

Perceptions, discourses and values:

Exploring how key stakeholders construct, negotiate and enact widening access to medical school

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I hereby declare that:

I, the named candidate, composed this thesis.

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Abstract

Perceptions, discourses and values: Exploring how key stakeholders construct, negotiate and enact widening access to medical school

'Widening access' (WA) policies are designed to increase the participation of underrepresented groups into Higher Education generally, and specifically into professions such as medicine. The interpretation, negotiation and enactment of WA policies is determined by key stakeholders, including medical schools, school teachers and potential applicants.

In the UK, measurable progress in WA to medicine has been low. This thesis argues this may partly be due to stakeholders' conflicting values, ideologies and interests. The thesis thus aims to explore, analyse and better understand the complex motivations, perceptions and values underlying key stakeholders' behaviour in WA to medicine.

Data includes medical school websites, interviews with high school teachers and focus groups with pupils. Analytical methods are qualitative (critical discourse analysis; thematic analysis) and are enriched by discursive and sociological theories (Foucault, Sen, Bernstein and Bourdieu). Analysis focuses on the pathways of mutual influence and communication between key stakeholders.

Findings indicate that UK medical schools predominantly situate WA within ideas of social mobility for the individual rather than benefit to the workforce. Medical school webpages frame WA as a 'requirement', a 'value', or a 'service' and communicate distinct impressions of institutional stance to other stakeholders. High school teachers perceive medical school applications as 'risky' and this appears to limit their ability to engage as greater advocates for WA. Pupils in WA high schools perceive medicine as increasingly culturally inclusive and negotiate cultural differences through reference to role models in the profession. High academic entry requirements within a context of substantial educational inequality may now be the largest perceived 'barrier' to medicine.

Overall, this thesis identifies the reasons underlying stakeholders' behaviour and evaluates whether these may be helping/hindering WA to medicine. It demonstrates the benefit of including diverse stakeholder's voices in WA research and provides practical recommendations for future research, policy and practice.

Summary of Salient Points

- Widening Access (WA) to medicine is a growing political imperative that has significant impact on UK medical school admissions processes and practices.
- There remains substantial uncertainty and tension surrounding the definition and goals of WA policy; this tension influences how policy is enacted by stakeholders.
- UK medical schools promote the value of WA as in the name of social mobility for academically able individuals (rather than workforce benefit) and present a variety of institutional stances towards WA on their webpages.
- UK medical school discourses do not present non-traditional students as bringing additional gains to medicine. Instead, these discourses reinforce that non-traditional applicants may be disadvantaged in a system which foregrounds traditional values.
- Medical schools should reflect upon, critically evaluate and amend their publicity materials to encourage applications from individuals from non-traditional backgrounds.
- Teachers in WA eligible schools firmly defend their pupils' freedom to make their own career decisions; they do not see it as their role to strongly encourage or discourage pupils from a career in medicine (and thus limit this freedom).
- Teachers perceive an application to medicine as a 'risky' choice for their pupils; medical schools should acknowledge and address this perception.
- School pupils from non-traditional backgrounds report the belief that their career choice should be determined by individual interest and ability rather than their social background.
- Contact to role models and 'hot knowledge' within medicine helps non-traditional school pupils reconcile perceived cultural differences and create a coherent image of themselves in the profession.
- Perceived sociocultural difference may no longer deter pupils from non-traditional backgrounds from aspiring to medicine to the same extent; academic entry requirements may now present the largest structural barrier to the profession.
- An approach which aligns the values and incentives of a wide range of stakeholders and systems is essential for change and progress within WA to medicine.

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Chapter 1

Introduction

1.1 Setting the Scene

Prior to starting this PhD, my professional experience was in ‘widening access’ (WA) to university and medical school. In these roles, I designed and ran university-led initiatives in collaboration with local high schools to engage with communities that traditionally do not participate in Higher Education (HE). The broad aims of these projects were to: offer advice, support and encouragement to pupils to consider university and medicine; to introduce pupils to the university and the medical environment in a non-threatening and enjoyable way; to boost their aspiration and thereby stimulate higher attainment.

These initiatives were founded in response to WA policies developed by successive UK governments. These aim to increase the participation of underrepresented groups in HE (Francis et al., 2017). Traditionally graduate jobs, and in particular professional careers, have been dominated by those in high socioeconomic classes (Kirby, 2016; Milburn, 2012). Internationally, WA policies are thus intended to combat issues such as social exclusion, lack of social mobility or historical bias against some groups (Shah et al., 2015).

Superficially, this seems straightforward: What could be problematic about raising awareness and aspiration to university? About tackling a lack of social mobility or social exclusion? Or encouraging more children to become doctors?

However, working ‘on the ground’ in WA and with a diverse range of stakeholders, I became increasingly sensitive to the many competing interests, values and ideologies deeply embedded within the concept and enactment of WA. Enthusiasm for WA was certainly not guaranteed: some stakeholders - even those who stood to gain from initiatives - fundamentally disagreed with WA, problematizing its aims and shunning involvement. With multiple stakeholders involved, the overall aims of WA were often

not clearly defined or agreed upon, and I found that people were keen to - consciously or unconsciously - mould these to meet their own objectives.

Experiencing and recognising this contested field, I came to understand WA to medicine as a complex site of struggle over meaning, values and practice. The ways WA is defined, enacted and understood shapes our understandings of what medicine 'is', who it is 'for' and who 'deserves' to join the profession. These value-laden judgements are naturally tightly contested and have knock-on effects for medicine and wider society.

WA initiatives can substantially change young peoples' lives in a range of unpredictable ways. Shaping dreams and providing opportunities is a responsibility. I believe all stakeholders must work together to offer best-evidence WA initiatives to these young people, to optimise benefit and reduce the risk of harm.

When there is a desire to change behaviour (e.g. to implement collaborative WA initiatives and encourage more young people from non-traditional groups to consider medicine), then policies to stimulate this change can only be effective if the reasons underlying the behaviour are clearly understood (Avis, 2005). I found working in WA frustrating because the reasons underlying stakeholders' behaviour seemed poorly understood, even to themselves. At the same time, I found the topic fascinating and deeply important. The desire to explore and try to resolve some of these frustrations became the founding motivation of this PhD.

In this chapter, I will first present some key terminology and background information about WA. The next sections outline the thesis background and rationale in summary, explain the format of the thesis 'with publications' and provide a summary of the methods and theoretical approaches. The chapter concludes with an outline of the thesis chapters and a statement of the thesis aims.

1.2 Widening Access to Medicine

1.2.1 Terminology

In this area of research and practice, both of the terms ‘widening access’ and ‘widening participation’ are used frequently and sometimes interchangeably. Nicholson and Cleland (2015, p.321-2) define these in the following way:

Widening participation (WP) refers to the policy that people such as those coming from disadvantaged backgrounds, mature students, students from ethnic and cultural groups and disabled students should be encouraged to take part, and be represented proportionately, within higher education.

[Widening Access (WA)] emphasises more the equality or fairness of the selection processes that act as a gateway to HE. This may refer to specific selection policies that increase the matriculation of certain unrepresented groups.

In this thesis, I have consistently used the term ‘widening access’ (WA) due to its emphasis on issues of fairness and the more specific focus on medical school policies. The use of this term is however, intended to more generally encompass the meanings of both WA and WP.

1.2.2 Widening Access in Practice

In the UK, decisions regarding the implementation of governmental WA policy are largely devolved to medical schools (Cleland et al., 2015). As a result, the criteria used to determine whether or not individuals are eligible for WA initiatives varies from school to school. These criteria tend to include (amongst others): individuals from lower socioeconomic groups; those who attended below-average performing schools; who are first-generation in their family to attend university; who live in socioeconomically deprived areas; mature students; disabled students; those who have been in the statutory care system; or who are from certain ethnic minority groups (Medical Schools Council, 2014c; Milburn, 2012). These individuals are often referred to in the literature as from ‘underrepresented minority’ (URM) groups, or from ‘diverse’ or ‘non-traditional’ backgrounds. The last term is preferred within this thesis.

To access and engage potential applicants from non-traditional groups, UK medical schools often work in partnership with local high schools and sixth-form colleges.

These schools are non-selective, free-to-attend, state-funded schools identified via statistics on lower exam performance, lower rates of progression to HE and deprived demographic intake (Medical Schools Council, 2016).

The reasons why non-traditional individuals are underrepresented in medicine, and measures medical schools have taken to address WA policies, are explored fully in the Background (Chapter 2).

1.3 Thesis Background and Rationale in Summary

Policies leading to the expansion of widening participation in Higher Education have been implemented in the UK for over two decades (Dearing, 1997). Particular attention fell on medicine following a 2012 report from the Social Mobility and Child Poverty Commission. This stated that, with regards to WA:

...medicine lags behind other professions both in the focus and in the priority it accords to these issues. It has a long way to go when it comes to making access fairer, diversifying its workforce and raising social mobility. (Milburn, 2012, p.3)

Since this report, UK medicine has seen a surge of interest and a strengthening of initiatives to attract individuals from non-traditional backgrounds (Medical Schools Council, 2014c, 2016). For example, medical schools have undertaken substantial changes to their admissions procedures to reduce bias and optimise 'fairness'. They have also substantially increased their 'outreach' activities to engage potential applicants from non-traditional backgrounds to consider the career (see 'Pre-Entry Activities' p.30 for a full discussion). Nonetheless, non-traditional applicants are still underrepresented, particularly those from lower socioeconomic groups (Steven et al., 2016).

There are many complex reasons why individuals from non-traditional backgrounds do not apply in representative numbers (see e.g. Cleland et al. (2012), Gorard et al. (2006), Southgate et al. (2015), Wouters et al. (2017)). Among these, sociocultural 'barriers' are often highlighted as particularly problematic: a lack of identity 'fit' or identification with the career, discouragement from family, schools or peers (Greenhalgh et al., 2004; Mathers and Parry, 2009; McHarg et al., 2007). These factors are notoriously difficult

to address and slow to change. Moreover, sociocultural reasons often underpin behaviour in relation to other ‘barriers’. For example, addressing the barrier of ‘a lack of information’ may seem relatively straightforward given how easy it is to gather information from the internet and the prevalence of smartphones. However, encouraging non-traditional individuals and their advisors to use this information, and to trust what it says, may be harder and rely on a change of perceptions and values.

Despite the strong influence of sociocultural factors in the success of WA to medicine, there remain substantial knowledge gaps about these factors in relation to key stakeholders. For example:

- It is known that medical schools’ interpretation and enactment of WA policy is context specific and substantially influenced by the schools’ own history, location and values (Cleland et al., 2015; Razack et al., 2015). However, understandings and justifications from medical schools as to *why* things are done in the ways they are in relation to WA, are often conflicting and confused (Cleland et al., 2015).
- Studies conclude that high school teachers in UK state-funded schools do not provide pupils with adequate support and may even discourage them from considering medicine (Greenhalgh et al., 2004; McHarg et al., 2007; Mathers and Parry, 2009). However, no UK based studies included the perspectives of teachers themselves, and rather drew conclusions about teacher motivation from the accounts of pupils and current medical students. Therefore, the teachers’ own perspective remains unexplored, as do the reasons and values underlying their (seemingly problematic) behaviour.
- Studies report that perceived sociocultural differences deter potential applicants from non-traditional backgrounds from considering or applying to medicine (Greenhalgh et al., 2004; Mathers and Parry, 2009; McHarg et al., 2007). However, UK studies on this topic are now approximately a decade old. It cannot be assumed that these perceptions remain unchanged – especially given the widespread implementation of WA initiatives and substantial changes in approach

and attitude across the HE sector during this time (DBIS, 2016; Molesworth et al., 2011).

Finally, with some key exceptions (Razack et al., 2015), there has been surprisingly little investigation of WA to medicine through language, discourse and communication. The exploration of language can help: reveal the values, assumptions and power structures underlying stakeholders' behaviours and practices; and evaluate the influence of one stakeholder's position on the positions of others (Willig, 2001; Wodak and Meyer, 2010).

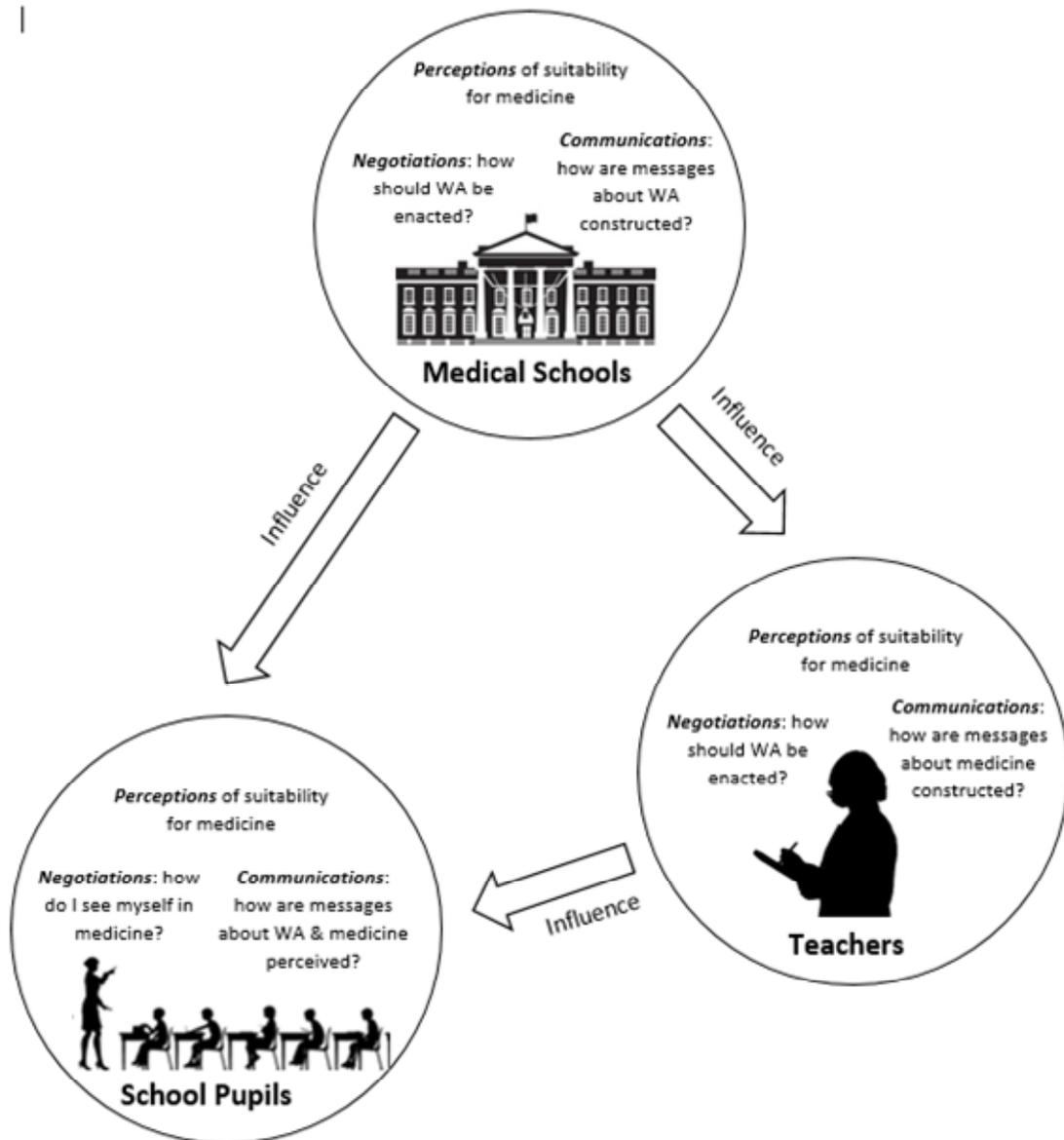
Throughout the thesis, I take the stance that WA to medicine should be understood as a system that is larger than the sum of its parts. These 'parts' (medical schools, high school teachers, potential applicants, policy makers and others) are highly mutually influential and interlinked through power structures and paths of influence. As a result, this thesis investigates the influential lines of communication between key stakeholder groups and aims to demonstrate that substantial progress in WA depends on the alignment of their perceptions, values and communications.

The first overarching rationale for this PhD is thus to make an original contribution towards the key knowledge gaps outlined briefly above. This is addressed through research focussed on cultural and communicative factors: the ways each stakeholder group perceives, negotiates and communicates about WA to medicine. Throughout the thesis, I place particular focus on the impression each stakeholder groups' communications might create for others. These overarching themes and their links are summarized visually in Figure 1.1.

The second thesis rationale is to stimulate alternative ways of thinking about persistent problems within WA - particularly underlying perceptions and power structures - and thus generate innovative recommendations for WA practitioners.

Although each stakeholder is focussed on in turn, their interaction with others remains a central theme throughout the thesis and is intended to encourage a 'whole systems' view of WA.

Figure 1.1 Stakeholders under investigation and linking themes



1.4 Thesis 'with publications'

At the University of Aberdeen, it is becoming increasingly common for PhD theses to be presented 'with publications'. This approach mirrors the format of theses in other countries renowned for excellence in medical education: it is the standard format in the Netherlands, and increasingly common in Canada and Australia.

The key difference between a traditional thesis and a thesis 'with publications' is that, in the latter, the results chapters are presented in the format of stand-alone

publications. Within my thesis each of these chapters thus appears as a journal article in Introduction Methods Results Discussion (IMRD) format, or as a book chapter.

At the University of Aberdeen, there is no maximum or minimum required number of publications, although it generally standard to present between three and five. All publications must have been started after the start date of the PhD (i.e. prior publications cannot be included). Publications may be published, under review or in submission.

Despite this divergence from traditional thesis format, key similarities remain. Several measures have been taken to ensure the key requirements of any PhD thesis are met and are evident to the reader. These stipulate that:

- I am the primary and first-named author on all work presented in the thesis and for consideration of the award of the PhD.
- My individual contribution to each multi-author publication is clearly and fully articulated, so that my contribution to the creation of novel independent research may be accurately judged.
- The thesis is presented as one coherent whole, following a natural and logical progression between studies and a consistent argument throughout. Additional commentary before and after each publication reinforces how the publications are linked to the overall thesis aims.
- Publications are stylistically incorporated into the thesis.

For a thesis 'with publications' only an overall Introduction and Discussion section are required to accompany the publications. However, in this thesis, I have chosen to include the following additional material:

- Methodology sections to clarify the reasoning and decisions behind the research designs of each study (and subsequent publication). The thick description of this process allows the reader to better judge the study's credibility and my contribution to the research (e.g. responsibility for decisions taken and the skills and experience I have gained during this PhD).

- A background chapter to situate the subsequent publications within their wider academic and practical context. This is primarily presented in the format of a book chapter publication.
- Two invited commentaries in which I am the first named author and which were completed during the PhD. These are on topics relevant to the aims of the thesis and may be found in Appendix A and B.

The publications presented in lieu of the traditional results chapters form the basis of this PhD. These are referred to throughout as Study One – Four.

References cited within each study are presented as usual in a bibliography directly after the study's discussion section to preserve the integrity of the publication.

To maintain consistency as much as possible, within the thesis, chapter bibliographies are thus presented at the end of the chapter in which they appear. These chapter bibliographies are presented in lieu of a full thesis bibliography.

1.5 Methods in Summary

The work within this thesis is situated in a subjective (interpretivist) ontology which understands human realities to be individual and meaningful only through sentient interpretation (Blaikie, 1993, p.96). Epistemologically, I have taken a 'situationalist orientation' (Savin-Baden and Howell Major, 2013, p.85), whereby researchers adopt the philosophical stance that is best suited to the needs of the research topic, question and context.

This rather pragmatic approach is also reflected in the studies' differing research designs, which are presented visually in Figure 1.2 (p.11), and described in summary (below). There are four studies included in this thesis:

Studies One and Two investigate how UK medical schools draw from, and contribute to, discourses ('ways of thinking') about WA to medicine. In these studies, I thus wanted to explore data from a publically and easily available source of information to all

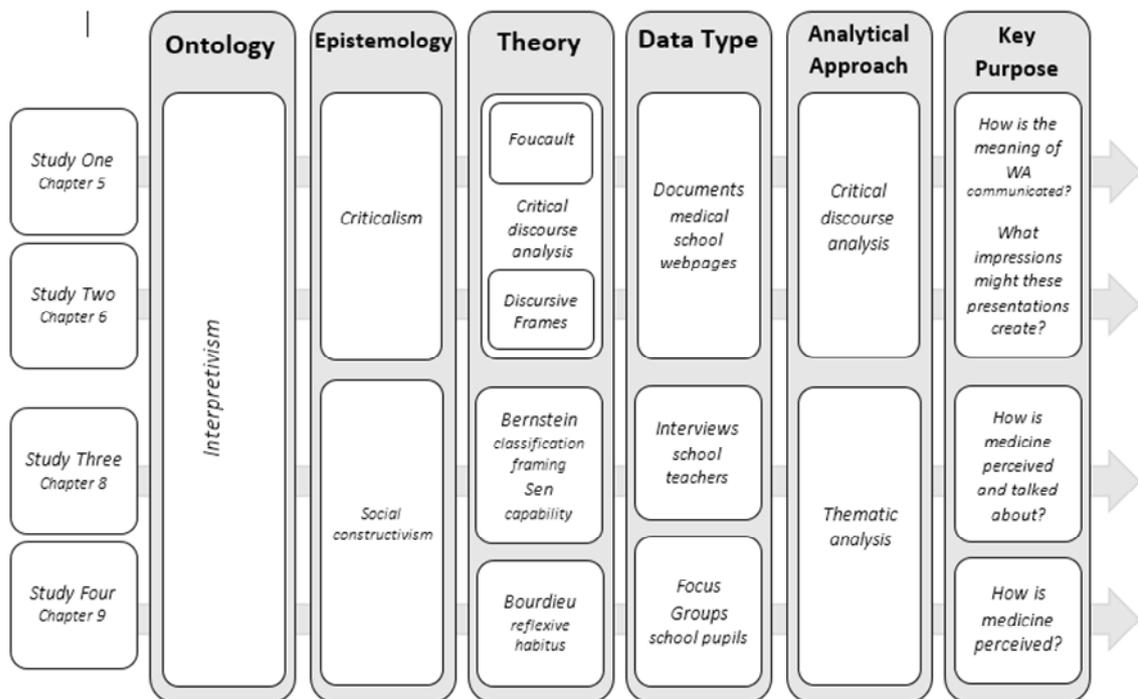
audiences and selected UK medical school webpages about WA. I sought a methodological approach that would allow me to explore the ways in which language was used to construct particular discourses of WA, and enable me to evaluate the influence these discourses might have on readers. This led me to critical discourse analysis (CDA) - an approach that foregrounds both these elements (Wodak and Meyer, 2010). In alignment with these methods, Studies One and Two are situated within a criticalist epistemology, which emphasises the social construction *and* contestation of knowledge (McMillan, 2015).

In Studies Three and Four, I switched my focus to the ways in which these discourses and their associated messages might be understood, negotiated and managed by two key groups: high school teachers and pupils. I sought data that would allow me insight into teachers' and pupils' uninhibited perceptions and opinions and therefore chose to conduct semi-structured interviews with teachers and focus group interviews with pupils (Barbour, 2005; DiCicco-Bloom and Crabtree, 2006).

I analysed this data thematically, using template analysis (Brooks and King, 2014). This offered a largely inductive (data-driven) approach and for unexpected insights or novel patterns to be developed. I then interpreted the themes through theories taken from the fields of Sociology and Education to add explanatory and evaluative power to findings. The social constructivist stance of these studies aligned with my intention to produce knowledge which described the subjective, lived realities of participants (Mann and MacLeod, 2015).

The research designs for each Study will be discussed in detail in Methodology sections Two and Three (Chapters 4 and 7).

Figure 1.2 Visual summary of the research designs for Studies One - Four



1.6 Thesis Aims

To recap, my intention for this thesis was to conduct original research to fulfil two key aims: (1) to address some of the current knowledge gaps and add an original contribution to the literature; and (2) to produce findings of applied value to the practice of WA (see section 1.6).

The following overarching research questions guided the programme of work:

1. How is the meaning and value of 'widening access' (WA) constructed and communicated by UK medical schools? How might these presentations influence audience perceptions?
2. How do school teachers from UK WA schools perceive and communicate who is 'suitable' for medicine?
3. How do high-achieving pupils from non-traditional backgrounds perceive 'suitability' for medicine?

During the course of the work, these overarching research questions were broken down and refined into the following, more specific, research questions in Studies One to Four:

Study One

- How is the value of WA to medicine communicated by UK medical schools through their WA webpages?
- What expectations are set up by these discourses with regards to who is 'suitable' for medicine and encouraged to apply?

Study Two

- How do medical schools discursively frame their approach to WA enactment on their webpages?
- What characterizes these frames?
- Which key messages might these frames communicate to audiences?

Study Three

- What do teachers in UK WA schools perceive to indicate a pupil's 'suitability' for medicine?
- What do they perceive to be their role in encouraging pupils to aspire or apply to the profession?

Study Four

- What key factors do pupils believe would have motivated current medical students to apply?
- How do pupils perceive their own motivations for medicine, or another career, to align with those they believe the medical students hold?
- Why do pupils consider themselves 'suitable' (or not) for medicine?

1.7 Thesis Outline

This thesis 'with publications' (see p.7) is organised as follows:

Chapter 2 presents the wider background of WA to medicine in the UK. It describes the practical and academic context, highlights the importance of the topic, and outlines key areas where there is a lack of knowledge and unresolved issues. Finally, the chapter outlines how the thesis will address some of these knowledge gaps.

As described in section 1.5, this thesis explores the behaviour of a range of stakeholders through a wide variety of research designs. Due to this diversity, I have split the Methodology into three parts for clarity.

Chapter 3 presents the General Methodology (Part One). This justifies the overall qualitative approach and discusses methodological aspects common to all the studies. It also outlines the importance of ethical practice and trustworthiness in qualitative research.

Chapter 4 acts as 'Part Two' of the Methodology and discusses the decisions underpinning the research designs of Studies One and Two. The methodological approaches of these studies share some key similarities and are thus presented together (see Figure 1.2, p.11).

Following a discussion of their research designs, Studies One and Two are presented. Chapter 5 contains Study One (*Discourses of WA on UK medical school webpages*). This is a critical discourse analysis study and was published in 2017 in the journal *Medical Education*. It identifies the discourses ('ways of thinking') present on UK medical schools' websites and considers the potential influence of these discourses on potential applicants.

Chapter 6 presents Study Two (*Framing WA to medicine*). This is a secondary analysis of the medical school webpages data, however, is distinct from Study One in research aims and design. Analysis focuses on the stylistic and rhetorical presentation of WA in the texts, and considers these within the wider HE context.

In Chapter 7, the focus turns to some of the key 'recipients' of WA: high school teachers and pupils. This chapter is 'Part Three' of the Methodology: a discussion of the research designs of Studies Three and Four. Again, as the methodologies of these studies share some key similarities they are presented together (see Figure 1.2, p.11).

Chapter 8 presents Study Three (*Teachers' perceived role in WA to medicine*). This study analyses semi-structured interviews with high school teachers to explore their perceived role in WA to medicine. The study is currently under review at an academic journal in Sociology/Education.

Having explored the role of teachers, in Chapter 9 - Study Four (*Exploring school pupils' perceptions of medicine*) - attention is turned to the perceptions of pupils. This is a thematic analysis of focus group interviews with high-achieving pupils in their final years attending high schools eligible and engaged in WA initiatives. This study has been submitted to an academic journal in Medical Education.

Chapter 10 draws together and presents an overall discussion of the thesis. It considers the extent to which the thesis aims have been met, the empirical and conceptual contributions to the field, discusses strengths and weaknesses, and suggests practical implications for future research and practice in WA to medicine.

Finally, two published invited commentaries are attached in Appendix A and B. These consider the importance of cultural change and social validity in medical admissions.

1.8 References for Chapter 1

Avis M (2005) Is there an epistemology for qualitative research? In: Holloway I (ed.) *Qualitative Research in Healthcare*. New York, NY: McGraw Hill, pp. 3–16.

Barbour RS (2005) Making sense of focus groups. *Medical Education* 39(7): 742–750. DOI: 10.1111/j.1365-2929.2005.02200.x.

Blaikie N (1993) *Approaches to social enquiry*. Cambridge: Polity.

Brooks J and King N (2014) *Doing Template Analysis: Evaluating an End of Life Care Service*. Sage Research Methods Cases. DOI: 10.4135/978144627305013512755.

Cleland J, Dowell J, McLachlan J, et al. (2012) Identifying best practice in the selection of medical students: literature review and interview survey. Report for the Medical Schools Council. London.

Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical Education* 49(1): 25–35. DOI: 10.1111/medu.12502.

DBIS Department for Business, Innovation and Skills. Success as a Knowledge Economy: Teaching Excellence, Social Mobility & Student Choice. UK Government. London.

Dearing R (1997) The Dearing Report: Higher Education in the learning society. The National Committee of Inquiry into Higher Education. London.

Dicicco-Bloom B and Crabtree BF (2006) The qualitative research interview. *Medical Education* 40: 314–321. DOI: 10.1111/j.1365-2929.2006.02418.x.

Francis B, Mills M and Lupton R (2017) Towards social justice in education: contradictions and dilemmas. *Journal of Education Policy* 32(4): 414–431. DOI: 10.1080/02680939.2016.1276218.

Gorard S, Smith E, May H, et al. (2006) Review of Widening Participation Research: addressing barriers to participation in higher education. Report for the Higher Education Funding Council for England (HEFCE). Bristol.

Greenhalgh T, Seyan K and Boynton P (2004) 'Not a university type': focus group study of social class, ethnic, and sex differences in school pupils' perceptions about medical school. *BMJ* 328(7455): 1541–1544. DOI: 10.1136/bmj.328.7455.1541.

Kirby P (2016) The educational backgrounds of the UK professional elite: Improving social mobility through education. The Sutton Trust. London.

Mann K and MacLeod A (2015) Constructivism: learning theories and approaches to research. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, pp. 51–65.

Mathers J and Parry J (2009) Why are there so few working-class applicants to medical schools? Learning from the success stories. *Medical Education* 43(3): 219–228. DOI: 10.1111/j.1365-2923.2008.03274.x.

McHarg J, Mattick K and Knight L V (2007) Why people apply to medical school: implications for widening participation activities. *Medical Education* 41(8): 815–21. DOI: 10.1111/j.1365-2923.2007.02798.x.

McMillan W (2015) Theory in healthcare education research: the importance of worldview. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 15–24.

Medical Schools Council (2014) *Selecting for Excellence Final Report*. London.

Medical Schools Council (2016) *Implementing Selecting for Excellence: A progress update*. London.

Milburn A (2012) *Fair Access to Professional Careers. The Independent reviewer on Social Mobility and Child Poverty*. London.

Molesworth M, Scullion R and Nixon E (2011) *The Marketisation of Higher Education and the Student as Consumer*. Oxon: Routledge.

Nicholson S and Cleland Jennifer (2015) Reframing research on widening participation in medical education: using theory to inform practice. In: Cleland J and Durning S (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 231–244.

Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.

Savin-Baden M and Howell Major C (2013) *Qualitative Research: The essential guide to theory and practice*. Oxon: Routledge.

Shah M, Bennett A and Southgate E (2015) *Widening higher education participation : a global perspective*. Waltham, MA: Elsevier Ltd.

Southgate E, Kelly BJ and Symonds IM (2015) Disadvantage and the ‘capacity to aspire’ to medical school. *Medical education* 49(1): 73–83. DOI: 10.1111/medu.12540.

Willig C (2001) *Introducing Qualitative Research in Psychology: Adventures in Theory and Method*. Buckingham: Open University Press.

Wodak R and Meyer M (2010) *Critical Discourse Analysis: history, agenda, theory and methodology*. In: Wodak R and Meyer M (eds) *Methods of Critical Discourse Analysis*. London: SAGE Publications, pp. 1–33.

Wouters A, Croiset G, Isik U, et al. (2017) Motivation of Dutch high school students from various backgrounds for applying to study medicine: a qualitative study. *BMJ Open* 7(5): e014779. DOI: 10.1136/bmjopen-2016-014779.

Chapter 2

Background

2.1 Introduction

As this thesis is presented with publications, Studies One - Four (chapters 5, 6, 8 and 9) each contain a separate discussion of the background literature most pertinent to that study. To avoid repetition, this chapter will instead situate these articles within the wider context of WA to medicine.

This wider context encompasses: a discussion of why WA is an important and contested issue in medicine; a general overview of current WA policy enactment; and a presentation of enduring issues in the area. These discussions are informed by the academic and policy 'grey' literature.

This chapter is presented primarily in the form of a book chapter, produced as part of my programme of PhD work. The invitation for this commissioned piece was sent to my primary supervisor (Prof Jen Cleland) and we collaborated on the work, with myself as the main contributor and first named author. Full contributions are detailed in section 2.2 and the citation for the work is as follows:

Alexander, K. and Cleland, J. (2018) Social inclusion or social engineering? The politics and reality of widening access to medicine in the UK. In: M. Shah and J. McKay (eds) *Achieving Equity and Academic Quality in Higher Education: Global Perspectives in an Era of Widening Participation*. Cham: Springer International Publishing.
DOI: 10.1007/978-3-319-78316-1

In the thesis chapter, I detail the authorial contributions to the book chapter and present the publication. The book chapter covers the majority of the context required to situate the thesis in its practical, political and academic context. It was however, also written to meet the requirements of the book editors, and is therefore not specifically tailored to the thesis. As a result, I also highlight a number of points and elaborate on these in relation to the aims of the thesis. In doing so, I aim to create a frame through which the reader may better understand the research questions, and how these fit into the 'bigger picture' of knowledge and practice in the field (Ebeling

and Gibbs, 2001). This chapter concludes with a summary of key points to carry forward to the rest of the thesis.

2.2 Contributions to this Publication

As per above, the invitation to contribute to this edited book was sent to my primary supervisor - Prof Jen Cleland (JC) - who suggested that we accept the invitation on the basis that I take on lead author role and responsibilities. We had a meeting in which we sketched out ideas for the chapter. I produced a topic outline for discussion and subsequently the first draft. JC reviewed this draft, reordered sections and suggested a stronger focus on systemic level change. I worked through these changes and composed the concluding sections to produce a second draft. JC reviewed this draft and suggested additional references. I made these additions, other changes and produced a third draft. JC suggested final, minor edits to reduce repetition and 'tidy' the draft. I made these changes and proofed the draft to produce a final copy. JC approved this for submission, and I emailed it to the book editors.

The editors made one comment on our submitted draft, which JC addressed by adding a small section and some extra references. These edits were accepted, and the chapter approved for publication. JC and I provided written consent for this to be published on 1st February 2018. The book appeared in print June 2018.

The chapter content is reproduced here as it appears in print, however, it has been formatted to be in keeping with the rest of the thesis stylistically.

2.3 Book Chapter: Social Inclusion or Social Engineering?

Social inclusion or social engineering? The politics and reality of widening access to medicine in the UK

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Abstract

Although driven by policy and investment, the available data suggests that, to date, UK efforts to minimise the barriers into professions such as medicine have had mixed success. We explore the myriad of social, individual and structural reasons why the resources invested in widening access (WA) activities have not significantly increased the representation of applicants from lower socio-economic groups within medical schools. We discuss the different discourses of widening access/increasing diversity in the UK context – notably those of ‘social mobility’ and ‘increasing diversity to improve workforce efficiency’ – and how these are interpreted and enacted “on the ground”. This includes examining the synergies and tensions between widening access and maintaining quality, and the gap between political directives and policy enactment within medical schools. We discuss if the different discourses of widening access can be reconciled, and if so, whether this can be done in a way to support widening access.

Introduction

The movement to 'widen access' (WA) to those who have not traditionally participated in Higher Education is a global issue, and currently a 'hot topic' for educators, politicians and policy-makers in the UK. The focus of WA is in part determined by each country's historical and current social issues. For example, US WA initiatives may particularly aim to attract students from under-represented minority (URM) ethnicity and racial groups (Castillo-Page, 2012; Lakhan, 2003), whilst in Canada and Australia medical schools also aim to recruit those from rural or Indigenous communities (Behrendt et al., 2012; Dhalla et al., 2002; Hay et al., 2016; Puddey et al., 2014). In the UK, the medical profession has been applauded for widening access to include greater ethnic and gender diversity (Milburn, 2012) and for creating increasingly 'fair' selection procedures for these groups (Mathers et al., 2016b). However, medicine remains under the spotlight with regards to the lack of progress in widening the profession's socioeconomic diversity.

Currently home applicants and entrants to UK medical schools remain clustered in higher socioeconomic groups. Only 5.1% of UK applicants come from the least affluent 10% of households, with that number being as low as 1.8% in some regions. These percentages drop further when it comes to achieving a place in medical school (Steven et al., 2016). Other indicators suggest that the percentage of medical students from 'working class' backgrounds (those with parents in semi-skilled or unskilled occupations) may even be falling (Cleland et al., 2012b).

Medical schools work in a multifaceted landscape of competing pressures – many of which are in tension with greater inclusion. In this chapter we explore the reasons why medical schools are under pressure to diversify their cohorts and the initiatives they currently deploy to attract and support applicants from under-represented or disadvantaged groups. We discuss why these initiatives have had limited success, including schools' concerns about maintaining a reputation for excellence and a lasting adherence to the principles of academic meritocracy. We conclude by discussing whether some of the tensions which block progress within WA might be reconciled, and how this might be done. In so doing, we call for medical schools, as well as the

wider educational contexts in which they are situated, to consider systemic and cultural change to tackle WA.

Context

In the UK, the vast majority of tertiary education is provided by state-funded universities. (There is only one, small, private medical school in the UK at the time of writing this chapter). The vast majority of students enter medicine after high school (i.e., with school-leaving qualifications) onto a 5-year course, with this considered the 'standard' route into medical education. In an effort to increase the diversity of the medical school population, a number of accelerated (four-year) graduate entry medicine (GEM) programmes have been established since 2000 (Medical Workforce Standing Advisory Committee, 1997). These now train 10% of the UK's medical students (Kumwenda et al., 2018).

As in all countries, entry to medicine is highly competitive. While competition or selection ratios vary by medical school, on average around half of those who apply as school-leavers receive an offer/place (Mathers et al., 2016b). The selection ratios are higher for those applying to GEM programmes at approximately 4:1 (Kumwenda et al., 2018). Successful applicants must demonstrate very high educational achievement; strong performance in aptitude tests, application statements and interviews; and, increasingly, must demonstrate that they possess personality traits befitting a career in medicine such as compassion, team working skills and integrity (Medical Schools Council, 2017).

Collectively UK medical schools currently accept approximately 6500 new students each year (of which over 90% are UK-domiciled at the time of application (MacKenzie et al., 2016)). Medical student numbers are regulated by the government and are expected to rise by approximately 23% in the next few years (with most, but not all, of these additional places being available in England) (Roberts and Bolton, 2017). This increase has been proposed partially in response to the dual concerns raised later in this chapter: the lack of participation of those from lower socio-economic groups in

medicine; and the challenge for the state education system (medical schools) to meet the needs of its state-funded and state-controlled National Health Service (NHS).

Barriers to widening access in UK Medicine

It is widely acknowledged that applicants from URMs/disadvantaged groups may face additional challenges when considering, preparing, or submitting a competitive application to medicine. These additional challenges may therefore place some applicants at an unfair disadvantage in comparison to others during the selection process. For WA initiatives to be successful, it is first important to understand how a complex and intertwining network of factors may contribute to an applicant's disadvantage and how these challenges might be addressed.

Disadvantage is initially evident when examining the inequalities between applicants' pre-university educational experiences (Chowdry et al., 2013; Nicholson and Cleland, 2015a). Worldwide, high academic achievement is a key requirement of all competitive medical courses, and worldwide, students in higher socioeconomic groups outperform students in lower groups in school exit examinations (Bowes et al., 2013; Chowdry et al., 2013; Gorard et al., 2006). In the UK, inequalities in attainment by socioeconomic group are already evident in primary school (Chowdry et al., 2013), showing that differentiated achievement starts early. As a result, a selection process centred strongly around academic attainment can be biased in favour of those in higher socioeconomic classes, who generally have access to higher achieving and better resourced schools (Cleland et al., 2012b). For example, primary and high schools may be able to access different amounts of material resources and information, which influences how much support they can offer students who wish to apply to competitive professional subject such as medicine (Southgate et al., 2015). As a result, many students who are able and motivated may still lack important knowledge about the admissions procedures or requirements (Kamali et al., 2005; Robb et al., 2007).

Moreover, a school's culture regarding academic attainment, work ethic and aspiration to certain careers also plays a large role in students' choices (Archer and Leathwood, 2003; DFES, 2003; Gorard et al., 2006; Reay et al., 2001; Slack, 2003). There is

increasing evidence that students in some UK state schools may be discouraged from considering or applying to medicine by school factors, including school culture and teachers' expectations (McHarg et al., 2007; Medical Schools Council, 2014a; Robb et al., 2007; Southgate et al., 2015).

These inequalities are starkly evidenced in schools' application rates to highly selective universities and to competitive subjects such as medicine (Hemsley-Brown, 2015; Medical Schools Council, 2014b). In England, 100 'elite' schools (3% of all schools) provided 11.2% of admissions to highly selective universities, and 31.9% of admissions to Oxford and Cambridge (Trust, 2011). Applications to medicine are also highly differentiated by school: 80% of UK applicants come from only 20% of UK schools, and half the schools in the UK sent no applicants to medicine in recent years (Medical Schools Council, 2014b).

Of course, schools are just one piece of the jigsaw, as larger societal influences, peer and familial expectations, as well as a student's beliefs about their own ability also strongly influence students' educational and career choices (Bridges, 2006; DFCSF, 2008; Hill et al., 2004; Miller and Cummings, 2009; Robb et al., 2007).

Financial concerns about the cost of tuition fees and living costs whilst a student may also deter capable applicants, and particularly those from poorer backgrounds who are more likely to be worried by the burden of 'debt' (Callender and Jackson, 2008; Minty, 2015). Although tuition fees for medicine are equivalent per year to studying any other subject at university (due to government subsidies), the course is considerably longer, and may require additional costs (Cleland et al., 2012b). There is substantial evidence that students from poorer backgrounds may also prefer to stay in the family home whilst studying to limit costs (Hughes et al., 2008; Mangan et al., 2010), which may severely restrict the medical schools available to them, especially if they live rurally.

Overall, the choice to attend university generally, and medicine particularly, may be seen as presenting more risk for a student from a non-traditional background, both culturally and financially (Archer and Hutchings, 2000; Archer and Leathwood, 2003). As discussed, a complex and intertwining set of factors may lead students to this conclusion. Justifiably, UK medical schools feel they are unable to counterbalance the

large inequalities in applicants' pre-entry experiences through their efforts alone (Cleland et al., 2015). Large-scale and joined-up interventions and investment at a political level are needed for real improvements to inequality and social mobility (Sutton Trust, 2017). Nonetheless, some of the negative perceptions held about medicine may be justified, as studies suggest medical school is not always welcoming to diverse students (Beagan, 2005; Greenhalgh et al., 2004; Orom et al., 2013), nor do systems provide them with enough support to concentrate on their studies (BMA Medical Student Committee, 2015). As a result, there are still potential applicants who feel that medicine is not a suitable career choice for someone from their background (Greenhalgh et al., 2004; Mathers and Parry, 2009) and this must continue to be addressed.

Why is widening access important in medicine?

In the UK, there are two main arguments to justify WA to medicine: the first is to increase social mobility; the second to improve healthcare provision. These drivers mirror those in many other countries which face similar challenges regarding a lack of diversity in the medical profession.

In relation to the first, the UK has long-standing and increasing levels of inequality in income (Eurofound, 2015), health (RCPCH, 2017) and education (Jerrim and Shure, 2016), coupled with limited social mobility (Sutton Trust, 2017) – considered the means to break “the transmission of disadvantage from one generation to the next” (Nicholson and Cleland, 2015, p.231).

The concept of social mobility is closely tied to ideas of meritocracy. ‘Meritocracy’ can be defined as “a social system, society, or organization in which people have power because of their abilities, not because of their money or social position” (The Cambridge English Dictionary, 2017). Meritocratic systems are strongly cherished for their perceived fairness, productivity, and for the opportunities they offer individuals within all social strata. However, although the meritocratic approach is the preferred philosophy of education in the UK (Sheeran et al., 2007), there are limits to its effectiveness.

As discussed above, the level of educational, social, cultural and financial resources and opportunities an applicant possesses, or is able to access, before they apply to medicine may set still them at a considerable disadvantage in a competitive, and apparently 'meritocratic' application system. Despite much investment in WA activities to address these disadvantages, to remove barriers, and to attract and support able but disadvantaged students into medicine, the proportion of medical students from lower socio-economic groups has remained static over many years (BMA, 2009) (see later for further discussion). Indeed, a high profile report for the Social Mobility and Child Poverty Commission stated that: "medicine ... has a long way to go when it comes to making access fairer, diversifying its workforce and raising social mobility" (Milburn, 2012).

The second reason to 'widen access' to the medical profession addresses the need to build a healthcare workforce that reflects and understands the needs of patients from diverse cultures and in diverse locations.

There is increasing recognition that a more diverse student cohort may benefit the workforce and medical school learning environment. Amongst other strengths, diverse students are understood to contribute a better understanding of diverse populations (Guiton et al., 2007; Morrison and Grbic, 2015; Saha et al., 2008; Whittle et al., 2003), multilingualism (Flores, 2000), as well as resilience and persistence to overcome barriers (Cleland and Medhi, 2015; Jardine, 2012). Diversity in the workplace may not only improve the competence of staff, but also provide the workforce with more practitioners who choose to work in underprivileged communities, locations and specialties (Bailey and Willies-Jacobo, 2012; Cooter et al., 2004; Dowell et al., 2015; Komaromy et al., 1996; Larkins et al., 2015; Puddey et al., 2014; JH Walker et al., 2012; KO Walker et al., 2012).

The topic of workforce planning is currently high on the political agenda in the UK as there are significant doctor shortages in many specialties and localities (NHS Improvement, 2016; UKFPO, 2016). As in many western countries, demands on healthcare provision in the UK are changing as the population becomes increasingly multicultural and ageing (ONS, 2011), and technological advances increase the level of

care it is possible to offer and ‘disrupt’ traditional roles with potentially dramatic reforms (Gorman, 2018). The UK faces additional challenges when matching doctor supply to community needs, especially as medical graduates’ choice of progression routes through training no longer fit predicted models (Cleland et al., 2016; Scanlan et al., 2017). In 2016, almost half of medical graduates either took a ‘break’ or left the workforce after completing the UK’s two year ‘Foundation Programme’ (the broad training programme medical school graduates are required to undertake before they are eligible for general practice (family medicine) or specialty training) (UKFPO, 2015). Although in the past graduates commonly took a ‘break’ at this point (especially to work overseas) (Smith and Low, 2012), the current scale of the phenomenon, and the increasing number who do not return to the UK health service (NHS) (UKFPO, 2016) has naturally led to concerns over a ‘brain drain’ within the UK and disrupted service provision. Moreover, the government’s planned rise in medical student numbers alone may not be a solution to this issue – increasing the supply of doctors does not, in itself, better match that resource to accommodate areas of need (Gorman, 2018).

A greater understanding about how socioeconomic factors (amongst many others) might relate to willingness to stay and practice in the UK is therefore becoming ever more pressing. It is worth noting however, that the relationship between lower socioeconomic status and higher desire to work in underserved areas is complex and often compounded by a multitude of factors (Griffin et al., 2016; O’Connell et al., 2017). Moreover, programmes that most successfully provide for rural areas have had three crucial support mechanisms: government investment; strong leadership; and lack of training places in neighbouring big cities (Gorman, 2018), as well as a focus on exposing their students to underserved localities (Phillips et al., 2018).

The UK undergraduate medical education landscape is thus in a period of significant change, as it adapts to shifting population demographics and demands, significant political changes and decisions, as well as to changes in the preferred career paths of graduates. WA to the profession is thus seen as one way to meet and help improve the skills, efficiency and distribution of the workforce into the future.

How are these calls for diversity played out in the UK?

It is important to understand how the different arguments for WA are conceptualised by UK medical schools as these concepts influence the design and implementation of WA initiatives, as well as how they are presented and judged to be successful (Jones and Thomas, 2006; Sheeran et al., 2007; Stevenson et al., 2010).

First, it is crucial to acknowledge that there is a tension between the political drivers to WA and the (equally politically driven) competitive nature of neoliberal university education in the UK. The UK Higher Education system is becoming increasingly competitive, and universities must compete for funding, students and prestige within a stratified marketplace. This puts increasing pressure on universities and medical schools to promote a reputation of excellence, high quality experience and exceptional standards (see e.g. Fairclough (1993) and Molesworth et. al (2011)). Yet, concurrently UK devolved governments are also putting increasing pressure on universities to widen access, setting them ambitious diversity targets (DBIS, 2016; Scottish Government, 2016). WA, with its aims of broader inclusivity and participation, can thus be seen at odds with the market pressure to convey more mainstream forms of excellence and of exclusivity and selectiveness in admissions.

When considering UK Higher Education as a whole, studies found large differences between the portrayals of WA given by more 'elite' institutions, in comparison to less selective or more recently established universities (Bowl and Hughes, 2013; Graham, 2013). Overall, selective institutions chose to continue to promote themselves as 'elite' with only vague statements about key WA activities (Bowl and Hughes, 2013).

Moreover, institutions' self-presentations with regard to inclusivity were seen to change over time in response to sector and policy changes: in the years between 2007 and 2011 the selective universities in Graham's study seemed to adopt a slightly more welcoming tone towards underrepresented groups, whereas less selective institutions moved away from promoting themselves as a 'WA institutions' to foregrounding their 'excellence' and 'quality' (Graham, 2013).

Like the wider universities to which they belong, UK medical schools vary in terms of their culture, history, location and capital and use their reputations and resources

strategically to differentiate themselves from their competitors (Brosnan, 2010). There are clear differences between UK medical schools' curricula, image and aspirations, which also impact on their stance towards, and enactment of widening access. For example, a UK-wide study interviewing medical school Admissions Deans revealed significant differences in the schools' attitudes towards, and interpretations of, WA policy (Cleland et al., 2015). Many felt that they could not reconcile the political goals of WA (often referring to calls to improve the workforce through diversity), with their school's aims and interests (selecting through academic meritocracy). Maintaining the highest standards of academic excellence and thereby selecting the 'best' students and doctors was thus seen in tension with efforts to increase diversity, particularly in the current medical education system that does not sufficiently compensate for, or reward, WA efforts which pose both cost and risk to the institution (Cleland et al., 2015) (see later for further discussion).

A subsequent discourse analysis of UK medical school WA webpages found similar tensions (Alexander et al., 2017). The argument (discourse) of widening access for social mobility through academic meritocracy was very strongly promoted, especially when linked to the use of WA as a tool to find and select 'the best and brightest' from a wider range of applicants. More traditional forms of excellence, such as academic achievement and ability, were promoted. Although all schools predominately used this argument, differences remained between the ways it was conceptualised and used. Some schools claimed that introducing WA initiatives did not reduce quality standards, whilst others argued that initiatives increased the effectiveness of selection through widening the application pool, and improved fairness by removing barriers to 'level the playing field'. Schools thus differed in whether they proposed that WA initiatives for social mobility did not diminish, or actually improved, the quality of admissions through academic meritocracy.

In contrast, the argument (discourse) for widening access as a means to improve the efficiency of the workforce was significantly marginalised on UK medical school WA webpages and the alternative strengths that diverse or underrepresented students might bring to the profession were not discussed. As a result, these attributes were not communicated as valuable (Alexander et al., 2017). Overall, a differentiated field of

opinions towards WA was revealed, although once again, UK medical schools strongly espoused their belief in academic meritocracy and were hesitant to propose the benefits of a diversified workforce.

How do medical schools implement WA policies?

In this section we will briefly review some of the WA initiatives currently utilised by UK medical schools and discuss their effectiveness. We will also consider how these initiatives link to the concepts of WA for ‘social mobility within academic meritocracy’ or for ‘workforce improvement through diversity’, and how they relate to the tensions described in the previous section.

Pre-entry Activities

All UK medical schools undertake ‘outreach’ activities to raise awareness and interest in medicine among communities that would not traditionally produce large numbers of applicants. Typical outreach initiatives include university staff visiting high schools to provide information about subject choices and application procedures to pupils and teachers. Other outreach schemes involve near-peer ‘mentoring’, or events in which pupils are invited to the medical school for a ‘taster’ of life as a medical student, for example by student shadowing or summer schools. Overall, pre-entry activities aim to address some of the disadvantages and challenges students from lower socioeconomic backgrounds may experience when considering medical school (for a good overview see Medical Schools Council (2014a)).

UK medical schools’ goals for pre-entry activities appear to centre on increasing the social mobility of their participants (Alexander et al., 2017). By aiming to compensate for the disadvantage of targeted individuals from URMs/disadvantaged groups, these initiatives encourage WA participants to acquire additional or more ‘appropriate’ skills, knowledge and aspirations to make them ‘suitable’ for admission to medicine. These activities are framed as necessary ‘top-up opportunities’ to allow selected individuals to succeed within the current system of academic meritocracy.

However, these activities have been criticised for using a ‘deficit model’ which concentrates on the deficiencies of individual learners rather than fully acknowledging or tackling the barriers in their environments, including those posed by medical schools themselves (Jones and Thomas, 2006; O’Shea et al., 2015; Sheeran et al., 2007; Smit, 2012). Emphasising the deficiencies of those from underrepresented backgrounds may unintentionally further reinforce individuals’ perceptions of difference and disadvantage, and in fact counter efforts to encourage them, or to help them to recognise their suitability for the profession (Alexander et al., 2017; Cleland and Fahey Palma, 2018; Frost and Regehr, 2013; Gartland, 2014; Greenhalgh et al., 2004; Razack et al., 2015).

Although sufficient evidence exists to indicate these pre-entry activities do have a positive effect on the recruitment of diverse students to medicine, their impact has typically been poorly evaluated and existing studies do not “expand the understanding or provide generalizable messages” in relation to what works and what does not (Nicholson and Cleland, 2015, p.234).

Widening Access through Admissions Procedures

In recent years, UK medical schools have made changes to their admissions procedures with the stated goals of reducing bias and increasing fairness in selection. The most obvious change has been a move away from a reliance on academic achievement as the primary, or only, selection method. This has been replaced by the use of a variety of tools to judge potential and ability to become a doctor (see MacKenzie et al. (2016) for a good overview of medical selection processes, and Patterson et al. (2016) for a review of the effectiveness of various tools).

Attaining the required grades remains the first hurdle in medical admissions, and failure to do so is the most common cause of rejection. Yet – as discussed earlier - just looking at educational attainment may not accurately identify potential, given the association between systemic and social factors, and attainment (Williamson, 2004).

In part to address this dilemma, UK medical schools first introduced the UKCAT test in 2006. The UKCAT test is an aptitude test which aims to measure whether an applicant

possesses the cognitive ability, as well as the attitudes and behaviour, desirable for a clinician (UKCAT, 2017). Aptitude tests are used globally for selection to medicine - for example in: Ireland (HPAT, 2017); Australia (UMAT, 2017); Canada and the USA (AAMC, 2017) – as well as for a range of other professions (Bertua et al., 2005).

Aptitude tests were considered to be a useful tool to assist WA to medicine, as outcomes were thought to be influenced less by the socioeconomic and educational background of applicants, and because tests could not be ‘coached’ for to the same extent as traditional school exams (Cleland et al., 2012b). Although initial, smaller scale studies indicated this might be the case (Tiffin et al., 2012, 2014), emerging longitudinal work has not shown benefits to WA (Mathers et al., 2016a).

