting the medical students to conduct a consultation with a simulated patient to demonstrate application of the three-element model of competent practice. This teaching session could also include formative feedback to the student to evaluate explicit incorporation of element of meaning from within patient practice within an SBAR handover. The feedback provided to each medical student should highlight how they have competently connected with both the material element, and also the element of meaning from within the practice of the patient to demonstrate patient-centered care. These practical recommendations are illustrated within an example teaching plan to enhance teaching of consultation skills within undergraduate medical schools, with competent practice framed in terms of the three-element model (Appendix E).

By creating space within the teaching session and supporting the students to critically reflect on the meaning within the practice, or related practices, the tutors can help the students to explore diverse ways of considering the practice. The tutors can use feedback to support the students to use sociological imagination, to create a practice which is most meaningful for an individual patient, to provide patient-centred care within evidence-based medicine (as per Hibbert, 2012).

When preparing students for practice, all three elements should be considered, to support the students to gain a deeper understanding of how practice is achieved. Competence is one of the three interconnected elements required for student practice. The results from this thesis highlighted the need for both competence with material aspects of practice, for technical

rationality, and competence with the meaning within the practice. To provide patient-centred care, the student needs to connect with meaning from within the carried by the patient. Variation with the element of meaning within practice, or variation with connection with this element within practice, will result in variation in how the practice is enacted.

When supporting students towards competent practice, connection with the element of material is important but **not** more important than connection with the element of meaning within the practice. Without this attention to meaning from within the practice of the patient, there will not be a patient-centred consultation. This is particularly the case when considering chronic healthcare condition when management depends on practice of the patient. Hence to highlight to the students the need to be explicit regarding meaning within the practice carried by patient, and to not make assumptions about the practice of the patient. So even with the same material element within practice, there can be variation in the practice enacted depending on how there is connection with the element of meaning.

Doctor-patient interaction is critical to health care outcomes (Stewart et al., 2003; Mead and Bower, 2000). Analysis of data for this thesis also showed that competent practice required more than just listening. Information gathered during doctor-patient interaction should lead to co-produced action. This thesis showed that by connecting with meaning, rather than just making assumptions that the meaning of patient and that of student or healthcare profession will align, demonstrated ethical and social competence and enactment of testimonial justice. By making explicit assumptions regarding the meaning of a practice, for both the patient and the health care professional, this helps to address the limits of patient-centredness described by Mole et al., (2016) and to value socio-cultural influences. This also acknowledges that the concept and practice of patient-centred care is variable and may be influenced by culture (Lamiani et al., 2008), highlighting the usefulness of participant's feedback within the practice to uncover cultural assumptions by exploring the patient's illness experience and handling the patient's emotions within a patient-centred approach. By teaching for connections this could help the doctors of the future to practice in the culturally complex world described by Wass (2019).

10.6 Summary of Chapter 10

The empirical data from this study adds to this literature about social interaction and communication in Social Practice Theory, to inform us about variation within evidence-based practice, and how competent professional practice is enacted. The case study focused on professional practice within early years medical training, and how medical students could be better prepared for practice, as further qualitative investigation had been called for in this area.

Social Practice Theory provided a way to conceptualise practice to illuminate a deeper understanding of competence and add to the understanding of meta-competence in relation to student reflection. The approach described by Shove, Pantzar and Watson (2012) was enhanced by combining it with the concepts described by Hibbert (2012) to support reflexivity. This provided a refined methodological approach, especially when underpinned by the medical ethics framework. Incorporating this reflexive approach to practice helped to disentangle, and bring to surface, the tacit knowledge within the practice and how this is then used as actionable knowledge.

The reflexive thematic analysis illuminated how supporting critical reflection contributed towards development of competent professional practice. Critical reflection required connection with all elements within practice. So, as well as connecting competently with material elements within practice, there should also be connection with the meaning element within practice. Actively exploring the element of meaning for individuals involved with carrying that practice, this should be explicit and not assumed. This requires space to be created for connections to be made. There needs to be balance within evidence-based practice, to be informed by the material element but also for meaningful connection for the individual context and related practices. Depending on how connections with the element of meaning are made (or not) for individuals involved, this can lead to variation with practice enacted even with same evidence-based material.

Practical contributions from this study, showed the value of incorporating ethical principles to support the patient to co-construct the performance of the consultation. Respecting patient autonomy, and epistemic justice, could be demonstrated by being explicit about connecting with the element of meaning from within the practice of the patient. This required attention to which practice, and which elements within practice were attended to, from within the bundle of multiple practices within any context at each point in time, depending on who was carrying that practice. By teaching for connections, tutors can support the competence of the students

to reflect on both the meaning element within the practice, and the material element within practice. This involved being explicit about assumptions regarding the meaning within practice, and connections within related practices. For example, the SBAR handover was a useful way demonstrate connection with meaning, for the performance of practice into action. The tutors can use feedback to support the students to co-produce their consultations with the patients. Teaching can support the students to use sociological imagination, to imagine different options for practice, to co-produce a practice which is most meaningful for an individual patient, and so to provide patient-centred care within evidence-based medicine.

Chapter 11 Conclusion

The findings within this thesis provided deeper insight into variation within evidence-based practice, particularly with respect to the role of knowledge, and how competence is considered in practical terms.

The practical contributions discussed at the end of the previous chapter form a significant part of the implications of this thesis. A professionally competent performance involves the medical student incorporating ethical principles to support the patient to co-construct the consultation. If there was no connection with meaning within and between practices it was interpreted as two co-located practices rather than a socio-material performance which is co-produced to provide patient-centred care. If the focus of the consultation was on a connection with the material element within the practice, this resulted in a technically competent performance rather than an ethical and professionally competent performance. The practice of teaching can support this process, by the tutors supporting the students to be explicit about connecting with the element of meaning from within the practice of the patient, rather than just assuming what that meaning is for that individual patient. By teaching for connections, the tutors can use feedback to support the students to co-produce their consultations with the patients. Teaching can support the students to use sociological imagination, by supporting the medical students to imagine different options, to explore different meanings within practice, and to generate greater potential for innovation and improvement in practice. Tutors can support the medical students to create space to co-produce a practice which is most meaningful for an individual patient, to provide the balanced performance which provides patient-centred care within evidence-based medicine.

Rather than just teaching the students to reflect uncritically upon the material element within practice, the teaching should balance the critical reflection with the element of meaning from within the practice of the individual patient to support the students' reflexivity and develop their meta competence.

The methodological implications of this thesis relate to the value of combining the practice-based approach described by Shove, Pantzar and Watson (2012), with the concepts described by Hibbert (2012) to support reflexivity to illuminate competence within practice. Reflexive thematic analysis and the framework provided by medical ethics, gives further structure to guide critical reflection to help to disentangle, and bring to surface, the tacit knowledge within the practice and how this is then used as actionable knowledge.

Theoretical implications are that this thesis adds to the literature that practice, and knowledge use within practice, is social and relational. By exploring how enactments are coordinated, it can illuminate why variation in evidence-based practice endures.

11.1 Limitations of the study

This case study was limited, by the data being generated from a single medical school. Although it is recognised that case boundaries ensure that the study remains reasonable and achievable in scope (Miles and Huberman, 1994), and this allowed an in-depth analysis to be conducted. This focus was further sharpened by zooming in to the analysis of four consultations which were chosen to *exemplify* a technical rational consultation, or a patient-centred consultation. The choices of these four consultations were informed by data from over 100 hours of field work, which included observation of over 250 partial or complete consultations between medical students and simulated patients of up to about five minutes each. These four consultations were chosen as they illustrated the range of the different types of practices observed during fieldwork. Nomination criteria for a technical rational consultation were guided by work by Schön, medical school tutors were familiar with that work and able to operationalise this nomination criteria with ease. This contrasts with nomination criteria for a patient-centred consultation exemplar, which was less explicit, and the criteria evolved over time through an iterative process of discussion with the medical school tutor participants. Different tutors may have brought different ideas about nomination criteria, and also which exemplar consultation might have been chosen from the pool available.

Another limitation is that although this study unpacked how competence is performed within practice, it did not look at the practice of assessment. This was because consent had not been negotiated with the Assessment Department within the Medical School, for them to be involved as research participants with this study. The practice of assessment would be a useful area for further research.

As with all interpretive studies, it would be expected that another researcher might reach different conclusions. The practice-based approach recognises that research participants and researchers, are carriers of a practice and are entwined rather than separate from the world. An interpretivist approach to knowledge was adopted, suggesting that as part of the research there is interest in the possible, and indeed multiple, meanings of social phenomena. To illuminate this potential variation, the methods used within this study were clearly communicated and conformed to robust principles of research practice.