Medical schools are now encouraged to use ‘contextual admissions’ (CA) during the selection process (Medical Schools Council, 2014b; Panel on Fair Access to the Professions, 2009). The use of CA is intended to assess an applicant’s potential to succeed in higher education by taking into consideration the context and circumstances in which their attainment to date has been achieved. In theory at least, this heralds a significant step towards seeking to select on ability rather than purely attainment and has considerable potential to reduce bias towards those in lower socioeconomic groups. However, in practice ‘ability’ is much harder to identify than ‘attainment’ is to assess – a major concern for many schools (Boliver et al., 2015; Cleland et al., 2014, 2015).

As a result, the national picture is complex and multifaceted: various different types of CA have been proposed for use by UK universities (see Boliver et al. (2015) and Moore et al. (2013) for further detail) and large differences remain in how medical schools select their students. Moreover, these processes have been criticised for lacking transparency and clarity (Cleland et al., 2014). To date, there have been no studies examining the impact of CA on medical school admissions and there is much concern as to the reliability of the markers being used (Thomas et al., 2009). Moreover, the (unacknowledged) potential value of applicants selected via CA may be overshadowed by a focus on the worry of opening doors to students who have achieved slightly less well in terms of prior attainment, a perceived ‘lowering of standards’, and the potential

negative impact this may have on school performance in league tables (Cleland et al., 2015). Unfortunately, given (in the UK at least) medical schools are notoriously poor at tracking their students in terms of evaluating the relative performance of students from different backgrounds, this attitude remains an unevidenced fear. Interestingly, recent evidence suggests that those entering with slightly lower academic tariffs and significantly lower outcomes on standard aptitude tests actually go on to outperform their more qualified counterparts from more privileged backgrounds (Kumwenda et al., 2017). Further research and evaluation is needed to assess the “added benefit” of medical school, and whether this differs by group.

Finally, similarly to pre-entry activities, CA initiatives may be subject to criticism for their focus on compensating for the ‘deficit’ of applicants from URMs/disadvantaged backgrounds (see e.g. Sheeran et al. (2007)). Moreover, although these initiatives do initiate superficial systemic change, they are largely still underpinned by the argument of selection through academic meritocracy and advocate little cultural change towards WA.

Widening Access through Alternative Entry Routes

Another approach to WA taken by UK medical schools, has been to create specific routes of entry for URM/disadvantaged groups. These include: ‘foundation years’, or tailor-made preparation programmes (Curtis et al. 2014a); extended programmes (Garlick and Brown, 2008); and graduate entry programmes (Medical Workforce Standing Advisory Committee, 1997).

Foundation and extended programmes serve the dual purpose of offering an extra year of academic study, aimed at helping participants address gaps in their science knowledge and attainment, as well as a chance for students from diverse backgrounds to acclimatise to a university environment (Curtis et al., 2014b; Garlick and Brown, 2008). These courses are generally considered to be successful and to add diversity to the schools’ student cohort, however, they are costly to run and the number of places available are very small (Mathers et al. 2011). In addition, these programmes tend to be offered by less selective schools, suggesting that may continue to be seen to be incompatible with a reputation for ‘excellence’ (Cleland et al., 2012b). Finally, once

again, these programmes may be seen as problematic, as they also seek to compensate for the 'deficit' of individuals within a system based on academic meritocracy.

Another 'alternative entry route' designed to WA has been the establishment of graduate-entry courses. These courses were founded on the premise that, as applicants with more varied life experience, higher numbers of graduate students would improve diversity within medicine, and perhaps they would be willing to work in underserved areas (Carter and Peile, 2007; Dowell et al., 2015; GP Taskforce, 2014; Wilkinson et al., 2004).

In contrast to the aforementioned initiatives, justifications for these courses do appear to consider the argument (discourse) of WA for workforce improvement through diversity. As a result, they foreground the potential benefits mature students with prior degrees may bring to the profession and a number particularly promote career pathways towards generalists, rural medicine and healthcare improvement (see e.g. Scottish Government Newsroom (2016)).

The effectiveness of graduate-entry initiatives may be questioned however. Although student cohorts in graduate-entry only courses may be slightly more socioeconomically diverse, the small intake on these courses (10% of total UK medical students) means that they do not significantly aid WA to medicine (Mathers et al., 2011). Moreover, graduates who enter through 'standard entry routes' are not more socioeconomically diverse than school-leavers (Garrud, 2011; Kumwenda et al., 2018).

Enduring issues and a new way of thinking about widening access to medicine?

WA is a deeply contested area in educational policy and politics (Archer, 2007; Francis, Mills, and Lupton, 2017) and the philosophical rationales supporting WA are not aligned (Sheeran et al., 2007). Uncertainty and conflicting messages have inevitably led to confusion 'on the ground' in medical schools and universities as to what WA should be 'for', how it should be 'done' and what the measures of 'success' should be (Cleland et al., 2015; Stevenson et al., 2010). These unresolved tensions are themselves a

barrier to WA: restricting the responsibility for WA to a few committed individuals, causing frustration and the attribution of blame on others, and preventing widespread cultural change across the institution (Stevenson et al., 2010).

In this chapter we have discussed two competing arguments (discourses) for WA and explored how they are currently enacted in UK medical schools. Meritocratic selection on the basis of academic attainment and ability remains a cherished cornerstone of medical schools' selection procedures, and to date, WA efforts seem to have been predominately shaped to around this model, emphasising the need to enhance the social mobility of disadvantaged individuals in this system. Such initiatives have, however, failed to significantly change the socioeconomic profile of UK medical school students.

We suggest this may be, at least in part, because these initiatives are primarily designed to fit into established models of selection, and do not embrace the required shift in attitudes at a cultural, professional, political or systemic level which would enable real progress in WA. The discourse of "it ain't broke, so why fix it" in relation to medical admissions perpetuates within established approaches and attitudes, yet the reality of a polarized society and underserved health service loom large as indications of systems at crisis point (NHS Improvement, 2016; Sutton Trust, 2017). WA is certainly not the only solution to these issues, but emerging evidence suggests it may be an important part of the puzzle (see e.g. Dowell et al. (2015), Larkins et al. (2015) and Milburn (2012)). Medical schools must play an important role in shifting behaviour, attitudes and norms, however they cannot do this in isolation or without other parties moving in parallel - the impact of WA initiatives ultimately depends on stakeholders and systems aligning (Gorman, 2018).

As in healthcare workforce planning (Gorman, 2018), if no consensus on the desired endpoint for WA is reached, then pre-entry or entry level changes to medical school are difficult to assess or plan. Governmental targets requiring increased admission to underrepresented groups may be unavoidable, but medical schools are still relatively free to interpret and enact these as they choose (Cleland et al., 2015; Ball, 1994, p.19). Therefore, a consensus across all key stakeholders, including but not limited to medical

schools, should be sought to clarify the desired overall endpoint for WA. Students are also stakeholders, so parents and applicants also need to 'buy-in' to any repositioning of medical education. This may be challenging in a society such as the UK - medical school is still considered to be for the elite and medicine to offer substantial personal choice and flexibility in terms of an ultimate career, rather than as a vocational course which aims to produce professionals who will meet the healthcare needs of the population.

Medicine is currently oversubscribed with qualified applicants, and many more who do not meet the current requirements aspire to this subject. In their role as gatekeepers, medical schools are able to prioritise who will join the profession. Despite ongoing research, choices about who to accept must be made with severely restricted information – relatively little is still known about how each selection procedure might affect eventual performance or choices as a doctor (Cleland et al., 2012b, p.6). Nonetheless, fundamental choices can still be made. For example: Should applicants who are more likely to graduate at the top of their class academically be prioritised? Or should applicants who are more likely to work in underserved areas be selected? Are these mutually exclusive or not? Where is the appropriate balance? The answers to these questions will determine the means as to how the answers are achieved, with consequences for both the processes and outcomes of WA.

The answers to these questions will also be strongly determined by the context in which medical schools operate and where most support from key stakeholders can be found. For example, if league tables reward schools that admit and graduate the highest academically achieving students (as they currently do) then the goal of academic excellence will be prioritised. If however, funding and prestige is available for courses that prioritise training medical students to ultimately work in underserved posts/regions (see for example, the graduate entry course discussed above), then promoting these courses may become more attractive.

Although there is some evidence within policy/governmental discourses that signal a move away from a deficit model of WA (see e.g. Scottish Government (2016, p.31)), for lasting change political targets for WA must be met by support financially, and by

removing the perceived risks to reputation loss through WA within a competitive marketplace.

Finally, changes must be made within the profession itself to tackle current attitudes and hidden curricula that dismiss or degrade general practice (family medicine), underserved specialties or rural posts as ‘second best’ (Baker et al., 2016; Edgcumbe et al., 2008). Medical schools can affect practical change here, as they exert significant influence on their graduates’ choice of specialties and locations (Brosnan, 2010; Cleland et al., 2012a; JH Walker et al., 2012).

Conclusions

In this chapter we have explored the key drivers for WA, their comparative influence, enactment on the ground, and evaluated their success. We have also suggested systemic and cultural changes that could help preserve the good in the established system whilst embracing the changes necessary to better address the needs of UK society. This may be considered “social engineering” but then, so could allowing the powerful in society, (those who have access to good schools, professional cultures and ample finances), to dominate the status quo to the exclusion of others.

Innovative change sometimes only arises out of necessity. The UK is now experiencing severe levels of inequality (Eurofound, 2015; Jerrim and Shure, 2016; RCPCH, 2017), a stagnation of social mobility (Sutton Trust, 2017), and a growing healthcare workforce crisis (GP Taskforce, 2014; NHS Improvement, 2016). An effective model of WA may be one way to partially address these issues. We encourage a move away from an approach that selects certain individuals (targeted primarily because of their demographic traits) and aids them to better ‘fit’ and compete within academically orientated selection procedures. Instead we advocate a model of WA that redefines the parameters of ‘merit’ so that it is not only more inclusive and encompasses the benefits diversity brings to a workforce, but can also better serve the needs of the UK healthcare system. Achieving this depends on the Higher Education market adequately recognising and rewarding widening access initiatives, as well as medical schools and

the wider healthcare system working together to drive change (Cleland et al., 2015; Gorman, 2018; Thompson, 2008).

References

- Association of American Medical Colleges (AAMC) (2017) Taking the MCAT® Exam. [Internet] Available at: <https://students-residents.aamc.org/applying-medical-school/taking-mcat-exam/> (accessed 26 July 2017).
- Alexander K, Fahey Palma T, Nicholson S, et al. (2017) 'Why not you?' Discourses of widening access on UK medical school websites. *Medical Education* 51(6): 598–611. DOI: 10.1111/medu.13264.
- Archer L (2007) Diversity, equality and higher education: a critical reflection on the ab/uses of equity discourse within widening participation. *Teaching in Higher Education* 12(5–6): 635–653. DOI: <http://dx.doi.org/10.1080/13562510701595325>.
- Archer L and Hutchings M (2000) 'Bettering Yourself'? Discourses of risk, cost and benefit in ethnically diverse, young working-class non-participants' constructions of higher education. *British Journal of Sociology of Education* 21(4): 555–574. DOI: 10.1080/713655373.
- Archer L and Leathwood C (2003) Identities, Inequalities and Higher Education. In: Archer L, Hutchings M, and Ross A (eds) *Higher Education and Social class: issues of exclusion and inclusions*. London: Routledge Falmer, pp. 175–91.
- Bailey JA and Willies-Jacobo LJ (2012) Are disadvantaged and underrepresented minority applicants more likely to apply to the program in medical education-health equity? *Academic medicine* 87(11): 1535–9. DOI: 10.1097/ACM.0b013e31826d6220.
- Baker M, Wessely S and Openshaw D (2016) Not such friendly banter? GPs and psychiatrists against the systematic denigration of their specialties. *British Journal of General Practice* 66(651): 508–509. DOI: doi:10.3399/bjgp16X687169.
- Ball SJ (1994) *Education Reform: A critical and post-structural approach*. Buckingham: Open University Press.
- Beagan BL (2005) Everyday classism in medical school: experiencing marginality and resistance. *Medical education* 39(8): 777–84. DOI: 10.1111/j.1365-2929.2005.02225.x.
- Behrendt L, Larkin S, Griew R, et al. (2012) Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People. Available at: <https://docs.education.gov.au/system/files/doc/other/heaccessandoutcomesforaboriginalandtorresstraitislanderfinalreport.pdf> (accessed 5 March 2016).
- Bertua C, Anderson N and Salgado JF (2005) The predictive validity of cognitive ability tests: A UK meta-analysis. *Journal of Occupational and Organizational Psychology* 78(3): 387–409. DOI: 10.1348/096317905X26994.

British Medical Association (BMA) (2009) Equality and Diversity in UK Medical Schools. Available at: www.nhshistory.net/bmastudentreport2009.pdf (accessed 15 March 2016).

BMA Medical Student Committee (2015) Medical Student Finances and the Effect on Wider Participation. Available from: https://www.bma.org.uk/connecting-doctors/community_focus/m/mediagallery/185 (accessed 15 March 2016).

Boliver V, Gorard S and Siddiqui N (2015) Will the Use of Contextual Indicators Make UK Higher Education Admissions Fairer? *Education Sciences* 5(4): 306–322. DOI: 10.3390/educsci5040306.

Bowes L, Thomas L, Peck L, et al. (2013) International Research on the Effectiveness of Widening Participation. Available at: <http://www.hefce.ac.uk/pubs/rereports/year/2013/wpeffectiveness/> (accessed 7 July 2016).

Bowl M and Hughes J (2013) Discourses of ‘Fair Access’ in English Higher Education. *Widening Participation and Lifelong Learning* 15(4): 7–25. DOI: 10.5456/WPLL.15.4.7.

Bridges D (2006) Ethics and Education Adaptive preference, justice and identity in the context of widening participation in higher education. *Ethics and Education* 1(1): 15–28. DOI: 10.1080/17449640600584946.

Brosnan C (2010) Making sense of differences between medical schools through Bourdieu’s concept of ‘field’. *Medical Education* 44(7): 645–652. DOI: 10.1111/j.1365-2923.2010.03680.x.

Callender C and Jackson J (2008) Does the fear of debt constrain choice of university and subject of study? *Studies in Higher Education* 33(4): 405–429. DOI: 10.1080/03075070802211802.

Carter YH and Peile E (2007) Graduate entry medicine: high aspirations at birth. *Clinical Medicine* 7(2): 143–7. DOI: 10.7861/CLINMEDICINE.7-2-143.

Castillo-Page L (2012) Diversity in Medical Education: Facts and Figures. Association of American Medical Colleges. Washington DC.

Chowdry H, Crawford C, Dearden L, et al. (2013) Widening participation in higher education: analysis using linked administrative data. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 176(2): 431–457. DOI: 10.1111/j.1467-985X.2012.01043.x.

Cleland J and Fahey Palma T (2018) “Aspirations of people who come from state education are different”: how language reflects social exclusion in medical education. *Advances in Health Sciences Education* 23(3): 513–531. DOI: 10.1007/s10459-018-9809-2

Cleland J and Medhi M (2015) Optimism and grit: Key to success in the widening access student’s journey into medical school. Research Paper presented at the Association for Medical Education Europe (AMEE) Annual Conference, Sept 5-9th Glasgow, UK.

Cleland J, Johnston PW, French FH, et al. (2012a) Associations between medical school and career preferences in Year 1 medical students in Scotland. *Medical Education* 46(5): 473–484. DOI: 10.1111/j.1365-2923.2012.04218.x.

Cleland J, Dowell J, McLachlan J, et al. (2012b) Identifying best practice in the selection of medical students: literature review and interview survey. Report for the Medical Schools Council. London.

Cleland J, Patterson F, Dowell J, et al. (2014) How can greater consistency in selection between medical schools be encouraged? A mixed-methods programme of research that examines and develops the evidence base. Report for the Medical Schools Council. London.

Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical education* 49(1): 25–35. DOI: 10.1111/medu.12502.

Cleland J, Johnston P, Watson V, et al. (2016) What do UK doctors in training value in a post? A discrete choice experiment. *Medical Education* 50(2): 189–202. DOI: 10.1111/medu.12896.

Cooter R, Erdmann JB, Gonnella JS, et al. (2004) Economic diversity in medical education: the relationship between students' family income and academic performance, career choice, and student debt. *Evaluation and the Health Professions* 27(3): 252–64. DOI: 10.1177/0163278704267041.

Curtis S, Blundell C, Platz C, et al. (2014) Successfully widening access to medicine. Part 1: recruitment and admissions. *Journal of the Royal Society of Medicine* 107(9): 342–346. DOI: 10.1177/0141076814538786.

Curtis S, Blundell C, Platz C, et al. (2014) Successfully widening access to medicine. Part 2: Curriculum design and student progression. *Journal of the Royal Society of Medicine* 107(10): 393–397. DOI: 10.1177/0141076814538787.

Department for Business Innovation and Skills (DBIS) (2016) *Success as a Knowledge Economy: Teaching Excellence, Social Mobility & Student Choice*. London.

Department for Children, Schools and Families (DFCSF) (2008) *The Impact of Parental Involvement on Children's Education*. Nottingham.

Department of Education and Skills (DFES) (2003) *The Future of Higher Education*. London.

Dhalla IA, Kwong JC, Streiner DL, et al. (2002) Characteristics of first-year students in Canadian medical schools. *Canadian Medical Association Journal* 166(8): 1029–35. <http://www.cmaj.ca/content/166/8/1029.long>

Dowell J, Norbury M, Steven K, et al. (2015) Widening access to medicine may improve general practitioner recruitment in deprived and rural communities: survey of GP origins and current place of work. *BMC Medical Education* 15(1): 1–7. DOI: 10.1186/s12909-015-0445-8.

- Edgcumbe DP, Lillicrap MS and Benson JA (2008) A Qualitative Study of Medical Students' Attitudes to Careers in General Practice. *Education for Primary Care* 19(1): 65–73. DOI: 10.1080/14739879.2008.11493651.
- Eurofound (2015) Recent developments in the distribution of wages in Europe. European Foundation for the Improvement of Living and Working Conditions. Available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1510en1.pdf (accessed 7 March 2016)
- Fairclough N (1993) Critical Discourse Analysis and the Marketization of Public Discourse: The Universities. *Discourse and Society* 4(2): 133–168. DOI: 10.1177/0957926593004002002.
- Flores G (2000) Culture and the patient-physician relationship: Achieving cultural competency in health care. *The Journal of Pediatrics* 136(1): 14–23. DOI: 10.1016/S0022-3476(00)90043-X.
- Francis B, Mills M and Lupton R (2017) Towards social justice in education: contradictions and dilemmas. *Journal of Education Policy* 32(4): 414–431. DOI: 10.1080/02680939.2016.1276218.
- Frost HD and Regehr G (2013) 'I am a doctor': negotiating the discourses of standardization and diversity in professional identity construction. *Academic Medicine* 88(10): 1570–7. DOI: 10.1097/ACM.0b013e3182a34b05.
- Garlick PB and Brown G (2008) Widening participation in medicine. *BMJ* 336(7653): 1111–1113. DOI: 10.1136/bmj.39508.606157.BE.
- Garrud P (2011) Who applies and who gets admitted to UK graduate entry medicine? - an analysis of UK admission statistics. *BMC medical education* 11(71). DOI: 10.1056/NEJMsa050004.
- Gartland C (2014) *STEM Strategies: Student Ambassadors and equality in Higher Education*. London: Institute of Education Press, University of London.
- Gorard S, Smith E, May H, et al. (2006) *Review of Widening Participation Research: addressing barriers to participation in higher education*. Higher Education Funding Council for England. Bristol.
- Gorman D (2018) Matching the production of doctors with national needs. *Medical Education* 52(1): 103–113. DOI: 10.1111/medu.13369.
- GP Taskforce (2014) *Securing the Future GP Workforce: Delivering the Mandate on GP Expansion*. Department for Health & Medical Education England. London.
- Graham C (2013) Discourses of widening participation in the prospectus documents and websites of six English higher education institutions. *British Journal of Sociology of Education* 34(1): 76–93. DOI: 10.1080/01425692.2012.692048.
- Greenhalgh T, Seyan K and Boynton P (2004) 'Not a university type': focus group study of social class, ethnic, and sex differences in school pupils' perceptions about medical school. *BMJ* 328(7455): 1541–1544. DOI: 10.1136/bmj.328.7455.1541.

Griffin B, Porfeli E and Hu W (2016) Who do you think you are? Medical student socioeconomic status and intention to work in underserved areas. *Advances in Health Sciences Education* 22(2): 491–504. DOI: 10.1007/s10459-016-9726-1.

Guiton G, Chang MJ and Wilkerson L (2007) Student body diversity: relationship to medical students' experiences and attitudes. *Academic Medicine* 82(10 Suppl): S85-8. DOI: 10.1097/ACM.0b013e31813ffe1e.

Hay M, Mercer AM, Lichtwark I, et al. (2016) Selecting for a sustainable workforce to meet the future healthcare needs of rural communities in Australia. *Advances in Health Sciences Education* 22(533–551): 1–19. DOI: 10.1007/s10459-016-9727-0.

Hemsley-Brown J (2015) Getting into a Russell Group university: High scores and private schooling. *British Educational Research Journal* 41(3): 398–422. DOI: 10.1002/berj.3152.

Hill NE, Castellino DR, Lansford JE, et al. (2004) Parent academic involvement as related to school behavior, achievement, and aspirations: demographic variations across adolescence. *Child development* 75(5): 1491–509. DOI: 10.1111/j.1467-8624.2004.00753.x.

Health Professions Admission Test (HPAT) (2017) Home | HPAT Ireland. [Internet] Available at: <https://hpat-ireland.acer.org/> (accessed 26 July 2017).

Hughes A, Mangan J, Vigurs K, et al. (2008) *Knowing Where to Study? Fees, Bursaries and Fair Access*. The Sutton Trust. London.

Jardine A (2012) Indicators of persistence and their influence on the first year experience of university students from low socio-economic backgrounds. PhD Thesis. Melbourne: University of Melbourne. Available at: https://minerva-access.unimelb.edu.au/bitstream/handle/11343/37863/290220_Jardine.pdf?sequence=1

Jerrim J and Shure N (2016) *Achievement of 15-Year- Olds in England: PISA 2015 National Report*. Department for Education. London.

Jones R and Thomas L (2006) The 2003 UK Government Higher Education White Paper: a critical assessment of its implications for the access and widening participation agenda. *Journal of Education Policy* 20(5): 615–630. DOI: <http://dx.doi.org/10.1080/02680930500222477>.

Kamali AW, Nicholson S and Wood DF (2005) A model for widening access into medicine and dentistry: the SAMDA-BL project. *Medical education* 39(9): 918–25. DOI: 10.1111/j.1365-2929.2005.02227.x.

Komaromy M, Grumbach K, Drake M, et al. (1996) The Role of Black and Hispanic Physicians in Providing Health Care for Underserved Populations. *New England Journal of Medicine* 334(20): 1305–1310. DOI: 10.1056/NEJM199605163342006.

Kumwenda B, Cleland JA, Walker K, et al. (2017) The relationship between school type and academic performance at medical school: a national, multi-cohort study. *BMJ open* 7(8): e016291. DOI: 10.1136/bmjopen-2017-016291.

Kumwenda B, Cleland J, Greatrix R, et al. (2018) Are efforts to attract graduate applicants to UK medical schools effective in increasing the participation of under-represented socioeconomic groups? A national cohort study. *BMJ open* 8(2): e018946. DOI: 10.1136/bmjopen-2017-018946.

Lakhan SE (2003) Diversification of U.S. medical schools via affirmative action implementation. *BMC medical education* 3(1): 6. DOI: 10.1186/1472-6920-3-6.

Larkins S, Michielsen K, Iputo J, et al. (2015) Impact of selection strategies on representation of underserved populations and intention to practise: international findings. *Medical Education* 49(1): 60–72. DOI: 10.1111/medu.12518.

MacKenzie R, Cleland J, Ayansina D, et al. (2016) Does the UKCAT predict performance on exit from medical school? A national cohort study. *BMJ Open* 6: e1011313. DOI: doi:10.1136/bmjopen-2016-011313.

Mangan J, Hughes A, Davies P, et al. (2010) Fair access, achievement and geography: explaining the association between social class and students' choice of university. *Studies in Higher Education* 35(3): 335–350. DOI: 10.1080/03075070903131610.

Mathers J and Parry J (2009) Why are there so few working-class applicants to medical schools? Learning from the success stories. *Medical Education* 43(3): 219–228. DOI: 10.1111/j.1365-2923.2008.03274.x.

Mathers J, Sitch A, Marsh JL, et al. (2011) Widening access to medical education for under-represented socioeconomic groups: population based cross sectional analysis of UK data, 2002-6. *BMJ (Clinical research ed.)* 342: d918. DOI: 10.1136/bmj.d918.

Mathers J, Sitch A and Parry J (2016a) Longitudinal assessment of the impact of the use of the UK clinical aptitude test for medical student selection. *Medical Education* 50(10): 1033–1044. DOI: 10.1111/medu.13082.

Mathers J, Sitch A and Parry J (2016b) Population-based longitudinal analyses of offer likelihood in UK medical schools: 1996-2012. *Medical Education* 50(6): 612–623. DOI: 10.1111/medu.12981.

McHarg J, Mattick K and Knight L V (2007) Why people apply to medical school: implications for widening participation activities. *Medical Education* 41(8): 815–21. DOI: 10.1111/j.1365-2923.2007.02798.x.

Medical Schools Council (2014a) *A Journey to Medicine: Outreach Guidance*. London.

Medical Schools Council (2014b) *Selecting for Excellence Final Report*. London.

Medical Schools Council (2017) *Entry requirements for UK medical schools 2018*. London.

Medical Workforce Standing Advisory Committee (1997) *Planning the Medical Workforce. Third Report*. London.

Milburn A (2012) *Fair Access to Professional Careers. The Independent reviewer on Social Mobility and Child Poverty*. London.

Miller K and Cummings G (2009) Gifted and Talented Students' Career Aspirations and Influences: A Systematic Review of the Literature. *International Journal of Nursing Education Scholarship* 6(1): 1–26. DOI: 10.2202/1548-923X.1667.

Minty S (2015) Young People's Attitudes towards Student Debt in Scotland and England. In: Riddell S, Weedon E, and Minty S (eds) *Higher Education in Scotland and the UK: Diverging or Converging Systems?* Croydon: Edinburgh University Press Ltd, pp. 56–70.

Molesworth M, Scullion R and Nixon E (2011) *The Marketisation of Higher Education and the Student as Consumer*. Oxon: Routledge.

Moore J, Mountford-Zimdars A and Wiggans J (2013) *Contextualised admissions : Examining the evidence*. Report to SPA The Supporting Professionalism in Admissions Programme. Cheltenham.

Morrison E and Grbic D (2015) Dimensions of Diversity and Perception of Having Learned From Individuals From Different Backgrounds: The Particular Importance of Racial Diversity. *Academic medicine* 90(7): 937–45. DOI: 10.1097/ACM.0000000000000675.

NHS Improvement (2016) *Evidence from NHS Improvement on clinical staff shortages*. UK National Health Service. London.

Nicholson S and Cleland J (2015) Reframing research on widening participation in medical education: using theory to inform practice. In: Cleland J and Durning S (eds) *Researching Medical Education*. Chichester, UK: John Wiley and Sons, Ltd, pp. 231–244.

O'Connell TF, Ham SA, Hart TG, et al. (2018) A National Longitudinal Survey of Medical Students' Intentions to Practice Among the Underserved. *Academic Medicine* 93(1): 90–97. DOI: 10.1097/ACM.0000000000001816.

O'Shea S, Lysaght P, Roberts J, et al. (2015) Shifting the blame in higher education – social inclusion and deficit discourses. *Higher Education Research and Development* 35(2): 322–336. DOI: 10.1080/07294360.2015.1087388.

Office of National Statistics (ONS) (2011) *UK Population Census*. Available at: <https://www.ons.gov.uk/census/2011census> (accessed 23 June 2016).

Orom H, Semalulu T and Underwood W (2013) The Social and Learning Environments Experienced by Underrepresented Minority Medical Students. *Academic Medicine* 88(11): 1765–1777. DOI: 10.1097/ACM.0b013e3182a7a3af.

Panel on Fair Access to the Professions (2009) *Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions*. London.

Patterson F, Knight A, Dowell J, et al. (2016) How effective are selection methods in medical education? A systematic review. *Medical Education* 50(1): 36–60. DOI: 10.1111/medu.12817.

Phillips JP, Wendling AL, Fahey CA, et al. (2018) The Effect of a Community-Based Medical School on the State and Local Physician Workforce. *Academic Medicine* 93(3): 306–313. DOI: 10.1097/ACM.0000000000001823.

Puddey IB, Mercer A, Playford DE, et al. (2014) Medical student selection criteria as predictors of intended rural practice following graduation. *BMC medical education* 14(218). DOI: 10.1186/1472-6920-14-218.

Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.

Royal College of Paediatrics and Child Health (RCPCH) (2017) State of Child Health Report 2017. Available at: http://www.rcpch.ac.uk/system/files/protected/page/SoCH_2017_UK_web_updated.pdf (accessed 7 March 2016)

Reay D, Davies J, David M, et al. (2001) Choices of Degree or Degrees of Choice? Class, 'Race' and the Higher Education Choice Process. *Sociology* 35(4): 855–874. DOI: 10.1177/0038038501035004004.

Robb N, Dunkley L, Boynton P, et al. (2007) Looking for a better future: identity construction in socio-economically deprived 16-year olds considering a career in medicine. *Social science and Medicine* 65(4): 738–54. DOI: 10.1016/j.socscimed.2007.03.011.

Roberts N and Bolton P (2017) Briefing Paper 07914: Medical school places in England from September 2018. House of Commons Library. London.

Saha S, Guiton G, Wimmers PF, et al. (2008) Student body racial and ethnic composition and diversity-related outcomes in US medical schools. *JAMA* 300(10): 1135–45. DOI: 10.1001/jama.300.10.1135.

Scanlan GM, Cleland J, Johnston P, et al. (2018) What factors are critical to attracting NHS foundation doctors into specialty or core training? A discrete choice experiment. *BMJ Open*; 8(3): e019911. DOI: 10.1136/bmjopen-2017-019911

Scottish Government (2016) The Final Report of the Commission for Widening Access: A Blueprint for Fairness. Edinburgh.

Scottish Government Newsroom (2016) Scotland's first graduate entry medical programme. [Internet] Available at: <https://news.gov.scot/news/scotlands-first-graduate-entry-medical-programme> (accessed 24 July 2017).

Sheeran Y, Brown BJ and Baker S (2007) Conflicting philosophies of inclusion: the contestation of knowledge in widening participation. *London Review of Education* 5(3): 249–263. DOI: 10.1080/14748460701661302.

Slack K (2003) Whose aspirations are they anyway? *International Journal of Inclusive Education* 7(4): 325–335. DOI: 10.1080/1360311032000110016.

Smit R (2012) Towards a clearer understanding of student disadvantage in higher education: problematising deficit thinking. *Higher Education Research and Development* 31(3): 369–380. DOI: 10.1080/07294360.2011.634383.

Smith C and Low L (2012) The gap between foundation years and specialty training. *BMJ Careers* 344: e1109 DOI: <https://doi.org/10.1136/bmj.e1109>

Southgate E, Kelly BJ and Symonds IM (2015) Disadvantage and the 'capacity to aspire' to medical school. *Medical education* 49(1): 73–83. DOI: 10.1111/medu.12540.

Steven K, Dowell J, Jackson C, et al. (2016) Fair access to medicine? Retrospective analysis of UK medical schools application data 2009–2012 using three measures of socioeconomic status. *BMC medical education* 16(1): 11–21. DOI: 10.1186/s12909-016-0536-1.

Stevenson J, Clegg S and Lefever R (2010) The Discourse of Widening Participation and Its Critics: An Institutional Case Study. *London Review of Education* 8(2): 105–115. DOI: <https://doi.org/10.1080/14748460.2010.487328>.

Sutton Trust (2011) Degrees of Success University Chances by Individual School. London. Available at: <https://www.suttontrust.com/research-paper/degree-success-university-chances-individual-school/> (accessed 14 July 2017).

Sutton Trust (2017) Social Mobility 2017. London. Available at: <https://www.suttontrust.com/research-paper/degrees-success-destinations-tables/> (accessed 4 July 2017).

The Cambridge English Dictionary (2017) Definition of Meritocracy. [Internet] Available at: <http://dictionary.cambridge.org/dictionary/english/meritocracy> (accessed 25 July 2017).

Thomas L, Storan J, Wylie V, et al. (2009) Review of Widening Participation Strategic Assessments 2009. Action on Access. Omskirk.

Thompson DW (2008) Widening participation and higher education. Students, systems and other paradoxes. *London Review of Education* 6(2): 137–147. DOI: 10.1080/14748460802185102.

Tiffin PA, Dowell JS and McLachlan JC (2012) Widening access to UK medical education for under-represented socioeconomic groups: modelling the impact of the UKCAT in the 2009 cohort. *BMJ* 344: e1805. DOI: <https://doi.org/10.1136/bmj.e1805>.

Tiffin PA, McLachlan JC, Webster L, et al. (2014) Comparison of the sensitivity of the UKCAT and A Levels to sociodemographic characteristics: a national study. *BMC medical education* 14(1): 7. DOI: 10.1186/1472-6920-14-7.

UK Clinical Aptitude Test (UKCAT) (2017) About Us. [Internet] Available at: <https://www.ukcat.ac.uk/about-us/> (accessed 26 July 2017).

UK Foundation Programme Office. UKFPO (2015) F2 Career Destination Report 2015. Available at: www.foundationprogramme.nhs.uk/download.asp?file=Careers_destination_2016.pdf (accessed 24 July 2017)

UK Foundation Programme Office. UKFPO (2016) Career Destination Report 2016. Available at: <http://www.foundationprogramme.nhs.uk/pages/resource-bank> (accessed 24 July 2017)

Undergraduate Medicine and Health Sciences Admission Test (UMAT) (2017) [Internet] Home | UMAT. Available at: <https://umat.acer.edu.au/> (accessed 26 July 2017).

Walker JH, Dewitt DE, Pallant JF, et al. (2012) Rural origin plus a rural clinical school placement is a significant predictor of medical students' intentions to practice rurally: a multi-university study. *Rural Remote Health* 12(1908).

www.rrh.org.au/journal/article/1908

Walker KO, Moreno G and Grumbach K (2012) The Association Among Specialty, Race, Ethnicity, and Practice Location Among California Physicians in Diverse Specialties. *Journal National Medical Association*. 104(1-2): 46–52. DOI: 10.1016/S0027-9684(15)30126-7

Whitla DK, Orfield G, Silen W, et al. (2003) Educational benefits of diversity in medical school: a survey of students. *Academic Medicine* 78(5): 460–6.

<https://www.ncbi.nlm.nih.gov/pubmed/12742780>

Wilkinson TJ, Wells JE and Bushnell JA (2004) Are differences between graduates and undergraduates in a medical course due to age or prior degree? *Medical Education* 38(11): 1141–1146. DOI: 10.1111/j.1365-2929.2004.01981.x.

Williamson H (2004) *The Milltown Boys revisited*. London: Berg.

2.4 Highlighted Topics

As noted above (section 2.1), this book chapter was written to accommodate the editors' guidelines rather than exclusively for the thesis. I have included the book chapter as the substantive element within my Background chapter as I think it provides a good overall overview of the current UK context of WA to medicine. Moreover, I think it provides sufficient evidence to convince readers that: (1) the issue of WA is worth investigating; and (2) there is a lack of knowledge and understanding in important and outstanding problems in the area (Lingard, 2015).

In this section, I therefore aim to address one final point: (3) to highlight to readers how the thesis' aims and studies add an original and valuable contribution to the issues outlined in the book chapter (Lingard, 2015).

2.4.1 Tensions in the Purpose and Definition of WA

The book chapter explores the tension between the two main discourses ('ways of thinking') about why medical schools should implement WA - in the name of meritocracy and/or for the benefit of workforce diversity. As the book chapter makes clear, these discourses are often seen in competition and key stakeholders (e.g. Admissions Deans p.29) may be confused and conflicted regarding how to balance, enact and integrate these discourses into their institutions.

The discussions in the book chapter were informed by Study One of this thesis (*Discourses of WA on UK medical school websites*). In the study, my co-authors and I unpick these two discourses within the text of UK medical schools' websites and question their relative strength. The findings of Study One go some way to exposing and exploring a key tension that may hinder progress in WA to medicine and aim to add clarity to this issue.

The concept of WA as a contested term, with no commonly agreed purpose, process or outcome, also forms a central part of Study Two (*Framing widening access to medicine*). This is another discourse analysis, but rather explores how various contextual pressures (including those of the marketised Higher Education sector, discussed in this book chapter p.28) shape and influence medical schools' presentations

of WA in their publicity material. This material has not been widely explored in medicine despite the valuable insight these texts may provide into the interplay between contexts, values and practice (see section 2.4.2).

WA is just one example of a ‘contested concept’ in medicine. In an invited commentary for *Medical Education* (Alexander and Cleland, 2018a) my co-author and I explore how the concept of “validity as a social imperative” is used and contested in medical school admissions. For example, we propose that commonly understood ideas of ‘fairness’ in admissions may be changing in tandem with changes within the profession (workforce shortages) and that this is subsequently reflected in alterations to UK medical schools’ admissions procedures. This commentary can be found in Appendix A.

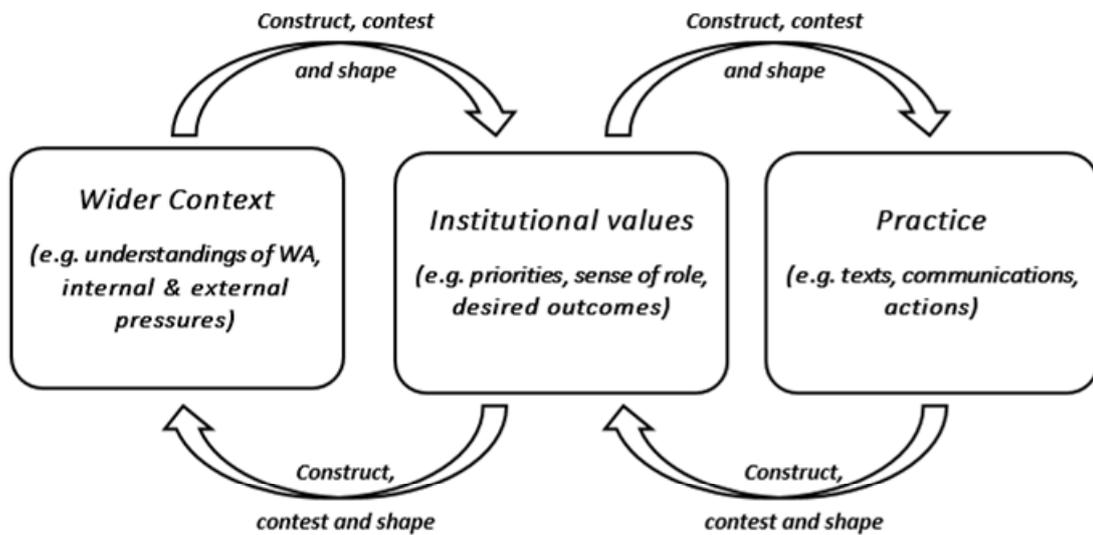
2.4.2 Links between Context, Values and Practice

The book chapter explores the ways in which a particular definition of WA (either for social mobility or workforce diversity) plays out in practice in the design and enactment of WA initiatives. It also highlights that cultural and institutional values are an integral part of this process. The interlinking relationship between contextual understandings, institutional values and practice is visualised in 50.

The mutually influential relationship between context, values and practice is a reoccurring theme within the thesis. All of the thesis studies: (1) investigate a form of WA ‘practice’ (medical school websites, teachers’ communications or pupils’ decisions); (2) use theory to explore what the practice may reveal about the groups’ values or perceptions; and (3) use knowledge of the wider context to inform interpretations.

This thesis is thus strongly built on the premise that, if there is a desire to change practice (e.g. to encourage young people from non-traditional groups to consider medicine), then policies to stimulate this change can only be effective if the reasons underlying the behaviour (e.g. context and values) are clearly understood (Avis, 2005).

Figure 2.1 The relationship between context, values and practice



The book chapter also argues that institutional reflexivity and change is often neglected in WA. For example, the chapter highlights that the enactment of WA policy tends to focus on the cultural and academic transformation of the WA applicant, rather than on examining or addressing problematic cultural practices within medicine. Studies One and Two (*Discourses of WA on UK medical school websites; Framing WA to medicine*) thus switch the focus back onto the practices of medical schools, and question what these practices reveal about their institutional stance to WA.

Institutional cultural change is also the focus of our invited commentary for *Perspectives on Medical Education* (Alexander, Cleland, et al., 2017). In this piece we emphasise the essential role of cultural change, in partnership with systemic change, to ensure the longevity of any WA intervention. This commentary can be found in Appendix B.

2.4.3 Barriers to Medicine

The book chapter presents an overview of common ‘barriers’ to medicine for those in lower socioeconomic or non-traditional groups (p.23). These include a number of factors relating to these individuals’ schools, for example: a lack of resources; a lack of support from teachers; and a school culture that does not encourage academic

achievement. The literature suggests that these barriers reduce applications from school-leavers from these backgrounds. However, as the existing UK literature in this area is now around ten years old, Study Four (*Exploring school pupils' perceptions of medicine*) acts as an 'updated' investigation of the influence these cultural perceptions may have on pupils' choices.

Finally, the book chapter outlines how UK medical schools are attempting to combat these barriers through pre-entry initiatives such as outreach initiatives and alternative entry routes. However, it also stresses that medical schools are unable to single-handedly change the circumstances which cause unrepresentative application rates, and therefore argues that 'joined-up' interventions are needed. As a result, Study Three of this thesis (*Teachers' perceived role in widening access to medicine*) focuses on school teachers as potential partners with whom medical schools could start to build a more effective and 'joined-up' approach to WA.

2.5 Summary of Key Points

In summary, Box 2.1 highlights the key points presented in this chapter.

The next chapter presents the General Methodology. This discusses aspects of the thesis' methodological design that are common to all studies, including: the overall qualitative approach, a discussion of philosophical paradigms, the role of theory and techniques used to judge the trustworthiness of qualitative research.

Box 2.1 Background: Summary of key Points

Key Points

- ✓ UK medical school admissions are experiencing a period of significant disruption and change
- ✓ WA is a growing political imperative
- ✓ Substantial uncertainty and tension remains regarding the definition and goals of WA policy
- ✓ The chosen definition and aims of WA have a tangible impact on how this policy is enacted by medical schools
- ✓ Significant and long-lasting progress within WA requires institutional values and culture to be reoriented to recognise the value of WA
- ✓ Material and sociocultural ‘barriers’ may deter those from non-traditional groups from making an application to medicine
- ✓ WA to medicine may present a perceived ‘risk’ for medical schools, potential applicants and their advisers
- ✓ Implementing WA successfully requires a joined-up approach and the involvement of a wide range of stakeholders and systems

2.6 References for Chapter 2

Alexander K and Cleland J (2018) Satisfying the hydra: the social imperative in medical school admissions. *Medical Education* 52(6): 587–589. DOI: 10.1111/medu.13586.

Alexander K, Cleland J and Nicholson S (2017) Let us not neglect the impact of organizational culture on increasing diversity within medical schools. *Perspectives on Medical Education* 6(2): 65–67. DOI: 10.1007/s40037-017-0342-4.

Avis M (2005) Is there an epistemology for qualitative research? In: Holloway I (ed.) *Qualitative Research in Healthcare*. New York, NY: McGraw Hill, pp. 3–16.

Ebeling M and Gibbs J (2001) Searching and Reviewing the Literature. In: Gilbert N (ed.) *Researching Social Life*. London: SAGE Publications, pp. 63–79.

Lingard L (2015) Joining a conversation: the problem/gap/hook heuristic. *Perspectives on Medical Education* 4(5): 252–253. DOI: 10.1007/s40037-015-0211-y.

Chapter 3

General Methodology

3.1 Introduction

As described in the Introduction (section 1.4) this thesis is structured ‘with publications’. Each ‘results’ chapter is thus a research study, formatted as a self-contained article for journal publication. Each study takes a distinct methodological and theoretical approach, and therefore a wide variety of research designs are presented within the thesis. These research designs are summarized visually in Figure 1.1 (p.7).

Due to this variety, the methodology section of the thesis is split into three parts. The current chapter (General Methodology), discusses aspects of the methodological design common to all studies within the thesis.

First, a brief overview of qualitative research is presented and compared to other approaches (quantitative and mixed method). Common philosophical paradigms used to underpin each approach are discussed, and the philosophical stance taken within this thesis is laid out. This is followed by a reflexive account of the decisions which led to a qualitative approach being taken within the thesis, and a discussion of its anticipated strengths and limitations. The role of theory within qualitative research is presented, followed by a discussion of ethical considerations. The chapter concludes with an overview of techniques to judge and ensure quality and trustworthiness is maintained in qualitative research.

The following two parts of the Methodology (Chapters 4 and 7) discuss decisions about each of the studies’ methods specifically, and are thus presented directly before the relevant studies instead of in this General Methodology.

3.2 Overview of Qualitative Research

Qualitative research aims to understand how the social world is produced, experienced and interpreted (Cleland, 2015). Qualitative researchers frequently aim to develop

knowledge about how people understand and account for their situations and experiences, and why this might affect how they think and act (Miles et al., 2013). As a result, qualitative research tends to investigate complex social and human phenomena, such as social processes, human experience, meaning-making, group interactions and the implicit conventions that guide social behaviour (Avis, 2005; Ng et al., 2014).

In order to study these complex phenomena, qualitative research is usually undertaken with non-numerical data, such as verbal or textual sources and observations (Miles et al., 2013). High-quality data is 'rich' with detailed ('thick') descriptions, which allow this complexity to be captured as much as possible (Miles et al., 2013). Data collection takes place through prolonged contact with participants in natural settings, in order to optimise insight into 'ordinary' experiences, perspectives or events (Miles et al., 2013; Ng et al., 2014). Naturalistic data is required and researchers strive to ensure, to the greatest extent possible, that is not coded, summarized, categorized or 'reduced' at the point of collection (Willig, 2001). Data collection methods include: interviews (either one-to-one or in a group); observation methods; and written documents (Cleland, 2015; Ng et al., 2014).

Qualitative data analysis is largely concerned with describing, investigating and understanding phenomena, and/or with hypothesis or theory generation (Cleland, 2015; Morse and Field, 1995). As a result, explanations tend to be developed inductively: researchers analyse the data for patterns, themes and commonalities and explore these using tentative hypotheses and logical reasoning, before developing general conclusions with reference to existing literature and theories (Cleland, 2015). Although there are many distinct methodologies and analytical methods available, qualitative approaches largely share this inductive process to some extent (Miles et al., 2013). Flexibility in research design and process is permitted to allow data collection and analytical methods to be adaptive and to optimise the opportunity for nuanced understanding and accurate hypotheses/theories to be generated as the study progresses (Avis, 2005; Miles et al., 2013).

3.3 Alternatives to Qualitative Research

3.3.1 The Quantitative Approach

Another major approach to research within medical education is quantitative. Quantitative research aims to observe, measure and describe phenomena in an objective and generalizable manner (Cleland, 2015).

Quantitative methods can be used to collect data on people's attitudes, self-perceptions and behaviours by presenting these as codified variables (Bowling, 2005). For example, to facilitate measurement, data is expressed numerically and collected through standardized and highly structured methods such as: questionnaires, surveys, observations, rankings or discrete choice experiments (Bowling, 2005; Cleland, 2015; Ryan et al., 2008).

Quantitative analytical methods use controllable variables and statistical analysis to: describe the state of a variable (establish 'what is'); observe patterns or relationships between variables; or establish cause-effect relationships between variables (Cleland, 2015). These techniques are deductive: a hypothesis is formed about the phenomenon and then tested to conclude whether the data supports or refutes this hypothesis (Bowling, 2005; Cleland, 2015). Research designs should allow exact reproducibility (Cleland, 2015).

3.3.2 Mixed Methods Approaches

Qualitative and quantitative approaches can be usefully combined within one programme of research: providing very different perspectives on the same phenomenon and thus enabling a deeper understanding (Cleland, 2015). Mixed methods approaches are commonly utilised within medical education (Cleland, 2015; Ng et al., 2014). As qualitative and quantitative approaches are usually underpinned by different philosophical assumptions, researchers must choose a paradigm which accommodates both (see section 3.4.2, below).

3.4 Philosophical Considerations

Every approach to research is underpinned by a set of philosophical assumptions. This section first defines the key concepts of epistemology and ontology. It then discusses common research paradigms with reference to these concepts. The section concludes with a discussion of the philosophical position taken within this thesis.

3.4.1 Epistemology and Ontology

Epistemology can be defined as the “philosophical theory of knowledge” (King and Horrocks, 2010, p.8). Epistemological questions are therefore concerned with developing an understanding of “how we know what we know” (Crotty, 2003, p.8). The epistemological stance taken provides a basis for delimiting what kinds of knowledge are considered possible, adequate and legitimate within a research study (Crotty, 2003).

For example, in the context of this thesis, I could ask: can knowledge about people’s perceptions be considered legitimate if these are captured in a one-off categorized measurement (e.g. on a Likert scale response)?

Ontology can be defined as the “science or study of being” (Blaikie, 1993, p.6). In other words, it is the theory and study of reality, being or existence (‘what is’) (Crotty, 2003, p.10). Ontology is closely linked to epistemology, as any understanding about the production of knowledge is inherently linked to claims or assumptions made about the reality it describes (Blaikie, 1993).

Referring again to the above example: my answer would depend on whether I considered perceptions to exist as: (1) static constructions that exist in an objective reality; or (2) as subjective and temporal experiences that are constructed within the reality of an individual.

3.4.2 Research Stances and Paradigms

This section outlines the ontological and epistemological stance of some of the paradigms used most frequently within medical education. Paradigms are defined as a set of shared beliefs amongst a community of researchers (Cleland, 2015).

Positivism

Within a positivist paradigm, reality consists of an ordered set of discrete and observable events, which are governed by systematic laws and mechanisms (Blaikie, 1993; McMillan, 2015). Objects and structures are ruled by identifiable cause and effect relationships (King and Horrocks, 2010). From this perspective, knowledge is objective, neutral and value-free and meaning exists independently of any subjective consciousness (King and Horrocks, 2010; McMillan, 2015). The researcher is considered to be an objective 'tool' to extract knowledge (Cleland, 2015).

Investigations within the natural sciences are commonly based in this paradigm and the purpose of knowledge generation is to discover and represent the essence or 'truth' about a phenomenon (Bowling, 2005). This paradigm can also be applied to social research, although is far less common (e.g. investigations into how behaviour is generated by biological, economic or social structures) (King and Horrocks, 2010, p.9).

Post-positivism

Post-positivism maintains the core elements of positivism ontologically, but epistemologically recognises that empirical investigations can be fallible and that the experiences, knowledge and values of the researcher can influence what is perceived (Cleland, 2015). Post-positivist research thus aims to ascertain knowledge about an accessible and 'probable' truth (McMillan, 2015). Researchers strive to be objective, but accept they cannot be completely removed from the research (Cleland, 2015).

Post-positivism is again predominantly used within the natural sciences. Within social research, post-positivists maintain the cause and effect mechanism between biology/environment and behaviour, but claim the former only influence the latter (rather than directly determine them) (King and Horrocks, 2010, p.9).

Criticalism

Within a broad understanding of criticalism, the researcher can consider reality to be either objective or subjective (Bunniss and Kelly, 2010a; McMillan, 2015). According to

Guba and Lincoln (1994, p.11), critical theorists follow an ontological position of 'historical realism', which assumes social reality is (or was) at some points flexible and shifting, before being reified into structures that are now so well-established that they are considered 'real' and objective. It is the role of research to critique and challenge these 'real' or 'truth' structures and return them to a flexible, contested state, especially if these are unjust or exploitative (Alvesson and Skoldberg, 2000).

Epistemologically, knowledge is considered to be constructed through social interaction and the deconstruction of texts, language and media (Savin-Baden and Howell Major, 2013). Knowledge is strongly shaped by power relations, including those between researcher and researched (Guba and Lincoln, 1994; McMillan, 2015). This paradigm thus draws particular attention to the inherently political dimension within research and the subjective role of the researcher (Alvesson and Skoldberg, 2000, p.124).

Studies underpinned by criticalism often aim to raise awareness of the political nature of social phenomena, question 'taken-for-granted' assumptions, and highlight how power can be used to marginalise some social groups (Alvesson and Skoldberg, 2000; Guba and Lincoln, 1994).

Subjectivity (Interpretivism)

Paradigms founded within subjectivity (or interpretivism) consider realities to be less structured, temporal and changing (King and Horrocks, 2010; McMillan, 2015).

Ontologically, they do not consider there to be one objective reality. Instead, reality is understood to exist as it is perceived and attributed meaning by people (Cleland, 2015; Mann and MacLeod, 2015), with their understandings and experiences built relative to their cultural and social frames of reference and context (King and Horrocks, 2010; McMillan, 2015). Multiple realities – each created by an individual or group - may thus co-exist (Mann and MacLeod, 2015).

Knowledge is thus not 'discovered', but rather *created* through the interpretation of these realities (Mann and MacLeod, 2015). Like the realities themselves, knowledge is thus multiple and diverse, and there cannot be one 'correct' or 'true' interpretation of the world (Bunniss and Kelly, 2010a; McMillan, 2015).

The paradigms of constructivism and social constructivism take this worldview.

Research using the constructivist paradigm considers reality to be constructed in the mind of the individual and knowledge created by researchers. Social constructivism considers reality to be socially constructed, and knowledge created through dialogue and negotiation (Savin-Baden and Howell Major, 2013). In both paradigms the researcher is explicitly involved in the creation of meaning and knowledge (Lodico et al., 2010; Mann and MacLeod, 2015; McMillan, 2015).

Research usually focusses on individual and social constructs, such as how people feel about, or make sense of, their world from their particular viewpoint or within a group (King and Horrocks, 2010; Savin-Baden and Howell Major, 2013).

Pragmatism

Within the pragmatic paradigm, researchers follow methods that best answer the question in hand rather than pre-determined philosophical stances (Cleland, 2015).

Pragmatism is not concerned whether reality is objective or subjective, but rather bases itself on John Dewey's conceptualization of experience and inquiry (Lodico et al., 2010; Morgan, 2014). As a result, researchers focus on assessing which approaches of inquiry might best achieve their aims, with the main question posed as "what kind of question is best answered by what methods?" (Cleland, 2015, p.11).

The rejection of traditional ontological and epistemological systems, and thus the philosophical conflict that often lies between utilising qualitative and quantitative approaches in the same study, means that pragmatism is popular in mixed methods research (see section 3.3.2). Pragmatism is increasingly established and now understood as a paradigm in its own right (Lodico et al., 2010; Morgan, 2014).

3.5 The Philosophical Stance within this Thesis

Within this thesis I take a practical approach to these philosophies, rather than a purist one. The specific aims of each of the studies led me to pursue different methodological, analytical, theoretical and paradigmatic approaches throughout the

thesis. Through this mixture of approaches, I aimed to produce the most illuminating and useful insight into each phenomenon as possible. This approach can be equated with the 'situationist orientation' as described by Savin-Baden and Howell Major (2013, p.85). Within this orientation, researchers adopt the philosophical approach that is best suited to the needs of the study - the research topic, question and context – rather than any pre-determined stance. The chosen philosophical stance then guides the subsequent decisions on data collection and analytical approach.

Although I thus used different paradigms in the overall thesis (criticalism and social constructivism), each individual study relied upon a single paradigm and was carefully designed to ensure alignment between philosophical stance, theory and methods. I thus avoided epistemological and ontological clashes within the studies (as can happen with mixed methods research for example). Moreover, some general points about my philosophical stance may be presented here as they apply to the whole thesis.