A potential methodological limitation of the study is that the focus in the practice-based approach is on the practices, rather than on the agents. The focus was on how a practice is enacted rather than achievement, or not, of predetermined outcomes from a more reductionist approach. For the analysis, it can be a challenge to identify the most crucial activity among many intertwined practices (Halkier and Jensen, 2011). Hence the context of interest for the reader, is likely to be different to the context used to generate data for this thesis. Therefore, to communicate the reliability of the research, I aimed to provide clear and transparent accounts of data generation and analysis, from the 100 hours of fieldwork, so that the reader can understand the research choices made within this study and evaluate the transferability of these findings for their own context.

11.2 Personal reflections

My experiential knowledge of the field was a double-edged sword. This prior experience was a valuable resource to orient the study in relation to current debates and potential areas of interest (Malterud, Siersma and Guassora, 2016). But I was also aware of the potential negative impact that this could have on the quality of the study. For example, familiarity might lead to assumptions being made, highlighting the importance of a reflexive research approach to minimise blind spots about other factors which could potentially influence the data generation and analysis.

An ongoing reflexive approach was used to assess my values and impact on the setting and interpretations (Cunliffe, 2003; Sandberg, 2005; Alvesson, Hardy and Harley, 2008; Alvesson and Sköldberg, 2009; Silverman, 2011). Approaches included the use of my sensitising framework, and regularly keeping a research diary. This provided a record of research choices made about critically appraising researcher values and interests, as well as embracing contradictions and tensions, to explore deeper meaning within the data (Sandberg, 2005; Nadin and Cassell, 2006).

A recurring thought that I had was “Am I stating the obvious?” The findings from this thesis showed that there were still students who performed technical rational consultations, who did not demonstrate the epistemic justice required within an ethical, professionally competent performance. So, there is still potential for more support to be provided to these students to enhance the teaching. The structure provided by the methodology within this thesis, could be used to inform the teaching practice towards supporting more patient-centred consultations.

My ongoing presence in the field also supported the quality of case study. The research process was supported by both formal and informal tutor interviews, and feedback from

students via post-consultation interviews. For example, emerging themes were discussed with tutors to explore if these themes were meaningful for them, with dialogue to explore deeper meaning. This process of respondent validation helped to co-produce the themes, and to support the credibility of the findings (Sandberg, 2005; Shah and Corley, 2006; Bryman and Bell, 2011; Silverman, 2011). Many of the tutors also had professional experience from clinical practice, so their feedback also reinforced the transferability of these findings beyond the context of the single medical school used for this case study. To support readers to evaluate the transferability of these finding, there should be enough details provided about the contextual richness, and uniqueness of the context from which the findings were generated (Bryman, 2004). My ongoing discussions with my PhD supervisors, with other experienced qualitative researchers within the department, or through training courses helped me to enhance the confirmability of thematic analysis.

My personal reflections written in the research journals were often about the research process. I was reassured by reading discussions provided by Braun and Clarke (2020), about what counts as quality practice in (reflexive) thematic analysis. In particular my concerns about sample size were also calmed by the consideration of the concept of information power discussed by Malterud, Siersma and Guassora (2016). This was also confirmed by a comment from a research colleague during fieldwork that, a thesis is not about the data *per se*, but about the researchers' thinking about the data. I was reassured that achieving an appropriate depth of analysis was more important than increasing the volume of data gathered.

The reflexive diary which I recorded, showed parallels between my emerging practice as researcher and the journey made by the medical students with their emerging practice. For example, my writing about my challenges to decide the *right* way to code, to engage with the data throughout the whole dataset in a manner that was systematic and rigorous. Braun and Clarke (2020, p.5) describe the analytic process as involving "immersion in the data, reading, reflecting, questioning, imagining, wondering, writing, retreating, returning."

The analysis of the data was the most challenging part of the research process for me; the pendulum swung from the thought that there was not enough data, towards feeling overwhelmed by the volume of data. The coding dilemmas described by other researchers resonated with my own dilemmas (Sipe and Ghiso, 2004; Corley and Gioia, 2011). For example, my initial plans to analyse further data from the visual component of the video recordings, as well as audio component, were shelved pending future investigation. Despite a wealth of

further potential information from such data to capture the complexity of enactment within the healthcare environment (Gordon et al., 2017).

Feedback from the medical school tutors participating in the research, was that the findings were relevant within the complexity of the healthcare environment. This feedback from the tutors also reassured me that the findings from the thesis provided clarification about useful constructs within the complexity of the healthcare encounter, rather than just stating the obvious. This resonated with my ongoing participation in the field as a tutor, for example the assessments of students still included examples of technical rational performances. Within my own teaching practice, I have also found the themes useful in my discussions with students. For example, framing the process of the consultation as co-producing a performance between both the healthcare professional and the patient, rather than having two co-located practices. The themes have helped me in my teaching practice towards supporting students to be explicit about any assumptions regarding meaning within practice carried out by the patient, to be respectful of epistemic justice both within the consultation and related practices.

11.3 Further research

A useful area for further research would be to investigate the practice of assessment of the medical students' consultation practice. The methodology used for this study could be applied to investigate themes generated from a study of assessment practices. For example, regarding how the practice of assessment, evaluates how medical students make connections (or not) with elements within the practice of a consultation. Does the practice of assessment of a consultation focus on the student making connections with the material element within the practice, to demonstrate a technical rational performance? Does the practice of assessment also evaluate how the student makes connection with the meaning element from within the practice of the patient involved with that consultation, to co-produce the consultation with the patient? Can this process be used to assess epistemic justice within the consultation? For example, by incorporating an SBAR handover within the assessment practice, does this make it explicit how the student balances the information about material element versus the information about the meaning element?

Within the scenario used for this study, the patient was competent and articulate within the practice of the consultation. It would also be interesting to use the methodology developed within this thesis, to further investigate how a practice is co-produced within a professional interaction when the patient/client scenario has been developed to surface issues related to equality or diversity. For example, Goldenberg (2006; 2010) has explored perspectives on

evidence-based healthcare for women, to pose questions about whether a different approach to practice is required with women's healthcare.

The methodology used within this study could be applied to explore competent practice of other professions. Could the incorporation of the ethical framework used within this thesis also inform the study of sectors other than the caring professions. For example, to explore client-centredness of financial services professionals? The methodology could also accommodate an organisational perspective, for example to provide a sociomaterial study of how co-production was enacted within an organisation, to explore how meaningful connections were supported (or not) within an organisation during the coronavirus pandemic.

11.4 Concluding Statement

This thesis illuminated how variation in the implementation of evidence-based knowledge into practice is enacted. During a medical consultation, the *right* answer in terms of the medical knowledge from evidence from within clinical guidelines, may not align with of *right* answer for an individual patient. This qualitative case study employed a practice-based approach, and reflexive thematic analysis, to investigate how medical students used knowledge in their practice with individual patients, to illuminate what is meant by competent professional practice and the provision of patient-centred care. This thesis showed that by considering the medical consultation as being social and relational, rather than linear and predictable, and showed how variation in evidence-based practice was enacted.

Overall, the practical contributions from this study, showed the value of the medical student considering ethical principles to support the patient to co-construct the performance of the medical consultation. By the medical student being explicit about connecting with the element of meaning from within the practice of the patient, they were able to demonstrate respect for patient autonomy, and epistemic justice. This required attention to which practice, and which elements within practice were attended to, from within the bundle of multiple practices within any context at each point in time. By teaching for connections, tutors can support the competence of the students to reflect on both the meaning element within the practice, and the material element within practice. The tutors can use feedback to support the students to use sociological imagination, to create a practice which is most meaningful for an individual patient, to balance the provision of patient-centred care within evidence-based medicine. The findings from this thesis illuminate the meaning of competent professional practice.

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Appendix A

University of St Andrews | FOUNDED 1413

University Teaching and Research Ethics Committee

10 October 2017

Dear Siobhan

Thank you for submitting your ethical application which was considered by the School of Management Ethics Committee on 9th October 2017 when the following documents were reviewed:

1. Ethical Application Form
2. Participant Information Sheet
3. Consent Form

The School of Management Ethics Committee has been delegated to act on behalf of the University Teaching and Research Ethics Committee (UTREC) and has granted this application ethical approval. The particulars relating to the approved project are as follows -

Approval Code:	MN13123	**Approved on:**	9/10/2017	**Approval Expiry:**	9/10/2022
Project Title:	Qualitative study of how medical students use knowledge in their emerging practice				
Researcher(s):	Siobhan Dumbreck				
Supervisor(s):	Professor Ruth Woodfield & Dr Lisi Gordon				

Approval is awarded for five years. Projects which have not commenced within two years of approval must be re-submitted for review by your School Ethics Committee. If you are unable to complete your research within the five year approval period, you are required to write to your School Ethics Committee Convener to request a discretionary extension of no greater than 6 months or to re-apply if directed to do so, and you should inform your School Ethics Committee when your project reaches completion.