Firstly, in all the presented work, the claims and assumptions made about phenomena understand these to be situated within a subjective ontology. My ontological stance is well encapsulated by the following description by Blaikie: “social reality is regarded as the product of processes by which social actors together negotiate the meanings for actions and situations” (Blaikie, 1993, p.96). Realities are thus understood to be multiple and meaningful only through sentient interpretation. The epistemological positions taken within the thesis – criticalism and social constructivism - align well with this ontological stance.

Throughout the whole thesis, I therefore understand my role as the researcher to be actively involved in the construction of knowledge and the creation of a subjective and value-laden account, not to make any 'truth' claims about the world (King and Horrocks, 2010).

The use of two different epistemological stances to best achieve the aims of the work is a practical, pragmatic approach. However, as the work is firmly grounded in traditional ideas of ontology and epistemology, I do not classify the work to sit within the paradigm of pragmatism.

Finally, I acknowledge this plurality of approaches is ambitious, particularly for a novice researcher. The decisions made about which philosophical and theoretical choices to make in each study were thus considered at length through a rigorous process of epistemological reflexivity (see section 3.9.5) and are expanded on in sections 4.3 and 7.3.

3.6 Justification for the Qualitative Approach

When considering how to approach this PhD, I was immediately drawn to a qualitative approach. This decision was developed and articulated during the first months of my doctorate through my study of research approaches and their underlying philosophical assumptions, as well as a reflexive examination of my own stance. I outline the reasoning that led to this decision below:

Producing Quality Insight into Phenomena

In my previous job working with young people and their teachers, we had extensively used surveys and Likert-type evaluations to try and capture their experiences and preferences. However, I felt this had always been done with very limited success. I found that both young people and their teachers often completed the surveys superficially and erratically, and subsequently the data was often of low quality.

Moreover, I felt that even *if* the categories on the surveys could capture a ‘real’ answer as to how participants felt, or what they wanted, it was a very vague approximation of this feeling/desire - even though it appeared very clear cut and was ‘practical’ (easy to input, categorize and determine an obvious outcome). Therefore, despite their convenience, I thus judged surveys fundamentally unable to create accurate insight into *how and why* participants felt, or understood their worlds in the way they did.

Philosophical Questions

I had also found that young people were often dismissive of the surveys, commenting the categories did not allow them to accurately or meaningfully report their experiences. I thus questioned whether even the most nuanced and well-constructed survey would be able to accurately capture these phenomena. Talking to them, I understood participants’ experiences and perceptions could be complex, changeable,

contradictory, as well as poorly articulated or understood (e.g. “yes, I felt welcome on the campus because it was so sunny today”).

In addition to the practical limitations of surveys, I thus questioned the efficacy of quantitative techniques to produce valid knowledge in relation to my research questions. Understanding the participants’ experiences as I did (complex, changeable, contradictory) I came to realise that I believed there was no one static ‘truth’ to discover about these. I started to see that my reservations about using categorical or codified response techniques were more than just practical, but also linked to my underlying ontological and epistemological beliefs.

I therefore reasoned that allowing respondents to express their beliefs and perceptions verbally or in written form with as little reduction of the data as possible (naturalistically) would be the best way to create legitimate knowledge about these phenomena. This permitted participants a high level of autonomy to report experiences and perceptions in their own words and on their own terms, and thus offered rich data to those wishing to understand their subjective experiences and realities (Avis, 2005).

My Skills, Experiences and Preferences

The qualitative approach originally transferred across to medical education from the social sciences and humanities (Ng et al., 2014). My academic background was in the humanities and therefore I was already familiar and comfortable reading and appreciating qualitative work. Moreover, influenced by my academic background in political science, I was fully aware and comfortable with the notion of all social research being considered subjective and political.

As I learned more about undertaking qualitative research, I began to further appreciate its strengths. For example, I was excited about the inherent flexibility permitted within qualitative research design, which allows the researcher to develop a more nuanced and detailed understanding of the phenomenon in hand (Avis, 2005; Miles et al., 2013). These subtleties and complexities might be missed by more positivistic or directive approaches (Anderson, 2010). I thus considered this an attribute and exciting challenge (rather than a threat to rigour), as long as the researcher adheres diligently and

conscientiously to maintaining high standards of trustworthiness in the work (see section 3.9 for a full discussion).

Adding an Original Contribution

Finally, my overall aims were to produce knowledge which: (1) would contribute new insight into the sociocultural and communicative aspects of WA to medicine; and (2) would be useful in WA policy and practice.

I thus aimed to produce novel insight into *how and why* particular barriers to medicine were created and problematic (not to ascertain their existence or measure their extent as one might with a quantitative approach (Cleland, 2015)). As the previous literature has shown that barriers appear to be context specific and complex, research with an inductive (data-driven) element seemed better suited to their exploration: building nuanced insight ‘from the bottom up’ into the underlying perceptions and tensions surrounding medicine and investigating why these might become a barrier to WA to the profession. Again, this suggested a qualitative approach.

3.7 Application of Theory

Within any type of research the data never ‘speaks for itself’ (Willig, 2001, p.134). All data must be interpreted in order to be explained and given meaning. Even in the empirical research of natural science, scientific theories are used to ‘make sense’ of sensory stimuli and therefore interpret something meaningful about the world, even if this process is assumed by researcher and reader (Avis, 2005, p.8). The interpretative process is more explicit within qualitative research and researchers must acknowledge to both themselves and readers that evidence cannot be independent from the theories that generate and interpret it (Avis, 2005; Reeves et al., 2008).

Theory can be defined as “an organised, coherent, and systematic articulation of a set of issues that are communicated as a meaningful whole” (Reeves et al., 2008, p.633). In qualitative research, theories help researchers explain and comprehensively understand the complex social phenomena under study, and are thus an intrinsic part of creating meaning and knowledge (McMillan, 2015; Reeves et al., 2008; Willig, 2001). Theories also enable researchers and readers to understand, and meaningfully draw

connections between, research and practice or policy (McMillan, 2015). They help illuminate and explain the (often implicit) assumptions, power structures and principles underlying the phenomena of study, and thus enable a deeper level understanding than descriptive or surface-level observations (Bordage, 2009; Reeves et al., 2008). Finally, theories help researchers and readers link the context-specific insight produced in a qualitative study to wider patterns and processes present elsewhere and thus enhance the wider significance and applicability of the research (Reeves et al., 2008).

Due to the inherent and unavoidable influence of the researcher in the qualitative research process, to ensure work is trustworthy, researchers must make their theoretical assumptions explicit to readers (Bordage, 2009). This includes both assumptions about philosophical paradigms as well as more specific or targeted theories (McMillan, 2015).

3.7.1 Conceptual Frameworks

Conceptual frameworks “represent ways of thinking about a problem or a study, or ways of representing how complex things work the way they do” (Bordage, 2009, p.313). These stem from well-established theories or models with clearly defined principles that have been confirmed via experimentation or observation, or from evidence-based practices (Bordage, 2009). As such, conceptual frameworks offer similar benefits to the application of a wider theory but in a more focussed way.

Considering a range of frameworks, or combining multiple frameworks within a study, allows the researcher to consider the research question or interpret results through various different ‘lenses’ to decide which alternative is most beneficial (see Nicholson and Cleland (2015) for a good example). The application of a conceptual framework concentrates focus on a specific part of a problem or illuminates a particular potential solution. This increased focus can offer researchers an enhanced understanding from one perspective, however by necessity, it also excludes a wide range of other perspectives (Bordage, 2009).

The application of theories and conceptual frameworks within Studies One – Four are discussed in full in Part Two and Three of the Methodology (Chapters 4 and 7).

3.8 Ethical Considerations

Qualitative research investigates the complex, competing and often politically-charged forms of human experience. From an ethical perspective it is imperative that, throughout the whole research process, researchers reflect upon how the research will impact human lives (Iphofen, 2005; King and Horrocks, 2010). Moreover, it is imperative they act upon these considerations in order to create research that is ethically sound (Willig, 2001).

This section presents an overview of fundamental ethical principles that should be considered before, during and after data collection. I justify why these are important and discuss the knowledge, skills and sense of responsibility required to uphold these principles as an ethical researcher.

Details of how ethical rigour was ensured within Studies One – Four are integrated throughout Parts Two and Three of the Methodology (Chapters 4 and 7).

3.8.1 Informed Consent

Qualitative research commonly involves human participants. Protecting these individuals from harm and preserving their well-being and dignity is of the utmost importance during any research project (King and Horrocks, 2010).

Firstly, an individual's autonomy should always be respected. Individuals should thus be given the free choice whether they wish to participate in the research or not. In order to make this choice, individuals must be fully informed of the research procedure, aims and intended outcomes, as well as about what their participation entails (Iphofen, 2005).

In practice, this procedure is primarily enacted through written or oral 'informed consent' procedures, undertaken before any data is collected (Willig, 2001). However, the act of 'informed consent' is not straightforward. Some individuals may not be able to provide informed consent as they are unable to grasp the full implications of their participation: for example, because they are intellectually impaired or too young.

Others might be coerced into participation by those in a position of power over them (e.g. parents, teachers, colleagues or the researcher) (Iphofen, 2005; King and Horrocks, 2010).

Furthermore, if the researcher wishes to retain flexibility within the qualitative research process, it may be impossible to outline in exact detail the process of data collection, analysis and predicted findings to participants in advance, and thus to 'fully' inform them (Willig, 2001). Finally, an individual who has given consent in advance of data collection, may later regret the decision and wish to revoke that consent.

An ethical researcher must be aware of these potential issues and take measures to address them. Researchers must be able to identify potentially vulnerable groups or individuals who would not be able to provide informed consent, and take responsibility for ensuring they are not involved in, or harmed in any way, by the research (Iphofen, 2005; King and Horrocks, 2010). They must also be highly aware of potential power differentials that might coerce an individual to participate and work to minimize these (Iphofen, 2005).

Researchers should present relevant, honest and understandable information about the study to participants, including an acknowledgment of the flexibility within the qualitative approach (DiCicco-Bloom and Crabtree, 2006; King and Horrocks, 2010). They must not deceive potential participants in any way (Willig, 2001). Finally, they must carefully consider all potential outcomes and consequences of the research, so that any potentially detrimental effects on participants are not left unforeseen and unplanned for (King and Horrocks, 2010).

Despite the formal procedure taking place before data collection starts, informed consent should be considered a 'process' and not a 'one-off' instance (King and Horrocks, 2010, p.115). If it becomes apparent during data collection that an individual was not fully informed of the implications of involvement or was coerced or pressurized into participation, then the researcher who is collecting the data must take responsibility for reacting and stopping the process (Iphofen, 2005). Ethical researchers must make it easy for participants to revoke their consent during or after data collection, without social awkwardness or fear of being penalized (Willig, 2001).

3.8.2 Duty of Care

During the data collection process, the researcher must stay diligent, react to the emotions of the participants and take responsibility for remediating or stopping any line of questioning or situation if this is causing distress (Iphofen, 2005; King and Horrocks, 2010). After the data collection has taken place, the researcher should debrief participants, and offer them the opportunity to access any subsequent publications arising from the research (Willig, 2001). The researcher must ensure that participants are not 'exploited' and are rewarded and recognised for their contribution (DiCicco-Bloom and Crabtree, 2006).

3.8.3 Anonymity and Confidentiality

Anonymity refers to the right of participants to not be identified by the research. The disclosure of a participant's identity might significantly jeopardise their position and relationships within their institution, community, family or friendship group, as well as cause them severe distress and loss of dignity (DiCicco-Bloom and Crabtree, 2006). Ethical researchers must respect their right to anonymity by concealing the identity of participants in all documents or presentations resulting from the research and by keeping all personal details about participants confidential (King and Horrocks, 2010).

Confidentiality refers primarily to how the research data is handled and stored, and who might have access to this data. The misuse of data can lead to participants' personal details, narratives or experiences being exploited or used for purposes that they did not consent to, as well as a breach of anonymity. Ethical researchers must protect the confidentiality and security of their participants' data and take responsibility for its safety (Iphofen, 2005; Willig, 2001). Researchers should also ensure they comply with the Data Protection Act 1998, the 2018 General Data Protection Regulation (GDPR) and any local policies.

The researcher must consider and identify any potential threats to the anonymity of participants and confidentiality of the data in advance, and take measures to reduce anticipated threats (King and Horrocks, 2010). The extent to which data can be made

anonymous and confidential should be fully discussed with participants during the informed consent procedures preceding data collection (Willig, 2001). If anyone else (e.g. other focus group participants or colleagues) have also accessed others' data (e.g. by witnessing them telling an anecdote), it is important to request they respect the other participants' right to anonymity and confidentiality (Willig, 2001).

3.9 Assessing Quality in Qualitative Research

Research must be rigorous to be meaningful and useful. In this section I discuss some of the core ways to assess rigour, or 'trustworthiness', in qualitative research. These are described using the four terms set out by Lincoln and Guba (1985): credibility; dependability; transferability; and confirmability. This section also includes a discussion of reflexivity, which must be practiced throughout the research process in order to maintain trustworthiness, quality and high ethical standards.

3.9.1 Credibility

Credibility refers to the extent to which the reader may assess the "validation of findings and results" (Seale, 2007, p.337). Credible research employs methods that can be clearly judged to produce accurate descriptions, interpretations and conclusions about reality (Cleland, 2015; Lodico et al., 2010). The following techniques may be used to enhance the credibility of qualitative work:

Triangulation ensures that a phenomenon is considered from multiple perspectives, for example via: triangulation of methods; triangulation of sources; analyst triangulation; and theoretical triangulation (Savin-Baden and Howell Major, 2013). Triangulation obliges researchers to consider their data, analysis or interpretations from another angle, encouraging a critical and reflexive assessment on their conclusions.

Researchers may also collect and consider the feedback of participants to ensure they have interpreted and presented the research in way that accurately reflects their participants' understandings and experiences (King and Horrocks, 2010; Lodico et al.,

2010; Mann and MacLeod, 2015). However, this is not always unproblematic and the decision if, how and when to refer to participants during interpretation divides opinion (King and Horrocks, 2010, p.163). (See section 7.6.3, p.182 for an applied discussion.)

3.9.2 Dependability

Within qualitative research, the researcher is considered to be an integral and subjective part of the research process, creating unique decisions and interpretations (Cleland, 2015; Miles et al., 2013). Researcher involvement can contribute strengths to a study (see section 3.6, p.62), however, this must also be recognised as an anticipated challenge, as it can also cause unfair influence or bias in research. Researchers must therefore show that their work is dependable: provide sufficient detail about the research process so that it could be reproduced, or at least retraced and justified at every step, if necessary (Mann and MacLeod, 2015).

This can be done through accurate and systematic documentation (Willig, 2001). For example, audit trails document: the steps taken throughout data collection and analysis; justifications for decisions taken; changes to the research design; and reflections (King and Horrocks, 2010; Mann and MacLeod, 2015).

3.9.3 Transferability

Within qualitative research, the targeted number of participants is determined by the aims of the study, rather than any pre-determined size required for statistical relevance (Willig, 2001). Due to the richness of naturalistic data and the labour-intensive methods of analysis and interpretation, qualitative studies tend to have fewer participants than quantitative studies, starting from just a few participants (Crouch and McKenzie, 2006). Although this enables a detailed investigation of one case, context or situation, it does not permit generalization (Anderson, 2010). Furthermore, qualitative research underpinned by a subjective worldview can never be generalized, as it understands the knowledge produced to be strongly embedded within the context of its creation, both spatially (e.g. location, setting) and temporally (e.g. date, time in a person's life) (Crotty, 2003; McMillan, 2015). Generalizability is therefore not an aim of

qualitative work, and instead it should be assessed on its ability to be transferable to other contexts (Lodico et al., 2010).

Trustworthy qualitative research will provide sufficiently rich detail ('thick description') in the write-up so that readers may assess for themselves the extent to which conclusions are to be transferrable to their own or other contexts (King and Horrocks, 2010; Willig, 2001). Transferability is also aided by the rigorous use of theory to highlight links between the study in hand and patterns and processes observed elsewhere, and to deepen understanding about underlying processes rather than superficial differences (Reeves et al., 2008).

3.9.4 Confirmability

The inherent subjectivity within most qualitative research means that trustworthiness in qualitative research can be difficult to maintain, assess and demonstrate (Anderson, 2010). Confirmability refers to "the extent to which the researcher makes clear his or her personal relationship to the research and the findings, and the contribution that any personal views may have to the research" (Mann and MacLeod, 2015, p.62).

To ensure confirmability, the researcher's influence within the research design and interpretation should be fully acknowledged in all documentation (Willig, 2001). This includes documentation of the research process (e.g. in an audit trail), as well as in the write-up of the work itself. For example, the researcher's philosophical stance and theoretical perspective must be made clear and sufficient evidence provided (e.g. through quotations) so that reader can assess for themselves the likelihood of any bias in interpretation.

Asking a colleague or member of the research team to review or independently code sections of the same data and then compare codebooks can challenge the researcher to critically assess how their assumptions and expectations may influence their judgements (King and Horrocks, 2010). Critical conversations with peers may also help the researcher challenge interpretations and consider alternative viewpoints on the data (Lodico et al., 2010). Finally, researchers should continuously practice reflexivity throughout the research process to aid confirmability (see below).

3.9.5 Reflexivity

King and Horrocks provide a broad explanation of reflexivity as a response “to the realisation that researchers and the methods they use are entangled in the political world.” (2010, p.126). In this section I discuss two dimensions of reflexivity - epistemological reflexivity and personal reflexivity - the influence these have on producing trustworthy research and knowledge, and techniques that can be used to develop these. Finally, I consider the role reflexivity plays in creating ethical research.

I have tried to incorporate and demonstrate reflexive practice throughout this methodology chapter. Specific measures taken to promote reflexivity during each of the studies are discussed in Part Two and Three of the Methodology (Chapters 4 and 7).

Epistemological reflexivity

Epistemological reflexivity involves researchers reflecting upon the underlying philosophical and theoretical assumptions of their research (Willig, 2001). This promotes a deeper understanding of what drives the research and stimulates researchers to move beyond accepting ‘the way we do things’ and instead critically consider new alternatives (King and Horrocks, 2010; Willig, 2001). Moreover, it encourages researchers to consider how a particular paradigm will illuminate certain elements of a study and downplay others, and thus assess the strengths and limitations of that paradigm, theory or framework (King and Horrocks, 2010; Willig, 2001).

Personal reflexivity

Researchers must be aware that their work – to a lesser or greater extent - will inevitably be influenced by political, social or economic motives (Savin-Baden and Howell Major, 2013). These motives need not be ‘suspicious’: research that aims to provide a human or societal benefit still clearly has a motive, if not a cynical or self-serving one. Researchers must however be transparent with readers about these motives and how they have come about. They must also reflect on the influence their

own position (values, experiences, culture, interests) might have on research design and interpretations (King and Horrocks, 2010; Willig, 2001).

As a result, practicing personal reflexivity and critical self-reflection throughout all phases of the research process helps prevent personal bias from distorting research design or interpretations (Savin-Baden and Howell Major, 2013). This is not just a matter of the reputation and integrity of the research or researcher, but also an ethical issue (see below).

Researchers may write and update a reflexive account or personal research log in order to develop their critical understandings of why an action or decision was taken, as well as create an accountable audit trail (King and Horrocks, 2010). In addition, a researcher positionality statement - which examines and makes clear the researcher's values and experiences - may be a useful exercise for the researcher and informative for the reader, enhancing confirmability and credibility (see Appendix C).

Reflexivity in ethical research

Within qualitative research, the data collected is often intimate and personal, detailing an individual's experiences, attitudes or concerns. This data is then inevitably manipulated throughout the research process through coding, categorization and interpretation. It is again manipulated in the write-up and dissemination, when the researcher often also has the interests of the audience in mind. However, in the end, the final presentation must however still fairly represent the voice of the participants to be ethically sound.

Maintaining a reflexive position throughout the research process thus helps the researcher assess to what extent the conclusions drawn accurately represent the experiences and accounts of participants, and whether any interpretations might be unfairly distorted by researcher input (Iphofen, 2005; King and Horrocks, 2010). To misrepresent participants, or to block alternative voices in order to promote the subjective position of the researcher would be highly unethical (King and Horrocks, 2010).

3.10 Summary

In this chapter I have justified the qualitative approach taken within this thesis and outlined some of the major elements within this approach. I have discussed the necessary ethical considerations to ensure no harm comes to participants and have outlined the important measures a qualitative researcher must take to create high quality and trustworthy research.

These key principles will be applied in practice in the following chapters. The next chapter will discuss the methodological decisions underpinning Studies One and Two.

3.11 References for Chapter 3

- Alvesson M and Sklöldberg K (2000) *Reflexive Methodology*. London: SAGE Publications.
- Anderson C (2010) Presenting and evaluating qualitative research. *American Journal of Pharmaceutical Education* 74(8): 141-150. DOI: 10.5688/aj7408141.
- Avis M (2005) Is there an epistemology for qualitative research? In: Holloway I (ed.) *Qualitative Research in Healthcare*. New York, NY: McGraw Hill, pp. 3–16.
- Blaikie N (1993) *Approaches to social enquiry*. Cambridge: Polity.
- Bordage G (2009) Conceptual frameworks to illuminate and magnify. *Medical education* 43(4): 312–9. DOI: 10.1111/j.1365-2923.2009.03295.x.
- Bowling A (2005) Quantitative social science: the survey. In: Bowling A and Ebrahim S (eds) *Handbook of Health Research Methods*. New York, NY: McGraw-Hill Education, pp. 190–214.
- Bunniss S and Kelly DR (2010) Research paradigms in medical education research. *Medical education* 44(4): 358–66. DOI: 10.1111/j.1365-2923.2009.03611.x.
- Cleland J (2015) Exploring versus measuring: considering the fundamental differences between qualitative and quantitative research. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd., pp. 3–14.
- Crotty M (2003) *The Foundations of Social Research: Meaning and Perspective in the Research Process*. London: SAGE Publications Ltd.
- Crouch M and McKenzie H (2006) The logic of small samples in interview-based qualitative research. *Social Science Information* 45(4): 483–499. DOI: 10.1177/0539018406069584.

- Dicicco-Bloom B and Crabtree BF (2006) The qualitative research interview. *Medical Education* 40 (4): 314–321. DOI: 10.1111/j.1365-2929.2006.02418.x.
- Guba E and Lincoln Y (1994) Competing paradigms in qualitative research. In: Denzin N and Lincoln Y (eds) *Handbook of qualitative research*. London: SAGE Publications, pp. 105–117.
- Iphofen R (2005) Ethical issues in qualitative health research. In: Holloway I (ed.) *Qualitative Research in Healthcare*. New York, NY: McGraw-Hill, pp. 17–35.
- King N and Horrocks C (2010) *Interviews in Qualitative Research*. Sage Publications.
- Lincoln Y and Guba E (1985) *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.
- Lodico M, Spaulding D and Voegtle K (2010) *Methods in Educational Research: From Theory to Practice*. San Francisco: John Wiley & Sons.
- Mann K and MacLeod A (2015) Constructivism: learning theories and approaches to research. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, pp. 51–65.
- McMillan W (2015) Theory in healthcare education research: the importance of worldview. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 15–24.
- Miles MB, Huberman AM and Saldaña JM (2013) *Qualitative data analysis: A Methods Sourcebook*. Arizona State University: SAGE Publications, Inc.
- Morgan DL (2014) Pragmatism as a Paradigm for Social Research. *Qualitative Inquiry* 20(8): 1045–1053. DOI: 10.1177/1077800413513733.
- Morse J and Field P (1995) *Qualitative research methods for health professionals*. Thousand Oaks, CA: SAGE Publications.
- Ng S, Lingard L and Kennedy TJ (2013) Qualitative research in medical education. In: Swanwick, T (ed) *Understanding Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 371–384.
- Nicholson S and Cleland J (2015) Reframing research on widening participation in medical education: using theory to inform practice. In: Cleland J and Durning S (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 231–244.
- Reeves S, Albert M, Kuper A, et al. (2008) Why use theories in qualitative research? *BMJ (Clinical research ed.)* 337: a949. DOI: 10.1136/BMJ.A949.
- Ryan M, Gerard K and Amaya-Amaya M (2008) *Using discrete choice experiments to value health and health care*. Dordrecht: Springer.
- Savin-Baden M and Howell Major C (2013) *Qualitative Research: The essential guide to theory and practice*. Oxon: Routledge.
- Seale C (2007) *Qualitative research practice*. London, UK: SAGE Publications.
- Willig C (2001) *Introducing Qualitative Research in Psychology: Adventures in Theory and Method*. Buckingham: Open University Press.

Chapter 4

Methodology for Studies One and Two

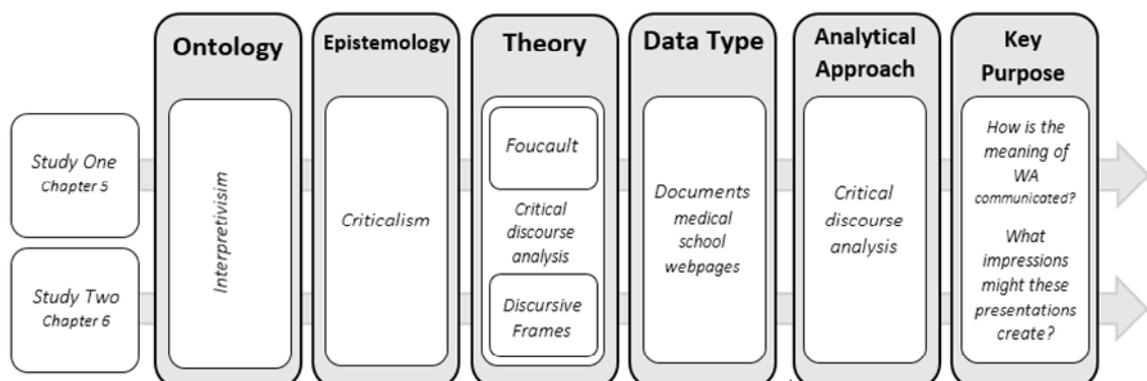
4.1 Introduction

This section of the methodology (Part Two) discusses the research designs of Studies One and Two (*Discourses of WA on medical school websites* (Chapter 5) and *Framing WA to medicine* (Chapter 6). These studies are presented in the thesis formatted as self-contained articles for journal publication and accordingly a description of their theoretical and analytical steps are included in their write-ups. This methodology chapter therefore discusses the reasons and justifications for the approaches taken and the alternatives that were considered in the research design, rather than reiterating the methods.

Studies One and Two share some key similarities: they are both situated within the criticalist paradigm, they both utilise the same data set and a critical discourse analysis approach. Due to these similarities, I chose to present the methodology for these studies together within this chapter.

The research designs of the studies are summarized visually in Figure 4.1 for comparison:

Figure 4.1 Visual summary of research designs for Studies One and Two



In this chapter, I present the aims of Studies One and Two and discuss how these fit into the purpose of the larger thesis. I explain the underpinning philosophical paradigm for these studies with reference to their purpose. A discussion of their underpinning

theory follows, including an overview of the theoretical frameworks chosen. Finally, I present key decisions related to data collection and analysis, with particular attention to the measures I have taken to ensure high ethical standards and levels of trustworthiness.

4.2 Study Aims

Studies One and Two aimed to answer the first central research question of this thesis (see section 1.6). This asks:

1. How is the meaning and value of 'widening access' (WA) constructed and communicated by UK medical schools? How might these presentations influence audience perceptions?

To answer this, I envisaged a critical discourse analysis (CDA) study of the WA webpages of UK medical school websites (discussed in detail below). I intended this to include: a 'macro' approach to identify the discourses ('ways of thinking') present in the texts and to situate these within their wider context; as well as a more targeted analysis of language to explore how these discourses were constructed stylistically.

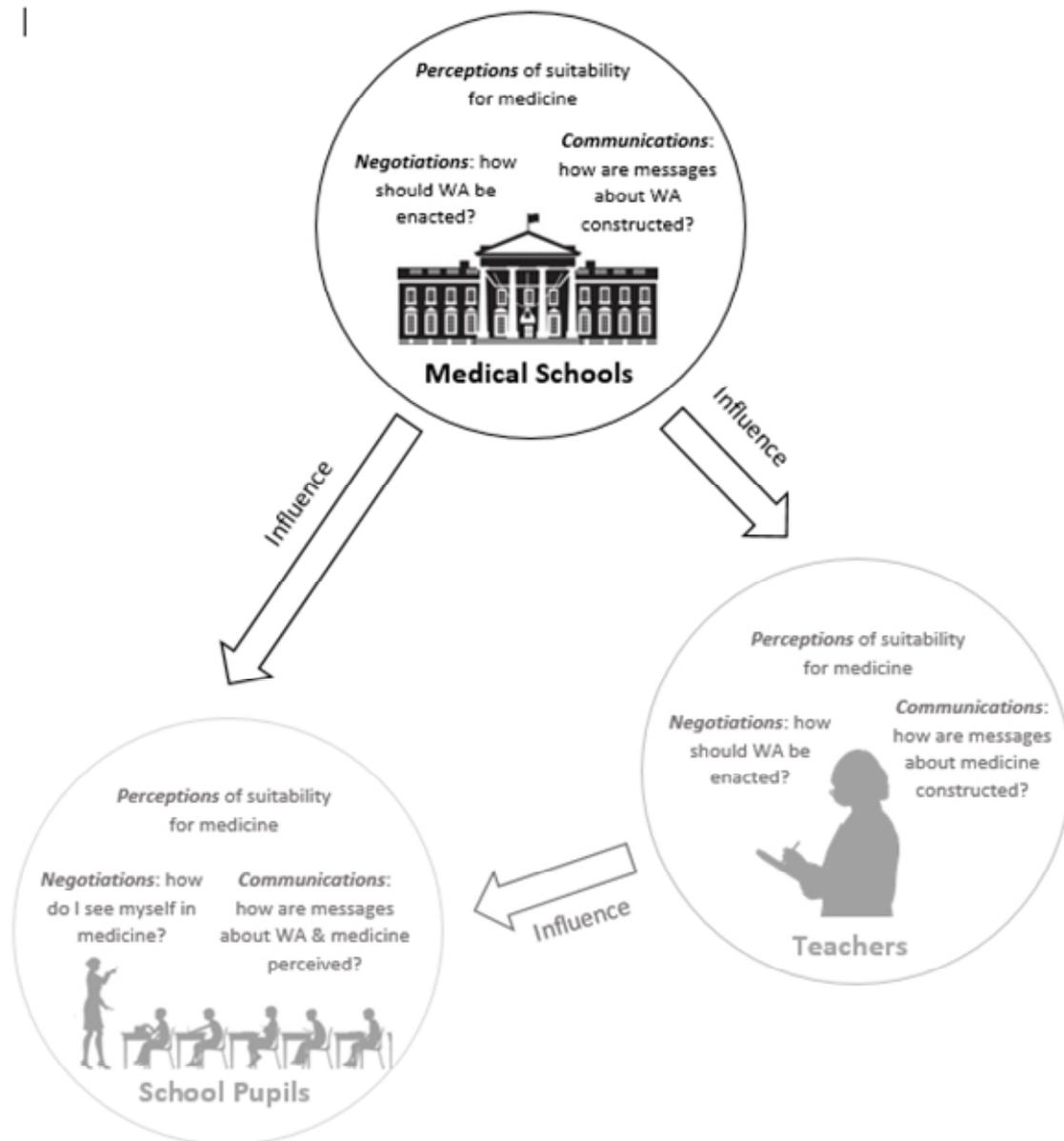
These two intentions are not mutually exclusive - all approaches to CDA require both a close textual analysis *and* a consideration of wider discourses (see section 4.4.1). However, during the initial design of the study I began to realise that I would be unable to focus on both aspects equally within the same study, as different conceptual frameworks generally put emphasis on either one or the other (see section 3.7.1, p.64).

As a result, I split the research design into two parts and consequently arrived at Study One and Study Two. Study One (*Discourses of WA on UK medical school websites*) includes a line-by-line textual analysis to identify the discourses present, however, the real weight of the study lies in the application of Foucauldian theory - powerfully illuminating the impact of these discourses within their wider social context (see section 4.4.2).

In contrast, Study Two (*Framing WA to medicine*) was designed to situate language in the key focal point, and to use the social context to inform interpretations. This study design employed discursive frames as the theoretical approach to concentrate analysis on how different versions of WA may be emphasised via different discursive styles (section 4.4.3).

Studies One and Two were the starting point for this thesis. They broadly investigate: how medical schools perceive WA's place within medicine; how this is negotiated within the group; and how schools communicate their understandings to audiences (see Figure 4.2, below). I felt it was important to begin this programme of work by building an understanding of the origin and construction of messages about WA, before investigating how these might be received in Study Three (*Teachers' perceived role in WA to medicine*) and Four (*Exploring school pupils' perceptions of medicine*).

Figure 4.2 Linking themes – focus of Studies One and Two (medical schools)



4.3 Paradigm

As discussed in section 3.5 (p.59), all the studies within the thesis are situated within a subjective (interpretivist) ontological stance. Constructivism is probably the epistemology most commonly paired with a subjective ontology (Cleland, 2015) and was the first position I considered for these studies.

When considering the overall purpose of the studies and my initial ideas for data collection and analysis, I was content that some aspects of constructivism were

suitable, however I was uncomfortable with other aspects. For example, constructivism indicates that the research constructs knowledge about the world which represents the viewpoint of participants (Mann and MacLeod, 2015). Researchers build interpretations but must ensure their own understandings do not cloud a fair representations of participants' realities (Iphofen, 2005; King and Horrocks, 2010). Although I agreed with these attitudes to knowledge construction in principle, I had reservations about how suitable they were for these studies. For example, as I intended to critically assess medical schools' language, I felt it would be difficult to give due and credible representation to the medical schools' subjective viewpoint rather than prioritising my own critical (but intentionally fair and unbiased) interpretations. This was a particular concern given the data set I was considering: websites could obviously not respond as an individual would in interview to elaborate their view, negotiate understanding or co-construct meaning.

I thus found the criticalist paradigm provided a superior alternative for these studies. Criticalism lends focus to both the social construction *and* the social contestation of knowledge (see section 3.4.2, p.56 for a fuller discussion). This aligned with the aims of these studies which sought to understand how knowledge about WA was created *and negotiated* by a group. Knowledge produced by criticalist research is understood to be the researchers' rigorous interpretation of discourse, social processes and systems, rather than the creation of a viewpoint (Savin-Baden and Howell Major, 2013).

Criticalism's explicit acknowledgement of the political dimension within knowledge creation suited these studies as they investigate a politically-charged and contested concept - how WA should be interpreted and enacted. Moreover, within the whole thesis I was interested to understand how a powerful actor (such as a medical school) can wield this power to influence the definition of a concept (such as who is 'suitable' for medicine) and the impact this has on other actors (such as teachers or school pupils) (see Figure 4.2). Criticalism's focus on power in knowledge construction meant the findings from Studies One and Two could better inform and link to those with Studies Three and Four.

Similarly to constructivism, criticalism places a strong focus on the subjectivity of the researcher and their strong influence in the study. This heightens the need for researcher reflexivity and an acute awareness of any bias.

4.4 Theoretical Approach

Studies One and Two both employ a critical discourse analysis (CDA) approach. CDA studies share a strong similarities in focus, understanding and theoretical approach rather than a set analytical approach (Mills, 2004; Taylor, 2001; van Dijk, 1995; Wodak and Meyer, 2010). As a result, CDA is discussed in this theoretical section as well as in the following analytical section.

In the write-up of Studies One and Two, the CDA approach and conceptual frameworks are described in detail (Chapters 5 and 6; p.103 and p.136). Therefore, to avoid repetition, this section will instead focus on the reasons CDA and each framework was selected, and present the alternatives that were considered.

4.4.1 Overall Theoretical Approach: Critical Discourse Analysis

The aims of Studies One and Two relate closely to how language is used by medical schools to construct a particular interpretation of WA, and to consider the implications these constructions might have on the impressions of readers (see above, section 4.2). This focus on language led me to consider a linguistically orientated approach: discourse analysis.

A spectrum of approaches is available within discourse analysis. At one end of this spectrum are 'micro-level' approaches to discourse analysis. These studies investigate the underlying linguistic or communicative functions and rules of language itself (Hodges et al., 2008; Taylor, 2001). These 'micro' approaches were therefore not suitable for my studies as I primarily wished to investigate the influence of language on audiences, not the linguistic, grammatical or semantic rules of language use.

At the other end of this spectrum, approaches to discourse analysis use a 'macro-level' analysis of language (Taylor, 2001). These approaches primarily aim to develop an understanding about another phenomena through language. For example, an understanding of why people communicate about a phenomenon in the way they do, and how this could be done differently (Taylor, 2001). These 'macro' approaches were a better fit for the aims of my studies.

Critical discourse analysis (CDA) is a 'macro-level' approach (Hodges et al., 2008). Discourses are understood to be the assumed 'rules' that enable and constrain a group's ways of thinking: they sanction what is considered valuable, legitimate or expected within a group (Foucault, 1972; Willig, 2001). Key theoretical aspects of CDA include (Wodak and Meyer, 2010, p.5):

- *The understanding of discourse as 'a social practice'* - representing the world and practices within it, but also able to regulate, reproduce or transform other social practices. This was useful as I aimed to investigate the potential impact of different depictions of WA on audiences.
- *A focus on power and ideology*, especially 'every-day' and 'taken-for-granted' ideologies. This was a strength as I aimed to explore the values and beliefs certain depictions of WA promoted and link these to constructions of 'suitability' for medicine.
- *A strong emphasis on the context* in which discourses are created (social, cultural, ideological, geographical and temporal). This was useful as I was keen to link findings to the wider pressures, debates and concerns surrounding WA to medicine, as well as the culture of the medical profession.
- *A critical stance* which questions whether discourses might be creating or perpetuating inequality or oppression, or hindering progress in a social issue. Again, I considered this a strength as, through the studies, I aimed to produce knowledge that would stimulate and facilitate medical schools' awareness and critical examination of their language and assumptions surrounding WA.

CDA is considered to be “problem or issue-oriented” rather than attributed to one particular paradigm and thus a variety of philosophical stances and methodological approaches may be suitable as long as these allow the researcher to effectively study and answer the research question (van Dijk, 1995, p.17). I found it in good alignment with criticalism, as this paradigm shares a belief in the social construction, negotiation and contestation of knowledge and a critical focus on power structures.

4.4.2 Study One: Conceptual Framework

To recap, the main aims within Study One (*Discourses of WA on medical school websites*) were to: (1) explore the different discourses currently surrounding WA to medicine; and (2) investigate the influence these discourses might have on potential applicants’ understandings of their suitability for medicine.

To achieve these aims, I decided to ‘tighten up’ the wider understandings of power and ideology within CDA (see above), and apply a conceptual framework that could offer explanatory power for two important aspects:

- Firstly, to explain which values and interests underpinned medical schools’ understandings of WA and depictions of a ‘suitable’ WA applicant.
- Secondly, to link the impressions created by the discourses, to applicants’ thoughts and actions in a clear and tangible way.

After some searching, I decided to apply the discourse theories of Michael Foucault. Foucault’s work particularly aims to expose the common assumptions, power structures and ideologies that underlie discourses, in order to bring them out of the realms of being ‘taken for granted’ or ‘unquestioned’ and allow them to be explored (Foucault, 1972; Mills, 2004). Moreover, Foucault’s theory of subject positions and subjectivity (Foucault, 1983; Willig, 2001) provided a clear theoretical explanation to link discourses and the way audiences might think and feel, and act. This addressed a common criticism of vagueness in CDA studies regarding how discourses affect their audiences (Widdowson, 1995; Wodak and Meyer, 2010).

In the original research design, I had also intended to consider findings through Sheeran's understandings of the different 'philosophies' of WA: meritocratic; democratic; and transformative (Sheeran et al., 2007). I thought comparing the findings with these approaches would add useful insight. However, as analysis progressed I decided this additional perspective would only confuse and detract from conclusions drawn by the Foucauldian approach and so removed it from the study design.

4.4.3 Study Two: Conceptual Framework

Study Two (*Framing WA to medicine*) is a secondary analysis of data used in Study One (see section 4.5.2). The study's main aim was to explore how medical schools negotiated the wider context of WA to present a particular institutional stance towards WA within their publicity material. Again, I was interested in the impressions these stances might create for audiences.

The wider theory of CDA was thus very useful and applicable within this study. However, I decided to again refine the theoretical focus by applying a conceptual framework:

Firstly, I sought a framework to investigate how the wider Higher Education and political context might be shaping medical schools language. I decided to draw on the theoretical insight of the 'multiple perspectives approach' proposed by Malen & Knapp (1997). This approach is designed to help researchers tease apart and explore the influence of context in the enactment of educational policy. It therefore sensitized the analysis to consider the motivations, practices and consequences (purpose, process and outcomes) which underlie the enactment of WA policy.

Secondly, I sought a framework to illuminate the use of rhetorical strategies in creating an institutional stance. I had originally planned to focus analysis on three linguistic strategies which had come across as influential during my previous analysis of the data set: evaluative language; pronoun use; and naming strategies. I reasoned that limiting analysis to these three key features made the analysis more manageable and the study

more credible and accessible to a non-specialist audience. I planned to situate findings within theoretical understandings of how these strategies help form audience impressions (see e.g. Benwell and Stokoe (2006); Cutting (2007) and Pennycook, 1994).

However, a better alternative presented itself during my background reading and I decided to use the theory of discursive frames within this study instead (Entman, 1993; van Hulst and Yanow, 2016). This theory offered three main benefits:

- It situated the linguistic analysis within larger theory of interpretative structures (these help individuals 'make sense of' and understand the world). This added credibility to findings as it provided an explanatory theory for how language may shape audience responses.
- The theory of discursive frames highlighted the link between ideology/values and language, which added a useful perspective to findings.
- This framework allowed an investigation of the three key linguistic strategies above, but also a range of others as required.

As a result, I combined aspects of the 'multiple perspectives' approach and the theory of discursive framing to create a novel conceptual framework. The application of this framework meant that findings were not only clearer, but also set within an established tradition of literature in discursive and educational policy analysis. This better demonstrated the transferability of the study to related areas.

4.5 Data Collection

This section outlines why medical school WA webpages were chosen as the data source for these studies, other possible sources considered, and the strengths and limitations of the data type chosen. I then present an overview of the process of data collection, with a focus on how trustworthiness was maintained during this process. Finally, I discuss ethical considerations during data collection.

4.5.1 Why Webpages?

In Studies One and Two I intended to focus on the messages medical schools were communicating to audiences about WA to medicine, and the impact this might have on audience perceptions of the issue. I therefore aimed to select data that came from a publically available source that was available to all audiences.

Webpages were thus an obvious choice, as most individuals have ample internet access (e.g. a smartphone constantly in reach). University websites have also now overtaken prospectuses, open days or leaflets, to become the most commonly referred to information source about university (The Student Room, 2016).

Interviews with WA officers or ethnographic observation of WA activities might have been other possible data sources. However, as I was keen to analyse language use and power structures in the studies, I decided against interviews because I felt these would create less naturalistic language than data taken directly from online (e.g. the interviewee might be cautious about being 'too correct' in their language about a politically sensitive topic rather than relaxing and expressing themselves authentically). Ethnographic observations would have provided very authentic and naturalistic data but would have been very difficult to capture for a linguistic/discourse analysis. Moreover, a recent UK study had interviewed medical school admissions deans and shown they were conflicted in their views of WA (Cleland et al., 2015). Therefore I built this knowledge into the design of the study instead of repeating such interviews myself.

Finally, I wanted to analyse the official messages that medical schools presented to *all* stakeholders, rather than those they felt comfortable saying 'backstage' (e.g. in their own team) or to a group they assumed would be in favour of WA (e.g. to participants at a WA event). I thus sought data that was available to all audiences: including non-WA pupils and their families, members of the medical profession, medical school staff, policy makers and the general public.

There were however limitations to using only one type of data. Triangulation of sources would have added credibility to interpretations drawn, and might have aided the demonstration of transferability to other data types if the same conclusions were

found in a range of material. My ideas for other comparable groups of texts to include in the analysis were:

1. Statements on WA in Medical School Policy Documents
2. Statements on WA Test Provider websites (e.g. UKCAT, BMAT)
3. Statements on WA by regulatory bodies of Medical Education
4. Statements on Disability on Medical School, Test Provider and Regulatory body sites (as a comparison group)

However, I finally decided to keep the data restricted to the original core material (UK medical school webpages on WA) and understanding this as a 'springboard' for other material should the analysis prove successful. The lack of data triangulation is an acknowledged limitation and outlined to readers in the studies' write-ups (p.119 and p.153).

4.5.2 Building the Collection of Texts

Studies One and Two use the same base data set with small differences. The data set for Study Two was refined to aid comparability between medical schools: this process is fully discussed within the study write-up (p.138).

To ensure the studies were representative of a wide range of UK medical schools, I planned to include sources (webpages) from as many schools as possible. Upon initial familiarization with the data, the large variation in quantity, content, style and location of the pages was overwhelming. Moreover, with websites, authorship can be vague or unknown, there may be multiple authors, and wider institutional restrictions may affect what can be included.

It was therefore soon apparent there could be no obvious way to decide which material to include and exclude, and that these decisions would be a subjective process based on my best judgement. Proving trustworthiness in this process thus became key to ensuring the credibility of findings.

Following familiarization, I thus worked out a set of parameters to define which material could credibly be considered to represent the institutional stance of the medical school on WA and which could not. To ensure the process was dependable, I kept an extensive audit trail (for both studies), that systematically detailed the decisions taken during the selection of material for the final data set, along with justifications for these. This audit trail was also a useful exercise in reflexivity as it made me more aware of my own biases and assumptions and helped me feel assured of the confirmability of the data set. This confirmability was reinforced by my research team who 'peer reviewed' the raw material and my decisions, and challenged me to consider the material from a range of perspectives.

I detailed a summary of the inclusion/exclusion parameters within the final write-up to allow readers to ascertain for themselves whether the final collection of webpages were a credible representation of UK medical schools' opinion on WA (see p.105 and p.138).

4.5.3 Ethical Considerations

As this study did not involve human participants, it did not require full ethical review. This was confirmed by the relevant ethics committee who approved the study (see Appendix D).

As the material was publicly available and published material, it was not necessary to store it confidentially or anonymise it. I nevertheless decided to anonymise the data for analysis and in the study write-up for two reasons: firstly, I decided that anonymised data would reduce the potential for my own bias towards a particular institution to unfairly influence the analytical and interpretative process and thus aid confirmability during analysis; Secondly, I wished to encourage readers to consider the medical schools as a group, rather than as individual institutions when reading the findings (see p.109 and p.142).

4.6 Analytical Approach

The analytical steps taken in Studies One and Two are described in the methods sections of these Studies' write-ups (see p.106 and p.139). This section therefore discusses justification for these methods and to outline the alternatives considered.

4.6.1 Overall Analytical Approach: Critical Discourse Analysis

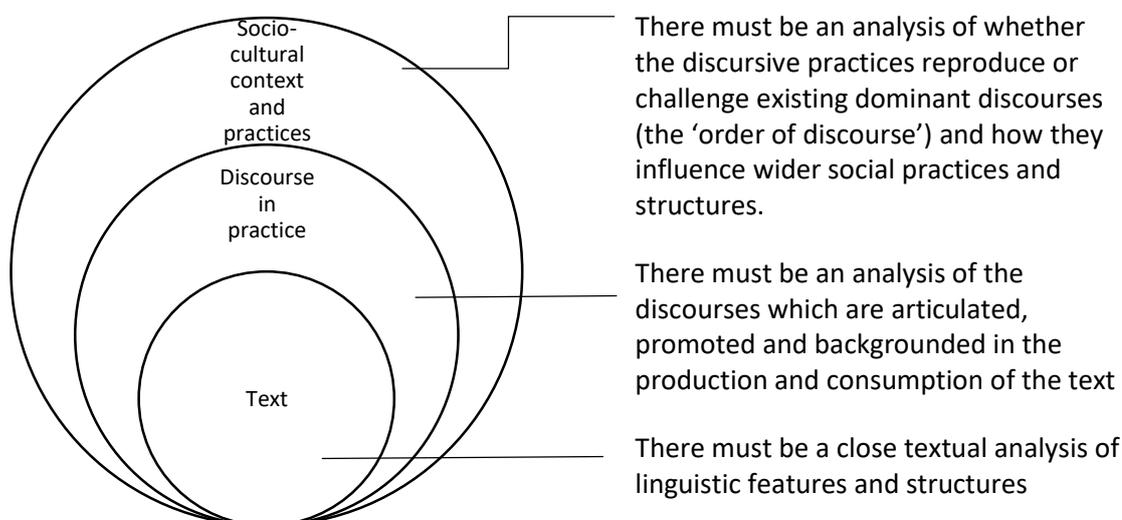
As mentioned in section 4.4, studies using a critical discourse analysis (CDA) approach share strong theoretical assumptions and foci. CDA does not however provide any rigid or set analytical method for data analysis (Mills, 2004; Taylor, 2001; van Dijk, 1995; Wodak and Meyer, 2010). The lack of a 'standard' structured analytical framework strengthens the approach: it has been argued that enforcing (or even allowing) rigid conformity within CDA would assimilate it into the mainstream and reduce its ability to remain flexible, adaptive and truly critical (Cheek, 2004).

It is therefore common for CDA researchers to build on the work of others and adapt or construct a unique framework to meet the needs of their study (see e.g. Parker's framework (1992) adapted by Willig (2001)). This is the approach I took within Studies One and Two (see sections 4.6.2 and 4.6.3).

We cannot assume that a text in its full actuality can be made transparent through applying the categories of a pre-existing analytical framework. What we are able to see of the actuality of a text depends upon the perspective from which we approach it, including the particular social issues in focus, and the social theory and discourse theory we draw upon (Fairclough, 1995, p.16)

Nonetheless, there some analytical commonalities that should be incorporated into any CDA study. These are outlined by Fairclough (2001) as: (1) the linguistic elements of the text must be analysed and described; (2) the factors influencing the text's production and consumption should be considered; (3) and interpretations of the text must be formed in relation to the social context. To formulate a base for my analysis, I thus drew on Fairclough's classic analytical framework for CDA (2001, p.21) and interpretations informed by Clarke (2008). These are conceptualised in Figure 4.3:

Figure 4.3 The key analytical principles of critical discourse analysis



As discussed above, a purpose-built or adapted analytical framework optimises the researcher's ability to thoroughly and credibly answer the research question in hand. The flexibility with CDA has drawn significant criticism however, for, amongst others: research bias in the selection and analysis of texts; a turn towards literary criticism rather than rigorous linguistic analysis; and weak explanations of the effect of texts on the thoughts of readers (see e.g. Stubbs (1997), Widdowson (1995), Wodak and Meyer (2010)). These criticisms mean that the researcher must take responsibility for convincing the reader that the analytical approach is theoretically and analytically trustworthy.

4.6.2 Study One: Analytical Framework

Norman Fairclough has written extensively on CDA and provides a number of excellent analytical guidelines for researchers. I thus first considered an analytical framework created by Fairclough (2001, p.21) for Study One. However, I felt this frame was not an ideal fit with the Foucauldian theory, as this conceptual framework required an even stronger focus on the historical and social context of the texts, whereas Fairclough's framework offered a more textually oriented approach.

After searching the literature, I finally decided to adapt a version of Hyatt's analytical framework (2013) for this Study One (see p.107 for a full description). This framework was designed to guide a CDA of educational policy, however, it contained many useful and relevant features to also explore how educational policy (e.g. WA policy) was enacted and communicated. For example, the framework encourages the researcher to identify 'drivers' (aims), 'levers' (instruments of policy implementation) and 'warrants' (justifications). This helped situate the texts within the context of WA to medicine and provided focal points for analysis.

I then combined this framework with steps inspired by Willig (2001, p.384-389). These steps were embedded within the Foucauldian concepts of subject positions and subjectivity and allowed me to evaluate how discourses might influence readers (see p.104 for a full description).

Overall, I was content that this was a highly relevant and effective analytical framework for this study. Moreover, anchoring this study with published analytical frameworks and well-established theoretical concepts added credibility to the analytical and interpretative process. However, this approach also had its limitations. For example, it did not allow for analytical or methodological triangulation which would have increased the credibility of findings. Moreover, it was only suitable for a textual analysis of the webpages, which meant pictures and formatting were not considered. These were accepted limitations of the analytical approach taken and were discussed in the write-up (p.119).

4.6.3 Study Two: Analytical Framework

Familiarity with the data set and prior experience conducting a CDA gave me the confidence to create a purpose-made analytical framework for Study Two. The framework consists of three steps and is described fully in the write-up of the study (p.139). This framework has two key strengths:

Firstly, each step of the analytical framework is strongly theoretically informed.

Although the combination of the theoretical approaches is novel, each school of theory

is well established in its own right, and their individual respectability aids the credibility of their combined use in this study. The potential transferability of this novel framework to other contexts is also strengthened by the individual theories' usefulness across contexts and disciplines.

Secondly, the analytical framework uses methodological triangulation to boost the credibility of results. As well as traditional, qualitative methods of analysis, I incorporated the use of concordance lists and frequency counts to examine the data set (see p.141). These quantitative tools were not used in an attempt to generate statistically relevant results, but rather to provide a 'description' of the data from a different perspective, to identify patterns within language use, and to highlight interesting linguistic aspects to direct and target qualitative analysis (Mautner, 2010). I therefore used these descriptive quantitative findings to reinforce or challenge qualitative findings. These also encouraged me to heighten my reflexivity and be more aware of assumptions or 'impressions' I may have formed about the text that could not be substantiated (Seale, 1999; Silverman, 2001). The inclusion of these tools strengthened confirmability and credibility within the study and help avoid accusations within CDA of 'cherry-picking' examples (Wodak and Meyer, 2010).

4.6.4 Ensuring Trustworthiness in Analysis

Acknowledging the highly subjective role of the researcher within CDA, to ensure dependability, I maintained a comprehensive audit trail justifying my analytical decisions. I shared this audit trail with my research team to improve confirmability. I also kept a personal log to note reflections about those decisions and to practice my reflexivity - ensuring I was as aware as possible about any biases or assumptions that could be affecting the work.

Other members of my research team 'peer-reviewed' the material, my analytical and coding notes and growing interpretations and we critically discussed our various interpretations. The differing perspectives brought to the study by each contributor acted as a form of analyst triangulation and aided credibility and confirmability. Finally, in the write-up of both Studies I aimed to provide lengthy examples of the data and a

rich description of the analytical process, to allow readers to judge the credibility of conclusions drawn for themselves.

4.7 Summary

In this chapter, I aimed to provide the reader with a rich discussion of the research designs for Studies One and Two (*Discourses of WA on UK medical school websites* and *Framing WA to medicine*). In doing so, I have discussed the anticipated strengths and weaknesses of the designs and the decisions taken, and outlined some of the alternatives considered. Having justified their research designs, next two thesis chapters (Chapters 5 and 6) present Studies One and Two in full

4.8 References for Chapter 4

Benwell B and Stokoe E (2006) *Discourse and Identity*. Edinburgh: Edinburgh University Press.

Cheek J (2004) At the margins? Discourse analysis and qualitative research. *Qualitative health research* 14(8): 1140–1150. DOI: 10.1177/1049732304266820.

Clarke M (2008) *Language teacher identities: Co-constructing discourse and community*. Clevedon: Multilingual Matters.

Cleland J (2015) Exploring versus measuring: considering the fundamental differences between qualitative and quantitative research. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd., pp. 3–14.

Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical education* 49(1): 25–35. DOI: 10.1111/medu.12502.

Cutting J (2007) *Vague Language Explored*. Basingstoke: Palgrave MacMillan. DOI: 10.1057/9780230627420preview.