If you make any changes to the project outlined in your approved ethical application form, you should inform your supervisor and seek advice on the ethical implications of those changes from the School Ethics Convener who may advise you to complete and submit an ethical amendment form for review.

Any adverse incident which occurs during the course of conducting your research must be reported immediately to the School Ethics Committee who will advise you on the appropriate action to be taken.

Approval is given on the understanding that you conduct your research as outlined in your application and in compliance with UTREC Guidelines and Policies (http://www.st-andrews.ac.uk/utrec/guidelinespolicies/). You are also advised to ensure that you procure and handle your research data within the provisions of the Data Provision Act 1998 and in accordance with any conditions of funding incumbent upon you.

Yours sincerely

Convener of the School Ethics Committee

cc Supervisor

Appendix B

Simulated Patient's Briefing – SBAR format

Patient Profile: Name: Owena Mynd (pseudonym) Age: 44 Date of birth 01/01/1975

Situation:

This visit: Annual recall to GP Practice for Blood pressure clinic, the Practice nurse has just seen you, and you are happy to chat with the Medical Student prior to seeing the doctor, as you have been reassured that this will not take extra time before you see the GP.

Background

About a year ago found raised blood pressure when joined the practice**.** Repeated checks over about 4-month period, including ambulatory blood pressure monitoring, but continued raised BP. So, started on Ramipril 2.5mg one each morning, but after few months went back to GP and this was stopped due to dizziness and persistent dry cough.

About 3 months ago: Then started on Losartan 50mg daily (to build up dose slowly from 25 mg daily to 50 mg daily) but also felt dizzy on these, so actually have been taking only one 25mg tablet every two or three days, (do not tend to take them on a day that working) and have not been ordering these regularly.

Lifestyle: non-smoker, alcohol 'normal' (reduced since hypertension diagnosis), 'regular' exercise (improved since diagnosis), diet okay e.g., fruit and vegetables enjoy food, not overweight. Moved to area about a year ago, with new job, you work part time in bank.

No other medical history, including no palpitations, no breathing problems.

No Known Allergies.

Family History Mother well, on BP tablets since about age 60.

Father died a couple of years ago from heart attack aged 68 'but rubbish lifestyle'.

Assessment by Nurse

Today's blood pressure readings (mmHg): 164/102, 160/100, 158/98.

All other assessments normal, including pulse, respiratory, lab results.

Currently prescribed Losartan 50mg each morning, but computer record shows Losartan 25mg take two tablets daily x 56 but these have only been ordered once since initiated about four months ago.

Recommendations

You are happy to chat with the Medical Student prior to seeing the doctor.

Appendix B (continued)

Simulated Patient – patient values and preferences

You believe that when you were first diagnosed, your blood pressure was probably raised due to busy lifestyle (you had just moved house, changed jobs – work part time irregular hours at local bank, two kids at senior school etc.) Today you think it was still raised because you are now feeling anxious about getting your blood pressure measured.

You are concerned that you have been on several different tablets, but you do not tolerate them very well. Bottom line is that feel fine when not taking tablets. You are worried that more tablets will make you feel more rubbish.

You have read all the information that the nurse has given you, and she has answered any of your questions. Your father died of heart attack, so you know blood pressure is important, and have informed yourself about the 'evidence' from recommended websites. You have bought a blood pressure monitor to use at home, and you understand that home target is 10/5 mmHg lower than clinic target. BP is usually less than 150/90mmHg and you are okay with that.

You have no other risk factors, and have improved your diet, exercise, and alcohol since last year. You understand that high blood pressure means that you are at increased risk of heart attack and stroke. You will keep coming to the Practice to check on your kidneys etc.

Your baseline risk is 6% over 10 years i.e., 6 out of 100 people with your same level of risk may have an event over 10 years: or 6 out of 1000 people per year.

Taking tablets and feeling rubbish will reduce this to 4 in 1000 people per year.

You work in a bank, so you understand number and you feel that this Absolute risk reduction is not worth your taking the tablets and feeling rubbish.

You will worry about heart attacks and strokes in another 10 years or so further down the line. You will continue to follow the lifestyle advice and will keep attending clinic to monitor for end organ damage.

Today, you have seen the nurse at the hypertension clinic who has asked the Medical Student to have a chat with you to get some more background. You are hoping that the Medical Student might help you explain to the doctor that do understand about hypertension and the medicines recommended.

Appendix C

Interview guide

Depending on the stage of analysis and on the practice that had just been observed by the participants, the probing questions we added and/or adapted accordingly.

PROBLEM

> "Realistic Medicine" continues to emphasise that care should be person centred. The report states that "doctors need support in choosing, with their patients, not to apply evidence-based guidelines; the strength of guidelines can make doctors feel unable to deviate from them, driven by feelings of peer pressure, assumed patient demand, concern about litigation and an understandable emotional need to 'do something' in the face of long-term conditions.

PRIORITISING PRACTICE

So, following your consultation what would be your recommendation that you would pass on to a GP?

GENERALLY

How was the consultation for you?

So, the treatment guideline recommends increasing her medication, how did it feel for you when the patient resisted this?

OPPORTUNITIES

Thinking about the knowledge that you had before the consultation and the knowledge that you gained during the consultation with your interaction with the patient, what changed/if anything?

Is this scenario something that you have covered in teaching in medical school or on clinical placements?

BARRIERS

From your perspective what are the challenges and obstacles to successful implementation of evidence into practice? How can these obstacles be overcome?

End Interview

Appendix D

SBAR format – communication technique

	Questions	Description
S - Situation	What is going on with the patient? What is the situation you are communicating about?	First the speaker presents the situation by identifying himself, stating the patient's name and briefly describing the problem.
B - Background	What is the background or context on this patient?	The speaker then provides the background, such as the patient's diagnosis, medical status, and relevant history. The patient's information is reviewed and questions the other care provider may have, are anticipated.
A - Assessment	What is the problem?	Then specific information on recent assessments and other quantitative or qualitative data related to the patient's current state are provided. This section can include a provisional diagnosis or clinical impression.
R - Recommendation	What is the next step in the management for the patient?	An informed suggestion for the continued care of the patient must be made by the speaker. The immediate need is explained clearly and specifically, including what is necessary to address the problem.

Adapted from: Institute for Healthcare Improvement, (2021). SBAR technique for communication: a situational briefing model. [Online]. Available at: http://www.ihi.org/resources/Pages/Tools/SBARToolkit.aspx (Accessed: 14 February 2021).

Appendix E

Example of Outline Teaching Plan Year 3 Medical Student Workshop:

Patient-Centered Consultation Practice

Intended learning outcomes

1. To describe how a medical consultation can be co-produced with a patient, using the three-element model of competent practice.
2. To compare examples of videos of medical consultations using the three element model of competent practice.
3. To demonstrate application of the three-element model of competent practice within a consultation with a simulated patient.
4. To evaluate explicit incorporation of element of meaning from within patient practice within the SBAR handover.

How the session will run

The focus of the session will be the opportunity for each student to practice their consultation skills with a simulated patient, with tutor feedback about competent practice framed in terms of the three-element model.

The simulated patient briefing (as per Appendix B), will involve a patient who is competent regarding the material aspects of the management of their chronic condition, but for whom the meaning of the practice of managing that condition will differ from the technical rational practice. The SBAR feedback (as per Appendix D), should explicitly refer to the element of meaning from within the practice of the patient.

The tutor can facilitate the timings of consultations, to allow each student opportunity to conduct a 5-minute consultation with a simulated patient, then provide SBAR feedback to the rest of workshop group, and then to receive tutor feedback about competent practice framed in terms of the three-element model. The feedback to each medical student should highlight how they have competently connected with both the material element, and also the element of meaning from within the practice of the patient.

This is a two hour workshop with approximately 8 students in each group. Suggested timings below.

Time (mins)	Content	Learning activities	Learning objective	Resources
10	Introduction and welcome. Intended learning outcomes and plan for session.	Presentation to whole group.	1.	Presentation of Intended learning outcomes and teaching plan.
20	Introduction of the three-element model of competent practice.	Video-presentation of three-element model of competent practice. Followed by group discussion facilitated by tutor.	1, 2, 4.	Video resource of two 5-minute simulated consultations and SBAR handovers: one technical-rational and one patient-centered consultation.
80	Individual consultation practice with simulated patient.	Consultation practice. SBAR handover. Feedback to individual students facilitated by tutor.	3, 4.	Simulated patient. (Appendix B simulated patient briefing).
10	Summary of session Review learning points	Feedback from whole group.	1, 2, 3, 4.	

Resources:

PowerPoint, Simulated patient, Pre-recorded examples of Video consultations. SBAR format – communication technique (Appendix D), Simulated patient briefing (Appendix B).