Entman RM (1993) Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication* 43(4): 51–58. DOI: 10.1111/j.1460-2466.1993.tb01304.x.

Fairclough N (1995) *Critical discourse analysis – The critical study of language*. London: Longman.

Fairclough N (2001) *Language and Power*. London: Longman.

Foucault M (1972) *The Archaeology of Knowledge*. London: Tavistock.

Foucault M (1983) *The Subject and Power*. In: Dreyfus H and Rabinow P (eds) *Michel Foucault: Beyond Structuralism and Hermeneutics*. Chicago: The University of Chicago Press, pp. 208–226.

Hodges BD, Kuper A and Reeves S (2008) Discourse analysis. *BMJ (Clinical research ed.)* 337: a879.

Hyatt D (2013) The critical policy discourse analysis frame: helping doctoral students engage with the educational policy analysis. *Teaching in Higher Education* 18(8): 833–845. DOI: 10.1080/13562517.2013.795935.

Iphofen R (2005) Ethical issues in qualitative health research. In: Holloway I (ed.) *Qualitative Research in Healthcare*. New York, NY: McGraw-Hill, pp. 17–35.

King N and Horrocks C (2010) *Interviews in Qualitative Research*. London: Sage Publications.

Malen B and Knapp M (1997) Rethinking the multiple perspectives approach to education policy analysis: Implications for policy-practice connections. *Journal of Education Policy* 12(5): 419–445. DOI: 10.1080/0268093970120509.

Mann K and MacLeod A (2015) Constructivism: learning theories and approaches to research. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, pp. 51–65.

Mautner G (2010) Checks and Balances: how corpus linguistics can contribute to CDA. In: Wodak R and Meyer M (eds) *Methods of Critical Discourse Analysis*. London: SAGE Publications, pp. 122–143.

Mills S (2004) *Discourse*. London: Routledge.

Parker I (1992) *Discourse Dynamics: Critical Analysis for Social and Individual Psychology*. London: Routledge.

Pennycook A (1994) The Politics of Pronouns. *ELT Journal* 48(2): 173–178. DOI: 10.1093/elt/48.2.173.

Seale C (1999) *The Quality of Qualitative Research*. London: SAGE Publications.

Savin-Baden M, Howell Major C. (2013) *Qualitative Research: The essential guide to theory and practice*. Oxon: Routledge.

Sheeran Y, Brown BJ and Baker S (2007) Conflicting philosophies of inclusion: the contestation of knowledge in widening participation. *London Review of Education* 5(3): 249–263. DOI: 10.1080/14748460701661302.

Silverman D (2001) *Interpreting Qualitative Data. Methods for Analysing Talk, Text and Interaction*. London: SAGE Publications.

Stubbs M (1997) Whorf's Children: Critical Comments on Critical Discourse Analysis. In: Ryan A and Wray A (eds) *Evolving Models of Language*. Clevedon: Multilingual Matters, pp. 110–116.

Taylor S (2001) Locating and Conducting Discourse Analytical Research. In: Wetherell M, Taylor S, and Yates S (eds) *Discourse as Data: A guide for analysts*. London: The Open University, pp. 5–48.

The Student Room (2016) *The Conversion Report*. Brighton. Available at: <http://tsrmatters.com/new-student-insights-conversion-report-2016/> (accessed 7 May 2016).

van Dijk TA (1995) Aims of Critical Discourse Analysis. *Japanese Discourse* 1: 17–27. <http://discourses.org/OldArticles/Aims%20of%20Critical%20Discourse%20Analysis.pdf>

van Hulst M and Yanow D (2016) From Policy “Frames” to “Framing”. *The American Review of Public Administration* 46(1): 92–112. DOI: 10.1177/0275074014533142.

Widdowson HG (1995) Discourse analysis: a critical view. *Language and Literature* 4(3): 157–172. DOI: 10.1177/096394709500400301.

Willig C (2001) *Introducing Qualitative Research in Psychology: Adventures in Theory and Method*. Buckingham: Open University Press.

Wodak R and Meyer M (2010) Critical Discourse Analysis: history, agenda, theory and methodology. In: Wodak R and Meyer M (eds) *Methods of Critical Discourse Analysis*. London: SAGE Publications, pp. 1–33.

Chapter 5

Study One: Discourses of WA on UK medical school websites

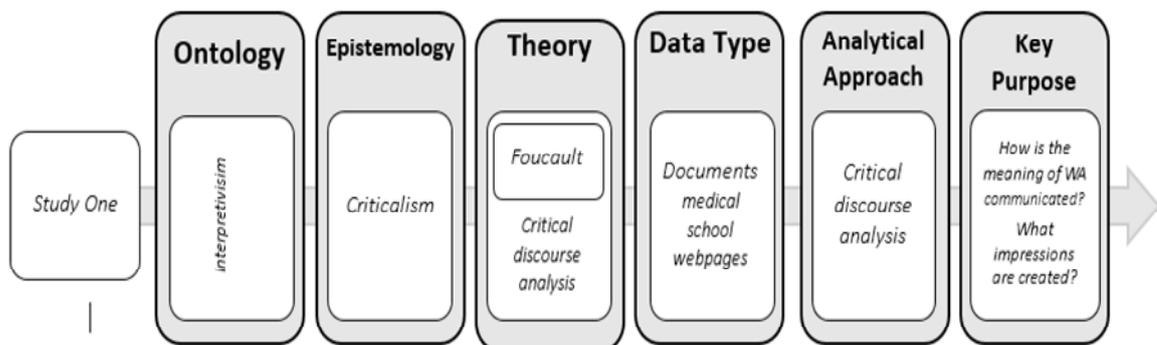
5.1 Introduction

This chapter presents the first study completed within my doctoral programme. The subsequent journal article was published in 2017 and may be cited as follows:

Alexander K, Fahey Palma T, Nicholson S, Cleland J (2017) 'Why not you?' Discourses of widening access on UK medical school websites. *Medical Education* 51(6): 598–611. DOI: 10.1111/medu.13264.

As discussed in the previous chapter, this is a critical discourse analysis of UK medical schools' WA webpages. The research design is summarized visually in Figure 5.1:

Figure 5.1 Research design of Study One (Discourses of WA on medical school websites)



In this chapter, I detail the author contributions and present the paper. The paper's content is as it appears in print, however the format has been edited to be in keeping with the rest of the thesis. The chapter concludes with a summary of the objectives, key findings and conclusions of this paper and a brief discussion of how these link into the larger thesis.

5.2 Contributions to Study One

The idea for this study was developed in discussion between myself and Prof Jen Cleland (JC). I produced a rough outline for possible research questions and data

sources and, together with JC, presented these to Prof Sandra Nicholson (SC) who agreed the study design.

As the research design focussed on language use, JC, SN and I agreed to find an additional member for the research team who could provide expertise in linguistic and discourse analysis. JC contacted a colleague, who recommended Dr Tania Fahey Palma (TFP) as a collaborator. TFP agreed to collaborate on the study, and subsequently became one of my secondary supervisors.

I planned the inclusion/exclusion criteria for data collection, agreed these with JC, SN and TFP, and collected the data (see section 4.5.2). During data collection, I researched various analytical methods. TFP helped guide my search and advised me on various approaches. I proposed the use of critical discourse analysis (CDA) and an adapted form of Hyatt's analytical framework (see section 4.6.2). I also proposed the Foucauldian theoretical framework (see section 4.4.2). I produced the design of the analytical and interpretative framework. The research team reviewed and agreed all decisions.

I conducted the analysis, with understandings developed and refined through critical review and discussion with JC, SN and TFP (see section 4.6.4). I created the first draft of the paper, with JC, SN and TFP making significant contributions to subsequent redrafts. We sent a draft to a contact of JC's, Ayelet Kuper (AK) at the Wilson Centre, Toronto, for informal review. AK made a number of very useful suggestions for improvement and her contribution is acknowledged at the end of publication. I implemented AK's suggested changes and all authors reviewed the subsequent draft.

We agreed as a team to submit the paper to the journal *Medical Education*. I formatted and proofed the draft, and submitted the paper via the journal's online portal. All authors approved the final version before submission.

Three reviewers and one editor made comments on the submission. I worked through these comments systematically and discussed my proposed changes in a meeting with JC. I made our agreed changes to the text in line with the reviewers' comments and sent the revised draft to SN and TFP for comment and approval. I incorporated SN's

and TFP's minor edits, produced a redraft and a letter of response to the editor. All authors approved the final draft for resubmission.

I reviewed the journal's proof of the paper and approved this for publication on behalf of all authors. The study first appeared online on 22 February 2017.

5.3 Study One

“Why not you?”: Discourses of widening access on UK medical school websites

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Abstract

Context In the UK, applications to medicine from those in lower socioeconomic groups remain low despite much investment of time, interest and resources in widening access (WA) to medicine. This suggests that medical schools' core messages about WA may be working to embed or further reinforce marginalization, rather than to combat this. Our objective was to investigate how the value of WA is communicated by UK medical schools through their websites, and how this may create expectations regarding who is 'suitable' for medicine.

Methods We conducted a critical discourse analysis of UK medical school webpages relating to WA. Our conceptual framework was underpinned by a Foucauldian understanding of discourse. Analysis followed an adapted version of Hyatt's analytical framework. This involved contextualizing the data by identifying drivers, levers and warrants for WA, before undertaking a systematic investigation of linguistic features to reveal the discourses in use, and their assumptions.

Results Discourses of 'social justice for the individual' justified WA as an initiative to support individuals with academic ability and commitment to medicine, but who were disadvantaged by their background in the application process. This meritocratic discourse communicated the benefits of WA as flowing one-way: with medical schools providing opportunities to applicants. Conversely, discourses justifying WA as an initiative to benefit patient care were marginalized and largely excluded. Alternative strengths typically attributed to students from lower socioeconomic groups were not mentioned, implying that these were not valued.

Conclusions Current discourses of WA on UK medical school websites do not present non-traditional applicants as bringing gains to medicine through their diversity. This may work as a barrier to attracting larger numbers of diverse applicants. Medical schools should reflect upon their website discourses, critically evaluate current approaches to encouraging applications from those in lower socioeconomic groups, and consider avenues for positive change.

Introduction

Widening access (WA) to medicine is a global issue, with each country's historical and social issues determining the focus of the initiative (AFMC, 2010; Gorman, 2015; Larkins et al., 2015; Milburn, 2012). In the USA, WA work concentrates on the recruitment of students from minority ethnicity and racial groups (Castillo-Page, 2012; Lakhan, 2003), whereas medical schools in Canada and Australia also focus on attracting those from rural areas and Indigenous populations (Behrendt et al., 2012; Dhalla et al., 2002; Hay et al., 2016; Puddey et al., 2014; Meredith E Young et al., 2012).

In the UK, the term 'widening access' is applied to a diverse group of students who are underrepresented in higher education generally, including those from lower socioeconomic backgrounds or ethnic minority groups, mature or disabled students and those leaving the statutory care system. In medicine, currently the main focus of WA is on recruiting a representative percentage of students from lower socioeconomic backgrounds (Medical Schools Council, 2014a; Milburn, 2012; Steven et al., 2016). As a result, diversifying the socioeconomic and family backgrounds of applicants and students is the primary criteria for measuring progress in WA to medicine in the UK (Steven et al., 2016).

However, despite a significant investment of resources by UK medical schools in WA (for example contributing staff time to planning and running outreach activities) (J Cleland et al., 2012; Gartland, 2014; Greenhalgh et al., 2006; Kamali et al., 2005; Medical Schools Council, 2014a), the number of applications to medicine from those in lower socioeconomic groups remains small. Using the Index of Multiple Deprivation (IMD) as a measure of socioeconomic status, 5.1% of UK applicants come from the least affluent 10% of households, with that number being as low as 1.8% in some regions (Steven et al., 2016). If only small numbers of students from these backgrounds are applying for medicine, extensive efforts to increase the socioeconomic diversity of the medical school population through the medical selection process itself (Patterson et al., 2016a) will have only limited impact. It is essential to encourage applications to medicine from diverse populations so that greater numbers of students from underrepresented groups can be selected.

What are the barriers to applying to medicine for those from underrepresented or 'non-traditional' groups? In most countries, high academic achievement is the first hurdle in the medical admissions process: there is extensive data to show that those in higher socioeconomic groups outperform those in lower groups on school exit examinations (Bowes et al., 2013; Gorard et al. 2007). However, it is not all about prior attainment: cultural, financial, social and school factors may also deter well-qualified non-traditional students from applying for university generally, and medicine specifically (Archer and Leathwood, 2003; DFES, 2003; Gorard et al., 2006; Diane Reay et al., 2001; Robb et al., 2007; Sianou-Kyrgiou and Tsiplakides, 2011; Slack, 2003b; Southgate et al., 2015). In the UK context, where the vast majority of entrants progress to medical school directly from high school education, able and suitable applicants from non-traditional groups may be deterred from a career in medicine by their teachers (McHarg et al., 2007; Medical Schools Council, 2014c) and, despite much WA outreach, may still feel that medicine is not for someone from their background (Aschbacher et al., 2009, 2014; Greenhalgh et al., 2004; Mathers and Parry, 2009). These persistent cultural barriers suggest that medical schools' key messages about WA may be failing to alter attitudes or even further embedding marginalization.

On the other hand, why should people from lower socioeconomic and other under-represented groups be encouraged to apply for medicine? The literature identifies that selective institutions such as medical schools typically consider WA as an initiative to address social justice for individuals by offering opportunities for social mobility, within a well-established discourse of meritocracy (Bowl and Hughes, 2013; Gartland, 2014; Jones and Thomas, 2006; Nicholson and Cleland, 2015b; Sheeran et al., 2007). However, there is also emerging acknowledgement that increasing the diversity of the medical profession may benefit the medical school learning environment (Guiton et al., 2007; Morrison and Grbic, 2015; Saha et al., 2008; Whitla et al., 2003) and improve workforce efficiency, including the competence and distribution of staff (Bailey and Willies-Jacobo, 2012; Cooter et al., 2004; Dowell et al., 2015; Komaromy et al., 1996; Puddey et al., 2014; KO Walker et al., 2012).

Exactly how the social justice and workforce management motivations for WA are currently combined – if they are indeed combined – within the context of UK medical

schools is unclear. Cleland et al.'s (2015) study interviewing UK medical school admissions deans found various, and often conflicting, interpretations and translations of WA policy. Many schools found reconciling the political goals of WA with their own aims, interests and resources problematic, especially with regards to their firmly held belief in 'selecting for excellence' through academic meritocracy. However, little is known about the influence that these differing values and attitudes to WA may have on aiding WA or reproducing processes of exclusion.

A series of papers have explored this within the Canadian context. Razack and colleagues (Razack et al., 2012, 2014, 2015) questioned whether the discourses – the institutionalized 'ways of thinking' that *enable and constrain* the way people think, act and communicate about an issue (Mills, 2004; Razack et al., 2015) - used by Canadian medical schools may act as a barrier to greater inclusion of diversity within the profession (Razack et al., 2012, 2014, 2015). In an analysis of Canadian medical schools' websites, policy documents and interviews with admissions committee members, they found tensions between the understandings of 'excellence in scholarship' and 'excellence in social accountability' with regards to admissions. Overall, 'excellence in scholarship' was presented as holding significantly more value, with more influential and prestigious schools enacting this discourse most powerfully.

Given that in the UK applications to Medicine from those in lower socioeconomic groups remain stubbornly low, despite attempts from medical schools to widen access, it is important to examine the messages being sent to these groups about why they should apply. We know that there are currently two main drivers for WA in this context (for social mobility and to increase workforce diversity) and that they may be causing challenges and tension in UK schools (Cleland et al., 2015). However, no previous studies have examined how discourses of WA are transmitted by UK medical schools to prospective students in lower socioeconomic groups and what effect these may have. Razack et al.'s work (Razack et al., 2012, 2014, 2015) exploring similar issues in Canada, suggests this is an important topic, which may indeed have implications for attracting diverse students to Medicine.

This paper cumulatively builds upon Razack's et al.'s work, but takes a distinct analytical and conceptual approach within a different context: Our context is that of

the UK, where 90% of medical programmes are undergraduate, and where the focus of WA is very much on increasing the representation of those from lower socioeconomic groups within medicine. We focussed on the messages potential applicants may gather from medical school websites as over 90% of students use these to inform a decision about where to apply (The Student Room, 2016) and an institution's written texts often influence (or even prescribe) the spoken communication of those within that institution (Mayr and Bastow, 2008).

This work employs a critical discourse analysis approach positioned within a paradigm of criticalism (McMillan, 2015). This approach acknowledges the ideological and political influences on individuals' and groups' experiences and knowledge of social reality, and aims to expose, examine and challenge these, especially if they may be creating or reproducing inequalities. A key aim is to encourage positive change (Hodges, 2014).

The following research questions focussed the work: How is the value of WA to Medicine communicated by UK medical schools through their WA webpages? What expectations are set up by these discourses with regards to who is 'suitable' for medicine and encouraged to apply?

Methods

Conceptual Framework

Our understanding of discourse is theoretically situated within the work of Michel Foucault. From this perspective, discourses are the (often taken-for-granted) 'rules' that enable and constrain a group's ways of thinking, and thus their production of knowledge and meaning. Discourses also sanction what is considered valuable, legitimate or expected within the group (Cheek, 2004; Foucault, 1972, 1984; Willig, 2001).

Within institutions such as medical schools, discourses are bound closely to institutional practice, regulating, organising and sanctioning what can be said, in which

situations and by whom. Discourses thus reinforce social structures within institutions whilst concurrently, adherence to these structures further reinforces the discourses that creates them (Mills, 2004).

Within one context multiple discourses may be in use, and will constantly compete for dominance, power and status (Cheek, 2004; Mills, 2004). Dominant discourses are those which are afforded greatest presence or authority, and which legitimate the current power relations and social structures (Willig, 2001). Once dominant, discourses work to secure their power by naturalizing themselves until they are no longer questioned by users (Foucault, 1972). Thus discourses can entrench their position “precisely because they are able to make invisible the fact that they are just one among many different discourses.” (Coates, 2012, p.92). Language and power are not static constructions however, and alternatives are always possible. Therefore, counter-discourses challenge the dominant discourse as power flows in new directions and social structures adapt to the changing discourses and pressures (Foucault, 1972, 1974).

A Foucauldian approach to discourse analysis particularly aims to expose the discourses in use within a context, in order to bring them out of the realms of being ‘taken for granted’ and allow them to be explored (Foucault, 1972; Mills, 2004). Foucault’s work also considers the implications discourses may have on the way people may think or feel, and how they might act. These are understood through an examination of *subject positions* and *subjectivity* (Foucault, 1983; Willig, 2001).

Discourses create ‘locations’ (positions) within their framework of ‘rules’, into which those using or hearing that discourse (subjects) may be placed, or may place others within. These subject positions can be likened to ‘vantage points’ as they provide assumptions about what can be seen, said and done from within that location. Although these positions do not go as far as to create roles or parts to be acted out, if they are taken up by people exposed to or using the discourse, they enable and constrain the opportunities of those people – validating some speech and action, and silencing others. In such a way, certain behaviour and actions are legitimized for certain people, depending on their subject position (Foucault, 1983; Willig, 2001).

Moreover, if taken up, these subject positions may influence a person's subjective experience (subjectivity). As well as enabling and constraining certain actions, this influences their thoughts, feelings and experiences. This does not claim to directly link language to thought or mental state, but does allow researchers to speculate about what the implications of the discursive structures and subject positions may be for people's subjective experience (Willig, 2001).

Data collection

In 2014 UK medical schools were recommended to improve the information about WA on their websites (Medical Schools Council, 2014c). Their accessibility, wide usage and importance in applicant decision making (The Student Room, 2016) meant that webpages about WA were considered a 'critical case' (Fairclough, 1992) (an occurrence that has strategic importance for a general problem) for our analysis, and a springboard for further exploration should the results prove useful.

With one exception, all UK medical schools are public institutions: they receive funding from the government and are subject to state control, including policy directives to widen access. The independent medical school is not subject to the same directives so was excluded from our study. Websites of public medical schools were reviewed and material selected for inclusion in the corpus (collection of texts) as per steps (i) and (ii) described below.

In total, 25 of the 34 schools provided material about WA activities (e.g. summer schools, outreach visits, mentoring) and/or WA entry routes (graduate entry, foundation years, extended programmes or non-science entry routes) available directly *on their own* websites. The remaining nine medical schools did not provide this material on their school's site, either not mentioning WA or linking to material on a wider university admissions department site or online prospectus. We considered each medical school to be responsible for the content published on its own website and that this content represented the views, advice and policy of that school. As a result, to specifically focus our study on medical schools' presentations of WA, we used only text from their own websites.

The corpus included webpages from 25 medical schools:

- from across the UK
- 13 from large urban areas, 12 situated in smaller cities;
- 16 schools from universities in the 'Russell Group' (a collection of research-intensive and highly ranked universities), nine from universities outside this group (often more recently established); and
- representing the full range of course entry points, including: the UK standard five-year programme; three+three pre-clinical and clinical programmes; graduate entry programmes; and those with the specific aim of widening access

The volume of information available from each webpage varied widely with the smallest entry containing 325 words and the largest 6,965. Downloadable files such as policy documents, online prospectuses, or activity brochures were not included (unless considered to be in lieu of webpages) as they were considered less relevant to analysis: this material was less likely to have been primarily written for a public audience (policy documents); to be written or compiled by departments outside the medical school (prospectuses); or not represent the immediate and primary messages communicated to readers through websites (the majority of website visitors may not initially download and read detailed information).

The final corpus consisted of 433,815 words, collected from April to July 2015.

Data Analysis

Our study took a critical discourse analysis approach, following five steps:

- (i) The familiarization phase involved wide reading of all UK medical school websites to inform the development of guidelines for assembling an appropriate and relevant corpus.
- (ii) Data was collected by copying text from UK medical schools' webpages about widening access, widening participation or outreach, as well as pages or sections concerning 'alternative entry' routes or programmes (for applicants

with graduate or non-science qualifications, or from WA backgrounds). These entry routes may focus on different aspects of WA, but all consider the impact of attracting those in lower socioeconomic groups (Medical Schools Council, 2014c).

We chose to concentrate our analytical focus on the language used, as familiarization with the data indicated this to be a fruitful and meaningful medium and linguistic analysis matched with the strengths of our research group. Therefore, within this study, 'text' refers only to written language.

(iii) To guide analysis, we followed the analytical framework for critical discourse analysis by Hyatt (2013), adapted specifically for this study. First, we 'contextualized' the material, in order to situate the texts within their wider context (essential for an accurate analysis of meaning (Goodwin and Duranti, 1997)), and to draw out specific aspects for concentrated analysis. These aspects were:

- drivers (aims of WA policy, initiatives and activities)
- levers (instruments of policy implementation)
- warrants (justifications for actions or decisions)

These aspects were identified through a line-by-line textual analysis of the material, and coded within NVivo to aid data management.

(iv) Having identified all references to WA (both explicit and implicit) within the drivers, levers and warrants, we focussed on examining the similarities and differences in the way WA (our discursive object) was constructed. This was done through a systematic investigation of the linguistic features present in each statement, such as evaluative language, tone, register and audience address. Paying particular attention to how the value of WA was expressed, we considered the function of constructing WA in this way – for example, where was responsibility attributed or emphasis placed? By grouping statements with similar constructions together and comparing these to the wider discourses of the area, we teased out the discourses present.

We then considered the subject positions and subjectivities made available by these discourses by examining the 'vantage points' they offered to subjects in the texts – for example, which behaviours were legitimized or silenced. Finally, we searched for evidence of subjects taking up these positions and analysed these instances to uncover how speakers communicated their experiences from within that position. Analysis was informed by an approach outlined by Willig (2001) and progressed iteratively, with researchers referring repeatedly to the data, theory, and wider context and discourses of the area to develop interpretations.

KA undertook the primary analysis, with understandings developed and refined through critical discussion with JC, SN and TFP. The group met at regular intervals to discuss and rigorously challenge the emerging interpretations through critical questioning. Full texts were accessible throughout analysis and discussion so that the team could confirm interpretation with careful consideration to a statement's co-text and context.

- (v) Finally, medical schools with different attributes were compared to reveal any differentiation across the sector (see Table 5.1, p.110).

Overall, this analytical approach intended to expose the discourses concerning the value of WA across a range of UK medical schools, for these to be examined, evaluated and their implications considered.

Ethical Considerations

The research team contributed diverse educational and professional backgrounds and varied areas of expertise, including psychology, medicine and linguistics. As a result, this study has been influenced and uniquely formed by a range of perspectives, interests and motivations. KA is a PhD researcher whose professional background is in working in WA at an operational level (running and designing outreach projects and activities), whilst JC and SN bring a strong engagement with WA at an academic level.

As a practicing clinician, SN provided a perspective from 'within' the medical profession, whilst JC, TFP and KA considered the profession from different 'outsider' perspectives. This diversity of perspectives facilitated the critical questioning of interpretations and power dynamics, and greatly aided the interdisciplinary and critical nature of the paper.

Moreover, these critical discussions offered the opportunity for heightened reflexivity and to expose and challenge team members' assumptions and biases. Throughout the research process KA recorded notes detailing the reasoning behind the decisions made and shared these with the research team, thus leaving no opportunity for choices to remain 'assumed' or unscrutinised. Finally, in an attempt to make any philosophical or institutional bias clear to the reader, we make our positions known by detailing our theoretical and professional contexts above.

Within the results, analysis is illustrated with quotations cited from medical school websites. These are identified with a randomly assigned numbers and school 'attributes' instead of by name (see Table 5.1), in an attempt to preserve the identity of the schools, as is the approach in other such papers (Bowl and Hughes, 2013; Graham, 2013; Razack et al., 2012). As the data used was made publically available by medical schools this approach does not ensure the anonymity of schools included, but rather encourages the reader to assess the findings for medical schools as a group rather than focus on individual institutions, as was the intention of the paper.

Permission to conduct the study was granted by the College of Life Sciences and Medicine Ethics Review Board at the University of Aberdeen.

Table 5.1 Attributes of medical schools (key)

Table One: Attributes of medical schools – key for interpretation of results		
Category	Grouping & Abbreviation	Definition
Mission Group Affiliation	Russell Group (RG)	The Russell Group universities are a group of 24 research intensive UK universities which are highly ranked in worldwide league tables ¹ . Medical schools at these universities tend to have been established longer than those not in this group.
	Non-Russell Group (NRG)	
Location	Small Urban (SU)	Medical Schools situated in areas/cities of less than 500,00 inhabitants (Office of National Statistics, 2011)
	Large Urban (LU)	Medical Schools situated in areas/cities of more than 500,000 inhabitants (Office of National Statistics, 2011)
Entry Routes offered	Undergraduate (UG)	Standard entry course offered
	Graduate (GEM)	Graduate entry course offered
	WA (WA)	Course offered to widen access to Medicine: for example a foundation year, extended programme or route for students lacking appropriate science qualifications
Medical School Number	Example: Uni18	All medical schools were randomly assigned a number to allow audiences to appreciate that the illustrative material represented a range of schools whilst still attempting to preserve the identities of the institutions.

¹When the Russell group was established, a medical school was a common feature of prestige for the universities declaring themselves members.

Results

The primary textual analysis of drivers, levers and warrants revealed that all schools communicated either explicitly or by strong implication that the purpose of WA was to ‘diversify the workforce’ or ‘diversify the student body’ by recruiting more students from WA backgrounds, particularly those from lower socioeconomic backgrounds. This is not a surprising result. However, it reveals only *what* WA is (increasing numbers of students from underrepresented backgrounds into Medicine), rather than the reasons *why* medical schools undertake WA (its value):

Widening participation schemes are designed to increase the numbers of successful applications to medical school from students with educationally disadvantaged backgrounds. (NRG SU UG/WA Uni28)

It is the aim of the [medical school] to fully support the University of X's initiative to widen participation and thereby create a more diverse student population. (RG SU UG Uni27)

Levers (instruments of policy implementation) were occasionally cited as a reason to undertake widening access, however, again these did not overtly communicate the value of WA:

The [WA initiative] specifically supports access to high demand professional subjects and the university works with XXX to support Scottish Executive objectives. (NRG SU UG Uni18)

As a result, although the eventual aim of WA and the external pressures to implement this were usually made clear, its value (why it was undertaken) was more elusive to identify.

Discourse of WA for social mobility through academic meritocracy

Across all medical schools, individual participants were positioned as central to WA. For example, drivers (aims) primarily focussed on identifying and providing opportunities to selected individuals to increase their likelihood of application and admittance to medical school:

On this page is a list of programmes and activities run by current medical students and the University targeted at prospective students from under-represented backgrounds. The aim is to encourage them in considering medicine as a career and helping them to apply to study medicine. (RG LU GEM/UG Uni6)

In this way, WA was communicated as opening up access to medicine to those for whom this would not have been an expected career choice. This conveys the value of WA as aiding social mobility (equality of opportunity for individuals with regards to occupation or income, thus preventing the automatic transmission of disadvantage from one generation to the next (Milburn, 2012)).

Warrants for this discourse centred on the concept of 'fairness' and social justice and was a consistent focus throughout many texts. Here WA was constructed as part of an admissions process that implied fairness for *all* applicants through selection based on meritocracy (selecting on the basis of merit rather than gender, race or class) (Archer and Leathwood, 2003):

[We are] committed to identifying the best possible applicants regardless of their personal circumstances or background. (RG LU UG Uni14)

Desirable forms of 'merit' were primarily communicated as academic achievement and/or academic ability, a commitment to study medicine and/or the potential to practice medicine. Anyone with sufficient merit was encouraged to apply:

WHO CAN STUDY MEDICINE...?

Why not you? Our tutors are looking for academically gifted students who are committed to a career in Medicine. Your school and general background are of no importance: if you hold, or are on predicted to achieve [grades], there is every reason to apply. (RG SU GEM/UG Uni32)

UK medical schools varied with regards to how they communicated the value of WA within this system of academic meritocracy. At one end of the spectrum, schools claimed that the use of WA did not diminish the key objectives of the system:

The central principles in selection remain that:

- selection decisions will continue to be based on the assessment of academic potential and aptitude for the respective professions
- by the declaration of transparent criteria, both academic and non-academic, false hope will not be offered to those considering application (RG SU UG Uni27)

For others, it was implied that WA was a means through which to encourage more students to apply, and thus allow medical schools to select the 'best' students from a wider selection:

We don't want to miss out on any talent, so if students have the ability, we want them to apply. (NRG LU GEM/UG Uni9)

Finally, some schools indicated that WA was a valuable tool in *improving* the fairness of the meritocratic selection process. Here, WA was shown to compensate for the lack of opportunities available to more privileged students. Warrants supported this on the grounds of fairness to talented individuals who would otherwise be at a disadvantage because of circumstances out with their control:

To prioritise interviews and adjust grades in order to provide a level playing field when competing against applicants from selective and fee paying schools.
(NRG SU UG/WA Uni28)

[The project] recognises the disadvantage young people from non-selective state schools may face when applying to medical school. They may have the aspiration, desire and ability to study medicine but not receive the necessary support and guidance when making their applications. [The project] aims to rectify this.
(RG LU UG Uni10)

Although aspects of this discourse varied across medical schools, it was united under the common value of WA as a tool within the selection system of academic-based meritocracy. Here, the driver to create social mobility for selected applicants was consistently communicated as 'a given' across the range of medical schools. Although the term 'social justice' was never explicitly mentioned in the corpus, this implicitly warranted the drivers' aims through appeals to fairness.

Discourse of WA for workforce improvement through diversity

It was very rare to find statements that challenged this dominant discourse of WA for social mobility. However, within the webpages of two universities in our corpus a contrasting discourse was briefly presented.

In this alternative discourse, instead of the value of WA being focussed on creating opportunity for talented individuals, its value was communicated as meeting the needs of the wider workforce and patient care through the use of warrants (emphasis added by authors):

Greater diversity within the medical profession is a goal that benefits us all. [The] outreach programme at X seeks out young, talented people who have the potential to become doctors but who may not have considered it as a possibility...

[the project] aims to identify young people with the potential to become **tomorrow's doctors** and who can contribute towards increased diversity within the medical profession, thus allowing medicine to better reflect the patient population.

(NRG SU UG Uni1)

Widening participation.

According to the British Medical Association, people from lower socioeconomic backgrounds use healthcare twice as frequently as the average – but only one in five UK doctors comes from these groups.

At XXX we offer a range of Widening Participation activities for schools and colleges to help raise aspirations, support young people's choices and encourage progression into medicine and other medical careers. (NRG SU UG Uni15)

Rather than foregrounding benefit to the individual through the provision of social mobility, these statements communicate the value of WA to be primarily of benefit to society through the creation of a diverse workforce. Warrants claim that those in lower socioeconomic groups, and indeed the whole population, benefit from greater diversity and more balanced representation in the workforce.

The value of WA is also warranted through reference to the beliefs of other powerful institutions: including references to "tomorrow's doctors" and "According to the British Medical Association..." The referral to the authority of other institutions' directives may help to strengthen their statements, or may intend to divert any potential opposition to the statements away to other institutions.

Within the discourse of WA for social justice, the values of academic meritocracy were strongly embedded. However, the values attributed to this discourse (of benefit to society through a more diverse workforce) appeared to be missing in these texts. No webpages in our corpus mentioned traits often specifically attributed to non-traditional students from lower socioeconomic backgrounds: for example, a better understanding of diverse populations (Morrison and Grbic, 2015; Saha et al., 2008; Whittle et al., 2003), a desire to work with underprivileged communities (Cooter et al., 2004; Dowell et al., 2015; Komaromy et al., 1996), multilingualism (Flores, 2000) or resilience in overcoming barriers (Cleland and Medhi, 2015). Thus no expectation was created that they were valued.

The very limited usage of the discourse for workforce efficiency and the exclusion of its associated values mean that this discourse is significantly marginalised in comparison to the dominant discourse of WA for the social mobility of individuals.

Relationships between medical schools and potential WA applicants

Within the dominant discourse of WA for social mobility, WA was shown to provide opportunities to students who would have traditionally not have considered medicine, and to provide compensatory activities to assist these students in becoming more competitive within the selection process. An analysis of the interaction between medical schools and participants within this discourse revealed that in the vast majority of instances the medical school discursively positioned themselves as the provider/facilitator of WA, and positioned the participants of their WA activities as recipients/beneficiaries.

For example, medical schools are shown to provide the benefits of WA to students, 'allowing', 'helping', 'encouraging' and 'supporting' them, whilst participants and teachers were presented as the group predominantly benefiting from WA:

Widening participation activity at XXX provides advice, information and guidance to allow students to make informed decisions concerning their future; thus providing them with the confidence to submit strong applications to study medicine.
(NRG SU UG Uni18)

WIDENING ACCESS

Do you have challenges and barriers that are inhibiting your potential admission to medical or dental school? We're here to help you overcome them.
(NRG SU UG Uni12)

In a Foucauldian sense, this discourse creates and legitimizes a subject position for medical schools in which they are responsible for 'providing' WA through support and information. WA participants are seen to require and receive medical schools' actions, legitimizing their position of disadvantage and deficit.

If taken up, these subject positions may also have implications for people's experience, thoughts and actions (subjectivity). Through the publication of testimonials we can see some examples of school teachers, potential applicants and current medical students

who had been part of WA activities taking up or acting from within this subject position, as their value-laden language expressed gratitude and debt for the provision of opportunity:

[Some of our pupils] were lucky enough to benefit from a presentation by [3 medical students]... I wanted you to be aware of how much we valued their time, energy and their encouragement of our students. (RG LU UG Uni10)

It has been a fantastic week and I'm so grateful that I was given a chance to experience this. (RG SU GEM/UG Uni32)

As current students at XXX, we continue to feel indebted to the hard work and the dedication of those who guided us to this destination.... We hope that more students are given the privilege to partake in such an opportunity. (RG LU UG Uni10)

The marginalized counter-discourse (WA for improved workforce and service provision) suggests a different model. Here, a diverse range of doctors can provide benefits to society through their difference, and thus WA participants may be positioned as contributors to improvements in the profession. However, no examples of the subjects positioned in this way were given, and no testimonials supported this discourse.

Discussion

This study examined how the value of WA is communicated by UK medical schools via the discourses on their WA webpages. We identified the dominance of an approach that emphasises the value of WA for an individual's social justice and mobility, which is perhaps not unexpected given the prominence of individualism within the UK's current neoliberal approach to higher education (Gartland, 2014; Pritchard, 2011; Wilkins and Burke, 2013). However, it is perhaps surprising how strongly this discourse overpowers the counter discourse of the value of WA for the improvement of service provision and patient care, especially given the increasing presence of this argument internationally (Bailey and Willies-Jacobo, 2012; Cooter et al., 2004; Dowell et al., 2015; Guiton et al., 2007; Komaromy et al., 1996; Morrison and Grbic, 2015; Puddey et al., 2014; Saha et al., 2008; KO Walker et al., 2012; Whitla et al., 2003).

Institutional discourses reinforce institutional values and structures, and vice versa (Mills, 2004). The deep entrenchment and dominance of the discourse of WA for social mobility suggests that it retains significant power and legitimacy, with its associated values presented as 'taken-for-granted'. The Foucauldian approach of this study allowed this discourse (and opposing discourses) to be exposed, examined and evaluated for their implications (Foucault, 1972).

Discourses shape and legitimize what is considered valuable and expected within a group, be this medical schools or WA participants. Expectations set up by the dominant discourse communicated that, to be suitable for medicine, WA students should display the qualities traditionally valued within a medical applicant (for example, highly academically achieving). On the other hand, alternative qualities often attributed to students from lower socioeconomic backgrounds (such as an understanding of underserved populations (Morrison and Grbic, 2015; Saha et al., 2008; Whitla et al., 2003)) are excluded from webpages and thus are not communicated as valuable.

A Foucauldian approach also highlights the implications discourses can have for the way people think, feel and act. Positioning WA participants as the sole beneficiaries of WA reinforces that they are at a disadvantage within a system that foregrounds academic achievement and traditional values. Both applicants and medical students from non-traditional backgrounds are acutely aware of their difference to the majority of those around them, and continue to feel that they may lack the desirable attributes expected (Frost and Regehr, 2013; Gartland, 2014; Razack et al., 2015). As a result, highlighting their lack of competitive attributes and need for compensatory measures may not work to reassure potential applicants from lower socioeconomic groups or their advisers of their suitability for the degree or encourage an application (Beagan, 2005; Greenhalgh et al., 2004; Mathers and Parry, 2009; Oliver and Kettley, 2010; Sianou-Kyrgiou and Tsiplakides, 2011).

Concurring with Cleland et al.'s study of UK medical school admissions deans' approaches to WA (2015), our results show that academic meritocracy remains a tightly-held belief within UK medical schools. This study reveals how justifications of WA for social mobility are also intertwined with promoting and preserving the

dominance of academic merit within selection, with the approach and extent to which this is done varying across schools. Some of the tensions revealed in Cleland et al.'s study were also evidenced here, with two competing and unreconciled discourses found.

Razack et al.'s work in Canada led them to conclude that the dominance of discourses of academic excellence may act as a barrier to greater inclusion within the profession (Razack et al., 2012, 2014, 2015). We agree that the strong focus on academic merit in the UK texts may discourage diversity - potentially exacerbating the underlying concerns of potential applicants from lower socioeconomic backgrounds and further highlighting their disadvantage in a selection procedure focussed on academic credentials.

Yet, context is essential for the production and shaping of discourse (Goodwin and Duranti, 1997) and this study reveals a significant difference between the discourses of social justice used by the medical schools in Canada and the UK: Razack et al.'s study of Canadian medical school websites found that when equity in social accountability ("discourses in which there is a social justice concern") was presented, this was as "justice in healthcare delivery rather than as a tool of social advancement of the individual being educated" (Razack et al., 2012, p.1328). This is a strong contrast to the findings of our study and emphasises the context-specificity of discourses. It would be of interest to know more about the dominant discourses of WA in other countries and settings.

By exposing and examining discourses, medical schools can analyse their texts and consider whether these are actually reproducing a process of exclusion. This may encourage an appreciation of how texts about underrepresented groups might actually be serving to continue to unintentionally exclude these groups from medical education, and hence medicine, and aid reflection on how to change practice and thought with respect to greater inclusiveness. Moreover, on the other side of the fence, little is known about how those with marginalised viewpoints - the potential applicants from lower socioeconomic groups, their parents and teachers - understand the value of WA, nor how medical school discourse may influence their decision to apply to medicine.

Further research is needed to investigate the effects current discourses of WA have on attracting a truly diverse cohort of students to medicine.

Although this study draws divisions between 'ways-of-thinking' about the value of WA, this is primarily intended to aid clarity and understanding within an area of contradictions and confused understandings (Cleland et al., 2015). These constructed divisions do not mean to imply that these approaches, or elements of them, cannot be combined or reconciled. For example, if medicine wishes to truly diversify its intake, there have been increasing calls to consider a wider re-definition of merit to also include values seen as advantageous to the competency and distribution of the workforce (Gorman, 2015; Hay et al., 2016; Powis, 2015; Puddey et al., 2014; Razack et al., 2015; Southgate et al., 2015). This would enable the profession to maintain a meritocratic system, but explicitly recognise and acknowledge the value of diversity. This would be one way of encouraging a truly wider group of applicants, rather than merely attracting the traditional (academically excellent and already committed to medicine) students from within non-traditional or underrepresented groups.

Examining WA webpages allowed a large number of diverse schools from across the UK to be compared through one important genre, in terms of the utility of webpages to applicants and the relationship between written and spoken text within institutions (Mayr and Bastow, 2008; The Student Room, 2016). However, as a minority of UK medical schools did not provide WA material on their websites, our study was limited to including material from only 25 of 34 possible schools. The specialized nature of the purpose-built corpus afforded researchers advantages when addressing the questions for which it was designed, however, future studies may fruitfully examine additional genres of material (for example prospectuses, field notes from open days, or interviews with admissions staff) to expand such an investigation.

This study examined language use only, with the aim of producing high quality focussed enquiry. However, excluding aspects such as images and typography decontextualized the text and limited the perspectives available to our analysis. Further studies in this area could consider multi-modal analysis to access these additional perspectives. In addition, our paper only considered how these pages communicated the value of WA to potential applicants, whereas attention could be directed to examining a range of

functions of these pages – from positioning the school within a competitive market, to how they address stakeholders or regulatory bodies.

Finally, as discussed, the term ‘WA’ encompasses many different groups of people depending on the context – from those in minority ethnic groups, to Indigenous populations, to rural or disabled applicants. Further studies could consider the implications of discourses on attracting students from these additional WA groups to medicine.

In conclusion, discourses on UK medical school websites overwhelmingly communicate that WA is practiced in the name of justice to ‘traditionally talented’ individuals who have been disadvantaged because of circumstances beyond their control. If UK medical schools believe that students from under-represented groups have additional strengths to offer to the medical school or workforce through their diversity, this is not being communicated effectively. Current discourses, and the expectations that they create and perpetuate, may not be acting to alleviate the worries of many potential applicants from WA backgrounds, nor to reassure them of their aptitude for medicine or encourage them to apply. If medical schools wish to attract larger numbers of able and *truly* diverse applicants to medicine from lower socioeconomic backgrounds, it is vital that they critically evaluate their current approaches to attracting such applicants and consider avenues for positive change.

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References

Association of Faculties of Medicine in Canada (AFMC) (2010) *The Future of Medicine in Canada*. Ottawa. Available at: <https://www.afmc.ca/future-of-medical-education-in-canada/medical-doctor-project/> (accessed 20 October 2015).

Archer Louise and Leathwood C (2003) *Identities, Inequalities and Higher Education*. In: Archer L, Hutchings M, and Ross A (eds) *Higher Education and Social class: issues of exclusion and inclusions*. London: Routledge Falmer, pp. 175–91.

Aschbacher PR, Li E and Roth EJ (2009) Is science me? High school students' identities, participation and aspirations in science, engineering, and medicine. *Journal of Research in Science Teaching* 47(5): 564–582. DOI: 10.1002/tea.20353.

Aschbacher PR, Ing M and Tsai SM (2014) Is Science Me? Exploring Middle School Students' STE-M Career Aspirations. *Journal of Science Education and Technology* 23(6): 735–743. DOI: 10.1007/s10956-014-9504-x.

Bailey JA and Willies-Jacobo LJ (2012) Are disadvantaged and underrepresented minority applicants more likely to apply to the program in medical education-health equity? *Academic medicine* 87(11): 1535–9. DOI: 10.1097/ACM.0b013e31826d6220.

Beagan BL (2005) Everyday classism in medical school: experiencing marginality and resistance. *Medical education* 39(8): 777–84. DOI: 10.1111/j.1365-2929.2005.02225.x.

Behrendt L, Larkin S, Griew R, et al. (2012) *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People*. Available at: <https://docs.education.gov.au/system/files/doc/other/heaccessandoutcomesforaboriginalandtorresstraitislanderfinalreport.pdf> (accessed 5 March 2016).

Bowes L, Thomas L, Peck L, et al. (2013) *International Research on the Effectiveness of Widening Participation*. Available at: <http://www.hefce.ac.uk/pubs/rereports/year/2013/wpeffectiveness/> (accessed 7 July 2016).

Bowl M and Hughes J (2013) Discourses of 'Fair Access' in English Higher Education. *Widening Participation and Lifelong Learning* 15(4): 7–25. DOI: 10.5456/WPLL.15.4.7.

Castillo-Page L (2012) *Diversity in Medical Education: Facts and Figures*. Report for Association of American Medical Colleges (AAMC). Washington DC.

Cheek J (2004) At the margins? Discourse analysis and qualitative research. *Qualitative health research* 14(8): 1140–1150. DOI: 10.1177/1049732304266820.

Cleland J and Medhi M (2015) Optimism and grit: Key to success in the widening access student's journey into medical school. In: Association for Medical Education Europe (AMEE), 2015. Research Paper presented at the Association for Medical Education Europe (AMEE) Annual Conference, Sept 5-9th Glasgow, UK.

Cleland J, Dowell J, McLachlan J, et al. (2012) Identifying best practice in the selection of medical students: literature review and interview survey. Report for Medical Schools Council. London.

Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical Education* 49(1): 25–35. DOI: 10.1111/medu.12502.

Coates J (2012) Gender and Discourse Analysis. In: Gee JP and Hanford M (eds) *The Routledge Handbook of Discourse Analysis*. Oxon: Routledge, pp. 90–103.

Cooter R, Erdmann JB, Gonnella JS, et al. (2004) Economic diversity in medical education: the relationship between students' family income and academic performance, career choice, and student debt. *Evaluation & the health professions* 27(3): 252–64. DOI: 10.1177/0163278704267041.

Department For Education and Skills (DFES) (2003) *The Future of Higher Education*. London.

Dhalla IA, Kwong JC, Streiner DL, et al. (2002) Characteristics of first-year students in Canadian medical schools. *CMAJ* 166(8): 1029–35. <http://www.cmaj.ca/content/166/8/1029.long>

Dowell J, Norbury M, Steven K, et al. (2015) Widening access to medicine may improve general practitioner recruitment in deprived and rural communities: survey of GP origins and current place of work. *BMC Medical Education* 15(1): 1–7. DOI: 10.1186/s12909-015-0445-8.

Fairclough N (1992) *Discourse and Social Change*. Oxford: Blackwell Publishers Ltd.

Flores G (2000) Culture and the patient-physician relationship: Achieving cultural competency in health care. *The Journal of Pediatrics* 136(1): 14–23. DOI: 10.1016/S0022-3476(00)90043-X.

Foucault M (1972) *The Archaeology of Knowledge*. London: Tavistock.

Foucault M (1974) *The order of things : archaeology of the human sciences*. London: Tavistock.

Foucault M (1983) The Subject and Power . In: Dreyfus H and Rabinow P (eds) *Michel Foucault: Beyond Structuralism and Hermeneutics*. Chicago: The University of Chicago Press, pp. 208–226.

Foucault M (1984) The order of discourse. In: Shapiro M (ed.) *Language and politics*. London: Basil Blackwell, pp. 108–138.

Frost HD and Regehr G (2013) 'I am a doctor': negotiating the discourses of standardization and diversity in professional identity construction. *Academic Medicine* 88(10): 1570–7. DOI: 10.1097/ACM.0b013e3182a34b05.

Gartland C (2014) *STEM Strategies: Student Ambassadors and equality in Higher Education*. London: Institute of Education Press, University of London.

Goodwin C and Duranti A (1997) Rethinking context: an introduction. In: Goodwin C and Duranti A (eds) *Rethinking Context: Language as an interactive phenomenon*. Cambridge: Cambridge University Press, pp. 1–42.

- Gorard S, Adnett N, May H, Slack K, Smith E TL (2007) *Overcoming the Barriers to Higher Education*. London: Trentham Books Ltd.
- Gorard S, Smith E, May H, et al. (2006) *Review of Widening Participation Research: addressing barriers to participation in higher education*. Report for Higher Education Funding Council for England. Bristol.
- Gorman D (2015) Developing health care workforces for uncertain futures. *Academic medicine : journal of the Association of American Medical Colleges* 90(4): 400–3. DOI: 10.1097/ACM.0000000000000644.
- Graham C (2013) Discourses of widening participation in the prospectus documents and websites of six English higher education institutions. *British Journal of Sociology of Education* 34(1): 76–93. DOI: 10.1080/01425692.2012.692048.
- Greenhalgh T, Seyan K and Boynton P (2004) 'Not a university type': focus group study of social class, ethnic, and sex differences in school pupils' perceptions about medical school. *BMJ* 328(7455): 1541–1544. DOI: 10.1136/bmj.328.7455.1541.
- Greenhalgh T, Russell J, Boynton P, et al. (2006) 'We were treated like adults'-- development of a pre-medicine summer school for 16 year olds from deprived socioeconomic backgrounds: action research study. *BMJ* 332(7544): 762–7. DOI: 10.1136/bmj.38755.582500.55.
- Guiton G, Chang MJ and Wilkerson L (2007) Student body diversity: relationship to medical students' experiences and attitudes. *Academic Medicine* 82(10 Suppl): S85-8. DOI: 10.1097/ACM.0b013e31813ffe1e.
- Hay M, Mercer AM, Lichtwark I, et al. (2016) Selecting for a sustainable workforce to meet the future healthcare needs of rural communities in Australia. *Advances in Health Sciences Education* 22(533–551): 1–19. DOI: 10.1007/s10459-016-9727-0.
- Hodges BD (2014) When I say ... critical theory. *Medical Education* 48(11): 1043–1044. DOI: 10.1111/medu.12374.
- Hyatt D (2013) The critical policy discourse analysis frame: helping doctoral students engage with the educational policy analysis. *Teaching in Higher Education* 18(8): 833–845. DOI: 10.1080/13562517.2013.795935.
- Jones R and Thomas L (2006) The 2003 UK Government Higher Education White Paper: a critical assessment of its implications for the access and widening participation agenda. *Journal of Education Policy* 20(5): 615–630. DOI: <http://dx.doi.org/10.1080/02680930500222477>.
- Kamali AW, Nicholson S and Wood DF (2005) A model for widening access into medicine and dentistry: the SAMDA-BL project. *Medical education* 39(9): 918–25. DOI: 10.1111/j.1365-2929.2005.02227.x.
- Komaromy M, Grumbach K, Drake M, et al. (1996) The Role of Black and Hispanic Physicians in Providing Health Care for Underserved Populations. *New England Journal of Medicine* 334(20): 1305–1310. DOI: 10.1056/NEJM199605163342006.
- Lakhan SE (2003) Diversification of U.S. medical schools via affirmative action implementation. *BMC medical education* 3(1): 6. DOI: 10.1186/1472-6920-3-6.

- Larkins S, Michielsen K, Iputo J, et al. (2015) Impact of selection strategies on representation of underserved populations and intention to practise: international findings. *Medical Education* 49(1): 60–72. DOI: 10.1111/medu.12518.
- Mathers J and Parry J (2009) Why are there so few working-class applicants to medical schools? Learning from the success stories. *Medical Education* 43(3): 219–228. DOI: 10.1111/j.1365-2923.2008.03274.x.
- Mayr A and Bastow T (2008) Conclusion: Researching institutional discourse. In: Mayr A (ed.) *An Introduction to Institutional Discourse*. London: Bloomsbury Publishing, pp. 163–177.
- McHarg J, Mattick K and Knight L V (2007) Why people apply to medical school: implications for widening participation activities. *Medical Education* 41(8): 815–21. DOI: 10.1111/j.1365-2923.2007.02798.x.
- McMillan W (2015) Theory in healthcare education research: the importance of worldview. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 15–24.
- Medical Schools Council (2014a) *A Journey to Medicine: Outreach Guidance*. London.
- Medical Schools Council (2014b) *Selecting for Excellence Final Report*. London.
- Milburn A (2012) *Fair Access to Professional Careers. The Independent reviewer on Social Mobility and Child Poverty*. London.
- Mills S (2004) *Discourse*. London: Routledge.
- Morrison E and Grbic D (2015) Dimensions of Diversity and Perception of Having Learned From Individuals From Different Backgrounds: The Particular Importance of Racial Diversity. *Academic medicine* 90(7): 937–45. DOI: 10.1097/ACM.0000000000000675.
- Nicholson S and Cleland Jennifer (2015) Reframing research on Widening Participation in Medical Education. In: Cleland J and Durning S (eds) *Researching Medical Education*. *Researching Medical Education*. Oxford: Wiley-Blackwell, pp. 231–242.
- Office of National Statistics (2011) *UK Population Census*. Available at: <https://www.ons.gov.uk/census/2011census> (accessed 23 June 2016).
- Oliver C and Kettley N (2010) Gatekeepers or facilitators: the influence of teacher habitus on students' applications to elite universities. *British Journal of Sociology of Education* 31(6): 737–753. DOI: 10.1080/01425692.2010.515105.
- Patterson F, Knight A, Dowell J, et al. (2016) How effective are selection methods in medical education? A systematic review. *Medical education* 50(1): 36–60. DOI: 10.1111/medu.12817.
- Powis D (2015) Selecting medical students: An unresolved challenge. *Medical teacher* 37(3): 252–60. DOI: 10.3109/0142159X.2014.993600.
- Pritchard RMO (2011) *Neoliberal Developments in Higher Education : The United Kingdom and Germany*. Oxford: Peter Lang AG.

Puddey IB, Mercer A, Playford DE, et al. (2014) Medical student selection criteria as predictors of intended rural practice following graduation. *BMC medical education* 14(218) DOI: 10.1186/1472-6920-14-218.

Razack S, Maguire M, Hodges B, et al. (2012) What Might We Be Saying to Potential Applicants to Medical School? Discourses of Excellence, Equity, and Diversity on the Web Sites of Canada's 17 Medical Schools. *Academic Medicine* 87(10): 1323–1329. DOI: 10.1097/ACM.0b013e318267663a.

Razack S, Lessard D, Hodges BD, et al. (2014) The more it changes; the more it remains the same: A Foucauldian analysis of Canadian policy documents relevant to student selection for medical school. *Advances in Health Sciences Education* 19(2): 161–181. DOI: 10.1007/s10459-013-9468-2.

Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.

Reay D, David M and Ball S (2001) Making a Difference?: Institutional Habitus and Higher Education Choice. *Sociological Research Online* 5(4) <http://www.socresonline.org.uk/5/4/reay.html>.

Robb N, Dunkley L, Boynton P, et al. (2007) Looking for a better future: identity construction in socio-economically deprived 16-year olds considering a career in medicine. *Social Science & Medicine* 65(4): 738–54. DOI: 10.1016/j.socscimed.2007.03.011.

Saha S, Guiton G, Wimmers PF, et al. (2008) Student body racial and ethnic composition and diversity-related outcomes in US medical schools. *JAMA* 300(10): 1135–45. DOI: 10.1001/jama.300.10.1135.

Sheeran Y, Brown BJ and Baker S (2007) Conflicting philosophies of inclusion: the contestation of knowledge in widening participation. *London Review of Education* 5(3): 249–263. DOI: 10.1080/14748460701661302.

Sianou-Kyrgiou E and Tsiplakides I (2011) Similar performance, but different choices: social class and higher education choice in Greece. *Studies in Higher Education* 36(1): 89–102. DOI: 10.1080/03075070903469606.

Slack K (2003) Whose aspirations are they anyway? *International Journal of Inclusive Education* 7(4): 325–335. DOI: 10.1080/1360311032000110016.

Southgate E, Kelly BJ and Symonds IM (2015) Disadvantage and the 'capacity to aspire' to medical school. *Medical education* 49(1): 73–83. DOI: 10.1111/medu.12540.

Steven K, Dowell J, Jackson C, et al. (2016) Fair access to medicine? Retrospective analysis of UK medical schools application data 2009–2012 using three measures of socioeconomic status. *BMC medical education* 16(1): 11–21. DOI: 10.1186/s12909-016-0536-1.

The Student Room (2016) The Conversion Report. Brighton. Available at: <http://tsrmatters.com/new-student-insights-conversion-report-2016/> (accessed 7 May 2016).

Walker KO, Moreno G and Grumbach K (2012) The Association Among Specialty, Race, Ethnicity, and Practice Location Among California Physicians in Diverse Specialties. *J Natl Med Assoc.* 104((1-2)): 46–52. DOI: 10.1016/S0027-9684(15)30126-7

Whitla DK, Orfield G, Silen W, et al. (2003) Educational benefits of diversity in medical school: a survey of students. *Academic Medicine* 78(5): 460–6. <https://insights.ovid.com/pubmed?pmid=12742780>

Wilkins A and Burke PJ (2013) Widening participation in higher education: the role of professional and social class identities and commitments. *British Journal of Sociology of Education* 36(3): 1–19. DOI: 10.1080/01425692.2013.829742.

Willig C (2001) *Introducing Qualitative Research in Psychology: Adventures in Theory and Method*. Buckingham: Open University Press.

Young ME, Razack S, Hanson MD, et al. (2012) Calling for a broader conceptualization of diversity: surface and deep diversity in four Canadian medical schools. *Academic medicine* 87(11): 1501–10. DOI: 10.1097/ACM.0b013e31826daf74.

5.4 Key Findings

Overall, this study explores how medical schools communicate the value of WA to external stakeholders, particularly potential applicants from non-traditional backgrounds. The findings contribute new insight into the ways UK medical schools perceive 'suitability' for medicine and how they negotiate the role of WA in their admissions procedures and values. The study uses Foucauldian theory to understand which impressions medical schools' communications may create for potential applicants, and to recommend ways in which the schools could reflect on and re-negotiate these texts to further promote WA. A summary of the objectives, key findings and conclusions of this work are contained in Box 5.2.

UK medical schools' webpages are revisited in the next chapter: Study Two. The analytical approach of Study Two concentrates on the rhetorical and linguistic presentation of WA in the texts. This shifts the focus of the thesis towards how different interpretations of WA, and their underlying values, may be emphasised, negotiated and communicated via different discursive styles.

Box 5.2 Study One: Summary of key Points

Objectives:

- To investigate how the value of WA is communicated by UK medical schools through their WA webpages
- To explore the expectations these messages might create about who is 'suitable' for medicine

Key Findings:

- ✓ On UK medical school webpages, the value of WA was predominantly promoted in aid of the 'social mobility' of the individual
- ✓ The value of WA for 'workforce improvement through diversity' was vaguely expressed and largely excluded
- ✓ WA was situated within an admissions system of academic meritocracy
- ✓ Individuals with desirable 'merit' were constructed as those with high academic ability and a commitment to study medicine
- ✓ Alternative strengths typically associated with non-traditional students were not mentioned as valuable or desirable
- ✓ Medical schools discursively positioned themselves as the 'providers' of WA (in a position of power) and non-traditional applicants as the 'beneficiaries' of WA (in a position of disadvantage and deficit)
- ✓ Texts do not present non-traditional students as bringing additional gains to medicine through their diversity

Conclusions and recommendations:

- The messages and values embedded in these texts may act as a barrier to WA and may not encourage increased applications from individuals from non-traditional groups
- Texts reinforce that WA applicants may be at a disadvantage in a system that foregrounds academic achievement and traditional values
- Medical schools should reflect and critically evaluate their publicity materials and consider avenues for positive change

Chapter 6

Study Two: Framing WA to Medicine

6.1 Introduction

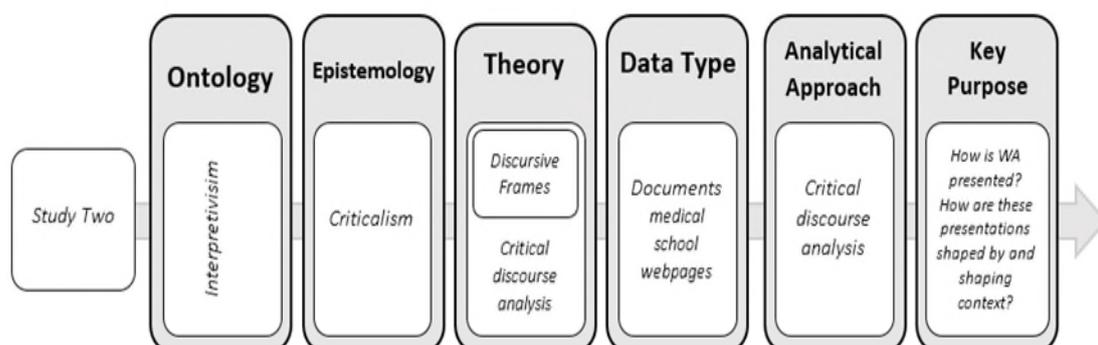
As discussed in the Methodology (section 4.2, p.76), originally, I had envisaged one critical discourse analysis (CDA) study in this thesis. However, following familiarization with the data and during my exploration of various research designs, I decided to conduct two studies instead: The first using a conceptual framework to focus attention on exposing hidden meanings and power structures (Study One); and the second using a conceptual framework to focus on the impact of the rhetorical strategies and discursive styles used to construct different ‘interpretations’ of WA (Study Two). Studies One and Two can thus be considered two sides of the same coin: the distinct research designs revealing two different perspectives on the same data.

The paper resulting from Study Two can be cited as:

Alexander K, Fahey Palma T, Cleland J (2018) A Requirement, a Value or a Service? Framing Widening Access to Medicine. In preparation.

The methodology of Study Two’s research design is discussed fully in Chapter 4, and summarized visually in Figure 6.1:

Figure 6.1 Research design of Study Two (Framing WA to Medicine)



This chapter first details the author contributions and then presents the paper. The chapter concludes by highlighting the paper’s key objectives, findings and conclusions, and presents a brief discussion of how Study Two links into the larger thesis.

6.2 Contributions to Study Two

The decision to conduct a secondary analysis on this data set was taken as a research team: I agreed to take the lead author role and responsibilities; Dr Tania Fahey Palma (TFP) agreed to be my primary source of advice and support given her linguistic expertise; and Prof Jen Cleland (JC) offered additional authorial support.

I drafted the research questions and searched the literature for possible conceptual frameworks. I suggested the focus on discursive frames and the inclusion of the 'multiple perspectives' approach (see section 4.4.3). TFP and I critically discussed how these could be incorporated and collaboratively built the conceptual framework and research design. JC agreed the research design.

I collected the data and conducted the analysis, with my developing interpretations critiqued and refined in critical discussion with TFP and JC (see section 4.6.4). I produced the first draft of the paper. This was reviewed by TFP and JC who made suggestions regarding the level of detail required in the introduction and methods, and the structure of the results. I subsequently made several redrafts of the paper, with TFP and JC contributing comments throughout each iteration. TFP arranged for a contact - Dr Anne O'Keefe (AOK) at the Mary Immaculate College, University of Limerick – to informally review the paper. AOK made a number of useful comments and her help is acknowledged, with our thanks, in the paper. I edited the draft in line with AOK's comments, and TFP and JC agreed these changes.

I discussed which academic journals might be appropriate for the paper with JC and TFP: we agreed on my suggestion of a journal focussed on in educational policy enactment. I formatted the paper to the journal's requirements and all authors approved this for submission. I submitted the work through the journal's online portal.

Two reviewers and one editor reviewed the work but recommended against publishing the paper. The reviewer's substantial comments reflected that they did not find the work an appropriate fit for the journal. Acknowledging their comments, we discussed alternative journals as a research team and agreed upon one in the field of medical education.

I edited the draft to incorporate the minor suggestions from the reviewers, and to format and tailor the text to the requirements of the new journal. TFP and JC reviewed the new draft and suggested minor edits. I incorporated these and produced a final draft. All authors approved this for submission, and I submitted the paper through the journal's online portal.

This was reviewed by one editor, who commented that it was methodologically rigorous, but as analysis was restricted to the UK context, was not applicable enough to the international audience of the journal. The next step is to either: substantially revise the study to present it as a case study of the UK context, and to situate and compare this case within an international context; or make smaller revisions and submit this to a journal with a more UK specific focus.

6.3 Study Two

A Requirement, a Value or a Service? Framing Widening Access to Medicine

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Abstract

Increasing diversity within medicine is a global concern. In the UK, governments have set ambitious widening access (WA) policy targets for medical schools. The interpretation of WA policy however remains a contested concept, with individual schools enacting this according to their interests and values. Although institutional webpages are highly influential and visible resources, little is known about how these are used to present, promote or justify medical schools' preferred enactment of WA policy. Likewise, little is known about the institutional images created by these webpages, and the impressions these might convey to applicants about medical schools' stance on WA. This study therefore utilises a critical discourse analysis (CDA) approach to explore how a wide range of UK medical schools discursively frame WA policy enactment on their websites: these frames determine the perspective from which information is presented and therefore can strongly influence audience responses. Our focus was the linguistic construction of discursive frames, and their potential influence on audiences. Three discursive frames were identified: 'institutional'; 'value-driven'; and 'service oriented'. These discursive frames implied the institutional stance on WA and also communicated to audiences how WA policy should be enacted within the institution. Medical schools should critically reflect on their current use of discursive frames regarding both their potential impact on attracting (or potentially deterring) potential applications, as well as the contribution their texts make to wider discussions over the 'meaning' of WA.

Introduction

The lack of diversity within the medical profession has become a global concern. Research in Canada (Meredith E. Young et al., 2012), the USA (Castillo-Page, 2012; Fenton et al., 2016), Australia (Department of Education, 2014) and the UK (Medical Schools Council, 2014c; Milburn, 2012; Steven et al., 2016) has revealed large disparities in the participation of different demographic groups in medical school cohorts. Widening access (WA) to medical school, has therefore become a highly political and current issue internationally.

In the UK medical schools have been set ambitious governmental policies to widen access to underrepresented groups (DBIS, 2016; Scottish Government, 2016). Medical schools have responded by undertaking initiatives to attract applications from those who traditionally might not have considered medicine as a career, and by making changes to their selection procedures to reduce barriers and bias (for an overview see e.g. Medical Schools Council (2014a) and Patterson et al. (2016)). However, each medical school's exact interpretation, enactment and presentation of WA policy is still strongly influenced by its individual location, resources, ethos and cultural context (Cleland et al., 2015; Razack et al., 2012). These differences underline that WA is a contested term, and that interpretations about the 'best' or 'correct' way to enact this policy depends on each school's interests and values. We can therefore understand WA policy as a site of struggle over meaning, where some actors' interests will be prioritised over others' (Chan, 2015; Taylor, 2004).

These negotiated meanings, interests and values are reflected in the presentation of a university's image and institutional stance within public material, and thus influence audiences' impression of that institution (Ivy, 2001; Reay et al., 2005; Simões and Soares, 2010). University websites are used by over 90% of prospective students to inform their application decisions (The Student Room, 2016). Efforts to attract students from underrepresented backgrounds to become involved with WA initiatives, or to consider university or medicine, may therefore be enhanced (or hindered) by the institutional stance presented in online resources. Webpage audiences also include

other important stakeholders: current staff and students may use the institutional stance on WA in order to guide their own rhetoric and actions (Fairclough and Wodak, 1997; Shaw et al., 2007); and policy makers or regulators may examine how medical schools translate policy into practice (Malen and Knapp, 1997).

One way in which to investigate how medical schools are negotiating and presenting their stance is through a study of language. There has been longstanding interest in how universities adapt language in their public material to reflect changing environments and policy pressures, such as the marketization of Higher Education (see e.g. Askehave (2007), Fairclough (1993) and Zhang (2017)) and the pressure to enact WA within an increasingly stratified marketplace (Bowl and Hughes, 2013; Graham, 2013). However, there has been limited use of linguistic analysis approaches within medical education research despite these having the potential to illuminate how (in this instance) medical school webpages may be (intentionally or unintentionally) shaping a reader's interpretation, evaluation and acceptance of WA (Entman, 1993; Wodak and Meyer, 2010).

This study therefore aims to focus on the use and impact of one discursive feature (framing), and to provide a concentrated and linguistically-focussed analysis of the strategies UK medical schools use to present an image of 'best practice' WA enactment and to promote an institutional stance towards WA which is attractive to audiences.

Examining a comparable set of webpages about WA, in total representing 21 of the 34 UK medical schools, the following questions guided our analysis:

1. How do medical schools discursively frame their approach to WA enactment on their webpages?
2. What characterizes these frames?
3. Which key messages might these frames communicate to audiences?

Discursive frames

Within critical discourse analysis (CDA) discourses can be understood as a ‘social practice’: the taken-for-granted ‘rules’ which enable, shape and limit a group’s way of thinking (Fairclough and Wodak, 1997). As a result, discourses are imbued with power and influence, able to shape what a group of people consider to be ‘knowledge’ or the ‘truth’, as well as ‘taken for granted’ assumptions about an issue (Foucault, 1972, p.49). These underlying assumptions and value systems influence policy creation and enactment to large extent, but are often overlooked, particularly in mainstream realist or modernist educational policy research (Ball, 1993, 2015).

CDA is a flexible methodological approach and can focus on specific linguistic features as required by the aims of the work (Wodak and Meyer, 2010). In this study, we focus on the construction and functions of discursive frames, understanding these to be one component of discourse (Fisher, 1997). The study is situated within a criticalist paradigm (McMillan, 2015).

The origins of frame analysis are typically traced to the work of Goffman (1974). Goffman believed that the frames found in all social interaction, including texts, are manifestations of larger social structures and ideologies, and are integral to our understandings of reality. Frames are also interpretative structures that help individuals ‘make sense of’ events or information, and can create or alter the reader’s perception of an issue (Chong and Druckman, 2007; van Hulst and Yanow, 2016).

Frames typically:

“select some aspects of a perceived reality and make them more salient in communicating a text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” (Entman, 1993, p.52).

Framing can therefore be used as a powerful rhetorical strategy to shape the ways in which an individual or group develop or reorient their conceptualization of an issue, and thus also their support or mobilization for that issue (Cheng, 2016; Chong and Druckman, 2007; Entman, 2003; Snow and Benford, 1988).

Amongst other strategies, frames may be created through: selecting certain information, keywords or themes; the use of evaluative or emotional judgements and language; repetition; categorization and naming (Entman, 1993; Jerit, 2008; van Hulst and Yanow, 2016). Such linguistic strategies connect audiences to certain conceptualizations and thus persuade them to support the author's interpretations (Cheng, 2016). The same issue, event or person, can thus be framed in a range of ways in order to achieve the impression judged to be most favourable to the author or speaker. The researcher may thus consider what actions the texts favour, who benefits from constructing and controlling these impressions, and the ideology, values, power and influence behind these frames (van Dijk, 2008, p.92). Equipped with this awareness, individuals may make a more informed decision about whether to "align" with current discourses/frames, or challenge and "resist" them in favour of an alternative (Shaw and Greenhalgh, 2008).

This strategic use of language concurs with the understanding within CDA that that linguistic features may be chosen consciously or subconsciously, but the author's specific interests, aims and context will always influence their language (Wodak and Meyer, 2010). The framing of public material can be considered a reflection of the institution's official stance on an issue, and thus contributes to the overall reputation and image of the institution (Ivy 2001; Fairclough and Wodak 1997). Previous studies have used a CDA approach to investigate how universities craft their institutional image and persuade students to choose their institution over others (see e.g. Hoang and Rojas-Lizana (2015), Ng (2016) and Saichaie and Morphew (2014)) but, to the best of our knowledge, this approach has not been used in medical education.

Methods

Data Collection

This study is a secondary analysis of written data collected from public UK medical school websites between April and July 2015: full details of the previous study are reported in Alexander et al. (2017).

There are 34 public medical schools in the UK. Public medical schools are those attached to universities that receive financial support from the government, and are thus required to follow government policy, including the remit to WA.

We considered each school to be responsible for the content and presentation of their own webpages and that these were representative of the school's policy, advice and views. As a result, only material located directly on the schools' own webpages (rather than on a wider university site or online prospectus) was included.

It is worth noting that webpages may reflect espoused values, instead of (or as well as) those actually enacted within the institution (Ball, 2000; Schuh and Miller, 2006).

Nonetheless, just because texts may not give a 'true' reflection of institutional values, they still tell us about how the institution is constructing their stance, and influencing their audiences. As Ball (2000, p.9) states: 'Truthfulness is not the point - the point is their effectiveness, in the market or for the Inspection, as well as the "work" they do "on" and "in" the organisation.' Moreover, CDA considers institutional identities to be enacted through their communications, and that these communications reflect institutional power structures and values (Benwell and Stokoe, 2006).

Webpages that provided information about WA initiatives, WA policy or indicated an institutional stance regarding WA (explicitly or implicitly) were prioritised for inclusion. This included, for example, full (or relevant sections of) webpages discussing the purpose of WA, detailing alternative entry routes or courses for applicants from WA backgrounds, or describing outreach activities. Webpages were omitted if a WA remit was not stated or implied, and if we considered their main function was to communicate about another matter. We also focused on medical school webpages, not wider university ones so those medical schools that did not include WA materials on their webpages were excluded. The exclusion of these webpages optimized comparability, so that only webpages which were considered 'equivalent' were included within this specialised data set.

The final data set consisted of 52 webpages containing 136,413 words and included material from 21 UK medical schools. The largest webpage contained 14,275 words, and the smallest 325 words. The average word count per page was 2623 words.

Twelve of the included medical schools belong to 'Russell Group' universities. These institutions characterise themselves as 'elite', highly ranked and research-intensive (Russell Group, 2016). Nine medical schools belong to universities outside this group and were typically more recently established institutions.

Data Analysis

This study uses a critical discourse analysis (CDA) approach as the overarching analytical approach, with framing strategies a particular focus.

There are three key dimensions to consider within a CDA approach: the linguistic elements of the text must be analysed and described; the factors influencing the text's production and consumption should be considered; and interpretations of the text should be formed in reference to the broad social context in which it is situated (Fairclough, 2001).

Moreover, CDA has a particular interest in considering the potential impact of discourses in shaping perceptions of an issue, highlighting and challenging these if necessary (van Dijk, 2008).

Step one: identifying the frames in use

The presentation of aims, solutions and recommendations is a key aspect of discursive frames (Entman 1993). As a result, we first focussed analysis on comparing the 'means' and 'ends' of policy – the aims, enactments and consequences. To do this, we questioned how the texts stated or implied the 'purpose', 'process' and 'outcomes' of WA enactments. This approach was inspired by the work of Malen and Knapp (1997) which suggests a framework of questions to highlight possible connections between educational policy and practice in a comparable way. Aware of the integral links between discourses and their social context, as well as the specific circumstances of these texts' production and consumption, we asked:

What does the text communicate as the:

Purpose: the aims of WA policy?

Process: how WA policy should be initiated and implemented?

Outcome: the desired consequences of WA policy?

We undertook a line-by-line textual analysis to identify all (explicit and implicit) references to the purpose, process or outcome of WA initiatives. These were recorded in a table (see Table 6.1 for an illustrative example). Identified references were then compared for key similarities and differences in the way that the purpose, process and outcomes of WA were communicated. Initial framing categories were formed by grouping together webpages using similar message content.

Table 6.1 Illustrative example for identification of ‘process’ within a webpage

Text	Text excerpt	Content summary	Concept
School 9, Webpage 2	‘[The medical school] is fully committed to widening participation (WP) and it forms part of the Strategic Plan for the School... is hoped that a WP curriculum will be developed and that more faculty staff will be encouraged to contribute’	The school should integrate WA into management plans and encourage the widespread involvement of staff.	Process

Step two: characteristic features of the frames

Analysis then concentrated on how WA was constructed linguistically and the values that these constructions inferred to the concept. This was done first within each reference (to purpose, process or outcome) and then within each webpage as a whole.

Particular attention was paid to linguistic features considered to be significant in the construction of frames, specifically those that indicate institutional positions, stance and identity (Entman 1993; 2003). For example: pronoun use and audience address (‘join *us* for a week’: School 16), evaluative lexical choice (‘get a *great* insight’: School 18), intensifiers (‘identifying *the best possible* applicants’: School 14), tense and active/passive voice (‘widening access *will be addressed*’: School 11) [emphasis added by current authors].

Features (e.g. intensifiers) could be more easily identified and examined in context through the use of concordance lists created in the software Wordsmith Tools (Version 6.0.0.229; Stroud: Lexical Analysis Software) (see Figure 6.2 for an illustrative example). We also used the software to examine the data set quantitatively and identify patterns within language use. For example, quantitative frequency counts revealed that certain pronouns were used very commonly in some texts, and rarely in others (see Figure 6.3, p.145). Our relatively small sample size resulted in the quantitative data being used for descriptive purposes only, however this provided a strong context for the qualitative analysis and was used to reinforce or challenge qualitative findings (Wodak and Meyer, 2010).

Figure 6.2 Concordance list for the intensifier 'very' created using Wordsmith Tools

N	Concordance
1	Academy, our students responded very well to the session and I hope we
2	, learning skills that will prove very useful throughout my medical
3	a competitive profession and I only had very small musings about pursuing
4	that we use to assess applicants is very similar to the normal assessment
5	additional discretionary points for very serious extenuating circumstances
6	Foundation Level 1 course, which is very much like doing A-Levels or

Initial categories (formed in 'step one') were re-examined. Where necessary, webpages were realigned from one category to another to ensure both message content and linguistic similarity.

Step three: potential influence of each frame on audiences

Finally, we considered the overall function of the discursive frames, with attention to the influence these may have on a variety of audiences. For example, we questioned: What is communicated about the ethos and structures of the institutions using each frame? Who or what is shown to be accountable for WA? What might be these frames communicate to audiences about how WA should be managed?

Our analysis and interpretations were informed by the five key 'perspectives' on policy enactment (rational, organizational, political, symbolic and normative) as described in Malen and Knapp (1997). These perspectives are based on prominent models of educational policy and offer the researcher comprehensive examples through which to

consider how institutions' differing perspectives might be used to interpret their differing policy enactments. These perspectives helped to illuminate the differences between the messages promoted by each frame, and to conceptualise the impression these frames might form for audiences.

Particular attention was paid to: the current context and challenges within WA to medicine; the wider discourses within WA and UK Higher Education; and the structures, policies or processes these discursive frames might be supporting or challenging.

Further considerations

Throughout analysis our interpretations were discussed critically within the research team. The context and previous literature were referred to within these discussions, to allow assumptions to be exposed and challenged, and for all decisions and comparisons to be justified and agreed. This aided rigour in analysis and evaluation, and minimized researcher bias.

Illustrative examples are provided within the results. Medical schools are identified with a randomly assigned number but we indicate whether the school is part of the Russell Group or not. The data used in this study is publicly available so our use of labelling was not to ensure the anonymity of the schools. Rather its purpose was to encourage readers to focus on the frames used by groups of schools, rather than by individual institutions.

Results

Determining the frames

Three discursive frames were identified: the institutional, value-driven and service-oriented (explained in more detail below). Texts utilizing the same frame conveyed similar messages about the perceived purpose, process and outcome of WA enactment, and possessed strong linguistic similarities. We considered each frame to convey a particular institutional stance regarding WA.

The number of schools utilising each frame were fairly evenly distributed (see Table 6.2). There was no obvious pattern between the choice of framing strategy and whether the medical school was a member of the Russell Group or not.

Table 6.2 Number of schools using each frame on their WA webpages

'Mission Group' of medical school	Institutional Frame	Value- driven Frame	Service- oriented Frame	
Russell Group schools	4	2	6	
Non-Russell Group schools	3	3	3	
Total number of schools	7	5	9	21

The key messages, linguistic characteristics and potential implications of each frame are detailed and discussed below. Each is demonstrated with a set of illustrative examples.

The Institutional Frame

Purpose, process and outcome of WA enactment

[The] University is committed to Widening Participation to higher education and that philosophy is shared by the Board of Medical Studies who govern the medicine programme. There are a number of ways in which applicants can have access to the medicine programme at XXX apart from the standard application routes, and there are a number of opportunities to visit the Institution to find out more about University and medicine in particular. (School 3, Russell Group)

Within the institutional frame, webpages typically presented an enduring system of admissions which included structures to accommodate the 'requirement' to undertake WA initiatives. This requirement was commonly portrayed as originating from an external source (a governmental directive, funding body or wider university pressure). However, responsibility for WA enactment and compliance was shown to lie with the school.

This frame implied that schools aimed to manage WA in a structured and controlled manner using their institutional processes or structures. Procedures to facilitate WA

were generally implied to be pre-existing or established, while additional measures were often presented as adaptations or exceptions made to these established procedures. Desirable consequences of WA initiatives were implied to be those which met the requirements of policy, but which did not require fundamental change.

Linguistic characteristics of the frame

...up to 6 places have been made available on this course for local applicants who have not achieved highly enough to gain entry to [the standard entry course] and have verifiable evidence of significant educational disadvantage or personal adverse circumstances. We suggest you contact Admissions and Student Recruitment for guidance if you wish to apply by this route. Additional support mechanisms are in place for those joining this widening access course.

(School 10, Non-Russell Group)

This excerpt adopts the formal and detached tone typical of the institutional approach, created through strategic pronoun use, lexical choice and passive voice: for example, the phrases 'we suggest' and 'if you wish' are hedged expressions, used to lessen the perceived impact of the action (Cutting, 2007).

The phrases 'educational disadvantage' and 'personal adverse circumstances' employ a factual register to describe what can be assumed to be delicate personal matters, whilst the intensifiers 'verifiable' and 'significant' emphasise that applicants who have 'not achieved highly enough' because of these reasons must be able to justify their eligibility for this course. These intensifiers amplify and strengthen this message (Labov, 1984) and contribute to the typically authoritative tone.

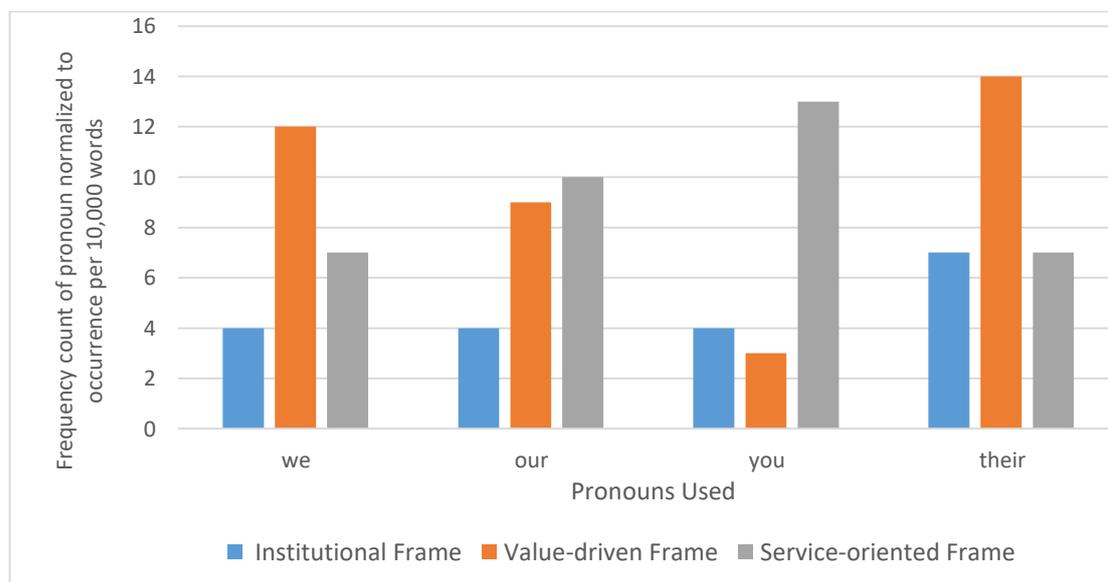
Finally, the creation of additional places for WA applicants is presented in the passive voice, without attributing the responsibility to any particular person or group. Supplementary support for WA students is implied to be pre-existing ('are in place'), with the use of technical language ('additional support mechanisms') invoking a procedural overtone.

Overall, texts employing this frame contained fewer pronouns than those using alternative frames (Figure 6.3). For example, in the following excerpt, applicants and the institution are referred to by name, enhancing the formal tone:

Applicants who have been in care should include this information in their UCAS application, therefore allowing the University to provide information about available support systems. (School 2, Russell Group)

In contrast, replacing the institutional names and nouns with pronouns would soften the tone and personalise the message by inferring empathy e.g.: ‘If you have been in care, you should include this information in your UCAS application, therefore allowing us to provide information about available support systems.’

Figure 6.3 Frequency of pronouns used (comparison between frames)



Implications of this frame

We suggest one possible function of the institutional frame may be to create the expectation, and bring acceptance to the practice, of limiting and entrenching the impact/effects of WA policy to within existing medical schools systems, rather than advocating far-reaching structural or cultural change to themselves or the wider Higher Education system. Processes were portrayed as optimal and fair in selecting the best students from a widened applicant pool.

The language employed by this frame may position these schools as those in which WA is managed, but not promoted or championed. This could lead to the perception by potential applicants, current staff and students, that although the institution takes responsibility for enacting WA, it prefers that this is done through an authoritative and

informative approach, limited to systems-level change. Policy makers may consider that, for this group of schools, policy may be most effective if it is targeted at procedural change within admissions procedures or if it already fits the schools' pre-existing structures.

The Value-driven Frame

Purpose, process and outcome of WA enactment

We don't want to miss out on any talent, so if students have the ability, we want them to apply. By encouraging and supporting students, as well as assessing their application fairly, we've been highly successful in raising the number of applications from sectors of society currently under represented in higher education.

(School 17, Non-Russell Group)

Within the value-driven frame WA was presented as a 'value' to be embedded into admissions, and by some schools, into wider medical school practices – from student support to careers advice. External drivers were not indicated as key. Rather the core drivers were presented as the school's own motivations for good practice in relation to WA.

This frame highlighted that the school implemented a range of specific initiatives for WA. These initiatives were frequently described and evaluated in more detail, and their success emphasised by examples of the integration of WA into school structures and ethos. Some schools explicitly expressed a pride in, and a desire to be recognised for, their commitment to WA.

Linguistic characteristics of the frame

It is hoped that the collaboration between WP [widening participation] and medical education will allow the [WA outreach] programme to flourish, with the aim of XXX becoming a leader in delivery of WP into medicine and with the School able to boast that "it teaches doctors from the age of 14!" (School 9, Non-Russell Group)

This example uses a persuasive and emotive tone that is typical of texts taking a value-driven approach. This is created through energetic and optimistic lexical choice ('flourish', 'hoped') and the use of the future tense ('will allow'). References to the

school ('we' and 'our') and references to the audience through the third-person pronoun ('their') reinforce the identity of the school against a comparable 'other' outgroup. However, the extensive use of 'our' and 'their' may be detrimental to building a sense of belonging between the two groups (Benwell and Stokoe, 2006; Pennycook, 1994).

In this example, responsibility for WA is attributed to school staff, with these agents positioned in the active structure as opposed to using the passive (as was more common in the institutional frame). This responsibility is shown to be taken up enthusiastically – the text states that the school aims to be 'able to boast' about its WA achievements, and become recognised as 'a leader in delivery of WP into medicine'. The use of the term 'collaboration' to describe the work done between two teams, implies joint effort and intent, as well as reinforces the perception of WA as a value to be integrated throughout the school's work.

The pronoun 'we' and 'our' were used frequently within value-driven texts, indicating a key function of pronouns in communicating the position and opinion of the medical school with regards to WA (see Figure 6.3, p.145). For example, the 'corporate we' can be used to evoke a sense of membership and solidarity within an organization (Handford, 2010).

We believe our students should be more representative of the community as a whole
(School 14, Russell Group)

With a focus on explaining and justifying their argument for WA, the pronoun 'their' was frequently used in reference to the 'disadvantage' of people from WA communities and/or WA activity participants. In comparison, direct audience address and the use of 'you' was less frequent than in either of the other frames (see Figure 6.3, p.145).

Implications of this frame

The value-driven frame foregrounds an approach to WA that requires larger scale integration and involvement from the school. This may suggest a process through

which the espoused values communicated on the webpages are further integrated into the schools' practice by means of a public commitment. Moreover, the use of this frame may help solidify the individual school's claims to be a 'leader' with regards to WA by displaying commitment (practised or espoused) to these initiatives and associated values – emphasising the 'excellence' of these schools regarding this issue. This reputation may attract applicants for whom social accountability is important, however, they may not yet feel that they are considered by the school to be 'members' of the group, as they were commonly addressed as an 'out-group' via the third person pronoun 'their' (rather than the more inclusive 'you').

Texts tended to portray an introspective approach, in which the focus of WA was on the institutional ethos, processes and development. Current staff and students may therefore perceive that they are being urged to embrace and nurture the concepts of WA within their institution. To maximize policy uptake within these schools, policy makers might consider embedding policy within the values that these medical schools see as important, or try to facilitate change by first targeting these value judgements.

The Service-oriented Frame

Purpose, process and outcome of WA enactment

Throughout the scheme young people will be provided with direct access to Medicine professionals, academics and undergraduate students. We want to recruit learners who will be successful at the university regardless of their educational and social background and therefore applicants will need to meet HEFCE's Widening Participation requirements. (School 8, Non-Russell Group)

The service-oriented frame presented WA as a 'service' which medical schools provide to WA activity participants. Actions were portrayed as strongly goal-oriented, with the aims of WA initiatives often stated, and the achievement of these goals used as a marker of overall success within WA. Aims were however predominantly restricted to those for the individual activity or initiative, rather than wider aims (e.g., getting X number of pupils engaged in an initiative rather than plans for integrating the principles of WA throughout the school). External regulators (governments, Medical Schools

Council, the university governance) were occasionally mentioned within the context of setting guides, targets or restrictions.

Overall, the focus of WA was shown to be on the provision of additional initiatives (services) which facilitated the achievement of WA targets, rather than an adaptation of school cultures or structures. Participant engagement was shown to be key, with webpages indicating prolific engagement and highlighting participant success stories and testimonials (see below).

Linguistic characteristics of the frame

If you're a student in year ten or above and are thinking about studying on a medical or dental course at university, our work experience programme allows you a taster of just what life as a student at [the medical school] is like. Join us for a week to sit in and observe our students in their learning environment... You'll also have the opportunity to visit the research laboratory and try out our specialist IT and e-learning resources.
(School 16, Non-Russell Group)

This excerpt displays the engaging tone typically used within this frame. This engagement is reinforced by the frequent use of the pronoun 'you' to directly address the reader and invite them to be included in their school community (see Figure 6.3, p.145). The pronouns 'us' and 'our' are drawn on to evoke institutional identity and to entice the reader to engage further with the school's WA activities ('Join us for a week'). The present and future tense in the active voice creates an impression of enthusiasm and opportunity. Moreover, the experience is presented as if it were an expedition to an unfamiliar and high-tech location ('observe our students in their learning environment', 'try out our specialist IT and e-learning resources'). The intensifier 'just' ('just what life... is like') emphasises that this is an authentic experience and the pupil will be fully engaged with the medical school.

The use of participant testimonials was common within texts employing the service-oriented frame. Although testimonials are not themselves the voice of the institution, they are curated by the institution to represent and align with their communicative goals, and are therefore interesting and relevant to include. The testimonials selected for inclusion on the webpages attested to the quality of initiatives:

I think that the Summer School was a springboard in my ambition to study medicine. It made the idea an actual reality as well as providing me with all the support you could ask for in what is a highly competitive application process. (School 21, Russell Group)

This testimonial is typical of the emotive and evaluative language used to create a persuasive recommendation of the initiative. The metaphor 'a springboard in my ambition' produces a colourful mental image whilst referencing a key objective of many WA initiatives (promoting aspiration). The intensifier 'highly' strengthens the evaluation of the application process to medicine as difficult, and is used in contrast to the phrase 'It made the idea an actual reality', in which the intensifier an 'actual reality' emphasises the practical success of the WA project in overcoming this difficult task. Finally, 'all the support you could ask for' highlights the generosity of the initiative's provision.

Implications of this frame

One function of this frame may be to create the impression that WA should be enacted via additional initiatives - as an additional 'product' provided by schools to address a need in the market - rather than presented as a question of cultural or systems change. In such a way, it is possible for the central 'brand' of the school (ethos, values and procedures) to remain separate from the 'brand' of one of their products (WA initiatives) (see e.g. Shaw et al. (2007)).

WA activity participants are positioned and addressed as customers by this frame, and therefore participant engagement and appreciation is of central importance. This mirrors current UK governmental policy pressure to position the student as a consumer in an Higher Education marketplace (DBIS, 2011; DfE, 2016). Advocates for this approach claim it will improve information, competition, choice and social mobility for students, however this is much debated (see e.g. Molesworth et al. (2011)). Potential applicants may however, be attracted by the heavily involving and inclusive style.

Within this approach, less attention is focussed on the school's responsibility to manage or adapt culturally to WA, and more placed on the accountability of initiatives to be successful and enjoyable. Current staff and students may thus perceive these goals as key in their design and implementation of WA initiatives. This approach

appears heavily goal-oriented, so policy makers may find that these schools are more responsive to policies that set performance targets, rather than those that demand changes at a systems or cultural level.

Discussion

This study illuminates the range of ways widening access (WA) policy enactment is framed on UK medical schools' webpages, and considers the impact of these choices for audiences. The 21 UK medical schools included in this study each used one of three discursive frames to present the interpretation and enactment of WA policy on their webpages: the 'institutional', the 'value-driven' and the 'service-oriented' frame. These frames highlight specific depictions of the institutions' preferred purpose, process and outcomes for WA policy: The institutional frame promoted a continuation of established procedures with minor adaptations on account of WA; the value-driven frame promoted the further integration of espoused WA values into the practice and ethos of the school; and the service-driven frame promoted WA as popular additional initiative that fulfilled a need, but did not necessarily impact on the school's image or culture more broadly. These depictions were constructed through strategic linguistic choices, and texts using each frame showed characteristic patterns.

The number of medical schools utilising each frame was relatively evenly distributed. This could suggest that, as yet, there is no one dominant norm for presenting the enactment of WA on institutional webpages. This may relate to the debate over the overarching role and definition of WA. Within medicine, as well as Higher Education more generally, there is still no strong consensus on what exactly the purpose, process and outcomes of WA should be, both between and within institutions (see e.g. Cleland et al. (2015), Sheeran et al. (2007), Wilkins and Burke (2013)).

This collection of texts feeds into wider discourses about WA, which in turn feed into policy making and enactment: an arena where there is currently a struggle over meaning (Chan, 2015; Taylor, 2004). What becomes the accepted norm of WA enactment will benefit some and disadvantage others, and interests, values and power are thus at stake. These texts therefore are one small part of a much larger discussion

and inevitably play a role in the overall creation and negotiation of meaning and norms. Research in a Canadian context has also shown that differences between schools' approaches to WA are evidenced discursively (Razack et al., 2012). Medical schools who take the opportunity to express their values and interpretations of WA enactment strategically may therefore help put their stamp on overall discourses.

In contrast to the results of other studies (Bowl and Hughes, 2013; Graham, 2013; McCaig and Adnett, 2009), our findings revealed institutions in the Russell Group (a traditional badge of 'status' amongst UK universities (Russell Group, 2016)) did not, as a group, show preference for any one discursive frame, in comparison to those outside this mission group. This suggests that medical schools do not currently frame their communications about WA policy enactment along traditional measures such as mission group adherence.

Some of these differences in framing may result from individual school's negotiation of the twin policy pressures of excellence/exclusivity (Radice, 2013) and participation/inclusivity (DBIS, 2016; Scottish Government, 2016), which may be perceived as pulling institutions in conflicting directions (Razack et al., 2015).

For example, in McCaig and Adnett's analysis, Russell Group universities constructed their university Access Agreements to solidify their position as 'selecting' institutions with high academic standards. However the authors also found that these documents were used to "soften their reputations as austere, elitist institutions" and promote the message that these universities would accept high-achieving students from any background (McCaig and Adnett, 2009, p34).

On the websites examined in this study, it might therefore be expected that Russell Group medical schools (typically positioned within an 'elite' market position) would capitalise on their status and adopt a formal stance that highlights a resistance to fundamental systemic or cultural change (e.g. the institutional frame). However, Russell Group universities are under particular pressure to widen access (OFFA, 2017; Russell Group, 2015) and as a result, others within this group may feel the pressure to widen access is more imperative and develop a more inclusive or persuasive frame in their address to WA participants (e.g. adopting a service-driven frame). Likewise, less

'prestigious' schools may choose a more matter-of-fact approach (e.g. the institutional frame) in order to underline their stringent standards, rather than try to capitalise on the perceived inclusivity of their institution by further embedding these values in material (e.g. via the value-driven frame). This hypothesis concurs with some findings in Graham's study (2013), whereby institutions were shown to adapt their discourses over time in reaction to changing policy pressures.

Moreover, the vast majority of applicants to medicine are currently still from professional/higher managerial and affluent backgrounds (Steven et al., 2016). This core applicant-base represents important stakeholders. As a result, as well as attracting 'non-traditional' applicants through WA webpages, it may also be important not to alienate 'traditional' applicants. Consequently, there may not yet be a clear strategic advantage for all schools, even all schools within one mission group, to use the same frame for their communication of WA.

Nonetheless, interpreting the findings within their context, we suggest that all three frames may have been moulded differently by the same competing pressures (the dual pressures to promote both an inclusive and elite image). As a result, those wishing to drive change or implement further WA policy may therefore wish to first consider addressing the underlying tensions medical schools perceive between the aims of WA and the demands of the market in order to facilitate deep-rooted and long-lasting change.

This study included a wide range of medical schools from across the geographical range of the UK. These schools encompass the differing ethos, cultures and curricula available within UK medical school education (Brosnan, 2010). Schools were well-balanced between members of the Russell Group and those that are not. However, not all schools provided relevant WA material on their own school webpages during the period of data collection and therefore only material from approximately two-thirds of UK medical schools could be included.

To focus our analysis and make best use of the expertise within our research team, only written language was examined within this study. A multi-modal analysis of these webpages, and of other promotional material, could reveal additional perspectives and

add value. For example, international comparison studies examining the frames used in medical schools' WA material would add significant value to this area. It would be particularly interesting to explore the differences between those in countries which, like the UK, have large divisions between the social classes (e.g. USA), with countries which currently have more equal distributions of socioeconomic capital amongst society (e.g. Netherlands).

Although our data and findings are context specific, the analysis of discursive frames is theoretically and methodically transferable, and could add further insight and value to new contexts and policy fields (see e.g. Braun et al. (2011), Lester et al. (2017) and Verger (2012)).

Emerging work has started to consider how discourses might affect medical school applicants' choices (Alexander, Fahey Palma, et al., 2017; Razack et al., 2015) and it is clear that applicants to different medical schools tend to possess different attributes (Steven et al., 2016; Wilson et al., 2013). Further research could deepen our understanding about the implications these value-laden texts may have on a variety of audiences such as applicants, parents, teachers and careers advisors, and allow a better understanding of how differently framed messages influence their decisions about whether, and where, to apply.

In conclusion, within a system of increasingly demanding WA targets and market pressures, medical schools should critically evaluate how highly visible material such as school webpages may influence the perceptions of potential applicants, current institutional members, policy makers and regulators. These texts make an important contribution to wider discourses and power dynamics within medicine about both what *WA is*, and what it *should be*. Moreover, schools should ensure that their espoused values align with those they practice or aspire to, and that they convey their interpretation of WA policy strategically.

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References

- Alexander K, Fahey Palma T, Nicholson S and Cleland J (2017) 'Why not you?' Discourses of widening access on UK medical school websites. *Medical Education* 51(6): 598–611. DOI: 10.1111/medu.13264.
- Askehave I (2007) The impact of marketization on higher education genres the international student prospectus as a case in point. *Discourse Studies* 9(6): 723–742. DOI: 10.1177/1461445607082576.
- Ball SJ (1993) What is policy? Texts, trajectories and toolboxes. *Discourse: Studies in the Cultural Politics of Education* 13(2): 10–17. DOI: 10.1080/0159630930130203.
- Ball SJ (2000) Performativities and Fabrications in the Education Economy: Towards the Performative Society. *Australian Educational Researcher* 27(2): 1–23. DOI: 10.1007/BF03219719.
- Ball SJ (2015) What is policy? 21 years later: reflections on the possibilities of policy research. *Discourse: Studies in the Cultural Politics of Education* 36(3): 306–313. DOI: 10.1080/01596306.2015.1015279.
- Benwell B and Stokoe E (2006) *Discourse and Identity*. Edinburgh: Edinburgh University Press.
- Bowl M and Hughes J (2013) Discourses of 'Fair Access' in English Higher Education. *Widening Participation and Lifelong Learning* 15(4): 7–25. DOI: 10.5456/WPLL.15.4.7.
- Braun A, Ball SJ, Maguire M, et al. (2011) Taking context seriously: Towards explaining policy enactments in the secondary school. *Discourse* 32(4): 585–596. DOI: 10.1080/01596306.2011.601555.
- Brosnan C (2010) Making sense of differences between medical schools through Bourdieu's concept of 'field'. *Medical Education* 44(7): 645–652. DOI: 10.1111/j.1365-2923.2010.03680.x.
- Castillo-Page L (2012) *Diversity in Medical Education: Facts and Figures*. Association of American Medical Colleges. Washington DC.
- Chan ZCY (2015) Policy matters: medical education for whom? Are locally or globally trained doctors best? *Medical Education* 49: 7–9. DOI: 10.1111/medu.12614.
- Cheng M (2016) The power of persuasion: Modality and issue framing in the 2012 Taiwan Presidential Debates. *Discourse & Society* 27(2):172–194. DOI: 10.1177/0957926515611556.
- Chong D and Druckman JN (2007) Framing Theory. *Annual Review of Political Science* 10(1) 103–126. DOI: 10.1146/annurev.polisci.10.072805.103054.
- Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical education* 49(1): 25–35. DOI: 10.1111/medu.12502.
- Cutting J (2007) *Vague Language Explored*. Basingstoke: Palgrave MacMillan.

- Department for Business Innovation and Skills (DBIS) (2011) *Students at the heart of the system*. London.
- Department for Business Innovation and Skills (DBIS) (2016) *Success as a Knowledge Economy: Teaching Excellence, Social Mobility & Student Choice*. London.
- Department of Education (DfE) (2014) *Undergraduate Applications, Offers and Acceptances, 2014. Report and Appendices*. Australian Government. Canberra, AC.
- Department for Education (DfE) (2016) *Higher Education and Research Bill*. London.
- Entman RM (1993) Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication* 43(4): 51–58. DOI: 10.1111/j.1460-2466.1993.tb01304.x.
- Entman RM (2003) Cascading Activation: Contesting the White House's Frame after 9/11. *Political Communication* 20(1): 415–432. DOI: 10.1080/10584600390244176.
- Fairclough N (1993) Critical Discourse Analysis and the Marketization of Public Discourse: The Universities. *Discourse & Society* 4(2): 133–168. DOI: 10.1177/0957926593004002002.
- Fairclough N (2001) *Language and Power*. London: Longman.
- Fairclough N and Wodak R (1997) Critical Discourse Analysis. In: Dijk TA van (ed.) *Discourse as Social Interaction*. London: Sage Publications, pp. 258–284.
- Fenton JJ, Fiscella K, Jerant AF, et al. (2016) Reducing Medical School Admissions Disparities in an Era of Legal Restrictions: Adjusting for Applicant Socioeconomic Disadvantage. *Journal of Health Care for the Poor and Underserved* 27(1): 22–34. DOI: 10.1353/hpu.2016.0013.
- Fisher K (1997) Locating Frames in the Discursive Universe. *Sociological Research Online* 2(3). <http://www.socresonline.org.uk/2/3/4.html>.
- Foucault M (1972) *The Archaeology of Knowledge*. London: Tavistock.
- Goffman E (1974) *Frame analysis: an essay on the organization of experience*. Boston: Northeastern University Press.
- Graham C (2013) Discourses of widening participation in the prospectus documents and websites of six English higher education institutions. *British Journal of Sociology of Education* 34(1): 76–93. DOI: 10.1080/01425692.2012.692048.
- Handford M (2010) *The language of business meetings*. Cambridge: Cambridge University Press.
- Hoang TVY and Rojas-Lizana I (2015) Promotional discourse in the websites of two Australian universities: A discourse analytic approach. *Cogent Education* 2(1): 101–148. DOI: 10.1080/2331186X.2015.1011488.
- Ivy J (2001) Higher education institution image: a correspondence analysis approach. *International Journal of Educational Management* 15(6): 276–282. DOI: 10.1108/09513540110401484.

- Jerit J (2008) Issue framing and engagement: Rhetorical strategy in public policy debates. *Political Behaviour* 30(1): 1–24. DOI: 10.1007/s11109-007-9041-x.
- Labov W (1984) Intensity. In: Schiffrin D (ed.) *Meaning, form, and use in context : linguistic applications*. Washington, D.C.: Georgetown University Press, pp. 43–70.
- Lester JN, Lochmiller C.R. and Gabriel R.E. (2017) *An Introduction to Discursive Perspectives on Education Policy and Implementation*. Cham: Springer International Publishing.
- Malen B and Knapp M (1997) Rethinking the multiple perspectives approach to education policy analysis: Implications for policy-practice connections. *Journal of Education Policy* 12(5): 419–445. DOI: 10.1080/0268093970120509.
- McCaig, C and Adnett, N. (2009). *English Universities, Additional Fee Income And Access Agreements: Their Impact On Widening Participation And Fair Access*. *British Journal of Educational Studies* 57(1): 18–36. DOI: 10.1111/j.1467-8527.2009.00428.x
- McMillan W (2015) Theory in healthcare education research: the importance of worldview. In: Cleland J, Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons Ltd, pp. 15–24.
- Medical Schools Council (2014a) *A Journey to Medicine: Outreach Guidance*. London.
- Medical Schools Council (2014b) *Selecting for Excellence Final Report*. London.
- Milburn A (2012) *Fair Access to Professional Careers. The Independent reviewer on Social Mobility and Child Poverty*. London.
- Molesworth M, Scullion R and Nixon E (2011) *The Marketisation of Higher Education and the Student as Consumer*. Oxon: Routledge.
- Ng CJW (2016) ‘Hottest brand, coolest pedagogy’: approaches to corporate branding in Singapore’s higher education sector. *Journal of Marketing for Higher Education* 26(1): 41–63. DOI: 10.1080/08841241.2016.1146388.
- Office of Fair Access (OFFA) (2017) *OFFA access agreement guidance – universities must play their part to raise school attainment*. London.
- Patterson F, Knight A, Dowell J, et al. (2016) How effective are selection methods in medical education? A systematic review. *Medical Education* 50(1): 36–60. DOI: 10.1111/medu.12817.
- Pennycook A (1994) The Politics of Pronouns. *ELT Journal* 48(2): 173–178. DOI: 10.1093/elt/48.2.173.
- Radice H (2013) How We Got Here: UK Higher Education under Neoliberalism. *ACME: An International E-Journal for Critical Geographies* 12(3): 407–418.
- Razack S, Maguire M, Hodges B, et al. (2012) What Might We Be Saying to Potential Applicants to Medical School? Discourses of Excellence, Equity, and Diversity on the Web Sites of Canada’s 17 Medical Schools. *Academic Medicine* 87(10): 1323–1329. DOI: 10.1097/ACM.0b013e318267663a.

- Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.
- Reay D, David M and Ball SJ (2005) *Degrees of Choice: Social Class, Race and Gender in Higher Education*. Stoke on Trent: Trentham Books Ltd.
- Russell Group (2015) *Opening Doors*. London.
- Russell Group (2016) Russell Group | Facts and figures. [Internet] Available at: <http://russellgroup.ac.uk/about/facts-and-figures/> (accessed 5 July 2016)
- Saichaie K and Morphew CC (2014) What College and University Websites Reveal about the Purposes of Higher Education. *The Journal of Higher Education* 85(4): 499–530. DOI: 10.1080/00221546.2014.11777338.
- Schuh AM and Miller GM (2006) Maybe Wilson Was Right: Espoused Values and Their Relationship to Enacted Values. *International Journal of Public Administration* 29(9): 719–741. DOI: 10.1080/01900690600767583.
- Scottish Government (2016) *The Final Report of the Commission for Widening Access: A Blueprint for Fairness*. Edinburgh.
- Shaw J, Brain K, Bridger K, et al. (2007) *Embedding widening participation and promoting student diversity: What can be learned from a business case approach?* The Higher Education Academy. York.
- Shaw SE and Greenhalgh T (2008) Best research-for what? Best health-for whom? A critical exploration of primary care research using discourse analysis. *Social Science & Medicine* 66(12): 2506–19. DOI: 10.1016/j.socscimed.2008.02.014.
- Sheeran Y, Brown BJ and Baker S (2007) Conflicting philosophies of inclusion: the contestation of knowledge in widening participation. *London Review of Education* 5(3): 249–263. DOI: 10.1080/14748460701661302.
- Simões C and Soares AM (2010) Applying to higher education: information sources and choice factors. *Studies in Higher Education* 35(4): 371–389. DOI: 10.1080/03075070903096490.
- Snow DA and Benford RD (1988) Ideology, Frame Resonance and Participant Mobilization. *International Social Movement Research* 1(1): 197–217.
- Steven K, Dowell J, Jackson C, et al. (2016) Fair access to medicine? Retrospective analysis of UK medical schools application data 2009-2012 using three measures of socioeconomic status. *BMC medical education* 16(1): 11–21. DOI: 10.1186/s12909-016-0536-1.
- Taylor S (2004) Researching educational policy and change in ‘new times’: using critical discourse analysis. *Journal of Education Policy* 19(4): 433–451. DOI: 10.1080/0268093042000227483.
- van Dijk TA (2008) *Discourse and Power*. New York: Palgrave Macmillan.

van Hulst M and Yanow D (2016) From Policy “Frames” to “Framing”. *The American Review of Public Administration* 46(1): 92–112. DOI: 10.1177/0275074014533142.

Verger A (2012) Framing and selling global education policy: the promotion of public–private partnerships for education in low-income contexts. *Journal of Education Policy* 27(1): 109–130. DOI: 10.1080/02680939.2011.623242.

Wilkins A and Burke PJ (2013) Widening participation in higher education: the role of professional and social class identities and commitments. *British Journal of Sociology of Education* 36(3): 1–19. DOI: 10.1080/01425692.2013.829742.

Wilson I, Griffin B, Lampe L, et al. (2013) Variation in personality traits of medical students between schools of medicine. *Medical Teacher* 35(11): 944–8. DOI: 10.3109/0142159X.2013.827331.

Wodak R and Meyer M (2010) Critical Discourse Analysis: history, agenda, theory and methodology. In: Wodak R and Meyer M (eds) *Methods of Critical Discourse Analysis*. London: SAGE Publications, pp. 1–33.

Young ME, Razack S, Hanson MD, et al. (2012) Calling for a Broader Conceptualization of Diversity. *Academic Medicine* 87(11): 1501–1510. DOI: 10.1097/ACM.0b013e31826daf74.

Zhang T (2017) The Marketization of Higher Education Discourse: A Genre Analysis of University Website Homepages in China. *Higher Education Studies* 7(3): 64. DOI: 10.5539/hes.v7n3p64.

6.4 Key Findings

Study Two revisits the data in Study One from a new perspective. It contributes a novel exploration of how UK medical schools use rhetorical and linguistic strategies to communicate a particular interpretation of WA to medicine to audiences. Findings emphasise how different discursive frames create medical schools' distinctive institutional stance towards WA. The study reveals how these institutional stances each imply a set of underlying perceptions and values, and how these are shaped by the wider Higher Education and policy context. No one discursive frame was used consistently by all schools, which suggests there is currently no consensus on the optimal way to interpret and present WA to general audiences. Box 6.3 highlights the objectives, key findings and conclusions of this work.

In the next chapter, the focus of the thesis shifts away from UK medical schools and on to those they seek to target with WA: high school teachers and pupils (Studies Three and Four respectively). As before, first I discuss the Methodology for these studies (Chapter 7) before presenting the studies themselves (Chapters 8 and 9).

Box 6.3 Study Two: Summary of key points

Objectives:

- To investigate how UK medical schools discursively frame their approach to WA enactment on their webpages
- To consider the key messages these frames might communicate to audiences about how WA should be interpreted and enacted

Key Findings:

- ✓ Three distinct discursive frames are used to present UK medical schools' preferred institutional stance regarding the purpose, process and outcomes of WA
- ✓ These stances present WA as: a 'requirement'; a 'value'; or a 'service'
- ✓ The institutional stance reflects the schools' espoused ideology and values to important stakeholders
- ✓ Each depiction of WA may attract some key stakeholders and deter others
- ✓ No one discursive frame is used substantially more/less, suggesting that there is no strong consensus on how WA enactment should be interpreted and presented
- ✓ The lack of a dominant frame also suggests there is no clear strategic advantage to the use of any one discursive frame

Conclusions and recommendations:

- These texts feed into and shape wider discourses about WA. Medical schools should critically evaluate whether their publicity material accurately portrays their intended institutional stance on WA
- Policy makers should consider how the competing pressures of inclusivity and elitism within the modern Higher Education marketplace may contribute to a lack of consensus in the interpretation of WA policy

Chapter 7

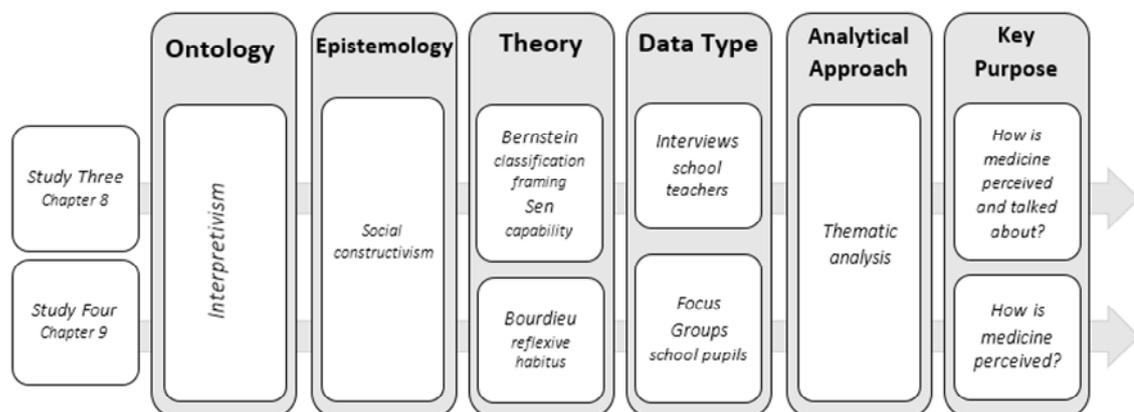
Methodology for Studies Three and Four

7.1 Introduction

This final part of the Methodology (Part Three) discusses the research design of Studies Three and Four (*Teachers' perceived role in WA to medicine* (Chapter 8) and *Exploring school pupils' perceptions of medicine* (Chapter 9)). As before, these are presented in the format of articles for journal publication and thus an explanation of the theoretical and analytical steps are included in their write-ups. This methodology chapter therefore concentrates on the reasons and justifications for the approaches taken within the research design and the alternatives considered, rather than providing a reiteration of the study methods.

Studies Three and Four are presented together in this chapter as they share some key similarities: both are situated within the social constructivist paradigm, share a thematic approach to analysis and utilise data collected from the same settings. The studies are however designed around different research questions and utilise different theoretical frameworks to achieve their aims. The studies' research designs are summarized visually in Figure 7.1 for comparison:

Figure 7.1 Visual summary of the research designs for Studies Three and Four



This chapter presents the aims of Studies Three and Four and relates these to the overall aims of the thesis. The next section discusses the underpinning philosophical

paradigm with reference to the studies' purpose. I then present an overview of data collection and analysis, and justify these approaches, including an outline of measures taken to ensure high ethical standards and levels of trustworthiness. The final section discusses the theoretical frameworks chosen for each study.

7.2 Aims

To recap, the first two studies of this thesis (*Discourses of WA on medical school websites* (Chapter 5) and *Framing WA to medicine* (Chapter 6)) investigate how UK medical schools draw from, and contribute to, discourses of WA to medicine. In Studies Three and Four, I investigate how these discourses and their associated messages are carried forward and managed by two key groups: high school teachers and pupils (see Figure 7.2, below).

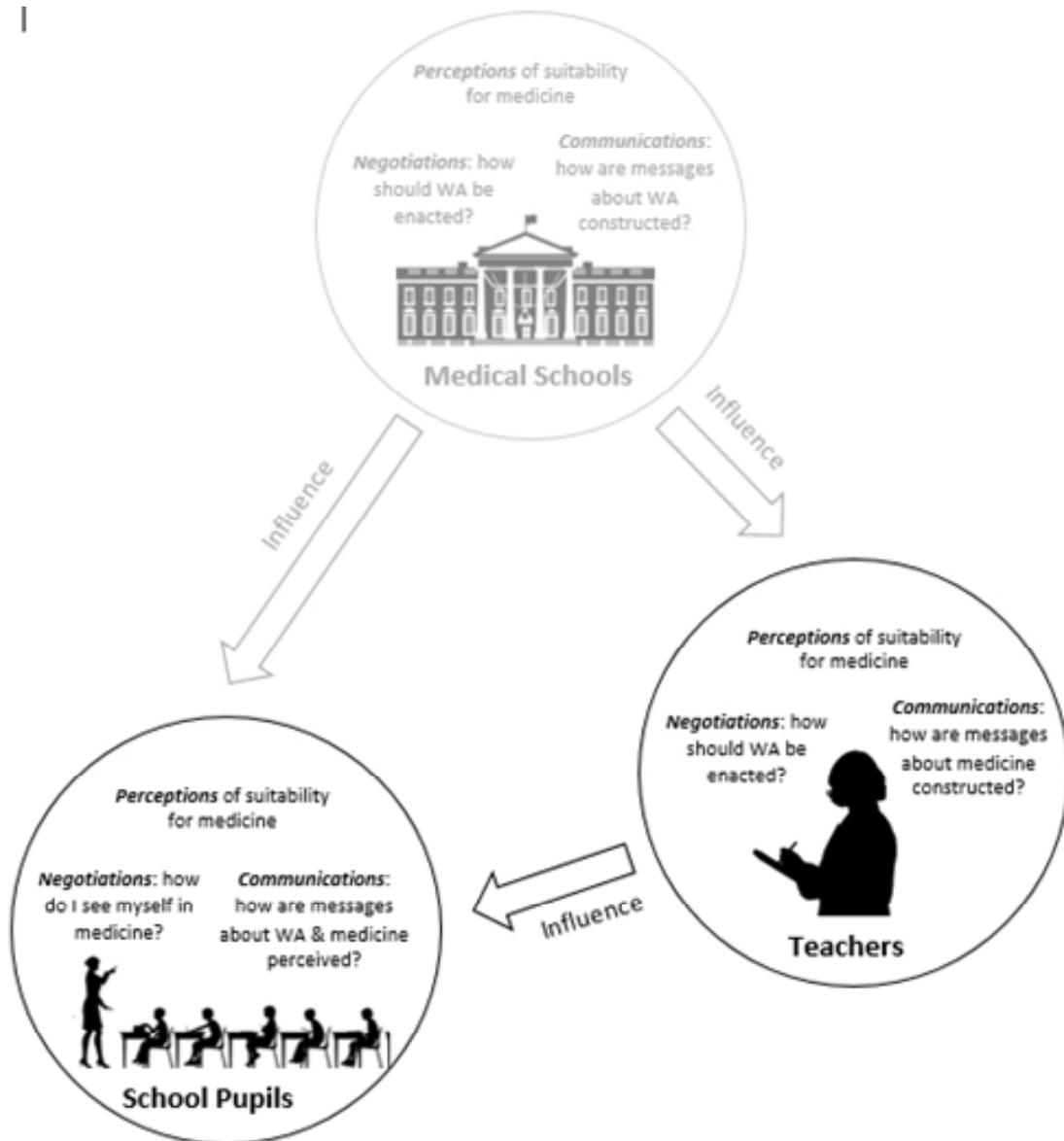
These studies aim to address the following two overarching research questions within this thesis (see section 1.6, p.11):

1. How do school teachers from UK WA schools perceive and communicate who is 'suitable' for medicine?
2. How do high-achieving pupils from non-traditional backgrounds perceive 'suitability' for medicine?

To address these questions, I sought a method of data collection that would allow teachers and pupils to share their views and opinions, and an analytical and theoretical framework that would explain their behaviours and represent their perspectives.

These are discussed in full below.

Figure 7.2 Linking themes – focus of Studies Three and Four (teachers and pupils)



7.3 Paradigm

All the studies within the thesis are situated within an interpretivist ontology, which considers realities to be temporal and subjective, and to be shaped by the individual's prior experiences (see section 3.5, p.59).

The first two studies in this thesis (Chapters 5 and 6) took a criticalist stance and strongly focused on the ways in which language was used to achieve particular goals with particular audiences (see section 4.3 for a full discussion).

In contrast, in Studies Three and Four, I intended to focus on content - experiences, perceptions and interpretations as reported by participants - to create understandings about the lived realities and perspectives of participants, how they made sense of the world and their place in it. These studies thus take an epistemological stance of social constructivism. This paradigm understands meaning to be co-constructed between researcher and participant, and that subsequent knowledge is representative of the subjective realities of participants (see section 3.4.2, p.56 for a full discussion).

Social constructivism understands researchers to be a subjective part of the research process, and that their aim is to portray a credible and fair representation of participants' experiences. Therefore, upon adopting this paradigm, I was aware of the importance of reflexivity within all stages of knowledge construction, to ensure my own bias did not unfairly colour my interpretations.

7.4 Data Collection

This section presents my decisions surrounding data collection. It discusses the methods of data collection, presents the interview setting and the choice of participants. It then presents an overview of the process of participant recruitment, with a particular focus on navigating gatekeepers and 'insider' assistance. The section concludes with a discussion of the anticipated challenges to trustworthiness and ethical practice during data collection.

7.4.1 Methods of Data Collection

In both studies, I decided to collect data via some form of interview. Interviews aim to replicate elements of a 'natural' conversation between participant(s) and researcher and are an effective method to explore meaningful perspectives and elicit in-depth information (DiCicco-Bloom and Crabtree, 2006). If the researcher aims to build understandings and to explore opinions and attitudes (rather than collect 'facts') through interviews, this method aligns well with a constructivist paradigm (Savin-Baden and Howell Major, 2013).

Study Three: Why semi-structured interviews?

For data collection with teachers, I considered one-to-one interviews to be most appropriate. I felt the privacy of a one-to-one interview might encourage participants to voice their own views and be more critical, whereas in a group interview they might feel obliged to agree with other staff members or superiors (Savin-Baden and Howell Major, 2013).

The three main 'types' of one-to-one interview sit on a spectrum from very structured to very unstructured (King and Horrocks, 2010). In the middle of this spectrum is the 'semi-structured interview'. In semi-structured interviews, the researcher follows a pre-set interview guide but is free to probe complex or pertinent participant responses. The participant may also share unprompted opinions or topics (DiCicco-Bloom and Crabtree, 2006). This approach thus provides structure for efficiency and comparability, as well as flexibility for rich, in-depth and spontaneous data creation.

I decided to undertake semi-structured interviews and prepared an interview guide (see Appendix F). I intended to use the guide flexibly and actively encourage participants to engage in additional discussions or raise other points of interest. I hoped this informal approach would help participants (and myself!) relax and encourage more 'natural' and unguarded conversation. I made small alterations to the interview guide as interviews progressed to focus on topics of most relevance and incorporate ideas developed in earlier interviews into later ones (Kvale, 1996). These minor alterations were anticipated and I had included this in my application for ethical approval.

To ensure the interview process could be judged as dependable and credible, I included a summary of the interview questions and format in the study's write-up (p.199).

Study Four: Why focus group interviews?

From the outset, I wanted to interview school pupils in a group for three reasons:

1. I thought pupils would find the discussion less intimidating if they were in a group of peers, rather than one-to-one with a researcher they had not met before. I wanted to create a relaxed, informal environment, in order to allow richer and

more naturalistic data - including jokes, teasing and arguments – to be produced (Savin-Baden and Howell Major, 2013).

2. I was keen to capture the way participants created shared meanings and perspectives through a process of negotiation amongst peers. A focus group interview method particularly encourages this, and can be used to capture group consensus (Barbour, 2005; Savin-Baden and Howell Major, 2013; Stalmeijer et al., 2014). The method aligns well with the social constructivist paradigm as this emphasises the social element of meaning-making (see section 7.3).
3. I thought that there was a higher possibility that more 'honest' answers or sensitive topics and experiences might be shared if these were raised organically by the group (rather than prompted by an interviewer). For example, from my previous experience working with groups of young people, I knew that if a more confident pupil shared an anxiety, 'taboo' subject or personal difficulty, this often stimulated other pupils to agree, empathise and also share their experiences. (At the same time I was aware that these situations must be managed well by the moderator to ensure the participants are not distressed (see section 7.4.4)).

In the focus groups, I first asked pupils to complete an activity together, with minimal intervention from myself (the moderator). I anticipated that 'loosening up' the group dynamic with an 'ice-breaker' would enhance data quality, create more 'natural' talk and allow the group to relax and get used to the microphone (Savin-Baden and Howell Major, 2013). I also anticipated some disadvantages: without moderator involvement, participants were much more likely to interrupt or talk over each other, discuss irrelevant topics and present thoughts informally (unfinished answers, unclear speech etc.) I anticipated this would reduce the quality of the recording, however, decided the benefits outweighed the disadvantages.

The focus group topic guide is included as Appendix G. An overview of the activity and topics pupils were prompted to discuss is detailed in the write-up of Study Four to allow the reader to judge the dependability and credibility of the process (p.232).

Interview setting

I decided to conduct the interviews and focus groups at participants' schools. I hoped the familiar setting would allow participants to feel more relaxed, and also perhaps more empowered and less 'guarded' in their responses (Savin-Baden and Howell Major, 2013). As this would also make participation more convenient, I hoped it might also boost recruitment. Finally, it gave me the chance to visit the schools and gain a wider sense of the context in which to situate my interpretations.

7.4.2 Defining the Sample

Selecting the schools

Throughout the thesis I was keen to examine how the interactions between medical schools, teachers and pupils shaped their perceptions of medicine and WA (see Figure 7.2, p.164). I thus sought participants who attended schools targeted by, and engaged with, medical schools' WA activities.

Previous studies on similar topics have tended to focus their recruitment in one geographical area (see p.231). This is perhaps because these studies were, at least partially, designed to inform the WA initiatives of a local medical school and 'barriers' to medicine tend to be very context specific (Gorard et al., 2006). However, I decided to select schools in a range of locations to investigate if there were deeper socio-cultural trends across the UK that transcended material and contextual differences and school systems. I hoped this would contribute useful new insight into the issue and enhance the transferability of the knowledge produced.

Purposive sampling (Bryman, 2012) ensured that the participants' schools met widening access eligibility criteria (see section 1.2.2). It also meant that I was able to balance the number of participating schools across my three selected regions (North East Scotland, Southern England and inner London).

I also considered inviting WA high schools from the Fife region to participate as I already had contacts in these schools. However, I decided against this for three reasons: Firstly, as I had previously worked with some of the teachers, I felt this could

alter the information they felt comfortable sharing in interview. Secondly, it might have been more difficult for me to prevent my prior knowledge of them unfairly colouring my interpretations. Finally, I felt that Fife schools would share many of the similarities of the northeast Scotland schools but perhaps to a lesser extent, and therefore were less likely to substantially widen the range of perspectives.

I did not plan comparison groups into the research design (e.g. teachers and pupils from high-performing, private or grammar schools; or from low-performing schools that do not engage with WA initiatives). Comparative studies may have also produced interesting results and are acknowledged as an area for future research (p.217, p.246 and p.272). However, to provide a tighter fit with the overall thesis aims, and to enable sufficient data collection and rigorous analysis under practical constraints, I decided to focus analysis on one 'type' of schools in my thesis.

Study Three: Selection of teachers

In Study Three I aimed to investigate how teachers understood their role in WA to medicine, and subsequently how they advised pupils about this subject. I planned to conduct a relatively small number of interviews (approx. 10-15) in order to allow very close attention to each, and to focus my inquiry on the dynamic and complex qualities inherent within participants' individual situations and perspectives (Crouch and McKenzie, 2006).

Having worked as a WA officer (see Appendix C), I knew that in many WA schools a teacher with a special interest would volunteer to be the 'key advisor' for medicine. I thus expected participants' substantive roles in the school to be quite varied (e.g. science teacher, guidance teacher, Head of Form). I did not consider this a disadvantage as I did not wish to directly compare teachers' practice and rather sought to understand commonalities underlying their experiences and perceptions of role (e.g. ideas of confidence, risk, duty). Furthermore, in qualitative work, variety of experience and a range of perspectives is actively sought rather than avoided (Savin-Baden and Howell Major, 2013).

Study Four: Selection of Pupils

The focus of Study Four was to understand how pupils in WA schools perceived medicine, and how they negotiated this perception with their own ideas of a good or 'suitable' career.

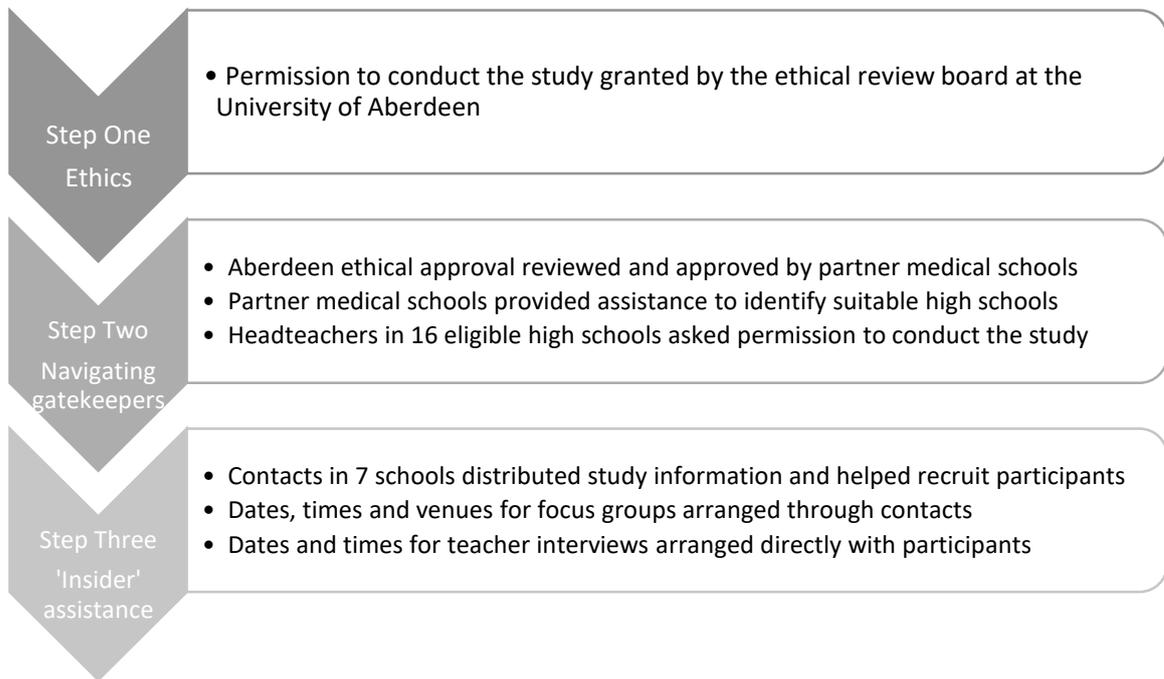
I thus invited pupils in their final two years at school who were academically able and interested in science subjects to participate. I reasoned that these pupils were more likely to: be seriously considering their post-school choices and be well-positioned through ability and interest to consider medicine. They were also more likely to have participated in medical schools WA initiatives as these are mostly targeted at ages 16+.

As I was particularly keen to capture the group consensus and process of negotiation surrounding a career in medicine, I actively sought to include pupils who were *not* considering medicine as well as those who were. I reasoned that a range of perspectives in the group would stimulate richer discussion and debate about both what attracts *and* deters pupils from the career. Additionally, I thought a range of perspectives within the group would mean participants might challenge each other to justify their opinions with more than the 'expected and accepted' reasons to be interested in medicine, and thus produce richer data of lived experiences – not just what participants felt they 'should' say (Savin-Baden and Howell Major, 2013).

7.4.3 Organising Data Collection: Ethics, Permissions and Recruitment

This section details the steps I took to gain consent and organise recruitment for Studies Three and Four. Figure 7.3 presents the main phases of this process in summary:

Figure 7.3 Overview of steps to organise data collection (Studies Three and Four)



Step One: gaining ethical approval

The importance conducting ethically sound research is discussed in Part One of the methodology (see section 3.8, p.65). Universities' ethical review boards require all research to be adhere to these high ethical standards. Permission to conduct the programme of work incorporating Studies Three and Four was granted by the Committee for Research Ethics and Governance in Arts and Social Sciences and Business at the University of Aberdeen. Confirmation is attached in Appendix E.

Step Two: navigating gatekeepers

As discussed in section 7.4.2, I had identified three geographical regions in which to invite teachers and pupils to participate. The eligible high schools in each of these regions were partnered for outreach activities with one key medical school. I thus considered these medical schools to be gatekeepers to accessing participants (see Box 7.1 for a discussion of gatekeepers).

Box 7.1 Working with Gatekeepers

Gatekeepers are defined as “someone who has the authority to grant or deny access to potential participants and/or the ability to facilitate such access” (King and Horrocks, 2010, p.31). In some cases, gatekeeper permission to conduct the study is obligatory. When gatekeeper permission is not required, their permission can nonetheless be advantageous in identifying and recruiting participants, and to reassure them of the credibility and trustworthiness of the study.

As general good practice, gatekeepers should be provided with an overview of the study, copies of the materials participants will receive (e.g. information sheets and consent forms) and be assured of the level of anonymity for individuals and the institution (King and Horrocks, 2010).

I contacted the Ethics Committees at Barts and the London School of Medicine and Southampton Medical School to make them aware of the study and ask their permission to proceed with the study. I forwarded full details of the study and the original ethical approval with my request. Both committees confirmed via email that they were satisfied to accept Aberdeen’s ethical approval.

Following the medical schools’ approval, I contacted their WA teams, discussed my study aims in detail and requested they suggested a number of partnered schools which they thought would be most suitable to include. Overall they recommended five high schools in northeast Scotland; six in southern England; and five in London.

The second set of gatekeepers were Headteachers. I contacted the Headteachers of the recommended schools by post and email to explain the study and request permission to conduct this in their schools. Accompanying my letter was a standardized information sheet for Headteachers, as well as copies of the material participants would be given (see Appendices H, J-P).

Headteachers were provided with a consent form which they were asked to complete and return to me if they were happy for the study to be conducted in their school (see

Appendix I). On this form they were asked to nominate a teacher within the school as a 'contact' to help me to identify and recruit suitable participants and organise a time and venue for the focus group. I made Headteachers aware that this contact did not have to participate in the study, and that I could not report on which individuals had participated in the studies order to preserve their anonymity (King and Horrocks, 2010). Of the sixteen Headteachers contacted, eight responded to agree the study could take place in their school.

Inducement to participate was framed as aiding research to inform WA to medicine by recognising and investigating voices from inside high schools (see the information sheets, Appendices H, J, L and M). Although the lack of payment or tangible reward increased the likelihood participation was truly voluntary, it also increased the likelihood that schools and individuals who were already motivated to engage with and improve WA were more likely to participate (King and Horrocks, 2010). I did not consider this a threat to the credibility of the study as these were always my intended participant groups, however, this aspect is highlighted in the write-ups as an important consideration for the reader when viewing the results (p.217 and p.246).

Step 3: Enlisting the use of 'insider' contacts

As discussed above, Headteachers had been asked to nominate a contact within the school to assist with recruitment and organisation. The role of 'insider' assistance is discussed in Box 7.2. Although the use of insider contacts was of great benefit to the study, it also required me to take extra measures to ensure trustworthiness and ethical standards were not compromised.

Box 7.2 'Insider' assistance with recruitment

The help of an 'insider' within an institution to assist with recruitment has both advantages and disadvantages (King and Horrocks, 2010, p.31-32). 'Insiders' know the individuals and structures within their institution, and can thus be a great help in passing on information about the study to eligible individuals. Moreover, their endorsement of the study is likely to boost recruitment.

However, there are also risks: Firstly, it is possible that the individual assisting recruitment is biased, or might only invite participants with certain views. Secondly, the individual may exert pressure on others to participate, thus endangering true voluntary consent (King and Horrocks, 2010).

I emailed the recommended 'contact' teachers to introduce myself and to introduce the study. I explained that their Headteacher had nominated them to help me organise the interviews, but that they were also free to recommend another contact if they wished. I attached information about eligibility and organisation of the pupil focus groups and a copy of all the participant materials to ensure they felt fully informed of what participation would entail for teachers and pupils (Appendices J - P).

My contacts' prior knowledge of the staff and pupils in their schools was a huge advantage in the identification of potential participants. The contacts' level of control over the process did mean that bias in participant recruitment was possible, however, I deemed it a relatively small risk as the contacts were not asked to make judgements about the pupils' suitability for medicine. To further reduce any bias, I kept the eligibility criteria for participation purposely loose (see Appendices H, L and M), encouraged contacts to invite any individuals they thought might be suitable and not to turn any volunteers away if they were interested. I kept in regular contact with contacts via email to answer any questions and to monitor recruitment (King and Horrocks, 2010).

I was more concerned that teachers and pupils might feel pressurized into participation by the contact, thus threatening truly voluntary consent.

I decided that teachers were in a sufficiently powerful position to resist pressure to participate should they choose to. I also suspected that there would be more than one eligible individual within each school and therefore it was less likely one individual would feel 'forced'. I also asked teachers to contact me directly if they wished to participate via email to arrange a time (rather than through the contact) to help preserve anonymity and reduce any pressure (King and Horrocks, 2010).

I was more concerned that pupils might feel coerced into participation if they were 'invited' (asked? told?) to participate by a teacher. I tried to mitigate this by stating clearly on the information sheets that participation was voluntary, and reiterating this regularly to the contacts in my communications with them. However, I could not guarantee this message was reaching to the pupils via the contacts. I therefore decided to spend extra time discussing voluntary consent with the pupils at the start of the focus groups (see section 7.4.4 below).

Contacts from seven of the eight of schools responded and agreed to help organise the interviews and focus groups. I contacted the non-respondent two subsequent times without a positive response. Data was collected between September and November 2016.

7.4.4 Moderating: Maintaining Quality and High Ethical Standards

This section describes the anticipated ethical considerations and possible challenges to trustworthiness during the data collection process and the measures I adopted to mitigate these.

Informed and voluntary consent

At the start of the interviews and focus groups, I gave participants another copy of the standardized information sheet and described the purpose, process and intended outcomes of the study verbally. I also outlined the extent to which data would be anonymized and how it would be held confidentially.

In focus groups, I included a verbal statement clarifying that although each participant had the right to disclose *their own* participation in the focus group if they chose to do

so, they were not at liberty to disclose who else had participated. Moreover, I requested that the conversation of the focus group remained between the participants. These measures were to urge focus group participants to respect each-others' right to anonymity and confidentiality (see section 3.8.1).

I gave participants the opportunity to ask questions, and made them aware that they could withdraw consent or choose to not participate at any time with no adverse effects. As per above (section 7.4.3) I had particular concerns about whether pupils' participation was entirely voluntary or whether they might have felt compelled to participate. As a result, I made it clear that they were free to return to class or break at any time during the focus group without needing to give a reason.

All participants were then asked to provide written consent, including for the sessions to be audio-recorded for later transcription (see Appendices K and N). As discussed in section 3.8.1, consent was considered to be 'on-going' rather than a 'one-off' process, and I was alert to any signs of misunderstanding, discomfort or distress from participants during the interviews and focus groups (King and Horrocks, 2010).

Focus group participants were asked to complete a personal information sheet in order to collect demographic data (Appendices O and P). I was aware of the power differential between myself and the pupils and therefore again sensitive to the possibility that pupils might feel coerced into providing this information. As a result, I told them they could leave sections blank if they wished.

Role as interviewer/moderator

At the start of data collection, I made my own position clear to participants: I presented myself as a research student and explained the type of research undertaken in my wider research team. I clarified that I was not a medical doctor, nor a staff member of any of the medical schools or WA teams, and was upfront about my interest in the topic.

I hoped my transparency would help to build trust and rapport with participants (Kvale, 1996). I was aware that when there is a power differential between participant and researcher, participants might be inclined to only reveal information they deem as

'socially acceptable' rather than their accurate experiences (King and Horrocks, 2010). I hoped that presenting myself (honestly) as a student and an 'outsider' to the medical world would help reassure participants that they could speak freely in front of me. I assured all participants there were no 'right or wrong' answers and it was their opinions I was most interested in (Savin-Baden and Howell Major, 2013).

To ensure the data created was rich and trustworthy, in advance of conducting the sessions I familiarized myself with 'good practice' guidelines for conducting interviews (see e.g. King and Horrocks (2010) and Kvale (1996) and for moderating focus groups (see e.g. Savin-Baden and Howell Major (2013, p.385)). I also attended interview training and practiced my interview techniques in advance (see PhD Portfolio, Box 10.1).

7.5 Transcription

Although transcribing the recordings myself could have been a valuable step in familiarization with the data (Braun and Clarke, 2006), this is extremely time consuming and I instead chose to submit the audio files to a professional transcription service for verbatim transcription. After transcription, I corrected the transcripts against the audio-recordings in order to ensure accuracy and that 'incorrect' grammar, mispronunciations, dialect and slang were still included (King and Horrocks, 2010). I tried to decipher the sections of the transcripts marked by the transcribers as [unclear], but did this erring on the side of caution if I was in any doubt - I did not want to put words into the participants' mouths (King and Horrocks, 2010). These processes were very time-consuming but increased the richness of the data and thus the confirmability of conclusions drawn.

At this point I also deleted any text from the transcript that participants had requested to be "off the record" and replaced this with a vague description (e.g. [participant describes family pressure]). I also removed speech that I judged to have been purposefully obscured (e.g. whispers) as I assumed participants did not intend for these to be recorded. Finally, I removed any personal information that I felt participants had

intended to be shared among their peers, rather than officially within the focus group (e.g. I thought the participant had perhaps forgotten the microphone was recording).

7.5.1 Anonymity and Confidentiality

Whilst 'cleaning' the transcripts, I ensured these were fully anonymized and any identifying aspects were removed.

Participants' demographic data was collated on a password-protected spreadsheet on my central University drive (secure, requires personal log in). Identifiers were added to this spreadsheet so participants' contributions could be identified if necessary (e.g. if they withdrew consent and wished for their data and contributions to be deleted). This spreadsheet was used for an anonymous descriptive analysis of participants (see Table 9.1) but otherwise not referred to during analysis.

In the write-up of the pupil's study, I wished to personalise the quotes by using pseudonyms rather than identifiers. The pseudonyms were randomly generated using the website: <https://www.name-generator.org.uk/quick/>

I transferred audio files to my password-protected central University drive and then deleted from recording equipment on the same day, or day after, sessions had taken place. Physical copies of consent and personal information forms were stored in locked filing cabinets. Electronic copies were securely stored on my password-protected University drive.

Personal data will be kept according to the University of Aberdeen's data guidelines and in accordance with the Data Protection act. These are detailed on the information sheet for participants (see Appendices H, L and M).

7.6 Data Analysis

This section presents an overview of the thematic approach to analysis. In it, I outline the varieties of thematic analysis and their relationship to theory, and present the

reasons I chose template analysis. This section concludes with an overview of measures taken to ensure trustworthiness and high ethical standards during analysis.

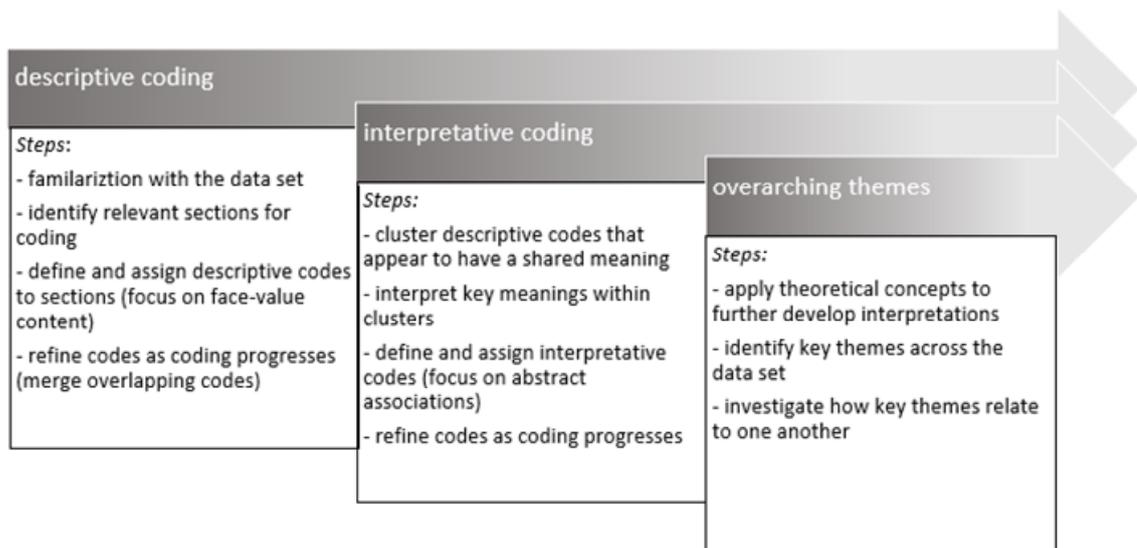
7.6.1 Overall Analytical Approach: Thematic Analysis

In Studies Three and Four I aimed to explore the experiences of participants from a wide range of locations and backgrounds. I thus sought an analytical approach that would allow me to organise and analyse a large and diverse data set for the identification of key patterns, similarities and differences. I was drawn to thematic analysis as this facilitates “cross-case” analysis: enabling a collection of experiences to be linked through common patterns or ‘themes’ (King and Horrocks, 2010). ‘Themes’ are defined as:

recurrent and distinctive features of participants’ accounts, characterising particular perceptions and/or experiences, which the researcher sees as relevant to the research question (King and Horrocks, 2010, p.150).

The analytical steps involved in thematic analysis are not prescriptive and a range of analytical frameworks are available (see section 7.6.2). However, there are some commonalities within approaches (Braun and Clarke, 2006) - these are presented in Figure 7.4. Steps tend not to be followed in a totally linear fashion and rather are recursive – with researchers moving back and forth through the phases as required (Braun and Clarke, 2006)

Figure 7.4 Overview of key analytical steps within thematic analysis



Thematic analysis is not coupled with any particular theoretical framework (Braun and Clarke, 2006). As a result, it can be combined with theory in various ways:

- It can be data-driven (inductive): conducted in the absence of any defining theoretical framework. This approach heightens the possibility for unprecedented insights, novel themes or new theoretical concepts to be developed. However, without the application of theory analysis may remain descriptive rather than become evaluative or explanatory (Braun and Clarke, 2006).
- A theoretical framework can be applied from the outset to aid interpretation and to illuminate relevant aspects of identified themes (King and Horrocks, 2010). This theory-driven, deductive approach may make analysis more efficient, but may also 'blinker' analysis to a restricted range of interpretations (Braun and Clarke, 2006).
- Finally, thematic analysis permits a 'hybrid' approach which is a combination of both inductive and deductive phases (see e.g. Fereday and Muir-Cochrane, (2006)).

Finally, thematic analysis is not aligned with any particular philosophical paradigm (Braun and Clarke, 2006). Within constructivist paradigms thematic analysis is understood to 'unpick' the ways in which events, realities, meanings and experiences are constructed by societies. This aligns well with the purpose of Studies Three and Four.

7.6.2 Analytical Framework: Template Analysis

As my studies were largely exploratory, I was drawn to a data-driven (inductive) version of thematic analysis to optimise the possibility for unanticipated insights to be developed. I thus first considered Braun and Clarke's (2006) guidelines. These encourage the researcher to first code all data as extensively as possible and then gradually interpret and organise these codes into themes (Braun and Clarke, 2006, p.89). Although the inclusiveness of this approach is a strength in a data-driven study, I was concerned that this was not an ideal fit for my own research style. For example, I thought that, following initial coding, I might find refining and reducing such extensive unorganised codes perplexing and potentially paralysing. I therefore sought an approach that would permit more structure in the analysis earlier on, but yet maintain an inductive character.

The approach I found was template analysis (King, 2004). Template analysis constructs a coding structure (template) on a sub-sample of the data, thus allowing the initial steps to be inductive, but still introducing more structure relatively early in the process. This alleviated my fears of being overwhelmed by the enormity of a fully coded, but non-organised data set. The template is then repeatedly revised and refined as coding progresses, and thus remains flexible to allow for unexpected insights (King and Horrocks, 2010). A final template is eventually produced and applied to all data. This ensures that any aspect which might have been 'missed' or overlooked in previous phases of analysis is included, and it confirms/challenges the suitability of the template itself (King, 2004). This final template also serves as the foundation for theoretical interpretation of the data set and provides a structure for the write-up of findings. The final templates for Studies Three and Four can be found in Appendices Q and R.

7.6.3 Ensuring Trustworthiness in Analysis

The flexibility and recursive approach within thematic analysis is considered a strength, as it optimises the potential for novel and insightful findings to be developed (Braun and Clarke, 2006). However, the approach has been criticised for a lack of firm guidelines and transparency (Attride-Stirling, 2001; Hollway and Jefferson, 2003). As a result, I put several measures in place to ensure and demonstrate trustworthiness.

I met with my supervisors/co-authors on a regular basis to discuss the reasoning behind decisions and to challenge myself to critically and reflexively examine these in a way that ensured confirmability. These discussions also pushed me to ensure that my themes were sufficiently clear and distinct, and that I could explain these to others in a credible way (Braun and Clarke, 2006).

These discussions also provided a form of analyst-triangulation. My supervisors and I have distinct academic and professional backgrounds and interests, and they encouraged me to consider alternative interpretations of the data from a range of perspectives (Barbour, 2001).

To facilitate confirmability I asked my supervisors to critically scrutinise my developing template (with reference to the transcripts) at key 'quality-check' stages (King and Horrocks, 2010). This 'code-confirming' approach is less rigorous than the 'code-defining' approach (asking others to independently code the data and comparing results), but it was agreed that we would employ the latter technique if significant differences were found during code-confirmation.

To ensure dependability, I produced a comprehensive and reflexive audit trail throughout the analytical process of both studies. This recorded all the major decisions made when developing and organising the themes, and justified the key interpretations. I organised the data and built the template using NVivo Tools software, and stored successive versions of my thematic structure in dated files to preserve the trail of decisions and changes.

Finally, I considered the use of respondent feedback. This technique asks participants to assess how well the analysis and interpretations fit their own understandings of the

phenomena - their validation can be seen to enhance credibility (King and Horrocks, 2010). However, employing respondent feedback is not always suitable (Barbour, 2001) and I decided against it for the following reasons:

- Due to the power imbalance between researcher and participants (particularly in the case of the school pupils), I felt participants might feel obliged to agree with my interpretations even if they did not (King and Horrocks, 2010).
- I anticipated that the teachers and pupils I interviewed would be very busy and that requiring them to attend another session (or give written feedback on the analysis) might be a barrier to recruitment.
- I questioned the value of respondent feedback given the purpose of the study: for example, it cannot be assumed that participants are consciously aware of their own underlying motivations, biases, or preferences (Iphofen, 2005) nor that they would agree these influenced their behaviour.
- Participant feedback is thought to be most useful in studies involving consistent and repeated contact with participants (Barbour, 2001).

7.7 Conceptual Frameworks

As discussed in 7.6.2, in both Studies Three and Four, I first completed a largely data-driven thematic analysis on the data before searching for a conceptual frameworks to focus analysis and highlight specific factors (see section 3.7.1, p.64 for a full discussion of conceptual frameworks). These were chosen in response to the main themes developed during thematic analysis, and with the aim of answering the research questions of the study.

The conceptual frameworks are detailed within the write-up of each study (p.200 and p.234). This section therefore discusses the justifications for the approaches taken and alternatives considered, rather than reiterating their substance.

7.7.1 Study Three: The Capability Approach, Classification and Framing

In Study Three, the overarching themes revealed that teachers perceived both structural limitations and factors of free choice and agency in their understanding of pupils' choices. This affected their sense of role when advising pupils (see Appendix Q for the final thematic template). As a result, I wanted to find a theory that could accommodate both these elements, with a stress on the role of agency, as this is what teachers seemed to consciously prioritise (see p.209).

Having discussed these themes, my primary supervisor (Prof Jen Cleland) suggested I consider the 'capability approach' as the conceptual framework for this study. This is based on the work of Amartya Sen (1999) and proposes that:

1. Individuals can make rational and reasonable choices about what they value: their ability for choice and agency is situated in key focus (Robeyns, 2005).
2. Structures and contexts nevertheless enable or constrain the freedom of individuals to actualise their choices (Hart, 2012; Unterhalter et al., 2007).

The capability approach was thus a useful framework to help explain and understand both the individual and structural elements of decision making regarding medicine. It also helped illuminate the ways teachers either accepted, or combatted, the structural factors they perceived to influence pupils' decisions (see p.200).

However, the capability approach lacks explanatory power and does not provide a substantial theory to explain the role of social interaction on the on the development of individuals' capabilities (Hart, 2012). This was problematic as I wanted to use theory to examine the influence of teachers' communications on pupils' choices.

To combat these limitations, researchers commonly combine other context-specific and explanatory theories with the capability approach. For example, in her exploration of students' university choices, Hart (2012) uses Bourdieu's work to help explore and explain the links between context, decisions and capability. Applying Bourdieusian concepts to my study might have thus enabled a more nuanced explanation as to how a range of social, cultural and material factors (conceptualised as capital and habitus)

enabled or constrained the teachers' underlying perceptions. However, I was instead keen to focus on how messages about medicine were shaped and communicated, so did not find this particularly appropriate.

Having searched the literature, I finally decided to pair the capability approach with Bernstein's concepts of 'classification' and 'framing' to focus on how teachers' perceptions of role were brought into practice (Bernstein, 1975). These concepts illuminated how teachers organised, categorised, evaluated and transmitted knowledge, and in so doing, how their communications and actions might influence a pupil for or against medicine (p.202). The addition of Bernstein's concepts boosted the credibility of findings as the theory directly links rhetorical strategies ('classification' and 'framing') to the impressions that may be created for recipients.

Researchers who use the capability approach must acknowledge that societal and power structures also impart values on the researcher, and thus they must be careful and reflexive about their own values when drawing conclusions (Unterhalter et al., 2007). Therefore, to ensure dependability and credibility, I continued with the practices described in section 7.4.4 throughout the deductive and theoretically informed stage of analysis.

7.7.2 Study Four: The Reflexive Habitus

The template analysis in Study Four again produced overarching themes emphasising the influence of both individual and structural factors on pupils' choices (see Appendix R). I therefore looked again at Bourdieu's theories of habitus to account for the structural influences on pupil's decisions and wondered if these could be contrasted with the theories of reflexive individualism to highlight the influence of agentic choice (see e.g. Bauman (2000), Beck (1992) and Giddens, (1991)).

However, a better alternative presented itself in the form of the 'reflexive habitus' which was a slight adaption of Bourdieu's classic concept (Decoteau, 2016). This is described fully in the study itself (p.234). I found this approach preferable to the above approach as it integrated the ability to make reflective, agentic decisions *and* the inevitability of structural forces into one unified concept, rather than conceptualising

these as two competing or irreconcilable forces. Given the results of my thematic analysis, I thought this integration more accurately reflected how the pupils perceived their experiences.

7.8 Summary

In this chapter I have outlined the research designs of Studies Three and Four (*Teachers' perceived role in WA to medicine* and *Exploring school pupils' perceptions of medicine*) and discussed the process of data collection and analysis. I have discussed the anticipated strengths and limitations of the decisions taken, and outlined how I planned to maintain high ethical standards and demonstrate trustworthiness throughout the research process. Having justified their research designs, the following two chapters will present Studies Three and Four.

7.9 References for Chapter 7

- Attride-Stirling J (2001) Thematic networks: an analytic tool for qualitative research. *Qualitative Research* 1(3): 385–405. DOI: 10.1177/146879410100100307.
- Barbour RS (2001) Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? *BMJ (Clinical research ed.)* 322(7294): 1115–7. DOI: 10.1136/BMJ.322.7294.1115.
- Barbour RS (2005) Making sense of focus groups. *Medical Education* 39(7): 742–750. DOI: 10.1111/j.1365-2929.2005.02200.x.
- Bauman Z (2000) *Liquid Modernity*. Cambridge: Polity Press.
- Beck U (1992) *Risk Society: Towards a New Modernity*. London: SAGE Publications.
- Bernstein B (1975) *Class, Codes and Control, Volume 3: Towards a Theory of Educational Transmissions*. London: Routledge and Kegan Paul.
- Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2): 77–101. DOI: 10.1191/1478088706qp063oa.
- Brooks J and King N (2014) *Doing Template Analysis: Evaluating an End of Life Care Service*. Sage Research Methods Cases. DOI: 10.4135/978144627305013512755.
- Bryman A (2012) *Social Research Methods*. Oxford: Oxford University Press.

- Crouch M and McKenzie H (2006) The logic of small samples in interview-based qualitative research. *Social Science Information* 45(4): 483–499. DOI: 10.1177/0539018406069584.
- Decoteau CL (2016) The reflexive habitus: Critical realist and Bourdieusian social action. *European Journal of Social Theory* 19(3): 303–321. DOI: 10.1177/1368431015590700.
- Dicicco-Bloom B and Crabtree BF (2006) The qualitative research interview. *Medical Education* 40(4): 314–321. DOI: 10.1111/j.1365-2929.2006.02418.x.
- Fereday J and Muir-Cochrane E (2006) Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods* 5(1): 80–92. DOI: 10.1177/160940690600500107.
- Giddens A (1991) *Modernity and Self-Identity*. Cambridge: Polity.
- Gorard S, Smith E, May H, et al. (2006) *Review of Widening Participation Research: addressing barriers to participation in higher education*. Report for Higher Education Funding Council for England (HEFCE). Bristol.
- Hart CS (2012) *Aspirations, Education and Social Justice: Applying Sen and Bourdieu*. London: Bloomsbury Publishing.
- Hollway W and Jefferson J (2003) The Status of Method: Flexibility, Consistency and Coherence. *Qualitative Research* 3(3): 345–357. DOI: 10.1177/1468794103033004
- Iphofen R (2005) Ethical issues in qualitative health research. In: Holloway I (ed.) *Qualitative Research in Healthcare*. New York, NY: McGraw-Hill, pp. 17–35.
- King N (2004) Using Templates in the Thematic Analysis of Text. In: Cassell C and Symon G (eds) *Essential Guide to Qualitative Methods in Organizational Research*. London: SAGE Publications Ltd, pp. 256–270.
- King N and Horrocks C (2010) *Interviews in Qualitative Research*. London: Sage Publications.
- Kvale S (1996) *Interviews: An Introduction to Qualitative Research Interviews*. Thousand Oaks, CA: SAGE Publications.
- Robeyns I (2005) The Capability Approach: a theoretical survey. *Journal of Human Development* 6(1): 93–117. DOI: 10.1080/146498805200034266.
- Savin-Baden M and Howell Major C (2013) *Qualitative Research: The essential guide to theory and practice*. Oxon: Routledge.
- Sen A (1999) *Development as freedom*. Oxford: Oxford University Press.
- Stalmeijer RE, McNaughton N and Van Mook WNKA (2014) Using focus groups in medical education research: AMEE Guide No. 91. *Medical Teacher* 36(11): 923–939. DOI: 10.3109/0142159X.2014.917165.

Unterhalter E, Vaughan R and Walker M (2007) The Capability Approach and Education. *Prospero* 13 (Special Issue of the Capability Approach): 34–50.
<https://pdfs.semanticscholar.org/dc38/36cbfe901addba6126d5a0f592661bce257d.pdf>

Chapter 8

Study Three: Teachers' perceived role in WA to medicine

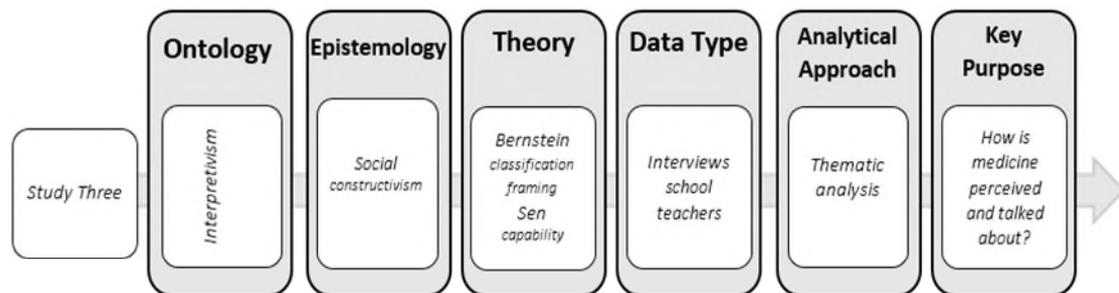
8.1 Introduction

This chapter presents the third study completed within my doctorate. This work is currently under review at a journal and may be cited as follows:

Alexander K, Cleland J, Nicholson S (2018) "It's going to be hard you know..." Teachers' perceived role in widening access to medicine. (Under review)

As described in the previous chapter (p.166 and p.168), the data source for this study is semi-structured interviews with teachers in UK high schools eligible for, and engaged with, medical schools' WA initiatives. The research design is summarized visually in Figure 8.1:

Figure 8.1 Research design of Study Three (Teachers perceived role in WA to medicine)



In this chapter, I outline the author contributions and present the paper. The chapter concludes with a summary of the objectives, key findings and overall conclusions of this paper and a brief discussion of how Study Three links to the surrounding studies and into the larger aims of the thesis.

8.2 Contributions to Study Three

The idea of a study focussed on school teachers was written into the initial PhD proposal formulated by my supervisors Prof Jen Cleland (JC) and Prof Sandra Nicholson (SN). The decision to focus on teachers' perceptions was decided between JC, SN and myself during early discussions about the direction and overarching aims of my PhD (see section 1.6).

I formulated the research questions for Study Three, selected the data collection method and proposed the eligibility criteria for participants. My proposals were refined and agreed in discussion with JC and SN. JC and SN suggested a thematic approach to analysis. I investigated various forms of thematic analysis and decided on template analysis (see section 7.6.2).

I submitted the research proposal for this work to the Ethical Review Committee (joint proposal for Studies Three and Four). Following ethical approval (see Appendix E), I organised and undertook participant recruitment, arranged and conducted the interviews (see section 7.4.3).

I checked and corrected the interview transcripts, familiarized myself with the data and conducted the template analysis (see sections 7.5 and 7.6.2). My coding procedures and developing themes were checked, refined and critiqued through critical discussions with JC and SN (see section 7.6.3). I produced a final template (codebook) of themes which JC and SN reviewed and agreed (see Appendix Q).

JC suggested the application of Sen's capability approach. I familiarized myself with this theory and prepared a document to outline its advantages and limitations. I shared and discussed this document with JC and SN and we agreed an additional explanatory theory might further improve the usefulness of the framework. I researched additional context-specific theories and proposed the application of Bernstein's concepts. I constructed a framework incorporating these theories, discussed and agreed this with JC and SN (see section 7.7.1).

I produced the first draft of the study. JC suggested ways to present findings more succinctly and structural changes to enhance clarity. I incorporated these changes and produced a second draft. JC and SN reviewed this draft, suggested minor edits and

to restructure the discussion. I made the suggested changes, other minor edits and produced a third draft.

We discussed which journal might be most appropriate for this paper as a research team, and decided on a journal in Sociology/Education. I formatted the paper to the journal's requirements and all authors approved this draft for submission. I submitted the paper online via the journal's online portal. The paper is currently under review at this journal.

8.3 Study Three

“It's going to be hard you know...” Teachers' perceived role in widening access to medicine

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Abstract

Medical students educated at UK state schools commonly report poor quality guidance and little encouragement from their teachers. Little is known about teachers' perceptions on this topic. We aimed to investigate teachers' perceptions of their role in encouraging pupils to aspire to medicine, and of 'suitability' for medicine. Purposive sampling resulted in semi-structured interviews with eleven teachers in seven 'disadvantaged' state schools across three diverse UK locations. Overarching themes were identified through thematic analysis and then considered through two conceptual lenses: Sen's Capability Approach and Bernstein's concepts of 'classification' and 'framing'. Teachers primarily perceived their role as supporting pupils to develop the capability and 'freedom' to make an informed and 'realistic' choice about medicine, advising from a predominantly 'risk-adverse' stance. They recognised pupils from a wide range of backgrounds as suitable for medicine, but acknowledged that pupils from professional backgrounds had significant advantages during preparation and application.

Introduction

A teacher's encouragement can positively influence pupils' overall attainment and help guide pupils to positive post-school destinations (Alcott, 2017). However, university students, including medical students, from UK state schools and lower socioeconomic backgrounds commonly report poor quality guidance and lack of encouragement from teachers (UCAS, 2015; McHarg et al., 2007; Mathers and Parry, 2009; Medical Schools Council, 2013). This situation clearly impedes medicine's attempts to 'widen access' (increase diversity) in the profession.

Globally the medical profession predominantly consists of individuals from affluent backgrounds, often educated in schools which outperform the average (AFMC, 2010; Department of Education, 2014; Milburn, 2012). The UK school system comprises predominantly of state-funded and free to use schools. Independent (fee-paying) and grammar (academically selective) schools consistently outperform most non-selective state schools (Sutton Trust, 2011). State schools themselves vary greatly in terms of their intake and levels of achievement, and are highly socioeconomically and socially segregated (The Challenge et al., 2017; Wheeler et al., 2014).

These disparities are clearly evidenced in medical school applications: 80% of UK medical school applicants come from only 20% of UK high schools, and half of schools have sent no applicants to medicine in recent years (Medical Schools Council, 2014c); 44% of applicants come from grammar and independent schools (Mathers et al., 2016b), whilst only approximately 11% of the under-16 school age population attend these schools (Bolton, 2017; ISC, 2017).

The imbalance between school origins and likelihood of achieving a place in medicine has caused concern that medical schools may not be promoting social mobility nor creating the best possible workforces to care for the populations they serve (Larkins et al., 2015; Dowell et al., 2015; Nicholson and Cleland, 2015). Yet, as applicants from independent and grammar schools are only slightly more likely to be accepted in comparison to those applying from state schools (Steven et al., 2016), significant imbalances in the school-type of applicants translates directly into imbalances in offers/acceptances. Therefore, the applicant pool must become more representative

of the population as a whole if numbers of underrepresented students are to rise significantly (Mathers et al., 2011; McLachlan, 2005; O'Neill et al., 2013).

The first step in addressing this imbalance is to identify factors that might deter a suitable applicant for medicine. For example, current medical students report persistent barriers relating to teachers. Individuals educated in state schools claim teachers underestimated their chances of success (McHarg et al., 2007), gave them the impression they were destined for failure (Southgate et al., 2017), and that there was an anti-academic culture of low expectations in their schools (Mathers and Parry 2009). Other studies suggest that pupils, many of whom have suitable attributes, may be put off medicine as they cannot imagine themselves as doctors, or lack the support to prepare themselves adequately for admission requirements (Greenhalgh et al., 2004; Southgate et al., 2015).

McHarg et al.'s London-based study (2007, p. 819) concluded that teachers may be guided by "a mistaken stereotypical view of doctors and their socio-economic backgrounds" and thus that they may deter able pupils from disadvantaged backgrounds. Robb et al. (2007) questioned how teachers came to 'believe in' certain pupils as potential medical candidates, and not in others. However, only one of these studies (Southgate et al., 2015) interviewed or observed teachers (careers advisers) themselves rather than relying on the accounts of pupils and medical students, and this focussed on material factors in schools.

We cannot assume that pupils' perspectives tell the whole story. Would teachers recognise or report the same behaviours and material constraints? If so, would they also perceive these in the same way as their pupils did (as discouraging or a deterrent)? What are their motivations and perspectives? An understanding of these perceptions is essential to widening access (WA) to medicine as teachers are a key pathway through which pupils access information and events about medical schools and medicine (Medical Schools Council, 2016; McHarg et al., 2007; Fleming and Grace, 2014).

If we do not identify or acknowledge the drivers and contextual pressures that shape teachers' perceptions of their role, it may be extremely difficult to induce changes to

behaviour that teachers may perceive as justified and supportive, not problematic and discouraging.

This paper considers the costs and benefits teachers perceive to surround a pupil's journey to medicine, and explores teachers' motivations, priorities and experiences when advising pupils about the subject and career. We also question how teachers decide that a pupil is 'suitable' for medicine or not, and what they believe to be their role in communicating this to the pupil. By examining teachers' practice, concerns and experiences, we view a medical application from their perspective and thereby gain an insight into how medical schools might adapt their approaches to address teachers' concerns and better engage them as advocates for WA to medicine.

Semi-structured interviews were conducted with eleven teachers in seven state schools across three UK locations. As this study sought to understand complex and interlinking dimensions of a phenomenon (teachers' perceptions of a pupil's journey to medicine), a small, purposive sample was chosen (Crouch and McKenzie, 2006). Participants self-identified as responsible for advising students on university choices/medicine. All schools were considered 'disadvantaged' and were targeted by local medical schools for WA outreach activities.

Template analysis was used to identify overarching themes relevant to our research questions. Findings were then considered through the lens of two theories: Firstly, Amartya Sen's capability approach offered a framework to conceptualise the steps in a pupil's journey to medicine and illuminate the factors aiding or abetting their progress (Sandars and Hart, 2015; Sen, 1999). Basil Bernstein's concepts of 'classification' and 'framing' were then applied to conceptualise the ways teachers guided pupils at each of these steps (Bernstein, 1975). The extent to which teachers 'classify' knowledge and 'frame' their messages to pupils provided an indication of what they perceived to be the duties and boundaries of their role.

The following research questions guided the work: What do teachers in UK WA schools perceive to indicate a pupil's 'suitability' for medicine? What do they perceive to be their role in encouraging pupils to aspire or apply to the profession?

Methods

This paper uses an interpretivist paradigm to capture the participants' diverse and multiple realities, and to gather detailed accounts of their perceived role and experiences (Bunniss and Kelly, 2010).

Data collection

Identifying schools and participants

A purposive sampling frame (Bryman, 2012) was employed to recruit teachers in high schools that had low rates of progression to medicine, and which engaged with medical school WA activities. As we sought to understand and explore in-depth the range and complexity of the teachers' perceptions (not to quantify them), a small sample size was appropriate and useful (Bryman, 2012; Crouch and McKenzie, 2006). Purposive sampling also ensured the participants worked in a wide range of high schools across three distinct regions of the UK: North-East Scotland, London and Southern England. Three UK medical schools (one in each region) provided a list of the high schools (ages 11-18) and sixth-form colleges (ages 16-18) targeted by their WA activities. All schools were state-funded and non-selective, however differed widely in terms of size, school type, location and current level of aspiration to medicine amongst the pupils. Key characteristics of the schools and their regions can be found in Table 8.1.

Table 8.1 Participants' professional role and school environment

<i>Name of School</i>	<i>Teacher's primary role</i>	<i>School Type</i>	<i>Location</i>	<i>Regional Characteristics</i>	<i>Perceived aspiration to study:</i>
A	Science Teacher	High School (ages 12-18)	North East Scotland	Rural; traditionally fishing, farming and factory-working communities; predominantly white	<i>at university:</i> Low <i>Medicine:</i> Low
B	Guidance Teacher* (x3)				
C	Guidance Teacher*				
D	Assistant Head of Sixth Form	Female Only Sixth Form College (ages 16-19)	London	Urban; located in an area of high socioeconomic deprivation; large majority of pupils from minority ethnic communities	<i>at university:</i> Moderate <i>Medicine:</i> High
E	Engineering Teacher Support & HE Progression Manager	Sixth Form College (ages 16-19)			
F	Careers Advisor Science Teacher	Sixth Form College (ages 16-19)	South England	Semi-urban; intake includes pupils from high and low socioeconomic areas; student body mixed ethnicities	<i>at university:</i> High <i>Medicine:</i> Moderate
G	Science Teacher				

* Guidance teachers teach personal and social skills and offer general academic and personal support

Headteachers were sent information about the study and an invitation for their school to participate. On receipt of Headteacher consent for the study, teachers with responsibility for advising students on university choices (with a focus on medicine) were invited to participate and provided with a standardized information sheet. Volunteers responded by email and a mutually convenient time for an interview was arranged. Interviews took place at the participant's school. Every participant was given the opportunity to ask questions prior to commencing the interview, was made aware that participation was voluntary and they could withdraw consent at any time. All participants gave consent for their interview to be audio recorded for later transcription.

Interviews

In depth semi-structured interviews were conducted between participants and one of the researchers (KA). In one interview, two teachers were interviewed together at their request.

Participants were prompted to discuss: their time at the school and their advisory role; perceived barriers and facilitators to their pupils achieving a place in medicine; their experiences advising pupils for medicine; to describe the pupils who had expressed interest in medicine and evaluate their suitability; to discuss institutional and individual processes for identifying students as 'suitable' for medicine; and their perceived role in shaping pupils decisions for/against applying for the subject. Participants were also encouraged to introduce topics they perceived to be of relevance. Reflective and observational notes were taken during and immediately after interview.

Analysis

Interview recordings were transcribed verbatim. Template analysis was used to organise and analyse interview and field note data thematically and to meaningfully show the relationships between themes as coding progresses. Analysis followed the

steps detailed in Brooks and King (2014). After key themes had been developed and relationships between them explored, two theoretical concepts (those of Sen and Bernstein – see below) were then applied to the data, in order to deductively refine findings and 'illuminate and magnify' key understandings (Bordage, 2009).

Conceptual Lenses

Two theories can offer more potential than one for exploring complex social issues (Ball, 1990). The combination of these lenses is novel and provides both insightful structure (capabilities approach) and explanatory power (Bernstein).

The capability approach.

The 'capability approach' originates from the work of Amartya Sen (Sen, 1999). Based on economic and human development work, it has been used in studies concerned with healthcare (Mitchell et al. 2017) and those exploring social justice and education (Walker and Unterhalter, 2010; Gale and Molla, 2015; Wilson-Strydom, 2015), including the evaluation of WA interventions (Hart, 2012).

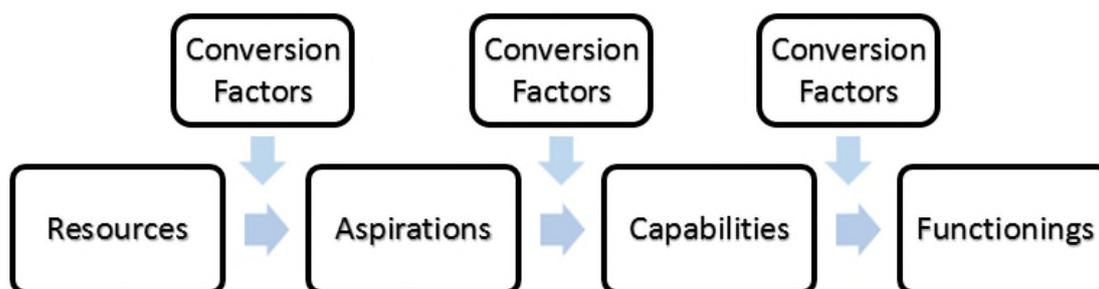
In this study, the capability approach is used to conceptualise the steps taken during a pupil's journey to medicine, and the factors that enable or prevent a student from progressing in this journey. Five key concepts underpin the capability approach and are summarized in Table 8.2.

Table 8.2 Key concepts within the capability approach

Concept	Description (with examples for this context)
Functionings	Ways of 'being' or 'doing' realised into actions (i.e. achievements). Being able to achieve the functionings an individual deems important to them is what makes life valuable (i.e. having a safe home, being a parent, doing a medical degree).
Capabilities	The range of opportunities and freedom of choice an individual can select from to achieve their preferred functionings. For example, a pupil must possess the necessary opportunity and freedom (e.g. skills, knowledge, support, aspirations and confidence) to be able to apply for medicine.
Aspirations	An individual's goals for their future well-being. Individuals may choose to build capabilities that will allow them to convert an aspiration into a functioning.
Resources	The raw material, 'the means', to build capabilities (e.g. classrooms, teachers, WA activities).
Conversion factors	Influence how efficiently a resource can be converted into a capability: these can make the process easy, or impossible. Conversion factors can be grouped into: personal factors (e.g. intelligence, health, literacy and numeracy skills); social factors (e.g. social norms, hierarchies, gender discrimination, power inequalities); and environmental factors (e.g. location, climate) (Robeyns, 2005). Conversion factors influence every step of pupil's journey to medicine.

The interaction between these concepts is visualised in Figure 8.2.

Figure 8.2 A pupil's journey to medicine, conceptualised through the capability approach



The capability approach is underpinned by the assertion that individuals can make reasonable and rational choices about which functionings they value (Robeyns, 2005). A key role of education is thus to provide pupils with the capabilities and freedom through which they can access the functionings they choose as valuable, and to provide conversion factors which enable this process (Unterhalter et al., 2007).

Classifying and framing choices.

Basil Bernstein's concepts of 'classification' and 'framing' are used to focus attention on how teachers and schools organise, transmit and evaluate knowledge – and how, in doing so, they are shaping the conversion factors influencing pupils. This approach is underpinned by an analysis of the strength of 'boundaries': particularly what 'counts' as valid knowledge (classification) and what 'counts' as a valid transmission of knowledge (framing) (Bernstein, 1975).

Classification refers to the boundaries between content types (i.e. pure or applied sciences, subjects suitable for 'academic' or 'non-academic' pupils). Strong classification creates strong boundaries between categories, whereas low classification blurs boundaries. For example, Oxbridge can be classified strongly by high schools as 'special' (different and more desirable) than other universities, or schools can classify all universities as equally desirable (Donnelly, 2014).

Strong framing places strict boundaries on the transmission of messages from teacher to pupil, whereas weak framing permits weaker regulation of the knowledge transferred. In a high school context, strong framing might result in pupils being presented with only the university choices deemed 'suitable' or 'beneficial' for them; whilst weak framing allows a greater range of options to be made available to pupils (Donnelly, 2015a, 2015b).

Using these concepts we can examine how teachers challenge conversion factors that inhibit a pupils' journey to medicine, or allow them to be reproduced. Using an examination of 'classification' and 'framing' we will focus on: *how* teachers guide pupils at each of the steps within the capability approach; *what* they perceive to be the duties and boundaries of their advisory role; and *why* they feel things are done in this way.

Ethics

Permission to conduct the study was granted by the Committee for Research Ethics and Governance in Arts and Social Sciences and Business at the University of Aberdeen.

Results

Overall, our sample contained interviews with 11 teachers with a remit to advise pupils on university choices, working in seven schools across three regions of the UK (see Table 8.1, p.198). Collectively, teachers had an average of 10.5 years' experience in their advisory role, and a minimum of 4 years' experience. Interviews were one-on-one (other than the exception noted earlier) and lasted an average of 28 minutes (range: 23 to 60 minutes).

The presentation of results has been structured to reflect the findings through our conceptual lenses: The transitional steps in the pupils' journey to medicine are conceptualised within the capability approach (Hart, 2012): firstly the conversion factors that encourage or discourage a pupil's construction and disclosure of the

aspiration to medicine are explored; secondly, the factors that shape how these aspirations are converted into the capabilities and freedom required to apply and examined; and finally the factors which might influence a final decision whether or not to convert a pupil's capability into a functioning (submit an application) are considered.

Throughout we focus on the ways school teachers perceive these conversion factors, as well as how their communication and behaviour either reproduce or challenge these factors via the use of framing and classification strategies (Bernstein, 1975).

1. Aspiration to medicine

The average levels of aspiration to medicine varied largely between schools (see Table 8.1, p.198). In this section we explore the social conversion factors teachers perceived as encouraging and discouraging a pupil's aspiration to medicine, and investigate how they responded to these:

Conversion Factors encouraging an aspiration to medicine

Teachers identified a range of conversion factors that encouraged the formation and disclosure of a pupil's aspiration for medicine, however, some of these were considered to be problematic.

Many teachers believed that pupils jumped to the aspiration to be a doctor, simply because they knew of the career and they perceived some aspects of the role to be appealing (e.g. the idea of 'helping people'). Moreover, teachers perceived that pupils, and commonly also their families, saw medicine as "an aspirational choice" (School E: Interviewee 1), to the extent that, within certain communities, some pupils "choose medicine because they are told to" (School E: Interviewee 2).

Teachers felt that if pupils were more familiar with the wide range of subjects and careers available, or if they didn't have family pressure to aspire to the subject, they would not necessarily jump to medicine. Teachers expressed deep concern when they felt a pupil's aspiration to medicine was a reflection of their family's wishes (an apparent aspiration), rather than their own.

Moreover, although medicine was perceived to be an 'obvious' consideration for academically able pupils, teachers also perceived it was not only these pupils who aspired to the subject. Instead, teachers expected that the majority pupils who aspired to medicine would not achieve the grades required for entry: "I do have students who come to me and I know they are never going to make the grade" (School F; Interviewee 1).

Finally, teachers felt the strong aspiration to medicine could cause pupils to exclude other (more achievable) potential careers:

...the two-fold challenge is that clearly not always does the aspiration meeting real prospects, um, and that [an aspiration to medicine] can have the effect of shutting down other opportunities, other routes [careers] if, um, if students and their families are not careful. (School E: Interviewee 1)

As a result, teachers employed a range of framing and classification strategies to mediate some of these 'encouraging' conversion factors. For example, when pupils expressed an aspiration to medicine, teachers reported they acknowledged this as a positive career choice, but also encouraged them to "think as creatively as possible" (School G) and be open to a range of careers, instead of *only* aspiring to medicine. They emphasised that there was a large range of careers available, including those that demanded similar skills to a doctor. Moreover, usually pupils volunteered an aspiration for medicine, rather than teachers seeking this out. When teachers did enquire about pupils' career aspirations, they tended to pose questions about career ideas generally, not specifically suggesting medicine to pupils.

These behaviours are examples of a weak framing and classification strategies for medicine, as teachers actively tried to emphasise the importance of keeping 'options open' and ensure medicine was not classified as different, or more valuable, than any other subject. Overall, these strategies attempted to encourage every pupil to develop a range of aspirations. This can be linked to their desire that these be converted into a range of capabilities. With a widened capability set, the pupil maintains a larger choice of potential functionings and is therefore more flexible, depending on the grades they achieve – reducing the risk of disappointment or being left with no options.

Framing strategies were, however, sometimes strengthened for practical reasons. For example, although opportunities to attend outreach programmes or general information talks about medicine were open all pupils, in order to fill the school's quota of available spaces, teachers would "maybe *encourage* certain pupils [to participate]" (School B: Interviewee 1). These more strongly-framed messages, directed at a small number of pupils, would signal that teachers considered them suitable to aspire to medicine and that they should consider this as a viable aspiration. These pupils were classified as those who had indicated a prior interest in the subject (i.e. already revealed their aspiration) and "high-fliers" (School B: Interviewee 1) in science subjects. Moreover this stronger framing strategy might also send the messages to pupils that if they were not approached by teachers at this point, that they were not considered as suitable for medicine.

Conversion Factors discouraging an aspiration to medicine

All teachers felt that the school's culture towards academic achievement, university study and medicine had a large effect on the level of aspiration to medicine. In some schools, teachers felt this culture discouraged pupils from aspiring to medicine.

In low-aspiration environments, the peer group was cited as a major barrier to pupils revealing an aspiration for medicine, as aspiring to this class of subject would result in ridicule:

...they're not always confident enough to say I really want to do medicine, I'm determined to get these five As, you know, because their mates'll have a pop at them. Maybe just banter, maybe just jokes, but they're not, um, sturdy enough to handle that kind of banter, to have a response and say: yeah I am, what are you going to do?
(School B: Interviewee 2)

Some teachers tried to encourage higher aspiration through strongly framed messages of positive career choices: "I'm heavily involved in trying to help promote sciences within the school and promote medical, biomedical sort of things to pupils" (School A). Other teachers tried to strongly frame the message that "it is within our grasp" for pupils to pursue careers such as medicine, for example by highlighting stories about role models (School B: Interviewee 3). Nonetheless, teachers generally tried *not* to

promote medicine specifically – rather, they wished pupils to raise their aspirations more generally and for a range of subjects.

Teachers recognised that, particularly in younger years, there were very limited formal opportunities for pupils to reveal aspiration for medicine to teachers without peers present (e.g. in a one-to-one advising session). They felt the thought of 'speaking up' in front of the class potentially discouraged students. Moreover, even announcing an aspiration in front of teachers could be a problematic: one teacher reported pupils were "almost apologetic" for their interest in Medicine, because they didn't believe they would "be good enough" (School B: Interviewee 3). Teachers also reported incidents where they had not been successful in finding out about a pupil's aspirations: "one girl we completely missed which was terrible" (School C).

This presents a major potential barrier: teachers need to know about a pupils' aspiration for medicine, so that they can support them in building their capability set for this choice. Pupils are much more likely to reveal an aspiration if they perceive that it is achievable and this aspiration will be accepted and supported (Hart, 2012).

2. Developing Capabilities for Medicine

In this section we explore how teachers manage the conversion factors that influence whether, and how well, a pupil is able to turn their aspiration for medicine into the capability to apply. Three key aspects are focussed on:

Firstly we explore the conversion factors teachers perceived to discourage their pupils from building capability for medicine and how they used framing and classification strategies to ameliorate these.

Secondly, we will discuss how teachers tried to develop pupils' 'freedom' to make an informed choice about whether or not medicine was the right career for them.

Finally, we consider – within these conditions – how participants made judgements about what type of pupil should be classified as 'suitable' for medicine.

Conversion factors that hinder capability for medicine

When it came to preparing for an application, medicine was classified apart from 'mainstream' university choices: teachers were aware that potential medics were required to prepare themselves for a 'different' application process. As a result, they reported that it was their role to make sure the pupil was aware of the academic and non-academic requirements for medicine. They also acknowledged that pupils needed active support, as well as information if they were to succeed in meeting these requirements. However they felt the school's capacity to do this was limited. For example, staff shortages meant pupils were commonly left with inexperienced or without teachers for extended periods:

Yes, I mean, a couple of years ago, we had a pupil who was doing Advanced Higher Biology, Physics and Chemistry. And the Chemistry teacher left, the Biology teacher left, the Physics teacher left, and they ended up being taught by a depute or the Head of Department who had practically no time... You know, and I know you're supposed to do a lot of it yourself, but you do need some teacher input. Consequently he didn't apply for Medicine, he pulled out at the last minute. (School C)

Difficulties and stressors related to living in low-income households – e.g.

“overcrowding, parents perhaps, or grandparents, are unwell” (School D) - meant that pupils were expected to achieve academically, keep calm and stay motivated “often despite incredible obstacles and challenges, not necessarily face by many of their peers in other areas” (School E: Interviewee 1). Teachers clearly identified these contextual conversion factors as hindering a pupil's capability building.

Nonetheless, teachers commonly cited the strengths of their pupils, claiming they had the *potential* to become competitive medical applicants, even in comparison to more privileged pupils. However, some teachers felt that their pupils struggled to recognise their (non-traditional) life-experiences as valuable, and thus to capitalise on or develop their own (non-traditional) strengths. All teachers felt that their pupils lacked confidence and often felt 'imposter syndrome' with regards to their classification as a potential medic – another hindering conversion factor.

Teachers expressed frustration and a wish to be able to do more to combat these discouraging conversion factors. One common method for doing so was creating peer support groups for pupils aspiring to medicine and similarly classified subjects (e.g.,

Oxbridge, Law). Teachers felt this gave pupils the opportunity for pupils to provide each other with important mutual support: emotional support during stress or disappointment; to keep motivation up for completing the preparation, application and selection processes; and an opportunity to share experiences and learn from one another. Although the creation of peer support models allowed teachers to take a step back from some support, they nonetheless indicated that it was also part of their role "to pick 'em up again" when pupils lost confidence (School F: Interviewee 1).

Some teachers were also passionate about providing, or encouraging pupils to seek out, relevant experiences and opportunities for their pupils (e.g., outreach activities, work experience). Others saw it as their role to push pupils to recognise and develop their strengths, and help them present these during application: "we try and prepare them to the best of our ability" (School D). Teachers described this support as part of their ambitious role of trying to find ways to develop pupils' skills and cultural awareness quickly, and within the restrictions of the school environment, to the same level as happens 'naturally' for more privileged pupils:

This is not something that you're taught in a lesson... this is something that's assimilated and we've got to find mechanisms to, to kind of match what for most of these [more privileged] applicants will be a kind of almost a natural process of personal and academic development, including all those wider enrichments of culture and so forth that they often have access to... but until very recently the overwhelming majority of our students, including medical students, parents would not have had a higher education so they would be the first in family. (School E: Interviewee 1)

However, these practices appeared to be largely the preserve of committed individuals rather than institutionalised practices and thus the prospect of a teacher's retirement or withdrawal of allocated teaching time to these projects were a constant possibility. Teachers reported a number of schemes that had already been reduced or discontinued.

Supporting pupils' freedom to choose their preferred functionings

Teachers also felt a key role of building capability for medicine was to allow pupils to find out whether their aspiration for medicine was their own, or something adopted

(consciously or unconsciously), in order to please others. Teachers felt it was vitally important that the pupil had the freedom to develop the capabilities for functionings that were valuable to them.

Teacher perceived this freedom to be blocked if pupils knew very little about the 'reality' of medicine or whether it would be suitable for them, and rather were continuing to aspire to this in order to please others. As one teacher explains:

“The *worst* situation is when that expectation [that the pupil will apply for medicine] isn't challenged, they have got the grades and then [they come] through for interview practice and what not, and then [we] just see that one or two of them are completely clueless, the expectation has been there but the effort [to find out about the career has] not been there at all, and that can be quite *upsetting* for them” (School E: Interviewee 2)

Teachers therefore perceived it as important to encourage pupils to learn about the career, and develop the confidence to pursue a post-school choice that *they* desired. Teachers directed pupils to medical schools' outreach events for 'confirmation and preparation', encouraged them to undertake work experience and organised mock interviews. These opportunities were presented by teachers as strategies to ensure pupils could build the relevant capabilities to cope with the rigours of a medical application, study and career.

In sixth-form colleges, where there were more applicants to medicine, teachers found the creation of peer groups (see above) or 'preparation programmes' were a good method to not only help prepare pupils and offer them emotional support, but to also help 'filter' them for or against application. Under pressure to explore the career and their choices, some pupils lost motivation for medicine and developed other interests. These groups also sometimes helped them build confidence to resist parents' wishes in favour of their own.

To further help pupils demonstrate whether they had the right skills and motivations to apply, teachers focussed their support on advising pupils on their personal statement and interview preparation. Aspects such as familiarization with aptitude tests were given the least attention: “You know, they're kinda almost supported, but they're doing it on their own” (School B: Interviewee 1).

However, the intense levels of commitment, hard work and dedication needed from pupils to make themselves competitive for medicine were also sometimes perceived as negative, as these could further narrow pupils' focus to strive only for this subject. Throughout the capability building process, teachers were therefore keen to emphasise how pupils should "think of all you have and could possibly do" (School F: Interviewee 2) and to impress upon pupils that they could also develop capability for many other rewarding subjects as well.

Finally, the process of preparation, application and training for medicine was generally regarded as daunting, long and expensive:

...but that's something I can share with the other students, this is a long process: if you really want to do it, you are going to have to hang in there, it's going to be a long process (School E: Interviewee 2).

Due to the perceived intense competition for places, and the school's historic acceptance rates, the large commitment of pupils' time, energy and emotional commitment was often perceived as a very high-risk investment by teachers.

Overall, through these strategies, by the final year of school teachers had usually managed to 'filter' down the numbers of aspirants for medicine, and were left with a smaller number of potential candidates who knew medicine 'was the right choice for them'. Teachers perceived the 'filtering' of pupils to be positive: "it's always nice to make sure yes, they can do this" (School F: Interviewee 1).

Suitability for medicine

Equally important to achieving the academic requirements, teachers felt students had to have the 'right' personalities for medicine, such as being caring, compassionate, interested in science and a good communicator. Possessing exceptional drive and determination, and a proactive attitude, both in school and in pursuing extra-curricular activities and work experience were seen as essential characteristics: "those are the sorts of students you know have a fighting chance." (School E: Interviewee 2).

Especially in schools where there were very few applicants to medicine, teachers stressed that a pupil's ability to cope on their own was particularly key. This teacher's description of her role, illustrates how a pupil's strong self-motivation meant teachers

felt they could rely more on weak frames when advising pupils on how to build capability for medicine:

...what I find myself is that, as I say, people identify themselves, and I tend to just give them the facts. I don't think I've ever been in a situation where I've felt it was my job to, kind of say, well, perhaps you won't, I just tend to keep it all very factual: this what you'll need to do, this is the kind of skills they're looking for, and then they go away and make up their minds kind of thing, so I don't think I try and influence, I think I just try and, kind of inform (School B: Interviewee 3)

Teachers did not communicate that a middle-class or professional family background was necessary to do medicine: in many schools the vast majority of pupils' parents had not attended Higher Education and teachers reported that the lack of HE experience in the family did not necessarily mean parents were less aspirational for their children academically. The examples volunteered by teachers as potential candidates reinforces this interpretation: e.g. a girl "from a normal family" (School C), a boy in the state care system (School B) or recent arrivals in the country or asylum seekers (School E).

However, teachers recognised that students with professional parents were often far better prepared to cope with the rigours of a medical application. Teachers found that these pupils could stay more motivated, were more aware of the expectations and were "confident and, kind of, cautiously optimistic" (School B: Interviewee 2).

Moreover, teachers felt these pupils benefitted from enhanced personal and academic development that came from growing up in a more privileged home and "from discussions around the dinner table" (School D).

3. Decision Making

In this section we discuss the framing and classification strategies teachers use when pupils are in the process of deciding whether or not to apply to medicine. This involved teachers assessing, and helping pupils assess, the strength of their capability set for medicine, and discussing the decision whether to apply.

Although teachers cited many reasons pupils decided against applying for medicine, by far the most common was that the pupil had not achieved, or was not predicted to achieve, high enough grades.

When pupils were younger, no teacher wished to intervene: "I do think in my mind that it's unrealistic for them, but it's not my job to tell them that" (School B: Interviewee 3). However, when pupils without a 'suitable' academic record persevered with their intention to apply into the final years of high school, most teachers saw it as their role to use more strongly framed messages. Teachers reasoned that pupils who were not predicted or awarded the grades would be extremely unlikely to be successful and it was their duty to ensure pupils knew this.

Common techniques to frame this message included showing the pupil statistics indicating the average grades and aptitude test scores of successful candidates, and asking pupils to reflect on these so that "they can see that, you know, the odds are stacked against them" (School G). Teachers strongly stressed that they found this part of their role challenging and that messages should be tactful and careful: "getting the realism at the right time when they can take it I suppose, I think, is the challenge sometimes" (School F: Interviewee 2).

Despite their strongly framed advice, all teachers stated that "ultimately it has to be the student's decision" (School G) and strongly denied their methods were to deter an application - "I don't dissuade them" (School E: Interviewee 2). Rather, they saw their role as ensuring pupils were making an informed and 'realistic' choice.

Teachers perceived that some pupils who decided not to apply to medicine felt like a failure because they perceived subjects to be in a strong hierarchy: every other healthcare subject was a "step down" (School F: Interviewee 2). As a result, again, teacher continuously stressed the need to develop aspirations and capabilities for other subjects which they tried to present as equally valuable and rewarding (weak classification). This was also used as a tactic to ameliorate pupils' disappointment or feelings of lack of direction following a decision not to pursue medicine.

Nonetheless, no teachers reported any difficulties in imagining their successful applicants as medical students or doctors. They perceived them as "very strong

individuals" (School E: Interviewee 1) who had had their hard work, commitment and effort rewarded. Moreover, because requirements were so rigorous, if pupils succeeded in getting a place, teachers felt they had proved they deserved to be there and were likely to grow in confidence.

Discussion

Teachers in UK state schools have been criticised by their former pupils for discouraging and deterring pupils from applying to medicine (UCAS, 2015; McHarg et al., 2007; Mathers and Parry, 2009; Medical Schools Council, 2013). By investigating the perspectives of teachers themselves and analysing the data through the novel combination of two conceptual lenses, this study provides new insight into this complex issue.

Teachers perceived that the conversion factors encouraging an aspiration for medicine were not always appropriate or positive, and they worked to counter-balance these through strategies designed to encourage pupils to aspire to a range of careers instead. In order to ensure pupils possessed the 'freedom' to make informed choices about medicine, teachers made pupils aware of what they perceived to be the tough realities of the application process and of medicine as a career. When it came to the application process, they used a variety of strategies to 'filter down' pupils to only put forward the strongest and/or most determined as candidates, to ensure others did not experience disappointment and/or were prepared for their 'realistic' chances of success. Although they attempted to find strategies to support pupils wherever they could, teachers acknowledged that, primarily because of the restricted resources within their school contexts, pupils often had to 'go it alone' through the majority of their journey to medicine.

Overall, teachers reported many of the same behaviours as pupils, and former pupils, have in previous studies. These included: teachers unable to provide sufficient support because of material and socio-cultural factors within their schools, and that this deterred the revelation of aspiration and the building of capability to medicine

(Mathers and Parry, 2009; Robb et al., 2007; Southgate et al., 2015); teachers believing that it was unlikely pupils would be accepted for medicine (Southgate et al., 2017); and making pupils aware that it was “going to be tough” to apply for medicine (Mathers and Parry, 2009). However, importantly, teachers did not perceive these behaviours as deterring pupils from medicine, and explicitly reported that they did not intend them to be so. Instead they perceived their actions as encouraging pupils to develop the capability and ‘freedom’ to make an informed and ‘realistic’ choice about medicine for themselves.

The teachers in our study firmly defended the principles of a pupil’s freedom to make their own decisions, and even actively attempted to widen the options of pupils who they felt were receiving strongly-framed messages about medicine from elsewhere (e.g. from family). As a result, weak framing strategies were generally employed – teachers did not see it as their place to either push or deter a pupil from medicine. It can however be argued that stronger framing strategies (a more interventionist stance) may be necessary to help ‘push’ students to reveal their aspirations (Hart, 2012), to achieve the high requirements, and to select a challenging and unfamiliar career such as medicine (Donnelly, 2015a). The subsequent counter-argument is that strongly framed messages may not always be best – although potentially aiding social mobility, they can ‘push’ pupils into potentially uncomfortable situations they would not have otherwise chosen, and thus restrict their capability and freedom to choose (Donnelly, 2015a; Hart, 2012). This study indicates these teachers felt it was generally their role to try not to strongly influence a pupil’s decision, by generally opting for weak framing and classification strategies.

Teachers reported that, perhaps because of its classification as a well-known, aspirational and high-status choice, pupils with a large range of abilities aspired to medicine - *not only* the most ‘academic’ pupils. This correlates with a recent study (McManus et al., 2015): the authors calculate 90% of children who aspire to medicine aged 11 are statistically unlikely to get the grades. This might suggest that there has been a cultural shift in terms of who can aspire to medicine, but no accompanying structural shift in secondary or tertiary education to accommodate this level of aspiration and to allow these new aspirants the opportunity to actually enter medicine.

In contrast with other UK studies, we did not find evidence that this group of teachers relied upon stereotypes or believed that medicine was 'unthinkable' for their pupils (Greenhalgh et al., 2004; Mathers and Parry, 2009). Teachers reported that they could well imagine pupils from a large range of backgrounds performing well in medical school and practicing as excellent doctors. Teachers did however, recognise the significant advantage that pupils from more affluent and professional backgrounds had in negotiating the preparation, application and selection processes for medicine. Moreover, teachers did predominantly identify 'suitable' pupils for medicine by factors that are strongly correlated to family background, such as their ability to stay motivated academically. Teachers felt that the educational and personal development opportunities their schools were able to provide were insufficient to make real progress on narrowing any divide between family background and the attitudes and achievements needed to get into medical school.

This study interviewed teachers in a range of very different schools, with different locations, intakes, cultures and levels of aspiration to medicine. These differences add limitations: for example because of their different structures, qualifications and funding levels, systems in Scottish and English schools are not directly comparable, and challenges facing teachers in rural schools differ from those in cities. Nonetheless, despite these large differences, an inductive thematic analysis followed by the novel combination of the capability approach and Bernstein's concepts of 'classification' and 'framing' enabled us to identify and evidence teachers' common concerns on a pupil's journey to medicine, and explain the common strategies they used to help combat these. Although small-scale studies with purposive samples, such as this one, cannot be representative of the whole population, this does not preclude some generalizations being made, albeit tentatively (Bryman, 2012). For example, the identification of strong commonalities suggests our findings may be transferable to other UK schools and localities, or be used to refine hypotheses.

Invitations to participate in this study were sent to UK state high schools currently engaged with medical schools' WA outreach programmes. We can reasonably expect that the teachers that volunteered for the study were those that were positive and engaged with WA to medicine, and hence their views may not be representative of the

full range of teachers. For example, less engaged teachers and/or those with a less positive view of medicine, may indeed actively and intentionally discourage pupils from medicine or rely on stereotypes. Likewise, teachers in more affluent state or grammar schools may choose different framing and classification strategies. Future comparison studies which investigate the framing and classification strategies of teachers from a variety of schools would be very interesting and may help us further understand the practical implications of these for pupils' aspirations, capabilities and decisions.

Nevertheless, the focus on relatively engaged and supportive teachers is also a definite strength of the study. These are the teachers medical schools *can* currently work with and who are potentially much more open to advocating WA to medicine.

In terms of practice, teachers' advice to pupils about medicine appears to be well-intentioned and adapted to fit their contexts. However their behaviour may also have the unintended consequence of producing framing and classification strategies pupils *may* perceive as discouraging (such as being encouraged to keep their options open) and which may thus reproduce inequality.

If medical schools wish for teachers to become more engaged advocates for WA to medicine (i.e. to strongly frame positive messages to encourage pupils) then the underlying tensions that currently deter teachers from doing this should be considered. Looking at the data as a whole, it seemed that teachers were "risk adverse" on their pupils' behalf – not wanting pupils to be disappointed through unrealistic aspirations and goals. One practical way of addressing this might be to reduce perceived risk. For example, medical schools and universities could focus on building more comprehensive 'Plan B' programmes into current WA for pupils who do not gain a place during their first application. Medical schools could also further highlight links between medicine and related healthcare subjects to encourage pupils to aspire to medicine amongst a range of other valuable options and challenge perceptions of strongly classified healthcare hierarchy. Finally they could highlight to teachers the increasing flexibility within the admission system, which now allows an applicant more than one opportunity to adapt and add extra choices should their medical applications be unsuccessful (UCAS, 2017). If the perceived risks were lower, perhaps teachers would be more willing to encourage more pupils to 'give it a go'.

Encouraging teachers to more strongly frame their encouragement for medicine, would however also entail ensuring that their pupils had a higher chance of also actually acquiring a place. Governmental policy changes in the UK mean this may be more likely in the near future. At the time of writing, a significant number of additional medical student places have been made available (Roberts and Bolton, 2017; Scottish Government Newsroom, 2016), and medical schools have been issued with stronger demands to take an increasingly diversified cohort (DBIS, 2016; Scottish Government, 2016). Moreover, it is likely these policy changes will oblige medical schools to reduce their academic requirements (and thus their weighting of school grades) and instead increase their emphasis on desirable personal attributes and intellectual ability, through multiple mini-interviews (MMIs), aptitude and situational judgement tests (SJTs) (Patterson et al., 2016a).

As a result, this could be a good opportunity for medical schools to enter into a dialogue with teachers about how they can best tailor their support of pupils, to highlight their strengths (e.g. their intellectual ability, academic potential, prior-experiences, resilience and correct motivations). In so doing, they may wish to encourage teachers to focus on helping pupils familiarise themselves with, and reduce anxiety about, aptitude tests, SJTs and MMIs, rather than focussing attention predominantly, or solely, on aspects of a more traditional admissions format (e.g. personal statements).

Overall, medical schools can play an important role in encouraging teachers to become advocates for WA to medicine, and to help them align their framing and classification strategies in order to present medicine as a strong option. However, medical schools cannot do this in isolation, nor without the support of other stakeholders, policies and systems. For example, currently, reducing academic entry requirements can negatively impact medical schools' position on league tables and thus their competitiveness on the international market (Brosnan, 2010). The overall impact of WA initiatives thus ultimately depends on policy, stakeholders and systems aligning (Gorman, 2018). Acknowledging the concerns of state-school teachers, and working with them to construct a more positive view of the journey to medicine, might be a tangible start.

References

Association of Faculties of Medicine of Canada (AFMC) (2010) *The Future of Medicine in Canada*. Ottawa. Available at: <https://www.afmc.ca/future-of-medical-education-in-canada/medical-doctor-project/> (accessed 20 October 2015).

Alcott B (2017) Does Teacher Encouragement Influence Students' Educational Progress? A Propensity-Score Matching Analysis. *Research in Higher Education* 58(7): 773–804. DOI: 10.1007/s11162-017-9446-2.

Ball S (1990) *Politics and Policy Making in Education: Explorations in Policy Sociology*. London: Routledge.

Bernstein B (1975) *Class, Codes and Control, Volume 3: Towards a Theory of Educational Transmissions*. London: Routledge and Kegan Paul.

Bolton P (2017) *Grammar School Statistics*. House of Commons Library. London.

Bordage G (2009) Conceptual frameworks to illuminate and magnify. *Medical education* 43(4): 312–9. DOI: 10.1111/j.1365-2923.2009.03295.x.

Brooks J and King N (2014) *Doing Template Analysis: Evaluating an End of Life Care Service*. Sage Research Methods Cases. DOI: 10.4135/978144627305013512755.

Brosnan C (2010) Making sense of differences between medical schools through Bourdieu's concept of 'field'. *Medical Education* 44(7): 645–652. DOI: 10.1111/j.1365-2923.2010.03680.x.

Bryman A (2012) *Social Research Methods*. Oxford: Oxford University Press.

Bunniss S and Kelly DR (2010) Research paradigms in medical education research. *Medical Education* 44(4): 358–366. DOI: 10.1111/j.1365-2923.2009.03611.x.

Crouch M and McKenzie H (2006) The logic of small samples in interview-based qualitative research. *Social Science Information* 45(4): 483–499. DOI: 10.1177/0539018406069584.

Department for Business Innovation and Skills (DBIS) (2016) *Success as a Knowledge Economy: Teaching Excellence, Social Mobility & Student Choice*. London.

Department of Education (DfE) (2014) *Undergraduate Applications, Offers and Acceptances, 2014. Report and Appendices*. Canberra, AC.

Donnelly M (2014) The Road to Oxbridge: Schools and Elite University Choices. *British Journal of Educational Studies* 62(1): 57–72. DOI: 10.1080/00071005.2014.902028.

Donnelly M (2015a) A new approach to researching school effects on higher education participation. *British Journal of Sociology of Education* 36(7): 1073–1090. DOI: 10.1080/01425692.2014.886942.

Donnelly M (2015b) Progressing to university: hidden messages at two state schools. *British Educational Research Journal* 41(1): 85–101. DOI: 10.1002/berj.3136.

Dowell J, Norbury M, Steven K, et al. (2015) Widening access to medicine may improve general practitioner recruitment in deprived and rural communities: survey of GP origins and current place of work. *BMC Medical Education* 15(1): 1–7. DOI: 10.1186/s12909-015-0445-8.

Fleming MJ and Grace DM (2014) Widening the lens : Utilizing teacher perspectives to assess widening participation efforts in Australian higher education. *Widening Participation and Lifelong Learning* 16(2): 46–63. DOI: 10.5456/WPLL.16.2.46.

Gale T and Molla T (2015) Social justice intents in policy: an analysis of capability for and through education. *Journal of Education Policy* 30(6): 810–830. DOI: 10.1080/02680939.2014.987828.

Gorman D (2018) Matching the production of doctors with national needs. *Medical Education* 52(1): 103–113. DOI: 10.1111/medu.13369.

Greenhalgh T, Seyan K and Boynton P (2004) 'Not a university type': focus group study of social class, ethnic, and sex differences in school pupils' perceptions about medical school. *BMJ* 328(7455): 1541–1544. DOI: 10.1136/bmj.328.7455.1541.

Hart CS (2012) *Aspirations, Education and Social Justice: Applying Sen and Bourdieu*. London: Bloomsbury Publishing.

Independent Schools Council (ISC) (2017) 2016/17 Key Figures. London. Available at: <https://www.isc.co.uk/media/3783/isc-key-figures-2016-17.pdf> (accessed 10 January 2018)

Larkins S, Michielsen K, Iputo J, et al. (2015) Impact of selection strategies on representation of underserved populations and intention to practise: international findings. *Medical Education* 49(1): 60–72. DOI: 10.1111/medu.12518.

Mathers J and Parry J (2009) Why are there so few working-class applicants to medical schools? Learning from the success stories. *Medical Education* 43(3): 219–228. DOI: 10.1111/j.1365-2923.2008.03274.x.

Mathers J, Sitch A, Marsh JL, et al. (2011) Widening access to medical education for under-represented socioeconomic groups: population based cross sectional analysis of UK data, 2002-6. *BMJ (Clinical research ed.)* 342: d918. DOI: 10.1136/bmj.d918.

Mathers J, Sitch A and Parry J (2016) Population-based longitudinal analyses of offer likelihood in UK medical schools: 1996-2012. *Medical Education* 50(6): 612–623. DOI: 10.1111/medu.12981.

McHarg J, Mattick K and Knight L V (2007) Why people apply to medical school: implications for widening participation activities. *Medical Education* 41(8): 815–21. DOI: 10.1111/j.1365-2923.2007.02798.x.

McLachlan JC (2005) Outreach is better than selection for increasing diversity. *Medical Education* 39(9): 872–5. DOI: 10.1111/j.1365-2929.2005.02257.x.

McManus IC, Ng-Knight T, Riglin L, et al. (2015) Doctor, builder, soldier, lawyer, teacher, dancer, shopkeeper, vet: exploratory study of which eleven-year olds would like to become a doctor. *BMC Psychology* 3(1): 38. DOI: 10.1186/s40359-015-0094-z.

Medical Schools Council (2013) *Selecting for Excellence: End of Year Report*. London.

Medical Schools Council (2014) *Selecting for Excellence Final Report*. London.

Medical Schools Council (2016) *Implementing Selecting for Excellence: A progress update*. London.

Milburn A (2012) *Fair Access to Professional Careers*. The Independent reviewer on Social Mobility and Child Poverty. London.

Mitchell PM, Roberts TE, Barton PM, et al. (2017) Applications of the Capability Approach in the Health Field: A Literature Review. *Social Indicators Research* 133(1): 345–371. DOI: 10.1007/s11205-016-1356-8.

Nicholson S and Cleland Jennifer (2015) Reframing research on Widening Participation in Medical Education. In: Cleland J and Durning S (eds) *Researching Medical Education*. Oxford: Wiley-Blackwell, pp. 231–242.

O'Neill L, Vonsild MC, Wallstedt B, et al. (2013) Admission criteria and diversity in medical school. *Medical Education* 47(6): 557–561. DOI: 10.1111/medu.12140.

Patterson F, Knight A, Dowell J, et al. (2016) How effective are selection methods in medical education? A systematic review. *Medical education* 50(1): 36–60. DOI: 10.1111/medu.12817.

Robb N, Dunkley L, Boynton P, et al. (2007) Looking for a better future: identity construction in socio-economically deprived 16-year olds considering a career in medicine. *Social Science & Medicine* 65(4): 738–54. DOI: 10.1016/j.socscimed.2007.03.011.

Roberts N and Bolton P (2017) *Briefing Paper 07914: Medical school places in England from September 2018*. London.

Robeyns I (2005) The Capability Approach: a theoretical survey. *Journal of Human Development* 6(1): 93–117. DOI: 10.1080/146498805200034266.

Sandars J and Hart CS (2015) The capability approach for medical education: AMEE Guide No. 97. *Medical Teacher* 37(6): 510–520. DOI: 10.3109/0142159X.2015.1013927.

Scottish Government (2016) *The Final Report of the Commission for Widening Access: A Blueprint for Fairness*. Edinburgh.

Scottish Government Newsroom (2016) *Scotland's first graduate entry medical programme*. Available at: <https://news.gov.scot/news/scotlands-first-graduate-entry-medical-programme> (accessed 24 July 2017).

Sen A (1999) *Development as freedom*. Oxford: Oxford University Press.

Southgate E, Kelly BJ and Symonds IM (2015) Disadvantage and the 'capacity to aspire' to medical school. *Medical education* 49(1): 73–83. DOI: 10.1111/medu.12540.

Southgate E, Brosnan C, Lempp H, et al. (2017) Travels in extreme social mobility: how first-in-family students find their way into and through medical education. *Critical Studies in Education* 58(2): 242–260. DOI: 10.1080/17508487.2016.1263223.

Steven K, Dowell J, Jackson C, et al. (2016) Fair access to medicine? Retrospective analysis of UK medical schools application data 2009–2012 using three measures of socioeconomic status. *BMC medical education* 16(1): 11–21. DOI: 10.1186/s12909-016-0536-1.

Sutton Trust (2011) Degrees of Success - HE Destinations tables. Available at: <https://www.suttontrust.com/research-paper/degrees-success-destinations-tables/> (accessed 14 July 2017)

The Challenge, iCoCo and SchoolDash (2017) Understanding School Segregation in England; 2011 to 2016. Available at <http://the-challenge.org/uploads/documents/TCN-Understanding-School-Segregation-in-England-2011-to-2016.pdf> (accessed 24 March 2017)

Universities and Colleges Admissions Service (UCAS) (2015) Through the lens of students: how perceptions of higher education influence applicants choices. Available at: <https://wwwucas.com/sites/default/files/through-the-lens-of-students.pdf> (accessed 5 May 16)

Universities and Colleges Admissions Service (UCAS) (2017) UCAS Homepage. [Internet] Available at: <https://wwwucas.com/> (accessed 4 December 2017).

Unterhalter E, Vaughan R and Walker M (2007) The Capability Approach and Education. *Prospero* 13 (Special Issue of the Capability Approach): 34–50.

Wheater R, Ager R, Burge B, et al. (2013) Achievement of 15-Year-Olds in England: PISA 2012 National Report (OECD Programme for International Student Assessment). National Foundation for Educational Research. London.

Wilson-Strydom M (2015) University access and theories of social justice: contributions of the capabilities approach. *Higher Education* 69(1): 143–155. DOI: 10.1007/s10734-014-9766-5.

8.4 Key Findings

Study Three explores the ways in which teachers: perceive entry to medical school; negotiate their role in advising pupils about an application to medicine; and tailor their communications to create distinct impressions about how pupils 'should' aspire to this subject. It contributes the teachers' perspective on their behaviour and attitudes to medicine – until now a gap in the UK literature - and consequently develops new understanding about the motivations and values that underlie and shape teacher decisions. The novel conceptual framework helps explain why pupils might perceive teachers' communications as discouraging, even when they do not intend them to be so. Box 8.3 highlights the objectives, key findings and conclusions of this work.

In the next chapter, non-traditional high school pupils' perspectives on medicine are explored. As potential applicants, they are the main recipients of medical schools' and school teachers' messages about WA and key stakeholders in the success of initiatives. The subject of 'suitability' for medicine is thus considered again from their perspective. Analysis focuses on the ways pupils' build and negotiate their understanding of the culture of medicine through social interaction.

Box 8.3 Study Three: Summary of key points

Objectives:

- To explore how school teachers perceive and interpret their role in advising and supporting pupils to aspire and apply to medicine
- To investigate how teachers perceive whether (or not) their pupils were suitable for medicine

Key Findings:

- ✓ Teachers promoted pupils' freedom to make their own career decisions
- ✓ Teachers did not see it as their role to strongly encourage or discourage pupils from a particular career, claiming strong interventions reduced pupils' freedom to choose
- ✓ Teachers did not seem to rely on stereotypes regarding suitability for medicine and imagined a diverse range of pupils as successful doctors
- ✓ Teachers perceived the academic entry requirements to be the largest barrier for their pupils, given their educational and home contexts
- ✓ Teachers recognised that pupils from 'traditional' backgrounds were more likely to successfully aspire and apply for medicine
- ✓ Teachers perceived an application to medicine as a 'risky' choice for their pupils and were cautious to strongly advocate an application

Conclusions and recommendations:

- Teachers' behaviour is strongly linked to their context
- Medical schools should acknowledge teachers' perception of medicine as 'risky' and seek to address this through providing up-to-date advice on admissions and wider systems changes to promote WA
- Medical schools should help teachers tailor their advice and support to focus on aspects of the application process which highlight pupils' strengths and build their confidence
- Teachers may need to become more comfortable advocating non-traditional and 'risky' careers to stimulate social mobility rather than social reproduction in career choice

Chapter 9

Study Four: Exploring school pupils' perceptions of medicine

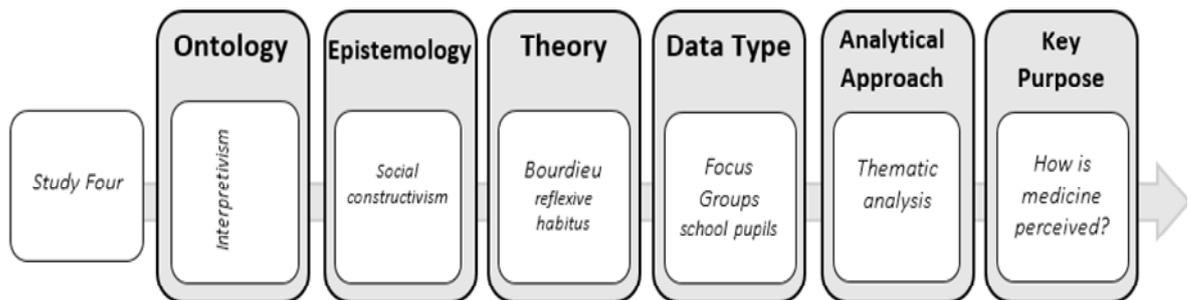
9.1 Introduction

This chapter presents the fourth study completed during my doctorate. This work is currently submitted at a journal in medical education and may be cited as follows:

Alexander K, Cleland J, Nicholson S (2018) Bridging the cultural divide? Exploring school pupils' perceptions of medicine. (In submission)

This study is a thematic analysis of focus group interviews with academically able pupils who attended schools engaged with medical schools' WA initiatives. The research design is summarized visually in Figure 9.1:

Figure 9.1 Research design of Study Four (Exploring school pupils' perceptions of medicine)



This chapter presents author contributions, the paper of Study Four and a summary of the objectives, key findings and overall conclusions of the work. The chapter concludes with a brief discussion of how Study Four links to the wider thesis aims.

9.2 Contributions to Study Four

I thought a study focussed on the perceptions of pupils from non-traditional backgrounds was essential within this PhD, as pupils (potential applicants) are crucial

stakeholders in the success of WA. The inclusion of this study was thus agreed collaboratively amongst the research team – Prof Jen Cleland (JC), Prof Sandra Nicholson (SN) and myself – during the early stages of my doctorate, and was built into the overarching direction and aims of thesis (see section 1.6).

I formulated the research questions and refined these in discussion with JC and SN. I suggested data collection via focus groups and the inclusion of a task-based activity (see section 7.4.1). I outlined the key parameters for participant eligibility, refined and agreed these in discussion with JC and SN (see section 7.4.2). As we considered Study Three's analytical design to have been successful, I decided to proceed with the same format for this study: applying a theoretical framework after the overarching themes had been developed via template analysis (see section 7.6.2).

I prepared and submitted the research proposal to the Ethical Review Committee (joint proposal for Studies Three and Four). Following approval, I organised participant recruitment and conducted the focus group interviews (see section 7.4.3).

I checked and corrected the transcripts and familiarized myself with the data (see section 7.5). I conducted the template analysis. Coding decisions and developing themes were checked, refined and critiqued through critical discussions with JC and SN throughout analysis. JC and SN reviewed and approved the final template (codebook) of developed themes (Appendix R). I proposed the conceptual framework of the 'reflexive habitus' and produced an outline of findings with this framework applied. This was reviewed and the theoretical approach agreed by JC and SN (see section 7.7.2).

I drafted the first version of the paper. JC reviewed this and suggested restructuring and refocussing the introduction, and smaller edits throughout to present findings more succinctly. I incorporated these changes and produced a second draft. SN reviewed this draft and suggested the results section should be restructured and reduced. I made the suggested changes, other edits and produced a third draft. This was reviewed by JC and SN who suggested further edits. I produced a final version which all authors approved for submission to a journal within medical education.

9.3 Study Four

Bridging the cultural divide? Exploring school pupils' perceptions of medicine

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Abstract

Introduction Literature published around a decade ago demonstrated that UK individuals from non-traditional groups may not consider, or aspire to, medicine because of sociocultural barriers, instead perceiving medicine as 'not for the likes of me'. Since this time the UK Higher Education landscape has undergone significant changes, with an increased emphasis on student choice and widening access (WA) initiatives. Consequently, the present study looks anew at the perceptions of medicine held by school pupils from non-traditional backgrounds to assess whether sociocultural factors remain a major barrier to medicine.

Methods Focus groups were conducted with 71 high-achieving school pupils in their penultimate or final year (aged 16-18). Participants attended UK state schools engaged with medical schools' WA initiatives. Transcripts were analysed thematically using a data-driven approach. Themes were then interpreted through the conceptual lens of the 'reflexive habitus' – an adapted version of Bourdieu's classic concept.

Results Participants did not perceive that sociocultural differences would deter them from aspiring to, or pursuing, the career of their choice. Some participants identified their 'different' backgrounds as a strength to bring to medicine. They reported that intrinsic motivators (personal interest and fulfilment) were most important in their own career choices. When asked what they believed might have motivated current medical students for the career, participants debated the role of extrinsic motivators (high status and income) versus intrinsic ones. 'Hot knowledge' from within medicine helped some participants reconcile this 'clash' in perceived values and imagine themselves in the profession.

Discussion These non-traditional school pupils appear to have embraced the belief that medicine is for anyone with appropriate desire and ability, regardless of their background. This suggests that structural barriers such as high academic entry requirements and inequalities in the pre-university education system may now be the key cause of low application rates.

Introduction

Widening access (WA) policies aim to boost social mobility and to ensure that any individual with the requisite ability and commitment has the opportunity to access the career of his/her choice, regardless of background, gender or ethnicity (Bradley et al., 2008; Medical Schools Council, 2014c; Milburn, 2012). In medicine (the focus of this paper), WA is also increasingly linked to the promotion of social accountability through its potential to create a more diverse workforce with an improved understanding of deprived communities and an increased desire to work in underserved specialities and locations (Dowell et al., 2015; Larkins et al., 2015; Morrison, 2017; O'Connell et al., 2018; Puddey et al., 2017).

WA to medicine coexists against a wider backdrop of educational policy and practice. In the UK, the focus on WA initiatives (Medical Schools Council, 2014a, 2014c) accompanies wider changes to the UK Higher Education (HE) landscape, such as a strong political and policy emphasis on student choice (DBIS, 2011), a large increase in total student numbers (HESA, 2018) and a focus on opening up access to more 'elite' subjects and universities (Milburn, 2012; Russell Group, 2015). Comparable forces are in play internationally. For example, Australian governments have set similarly high targets for participation in HE overall, with a focus on higher proportions of students coming from lower socioeconomic, rural and indigenous backgrounds (Gale and Parker, 2013).

Nonetheless, despite the substantial changes to the global HE sector's focus (Altbach et al., 2009), and the accompanying international investment and engagement in WA (Shah et al., 2015), numbers of applications to medicine from those in underrepresented groups have not risen substantially (AAMC, 2016; Puddey and Mercer, 2013; Steven et al., 2016).

Why is this? Applicants from underrepresented, or "non-traditional", groups may not apply to medicine for multiple reasons. International literature reveals that they may be deterred by factors including: socio-cultural barriers and lack of identity 'fit' (Gorard et al., 2006; Greenhalgh et al., 2004; Mathers and Parry, 2009; McHarg et al., 2007); lack of confidence or feelings of inadequacy (Gore et al., 2017; McHarg et al., 2007; Wouters et al., 2017); perceived financial costs or material barriers (Freeman et al.,

2016; Hadinger, 2017; Southgate et al., 2015); or lack of information (Hadinger, 2017; Martin et al., 2018; Medical Schools Council, 2014c; Robb et al., 2007). Greenhalgh et al.'s (2004) UK study reported more affluent school pupils were happy to consider medicine for the intrinsic benefits of the career, whereas school pupils from lower socioeconomic groups perceived it as a career geared towards the 'posh' (people from higher social classes) and felt they would be at an unsurmountable disadvantage in competition for a place since they did not come from this group (Greenhalgh et al., 2004).

This and other empirical studies focusing on the sociocultural barriers to medicine in the UK context are now approximately a decade old (Greenhalgh et al., 2004; Mathers and Parry, 2009; McHarg et al., 2007; Robb et al., 2007). As mentioned earlier, in this time there have been substantial changes to the broader HE sector, including a widespread focus on WA. The extent of this shift suggests that the cultural and structural barriers non-traditional pupils currently face in relation to studying medicine may now be quite different.

Medical schools' WA initiatives thus risk operating on old knowledge and outdated assumptions. There is an urgent need for up-to-date studies through which medical schools may recalibrate their initiatives and focus on the key concerns of today's non-traditional applicants. These studies must address questions including: Is medicine still a career that is considered 'unreachable' for individuals in non-traditional groups? Or have the sector's efforts to widen access, including those from medical schools, changed perceptions? And if so, why might application rates not be following this trend?

This study addresses some of these gaps. It aims to explore how a diverse group of UK pupils in high schools targeted by WA initiatives perceive the reasons individuals are attracted to, and 'suitable' for, a career in medicine and how these align with the pupils' own priorities for a career.

The following research questions guided our analysis:

1. What key factors do pupils believe would have motivated *current* medical students to apply?

2. How do pupils perceive their own career motivations align with those they believe the medical students hold?
3. Why do pupils consider themselves 'suitable' (or not) for medicine?

Methods

This study employs a social constructionist worldview, which acknowledges participants' individual and diverse experiences of the world, and emphasises the social dimension in meaning-making (Savin-Baden and Howell Major, 2013).

Data collection

Participating schools

The UK's pre-university school system consists primarily of non-selective state-funded schools that are free to attend. These schools vary considerably with regards to their levels of attainment and are often highly socioeconomically and socially segregated (Jerrim and Shure, 2016; The Challenge et al., 2017).

This study aimed to collect perspectives from high school pupils attending schools targeted by, and engaged with, medical schools' WA activities. UK medical schools target non-selective state schools within their local geographical region, identified via statistics on school performance and demographic intake (e.g. characterised by below average attainment or progression to university and situated in an area of socioeconomic deprivation). These schools are prioritised for aspiration-raising pre-entry WA activities and application support and guidance (Medical Schools Council, 2016).

We were interested to investigate whether there were sociocultural barriers that transcended the procedural and structural differences between Scottish and English school systems. Thus, instead of focussing on one geographical area or city (Greenhalgh et al., 2004; Robb et al., 2007; Southgate et al., 2015; Wouters et al., 2017), this study aimed to explore the breadth of pupils' experiences across the UK. Purposive sampling (Bryman, 2012) ensured the participants' schools met widening

access eligibility criteria and included of range of high schools across three diverse UK regions: North-East Scotland, London and Southern England.

We were particularly interested in gathering the views of pupils who were academically able and interested in science subjects, as these pupils' abilities and interests positioned them well to consider medicine as a career. We actively sought to include pupils with a range of career intentions (not only medicine) in order to hear both what attracts, as well as deters, a potential applicant from the career.

Pupils in their penultimate and final years of school were included as these individuals were considered more likely to have started making reasoned decisions about their post-school choices, as well as more likely to have experienced some kind of university outreach, mostly concentrated at ages 16+ (Medical Schools Council, 2014a, 2014c).

Participant recruitment

Headteachers of high schools (ages 11-18) and sixth-form colleges (ages 16-18) targeted by local medical schools' WA initiatives were contacted with information about the study and an invitation for their pupils to participate. Following consent, contact teachers were asked to invite eligible pupils (see above) to participate and to provide them with an information sheet. It was stressed to teachers that pupils' participation should be entirely voluntary. Teachers organised a time and venue within the school for the focus group. One additional focus group took place during a medical school widening access initiative.

At the start of the focus groups, all participants were given further information and the opportunity to ask questions, and made aware that they could withdraw consent or choose to not participate at any time with no adverse effects. All participants gave written consent to participate, and for their focus group to be audio-recorded for later transcription.

All participants were asked to complete a personal information sheet to collect demographic data. Data was collected in October and November 2016.

Focus groups

Focus group were chosen to encourage interaction between participants, and allow them to discuss, debate and situate their own opinions amongst those of their peers

(Barbour, 2005; Stalmeijer et al., 2014). We were particularly interested to capture this process of knowledge co-construction (McMillan, 2015; Stalmeijer et al., 2014) due to our focus on the cultural and social influences on participants' perceptions.

Participants were first asked to complete an activity as a group. Task-based activities are a useful strategy to engage participants, encourage them to work together interactively and explore their thoughts informally before discussing them with an unfamiliar adult (Gibson, 2007; Punch, 2002). Participants were given 14 'factors' that might be given as a reason to apply for medical school (e.g. Opportunity to work with people; Opportunity for high income; Desire for challenge; Interest in human biology). These 'factors' were developed for and detailed within Vaglum et al.'s survey study on medical students' motivations (1999).

Participants were asked to rank these 'factors' in order of importance (from the most important factor to the least) according to how they believed *current medical students* would have chosen. Participants were left to discuss the activity without participation from the focus group moderator (KA), except to answer any questions.

Once participants had completed the exercise, the moderator prompted the group to discuss their ranking and justifications for this, as well as their perceptions of medical students, doctors and medicine more generally, and any other factors not listed that they deemed important. Participants were then prompted to discuss whether they thought there would be differences in the ranking for medical students if it were split by gender (i.e. a male ranking and a female ranking). Finally participants were asked about their own plans for the future, and how they might reorder the ranking if it were *for them personally* in their chosen career (medicine or otherwise).

At the end of the session the moderator discussed the findings of the study from which the 'factors' were taken (Vaglum et al., 1999), allowing the participants to compare their ranking. Motivations for medicine were then briefly discussed within the wider and more recent literature about medical students' motivations.

Data Analysis

Focus group audio-recordings were transcribed verbatim, corrected for accuracy, anonymised and uploaded into NVivo 11 (QSR International Pty Ltd, Doncaster, Vic,

Australia). To safeguard participant anonymity participants are referred to with a pseudonym, their gender (m/f) and their focus group identifier (e.g. Ana (f) Group H).

Template analysis (King and Horrocks, 2010) was used to code the data, identify the developing themes and to create a final template with which to code all data. This template included integrative themes which permeated through several other themes. The analytical process was largely inductive (data driven), although we do acknowledge the inevitable influence of prior literature and experiences on developing interpretations (King and Horrocks, 2010).

The reflexive habitus

Identified themes were then considered through the conceptual lens of a 'reflexive habitus' (Decoteau, 2016) a concept adapted from the work of Pierre Bourdieu. Bourdieu's concept of habitus offers insight into the manner in which context shapes an individual's dispositions and subsequently his/her thoughts and choices (Bourdieu, 1984, 1985). As a result, habitus has been used extensively within research examining educational inequalities to investigate how and why an individual's background appears to influence his/her educational decisions and level of participation (Webb et al., 2017).

According to Bourdieu, habitus is a set of dispositions (behaviours, beliefs and tastes) that individuals unconsciously develop through socialization, and which help them successfully navigate social contexts (Bourdieu, 1985). These social contexts are referred to as 'fields'. Within every field, individuals will adapt their practice to compete for desirable resources and to connect or 'fit in' with others. For example, in the field of medical school, applicants must compete for a place (Razack et al., 2015), successfully negotiate the transition from pre-clinical to clinical practice (Balmer et al., 2015), and foster professional networks (Nicholson and Cleland, 2017). Every field is governed by unquestioned and implicit rules of acceptable behaviour, referred to as "doxa" (Bourdieu, 1985).

Bourdieu understood the habitus to consist of both primary (or 'original') habitus and secondary ('specific' or 'cultured') habitus (Bourdieu, 1967, 2000; Wacquant, 2013). An individual develops their primary habitus in early childhood through exposure to

familial dispositions: this forms the baseline for his/her social identity and the foundation on which other habitus may be shaped. The secondary habitus develops through teaching or learning, for example during schooling, technical skills acquisition or entry into a profession (Decoteau, 2016). The greater the difference between the primary and secondary habitus, the more difficult the acquisition of the secondary habitus may be (Decoteau, 2016). The mismatch or 'gap' between the primary habitus of non-traditional applicants and the habitus required to negotiate the field of medicine has been identified as a barrier to attracting these groups to medicine (Brosnan et al., 2016; Greenhalgh et al., 2004; Mathers and Parry, 2009; Southgate et al., 2017).

However, Bourdieu's concept of habitus has been critiqued as limited and outdated. For example, habitus has been criticised for insufficiently acknowledging individuals' ability to exert their own agency (Archer, 2010) and to be unsuitable for a modern world, in which traditional class systems, roles and expectations have been replaced with reflexive individualism (Bauman, 2000; Beck, 1992; Giddens, 1991).

Therefore, in this study we employ the more nuanced concept of a 'reflexive habitus' (Decoteau, 2016). Within this model, individuals are understood to be positioned within multiple, intersecting and overlapping fields. From learning the doxa and practices of one field and translating this to another field, they are able to perceive and negotiate any mismatch between their primary habitus and the secondary habitus required for a specific field and thus reflexively decide how to act (Decoteau, 2016). This ability to manage habitus and adapt responses in complex and unfamiliar fields can be evidenced, for example, in Reay et al.'s study of working class students adapting to life at an elite university (Reay et al., 2009).

The 'reflexive habitus' is distinct from Bourdieu's original concept, as the original predominantly understands habitus to be restructured in reaction to disruptions and radical changes to the field (Bourdieu, 2000) rather than through an individual's everyday reflection (Decoteau, 2016).

Ethical Approval

Permission to conduct this study was granted by the Committee for Research Ethics and Governance in Arts, Social Sciences and Business at the University of Aberdeen.

Results

In this study, we were interested in the similarities and differences participants perceived between their own motivations for a career and those they believed medical students to hold. We intended to explore any cultural differences and question whether participants saw themselves as 'suitable' for medicine.

First, we describe the participants. We then explore the above questions via themes relating to intrinsic motivations (similarities) and extrinsic motivations (differences). We then summarise how participants may be negotiating perceived differences and finding their own 'fit' in medicine.

Descriptive Findings

Ten focus groups were conducted with 71 high school pupils, 26 (36.6%) in their penultimate and 45 (63.4%) in their final year. Focus groups contained between five and ten participants and lasted between 22 and 45 minutes (average 34 minutes).

Overall, participants possessed diverse demographic characteristics (see Table 9.1). More participants were female than male (69.1% and 30.9% respectively). All ethnic minority (non-white) groups were overrepresented in comparison to the UK-wide population (ONS, 2011a). A small percentage of participants (4.2%) had been in the statutory care system. Just over half the representative number of participants came from the two lowest Polar Quintiles (22.6%) - a measure of an individual's likelihood of participation in Higher Education (HEFCE, 2017). Participants were however, roughly representative of the UK population according to their socio-economic status with 16.9 – 22.5% coming from each deprivation quintile (IMD/SIMD: Ministry of Housing Communities & Local Government (2015) and The Scottish Government (2016)).

Parent/guardian occupations represented all eight standard occupation classes (ONS, 2011b). The majority of participants (57.7%) did not list a second parent/guardian occupation.

When asked (via the personal information sheet) whether they were considering medicine, 40 participants selected 'yes' (56.3%), 9 selected 'maybe' (12.7%) and 22 selected 'no' (31.0%).

Table 9.1 Participant Demographics and Background Information¹

Criteria	% (n)	
School Year		
Final	63.4 (45)	
Penultimate	36.6 (26)	
Gender		
Male	30.9 (22)	
Female	69.1 (49)	
Location		
North-East Scotland	40.8 (29)	
London	26.8 (19)	
Southern England	32.4 (23)	
Ethnicity		
Asian/British Asian	31.0 (22)	
Black/African/Caribbean/Black British	5.6 (4)	
Mixed Ethnic Groups	4.2 (3)	
White	54.9 (39)	
Other	4.2 (3)	
Care Status		
Currently or previously been in care	4.2 (3)	
Never been in the statutory care system	95.8 (68)	
Polar 4 Quintile²		
1 (lowest participation in Higher Education)	12.7 (9)	
2	9.9 (7)	
3	28.2 (20)	
4	21.1 (15)	
5 (highest participation in Higher Education)	21.1 (15)	
Not provided	5.6 (4)	
Unclassified	1.4 (1)	
Index of Multiple Deprivation Quintile (IMD³/SIMD⁴)		
1 (most deprived)	16.9 (12)	
2	22.5 (16)	
3	16.9 (12)	
4	19.7 (14)	
5 (least deprived)	16.9 (12)	
Not provided	5.6 (4)	
Unclassified	1.4 (1)	
Parent/Guardian Standard Occupational Class⁵	Parent/Guardian 1	Parent/Guardian 2
1 Higher managerial & administrative occupations; Higher professional occupations	15.5 (11)	2.8 (2)
2 Lower professional & higher technical occupations; Lower managerial & administrative occupations; Higher supervisory occupations	16.9 (12)	11.3 (8)
3 Intermediate occupations	7.0 (5)	4.2 (3)
4 Employers in small organisations; own account workers	14.1 (10)	0 (0)
5 Lower supervisory & technical occupations	4.2 (3)	4.2 (3)
6 Semi-routine occupations	16.9 (12)	8.5 (6)
7 Routine occupations	5.6 (4)	4.2 (3)
8 Never worked and long-term unemployed	2.8 (2)	0 (0)
Not provided	14.1 (10)	57.7 (41)
Unclassified	2.8 (2)	7.0 (5)

¹As self-reported by participants via their completion of a personal information sheet.

²Polar4 (Participation of Local Areas) is a UK-wide measure of how likely young people are to enter Higher Education according to postcode area in which they live (HEFCE, 2017).

³The Index of Multiple Deprivation (IMD) ranks all areas of England according to an aggregate of seven measures of deprivation enabling comparison of these areas (Ministry of Housing Communities & Local Government, 2015).

⁴The Scottish Index of Multiple Deprivation (SIMD) is a similar rank of deprivation for areas in Scotland (The Scottish Government, 2016).

⁵Standard Occupational Class is determined by the UK Office of National Statistics. Jobs are classified by their skill level and content (ONS, 2011b).

Intrinsic motivations

Participants reported that intrinsic motivation for a career was the most important factor in their choices and essential to succeeding in a career long-term. The prioritisation of intrinsic motivations was largely unquestioned, with participants claiming they desired, above all, a career that was enjoyable, interesting and stimulating. This suggests that participants' habitus had internalised the principles of individual choice and personal fulfilment as priorities in career choice. Participants assumed that current medical students' career choices would also be primarily driven by intrinsic interests:

...I think when you're in it you must have like a drive, like a motivation, and I don't think motivation can be sustained from things like, I don't know, money or stuff like that. It has to be something from where you actually genuinely want to help people which is something like a doctor would do... *Connie (f) Group J*

When discussing who would be a 'typical' doctor, all groups named personal characteristics and abilities (e.g. academic, motivated, caring) but not demographic characteristics. If participants were not considering medicine, they reported this was also out of personal choice: the subject or the pressures of the career didn't appeal; they had chosen not to strive for the grades; or had a preferred option. No participants reported or implied that they felt medicine was culturally unsuitable for them, nor that financial costs or a lack of information would prevent them from pursuing their desired career.

The only substantial barrier participants reported between themselves and medicine was the achievement of the grade requirements. This had deterred some participants, who seemed disillusioned with the thought of aspiring to an 'impossible' goal – for

these participants the career itself was conceivable and attractive, but the entry grades were perceived as virtually unattainable even with great effort and sacrifice. However, other participants believed that the entry requirements could be overcome given enough intrinsic motivation and determination for the career:

Can I say, if you really want to be a doctor, you can. If you get terrible grades, work your way around... it takes ages, but you can work into a doctor position.

Arjun (m) Group I

Extrinsic motivations

Family experiences in an insecure job market and growing up in households on a limited income appeared to have shaped some participants' habitus, causing them to automatically prioritise a career with a low risk of redundancy and high employment levels:

Group E

Moderator So, you put job security at the very top [of the ranking]. Why did you guys put that there?

Huzaifah (m) Because people don't like being like, oh, I might get fired the morn'. Whereas if you've got...

Lindsey (f) Yeah, there's a lot to do with like, people losing their jobs right now as well, and it's like, quite stressful.

Jackson (m) So a lot of young doctors and that...

Huzaifah If you're taking in a good, steady income then you can look after your family and yourself.

Jackson So having a job is one of the most important things in your life, because without a job you can't feed... have a house... everything.

Huzaifah I'm pretty sure doctor is probably the most stable job...

Structural and extrinsic factors were clearly influential in participants' choice of career. A number of participants openly discussed the familial pressure on them to apply to medicine as a high-status career. Some female participants reported that medicine was a chance to break free of more traditional or expected gender roles (embedded in their primary habitus) and define themselves as individuals, equal to men (develop a new habitus in a field with more gender-equal doxa). However, during discussion

participants reinforced that they nevertheless believed intrinsic factors and agentic choice had been their key motivations, not extrinsic or structural factors.

In contrast, some participants felt strongly that extrinsic motivators would have influenced the medical students' choice of career - especially a desire for high social status and income. These participants argued that there were other roles with healthcare that would fulfil similar intrinsic motivations (e.g. to help people and an interest in science) and subsequently extrinsic factors attracted applicants:

...you could just do biology if you wanted to learn about some of those things. Rather than do medicine. But then you get the money and stuff with medicine. If that makes sense. So I think that's the reason why people choose medicine over science courses.

Poppy (f) Group D

These participants believed that these extrinsic motivations originated from medical students' families, who wished them to maintain a family tradition or high status. Therefore, although no participants expressed that medicine was for those from 'rich' or 'posh' backgrounds, they did implicitly perceive medical students as having developed their habitus within families that already possessed and/or desired social status. Moreover, the medical field was seen as an arena where status and wealth could be accrued.

Participants described individuals who were primarily motivated by a desire for high income or social status very negatively, linking this to arrogance, selfishness or lack of ambition.

Participants' strong aversion to these extrinsic motivators was potentially due a clash between these and their habitus. Firstly, allowing extrinsic factors to be considered legitimate motivations might challenge their strong belief in the importance of intrinsic motivation as the key to success, which was firmly embedded within their current habitus. Secondly, when describing their neighbourhoods and upbringings, participants described communities that were close-knit, humble and unpretentious. A primary habitus developed in such a community might be in tension with a field where high status and income were highly valued.

A lot of folk from here, they're not cocky. *Huzaifah (m) Group E*

Negotiating cultural difference

Participants' interaction with doctors and the 'field of medicine' was key in their ability to reconcile any 'clash' between what they perceived to be medical students' motivations and their own values.

Participants with family members in the profession, or who had met doctors or medical students through work experience or widening access initiatives, reported that doctors had stressed to them that extrinsic motivations were unsuitable reasons to choose the career, and rather that personal fulfilment was a key:

Group A

- Safah (f) I think before you actually get to know what medicine is about you'd go into it for the money and prestige...
- Efa (f) Because when you go to a hospital everybody knows who a doctor is, but when it comes to all the other professionals, it's like: "what is that?"
- Safah (f) ... but once you get to know what medicine actually entails...
- Ashlee (f) And once you go to work experience the doctors are constantly telling you if you want, if you're getting into the job for money, don't do medicine, and that's what, that's drilled into your head, so I think that's the thing.

These participants had learned through their interactions - 'hot knowledge' (Ball and Vincent, 1998) - that extrinsic factors were not accepted as suitable motivations within the medical field, and reported that this was an outdated stereotype and these factors did not motivate doctors 'nowadays'.

The overall influence of extrinsic motivations in medical students' choices was thus a very hotly debated topic within all the focus groups. Participants who were considering medicine denied the influence of extrinsic factors in their own choices totally or to a very large extent, often citing a belief that medicine should be a totally 'selfless' career. The forceful shunning of extrinsic motivators, and the disassociation of these from medicine, may be seen as an effort by these potential applicants to reconcile the mismatch between their primary habitus (where humility was valued) and their perception of the accepted habitus within the field of medicine (where high status was valued). It may also be seen as an attempt to develop a new secondary habitus and

practices to 'fit' within the doxa of the medical field - believing and describing extrinsic factors to be unimportant.

Perceived 'fit' with medicine

Participants largely perceived medicine as a field that was becoming more inclusive to the participation of women and individuals from diverse backgrounds. Some participants were even able to critically consider the field of medicine and identify areas in which practices and qualities developed through their backgrounds (one field) could be usefully applied to medicine (the new field). They felt that this would enhance their practice as a doctor as well as enrich medicine more generally:

Maybe possibly someone that came from a very rich background and became a doctor might not have been as exposed to like, the, not as great sides of the NHS [National Health Service]. If they have private health care, they might not know the issues that the public, poorer people might face. Yeah, just in general they [someone from our background] might be sort of be more understanding about that stuff.

Connie (f) Group J

Being around in this area, you are quite exposed to different cultures and religions and races. And, just being able to, not only be tolerant, but to encourage that kind of diversity, I think, is a mind-set that needs to be spread to other parts.

Ellie (f) Group B

Discussion

This study investigated the perceptions of an ethnically and socioeconomically diverse group of UK pupils in their final years at high school who possessed high academic ability and attended 'widening access' (WA) schools. Overall, findings suggest that a key mantra of WA initiatives - that anyone with the ability and desire should have the opportunity to access medicine, regardless of their background (British Medical Association, 2017.) - has successfully integrated into the collective consciousness of this diverse group of non-traditional pupils. Moreover, through access to 'hot knowledge' of the medical field, participants were able to draw upon role models in medicine, as

well as their own experiences, to successfully negotiate cultural tensions and create a positive, coherent image of themselves in the profession.

Participants stressed the primacy of intrinsic motivators (i.e. desire for interest, challenge and fulfilment) in the formation and achievement of career goals, and downplayed the influence of structural factors (e.g. family pressure, financial concerns) in their aspirations. This chimes with wider discourses in educational policy and practice which promote individualisation and encourage young people to choose careers in alignment with their individual interests and strengths (DBIS, 2011; Laughland-Booÿ et al., 2015; Rasborg, 2017). Our participants' attitudes were thus more similar to those Greenhalgh et al. (2004) found amongst the affluent participant group, rather than those in the lower-socioeconomic group. Although direct comparison between studies is unsuitable, our findings may thus suggest a tangible change in the attitudes of WA eligible pupils over this time.

Indeed, in our study, some participants even cited their own 'non-traditional' experiences (e.g. growing up in ethnically and religiously diverse or non-privileged communities) as a strength to bring to medicine and to benefit patients, rather than a barrier to be overcome. Furthermore, our participants did not report that other commonly identified 'barriers' to medicine - financial (Freeman et al., 2016; Hadinger, 2017; Southgate et al., 2015), cultural (Gore et al., 2017; Greenhalgh et al., 2004; Mathers and Parry, 2009; McHarg et al., 2007; Wouters et al., 2017) or lack of information (Hadinger, 2017; Martin et al., 2018; Medical Schools Council, 2014c; Robb et al., 2007) - would deter them from aspiring to and pursuing the career of their choice. Some, (although not all) participants even believed that the most significant barrier to medicine – achievement of the required academic grades - could be navigated with sufficient willpower and smart choices.

As pupils were still at school, these aspirations were naturally yet to be tested by the rigours of application or the costs and challenges of being a medical student (BMA Medical Student Committee, 2015; J Cleland et al., 2012; Orom et al., 2013). Moreover, despite their belief in the triumph of determination and talent, whether or not these pupils really do have a realistic opportunity to realise their aspirations is questionable. The very high academic entry requirements for medicine may present an almost

unsurmountable structural barrier in the UK's pre-university educational context (significant inequality and disparities in attainment) (Chowdry et al., 2013; Jerrim and Shure, 2016).

Inequalities in primary and high school translate strikingly into medical school application statistics: 80% of UK medical school applicants come from only 20% of UK high schools, and half of schools have sent no applicants to medicine in recent years (Medical Schools Council, 2014c). Applicants from selective and fee-paying schools are significantly overrepresented (Mathers et al., 2016b). Structural barriers may help explain why applications from those in lower socio-economic groups have not risen significantly over the last decade (Steven et al., 2016) despite a change in WA policy and practices, and attitudes. The alignment of medical school systems, educational policies, market pressures and other stakeholders is required to address this barrier (Alexander and Cleland, 2018b; Gorman, 2018).

The substantial demographic diversity within the participant group enabled us to include a breath of views from participants living in very different contexts, cultures and attending different schools. The disproportionate number of females may be because females tend to perform better at high school (Bosworth and Kersley, 2015) and are more likely to apply for medicine (Steven et al., 2016). The overrepresentation of all ethnic minority (non-white) groups may have resulted from three focus groups having taken place in London (accounting for 26.8% of participants), a city that has higher than average ethnic minority populations (ONS, 2011a).

Whilst all participants attended a WA eligible school a small minority of participants came from more 'traditional' backgrounds (e.g. professional parents and/or high socioeconomic postcode). This is not unexpected: Boliver et al. (2015) caution against the ecological fallacy of assuming that all people (pupils) have the modal characteristics of those who live in the same area or attend the same school. We considered this mix authentic, and it facilitated a reflexive 'group view' via exposure to various perspectives. Focus groups interviews and the inclusion of a group activity (Gibson, 2007), stimulated open, informal and sometimes heated discussion between the participants.

As permission and recruitment for data collection was arranged through high schools, we can expect that these WA schools were relatively open and encouraging towards university and medicine. The attitudes of WA eligible pupils may be very different in schools that do not currently engage with medical schools' WA activities.

The nature of this study means generalization of findings is not possible, however the strong reoccurrence of themes across locations, and the robust application of theory aids transferability (Reeves et al., 2008). The conceptual framework of the 'reflexive habitus' helped illuminate the ways in which our participants looked into the field of medicine, how they perceived its doxa, and the habitus and practices of those already working/studying in this field. It also allowed us to explore whether participants felt any mismatch between their habitus and that of those working medicine. Finally, it helped us consider how participants perceived their suitability for a medical career, by exploring how they felt this 'mismatch' might be managed or reconciled - taking lessons from practices learnt in one field and applying these to the new field of medicine.

Future studies to compare differences in perceptions between those from contrasting demographic groups (e.g. high/low socioeconomic status; privately/state educated) would add nuanced insight to this area. Alternatively, given the change in attitudes this study suggests, large-scale surveys might be useful to gauge the extent of this change across demographic groups and locations. Finally, studies that target pupils attending schools not engaging with medical schools' WA initiatives would usefully investigate the potential impact of these activities and offer a new perspective.

Overall, this study adds a nuanced understanding of how 'hot knowledge' of the medical field may help non-traditional pupils reconcile cultural differences and adapt their attitudes to imagine themselves in the profession. It suggests that, in the modern Higher Education context, non-traditional pupils no longer see medicine as an 'unreachable' profession, but that high academic entry requirements in a context of significant educational inequality are now the most substantial barrier. This illustrates the key importance of research keeping pace with political and societal change – exposing and foregrounding the barriers of the present, rather than allowing these to be eclipsed by understandings of the past.

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References

- American Association of Medical Colleges (AAMC) (2016) AAMC Facts & Figures 2016 | Current Trends in Medical Education. [Internet] Available at: <http://www.aamcdiversityfactsandfigures2016.org/report-section/section-3/#figure-30> (accessed 13 July 2018).
- Alexander K and Cleland J (2018) Social Inclusion or Social Engineering? The Politics and Reality of Widening Access to Medicine in the UK. In: *Achieving Equity and Quality in Higher Education*. Cham: Springer International Publishing, pp. 143–172. DOI: 10.1007/978-3-319-78316-1_7.
- Altbach PG, Reisberg L and Rumbley LE (2009) Trends in global higher education: Tracking an academic revolution. A Report prepared for the UNESCO 2009 World Conference on Higher Education. Paris.
- Archer M (2010) Routine, reflexivity, and realism. *Sociological Theory* 28(3): 273–303.
- Balmer DF, Richards BF and Varpio L (2015) How students experience and navigate transitions in undergraduate medical education: an application of Bourdieu's theoretical model. *Advances in Health Sciences Education* 20(4): 1073–1085. DOI: 10.1007/s10459-015-9588-y.
- Ball SJ and Vincent C (1998). "I heard it on the grapevine": "hot" knowledge and school choice. *British Journal of Sociology of Education*, 19(3), 377–400. <https://doi.org/10.1080/0142569980190307>
- Barbour RS (2005) Making sense of focus groups. *Medical Education* 39(7): 742–750. DOI: 10.1111/j.1365-2929.2005.02200.x.
- Bauman Z (2000) *Liquid Modernity*. Cambridge: Polity Press.
- Beck U (1992) *Risk Society: Towards a New Modernity*. London: SAGE Publications.

Boliver V, Gorard S and Siddiqui N (2015) Will the Use of Contextual Indicators Make UK Higher Education Admissions Fairer? *Education Sciences* 5(4): 306–322. DOI: 10.3390/educsci5040306.

Bosworth D and Kersley H (2015) Opportunities and outcomes in education and work: Gender effects. UK Commission for Employment and Skills (UKCES). London.

Bourdieu P (1967) *Systems of Education and Systems of Thought*. *Social Science Information* 14: 338–58.

Bourdieu P (1984) *Distinction: A Social Critique of the Judgement of Taste*. London: Routledge.

Bourdieu P (1985) The genesis of the concepts of habitus and field. *Sociocriticism* 2(2): 11–24.

Bourdieu P (2000) *Pascalian Meditations*. Stanford, CA: Stanford University Press.

Bradley D, Noonan P, Nugent H, et al. (2008) *Review of Australian Higher Education, Final Report*. Canberra.

British Medical Association (2017) *BMA - Widening participation into medicine* | British Medical Association. [Internet] Available at: <http://www.bma.org.uk/developing-your-career/medical-student/widening-participation> (accessed 17 May 2016).

British Medical Association (BMA) Medical Student Committee (2015) *Medical Student Finances and the Effect on Wider Participation*. Available at: https://www.bma.org.uk/connecting-doctors/community_focus/m/mediagallery/185 (accessed 7 July 2017)

Brosnan C, Southgate E, Outram S, et al. (2016) Experiences of medical students who are first in family to attend university. *Medical Education* 50(8): 842-851. DOI: 10.1111/medu.12995.

Bryman A (2012) *Social Research Methods*. Oxford: Oxford University Press.

Chowdry H, Crawford C, Dearden L, et al. (2013) Widening participation in higher education: analysis using linked administrative data. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 176(2): 431–457. DOI: 10.1111/j.1467-985X.2012.01043.x.

Cleland J, Dowell J, McLachlan J, et al. (2012) *Identifying best practice in the selection of medical students: literature review and interview survey*. Medical Schools Council. London.

Department for Business Innovation and Skills (2011) *Students at the heart of the system*. London.

Decoteau CL (2016) The reflexive habitus: Critical realist and Bourdieusian social action. *European Journal of Social Theory* 19(3): 303–321. DOI: 10.1177/1368431015590700.

Dowell J, Norbury M, Steven K, et al. (2015) Widening access to medicine may improve general practitioner recruitment in deprived and rural communities: survey of GP origins and current place of work. *BMC Medical Education* 15(1): 1–7. DOI: 10.1186/s12909-015-0445-8.

Freeman BK, Landry A, Trevino R, et al. (2016) Understanding the Leaky Pipeline: Perceived Barriers to Pursuing a Career in Medicine or Dentistry Among Underrepresented-in-medicine Undergraduate Students. *Academic Medicine* 91(7): 987–993. DOI: 10.1097/acm.0000000000001020.

Gale T and Parker S (2013) Widening Participation in Australian Higher Education: Report submitted to HEFCE and OFFA (October 2013). London.

Gibson F (2007) Conducting focus groups with children and young people: strategies for success. *Journal of Research in Nursing* 12(5): 473–483. DOI: 10.1177/1744987107079791.

Giddens A (1991) *Modernity and Self-Identity*. Cambridge: Polity.

Gorard S, Smith E, May H, et al. (2006) Review of Widening Participation Research: addressing barriers to participation in higher education. Higher Education Funding Council for England (HEFCE). Bristol.

Gore J, Patfield S, Holmes K, et al. (2017) Widening participation in medicine? New insights from school students' aspirations. *Medical Education* 52(2): 227–238. DOI: 10.1111/medu.13480.

Gorman D (2018) Matching the production of doctors with national needs. *Medical Education* 52(1): 103–113. DOI: 10.1111/medu.13369.

Greenhalgh T, Seyan K and Boynton P (2004) 'Not a university type': focus group study of social class, ethnic, and sex differences in school pupils' perceptions about medical school. *BMJ* 328(7455): 1541–1544. DOI: 10.1136/bmj.328.7455.1541.

Hadinger MA (2017) Underrepresented Minorities in Medical School Admissions: A Qualitative Study. *Teaching and Learning in Medicine* 29(1): 31–41. DOI: 10.1080/10401334.2016.1220861.

Higher Education Funding Council for England (HEFCE) (2017) POLAR - Participation of Local Areas. [Internet]. Available at: <http://www.hefce.ac.uk/analysis/yp/POLAR/> (accessed 3 April 2018).

Higher Education Statistics Agency (HESA) (2018) [Internet] Higher Education Student Statistics: UK, 2016/17 - Student numbers and characteristics | HESA. London.

Jerrim J and Shure N (2016) Achievement of 15-Year- Olds in England: PISA 2015 National Report. London.

King N and Horrocks C (2010) *Interviews in Qualitative Research*. London: Sage Publications.

Larkins S, Michielsen K, Iputo J, et al. (2015) Impact of selection strategies on representation of underserved populations and intention to practise: international findings. *Medical Education* 49(1): 60–72. DOI: 10.1111/medu.12518.

Laughland-Booÿ J, Mayall M and Skrbiš Z (2015) Whose choice? Young people, career choices and reflexivity re-examined. *Current Sociology* 63(4): 586–603. DOI: 10.1177/0011392114540671.

Martin AJ, Beska BJ, Wood G, et al. (2018) Widening interest, widening participation: factors influencing school students' aspirations to study medicine. *BMC medical education* 18(1): 117. DOI: 10.1186/s12909-018-1221-3.

Mathers J and Parry J (2009) Why are there so few working-class applicants to medical schools? Learning from the success stories. *Medical Education* 43(3): 219–228. DOI: 10.1111/j.1365-2923.2008.03274.x.

Mathers J, Sitch A and Parry J (2016) Population-based longitudinal analyses of offer likelihood in UK medical schools: 1996-2012. *Medical Education* 50(6): 612–623. DOI: 10.1111/medu.12981.

McHarg J, Mattick K and Knight L V (2007) Why people apply to medical school: implications for widening participation activities. *Medical Education* 41(8): 815–21. DOI: 10.1111/j.1365-2923.2007.02798.x.

McMillan W (2015) Theory in healthcare education research: the importance of worldview. In: Cleland J and Durning SJ (eds) *Researching Medical Education*. Chichester, UK: John Wiley & Sons, Ltd, pp. 15–24.

Medical Schools Council (2014a) *A Journey to Medicine: Outreach Guidance*. London.

Medical Schools Council (2014b) *Selecting for Excellence Final Report*. London.

Medical Schools Council (2016) *Implementing Selecting for Excellence: A progress update*. London.

Milburn A (2012) *Fair Access to Professional Careers*. The Independent reviewer on Social Mobility and Child Poverty. London.

Ministry of Housing Communities & Local Government (2015) *English indices of deprivation 2015*. Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015> (accessed 26 April 2018).

Morrison A (2017) The Responsibilized Consumer: Neoliberalism and English Higher Education Policy. *Cultural Studies ↔ Critical Methodologies* 17(3): 197–204. DOI: 10.1177/1532708616672675.

Nicholson S and Cleland J (2017) "It's making contacts": notions of social capital and implications for widening access to medical education. *Advances in Health Sciences Education* 22(2): 477–490. DOI: 10.1007/s10459-016-9735-0.

O'Connell TF, Ham SA, Hart TG, et al. (2018) A National Longitudinal Survey of Medical Students' Intentions to Practice Among the Underserved. *Academic medicine* 93(1): 90–97. DOI: 10.1097/ACM.0000000000001816.

Office of National Statistics (ONS) (2011a) *Ethnicity and National Identity in England and Wales*: 2011. London.

Office of National Statistics (ONS) (2011b) *Standard Occupational Classification SOC 2010*. Available at: <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2010> (accessed 3 April 2018).

Orom H, Semalulu T and Underwood W (2013) The Social and Learning Environments Experienced by Underrepresented Minority Medical Students. *Academic Medicine* 88(11): 1765–1777. DOI: 10.1097/ACM.0b013e3182a7a3af.

Puddey IB and Mercer A (2013) Socio-economic predictors of performance in the Undergraduate Medicine and Health Sciences Admission Test (UMAT). *BMC Medical Education* 13(155). DOI: 10.1186/1472-6920-13-155.

Puddey IB, Playford DE and Mercer A (2017) Impact of medical student origins on the likelihood of ultimately practicing in areas of low vs high socio-economic status. *BMC Medical Education* 17(1). DOI: 10.1186/s12909-016-0842-7.

Punch S (2002) Interviewing strategies with young people: the 'secret box', stimulus material and task-based activities. *Children & Society* 16(1): 45–56. DOI: 10.1002/chi.685.

Rasborg K (2017) From class society to the individualized society? A critical reassessment of individualization and class. *Irish Journal of Sociology* 25(3): 229–249. DOI: 10.1177/0791603517706668.

Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.

Reay D, Crozier G and Clayton J (2009) 'Strangers in Paradise?': Working-class Students in Elite Universities. *Sociology* 43(6): 1103–1121. DOI: 10.1177/0038038509345700.

Reeves S, Albert M, Kuper A, et al. (2008) Why use theories in qualitative research? *BMJ (Clinical research ed.)* 337: a949. DOI: 10.1136/BMJ.A949.

Robb N, Dunkley L, Boynton P, et al. (2007) Looking for a better future: identity construction in socio-economically deprived 16-year olds considering a career in medicine. *Social Science & Medicine* 65(4): 738–54. DOI: 10.1016/j.socscimed.2007.03.011.

Russell Group (2015) *Opening Doors*. Available at: <http://russellgroup.ac.uk/media/5034/opening-doors-understanding-and-overcoming-the-barriers-to-university-access.pdf> (accessed 4 September 2017)

Savin-Baden M and Howell Major C (2013) *Qualitative Research: The essential guide to theory and practice*. Oxon: Routledge.

Shah M, Bennett A and Southgate E (2015) *Widening higher education participation : a global perspective*. Waltham, MA: Elsevier Ltd.

Southgate E, Kelly BJ and Symonds IM (2015) Disadvantage and the 'capacity to aspire' to medical school. *Medical education* 49(1): 73–83. DOI: 10.1111/medu.12540.

Southgate E, Brosnan C, Lempp H, et al. (2017) Travels in extreme social mobility: how first-in-family students find their way into and through medical education. *Critical Studies in Education* 58(2): 242–260. DOI: 10.1080/17508487.2016.1263223.

Stalmeijer RE, McNaughton N and Van Mook WNKA (2014) Using focus groups in medical education research: AMEE Guide No. 91. *Medical Teacher* 36(11): 923–939. DOI: 10.3109/0142159X.2014.917165.

Steven K, Dowell J, Jackson C, et al. (2016) Fair access to medicine? Retrospective analysis of UK medical schools application data 2009–2012 using three measures of socioeconomic status. *BMC medical education* 16(1): 11–21. DOI: 10.1186/s12909-016-0536-1.

The Challenge, iCoCo and SchoolDash (2017) *Understanding School Segregation in England; 2011 to 2016*. Available at: <http://the-challenge.org/uploads/documents/TCN-Understanding-School-Segregation-in-England-2011-to-2016.pdf> (accessed 24 March 2017).

The Scottish Government (2016) *The Scottish Index of Multiple Deprivation*. Available at: <http://www.gov.scot/Topics/Statistics/SIMD> (accessed 26 April 2018).

Vaglum P, Wiers-Jenssen J and Ekeberg Ø (1999) Motivation for medical school: the relationship to gender and specialty preferences in a nationwide sample. *Medical Education* 33(4): 236–242. DOI: 10.1046/j.1365-2923.1999.00293.x.

Wacquant L (2013) *Homines in extremis: what Fighting Scholars teaches us about Habitus*. In: Garcia R (ed.) *Fighting Scholars: Habitus and Ethnographies of Martial Arts and Combat Sports*. Anthem Press, pp. 191–8.

Webb S, Burke PJ, Nichols S, et al. (2017) Thinking with and beyond Bourdieu in widening higher education participation. *Studies in Continuing Education* 39(2): 138–160. DOI: 10.1080/0158037X.2017.1302926.

Wouters A, Croiset G, Isik U, et al. (2017) Motivation of Dutch high school students from various backgrounds for applying to study medicine: a qualitative study. *BMJ open* 7(5): e014779. DOI: 10.1136/bmjopen-2016-014779.

9.4 Key Findings

Study Four explores the perceptions of important stakeholders within WA to medicine: the young people medical schools hope to attract via their WA initiatives. This study investigates non-traditional pupils' perceptions of the culture, values and motivations within medicine, and considers how they negotiate perceived cultural differences. This study provides an important update on previous UK literature on the topic – now approximately a decade old. Findings contribute new insight into how these young people consider medicine and how they believe they would 'fit in' and contribute to the profession. The use of the 'reflexive habitus' provided a nuanced explanation of how pupils were able to reconcile cultural differences and negotiate a coherent impression of themselves within medicine. Box 9.2 highlights the objectives, key findings and conclusions of this work.

In the next chapter, all four studies presented within the thesis are critically discussed. This discussion considers the extent to which these studies meet the overall aims of the thesis and their empirical and conceptual contributions to the literature and academic field. The strengths and weaknesses of the thesis are assessed and implications for future research, policy and practice in WA to medicine are considered.

Box 9.2 Study Four: Summary of key points

Objectives:

- To explore whether participants perceived sociocultural differences between their own motivations for a career and those of current medical students
- To investigate whether/how participants were able to reconcile these differences
- To explore whether participants considered themselves 'suitable' (or not) for a career in medicine

Key Findings:

- ✓ Participants prioritised intrinsic motivations (e.g. personal interest and fulfilment) in their career choices
- ✓ Participants reported that they would not be deterred from aspiring to their chosen career by material or cultural factors
- ✓ Participants perceived the entry grades for medicine as the primary barrier
- ✓ Participants held differing beliefs about the relative importance of extrinsic factors (high status and income) in current medical students' career choice
- ✓ Role models in medicine allowed participants to negotiate and remediate perceived cultural tensions between their background's values and those of medicine
- ✓ Participants perceived medicine as more inclusive and less status driven than in previous decades
- ✓ Some participants reported their non-traditional backgrounds as a strength to contribute to the practice of medicine

Conclusions and recommendations:

- Findings suggest that a key message of WA - that career choice should be determined by individual interest and ability rather than social background - has been embraced by young people from non-traditional backgrounds
- Findings reinforce the importance of 'hot knowledge' in WA initiatives
- The alignment of medical school systems, educational policies, market pressures and other stakeholders is required to address the structural barrier of high academic attainment in a context of educational inequality

Chapter 10

Discussion

10.1 Introduction

To recap, widening access (WA) to the medical profession has become an increasingly important issue for medical schools internationally (AFMC, 2010; Gorman, 2015; Larkins et al., 2015; Milburn, 2012). The interpretation and enactment of WA policy remains, however, a deeply contested area (Archer, 2007; Francis et al., 2017; Sheeran et al., 2007). Conflicting values, ideologies and interests have led to confusion on the ground regarding the 'correct' purpose of WA, the 'best' way to enact this, and how to measure success (Cleland et al., 2015; Stevenson et al., 2010). This thesis argues that these unresolved, and often 'hidden', tensions create a substantial barrier to WA in medicine. The driving force behind this doctorate was therefore to explore, analyse and better understand the complex sociocultural perceptions underlying stakeholders' behaviour and their mutual spheres of influence.

The overall aims for the thesis were: (1) to contribute original knowledge of sociocultural and communicative factors influencing stakeholders in WA to medicine; and (2) to provide findings that could be of practical value to WA practitioners and researchers. In this chapter, I discuss and evaluate the extent to which these aims have been achieved.

As each of the studies presented within the thesis contains its own discussion, this chapter will concentrate on a discussion of the thesis as a whole, rather than repeat the points made in individual studies.

In this chapter I first outline and critically evaluate the thesis' key contributions to the literature within WA to medicine. I assess the limitations of the overarching thesis design and consider changes and additions which might have extended the scope or quality of the findings. I then apply the findings of the thesis to create practical suggestions for policy and practice, and highlight recommendations for future research. The chapter finishes with some concluding remarks.

10.2 Key Contributions to the Literature

This section draws together the main findings of all the studies contained within the thesis, discusses what these findings contribute to the literature and evaluates how original this contribution is.

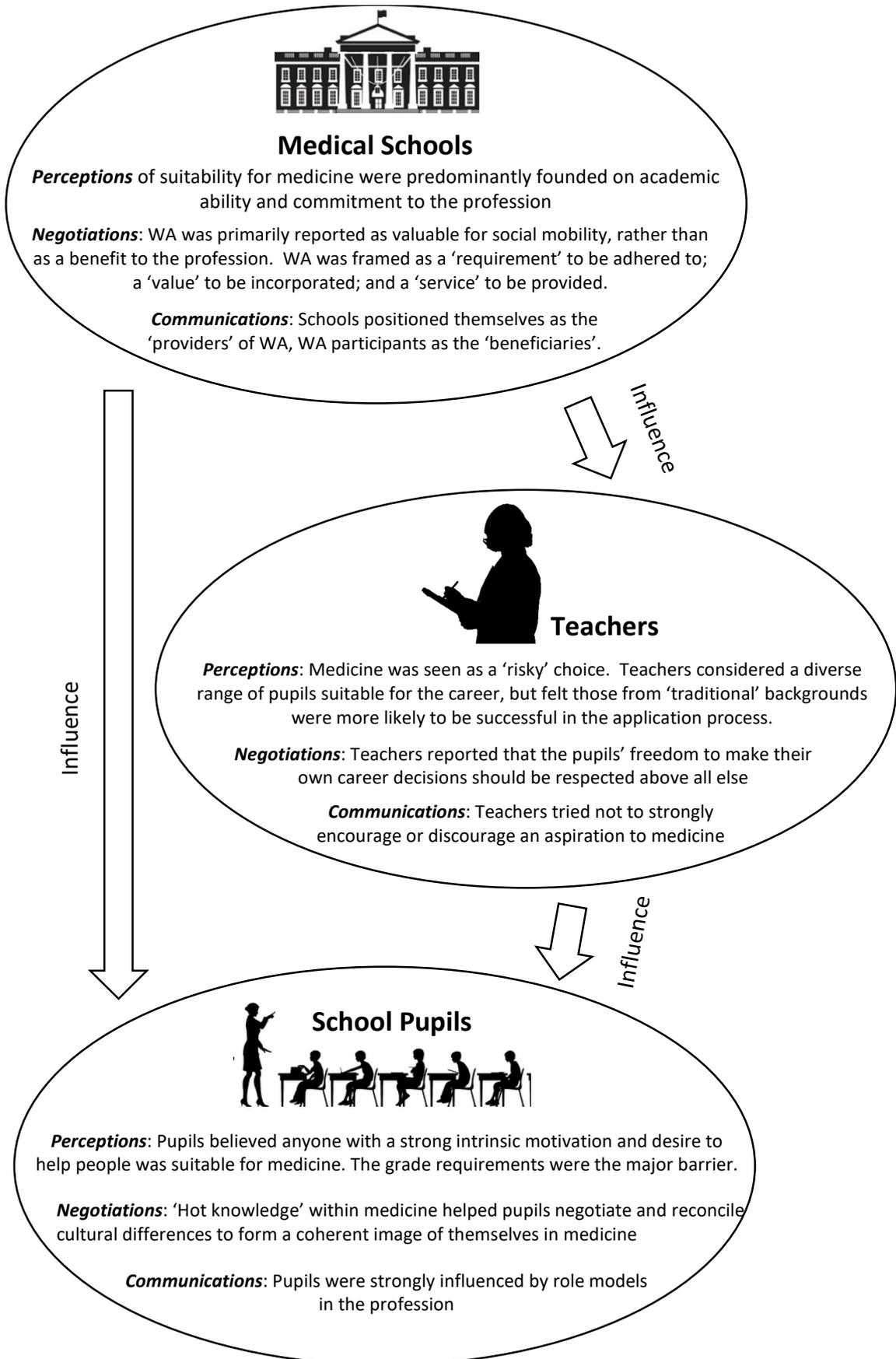
In review, these studies include:

- Study One (*Discourses of WA on medical school websites*) and Study Two (*Framing WA to medicine*). These examine medical schools' discourses of WA, interpret what these convey about institutional stance towards WA, and consider how these impressions might influence other stakeholders' perceptions.
- Study Three (*Teachers' perceived role in WA to medicine*) considers teachers' perceptions of medicine and their perceived role in advising their pupils to apply. Participating teachers' schools were eligible for, and engaged with, medical schools' WA initiatives.
- Study Four (*Exploring school pupils' perceptions of medicine*) analyses focus groups with high-achieving school pupils attending schools engaged with medical schools' WA initiatives. It explores the motivations behind their own career choices, and compares these with their perceptions of the factors which motivate applicants for medicine.

The key findings and communicative links between the stakeholders are summarized in Figure 10.1. These are also discussed thematically in the sections below.

The practical implications of these findings and suggestions for future research are discussed later in the chapter (see section 10.4).

Figure 10.1 Stakeholders under investigation and linking themes (with findings)



10.2.1 Medical Schools' Stance on WA to Medicine

Existing literature has positioned WA as a means to enable social mobility and prevent the automatic transmission of disadvantage between generations (Medical Schools Council, 2014c; Milburn, 2012). WA is also increasingly linked to ideas of social accountability and the selection of a workforce with an increased understanding of, and desire to work for, underserved specialities and locations (Dowell et al., 2015; Griffin and Hu, 2015; Larkins et al., 2015; A. Morrison, 2017; O'Connell et al., 2017).

Upon commencing the doctorate, the way in which these two fundamental motivations for WA were incorporated into UK medical schools' existing processes and value systems was unclear. For example, it was known that medical schools' interpretation and implementation of WA policy was strongly influenced by their individual context, history and values (Cleland et al., 2012; Cleland et al., 2015; Razack et al., 2015). However, the understandings and justifications from medical schools as to exactly *how* and *why* they interpreted WA in the form that they did were often uncertain and conflicting (Cleland et al., 2015).

This thesis thus aimed to contribute insight into this area in two key ways:

- (1) To understand how, as a group, UK medical schools presented the value of WA through their publicity material – whether for social mobility, for improved diversity in the workforce, or for another reason; and
- (2) To analyse how these schools presented their institutional stance on WA (implying their preferred purpose, process and outcomes for WA policy).

I chose to explore these areas through a critical discourse analysis of medical school webpages about WA.

Findings from Study One (*Discourses of WA on UK medical school websites*) revealed that medical schools predominately promoted WA as a means of social mobility for the individual, rather than for the benefit of the workforce. The strength of the discourse for social mobility was striking, and this finding brought into sharp focus how one-sided this justification was in this material.

Study Two (*Framing WA to medicine*) revealed that medical schools framed their institutional stance about WA in three distinct ways: the ‘institutional’ frame implied that WA was a ‘requirement’ which should be integrated into the established processes of the school; the ‘value-driven’ frame emphasised how the school considered WA as a ‘value’ to shape its practice and ethos; and the ‘service-oriented’ frame promoted WA as an additional ‘service’ provided by the medical school, but did not foreground any broader impact on school image or culture. No one discursive style was used substantially more than others.

This suggests that although medical schools may fundamentally agree on the underpinning value of WA as primarily for social mobility - or at least, this is the value they are comfortable to promote – there is no apparent consensus on the multitude of ways that WA should be interpreted and presented.

To the best of my knowledge, these are the first studies to question how the meaning and value of WA is constructed by UK medical schools in their publicity material. These findings contribute a novel addition to other studies investigating the discourses of WA within medicine (Razack et al., 2012, 2014, 2015) and those exploring how Higher Education institutions adapt their WA discourses over time in reaction to changing policy pressures (Bowl and Hughes, 2013; Graham, 2013).

10.2.2 Influence of Discourses of WA on Potential Applicants

In the UK, individuals from non-traditional groups (particularly those from lower socioeconomic backgrounds) apply to medicine in disproportionately low numbers (Steven et al., 2016). Previous literature has stressed the importance of raising the numbers of applications from non-traditional groups, so that greater numbers can be selected into the profession (Mathers et al., 2011; McLachlan, 2005; Steven et al., 2016). However, to the best of my knowledge, no previous studies have considered whether the discourses in UK medical schools’ publicity material might encourage or discourage applicants to consider medicine or participate in WA activities.

Findings from Study One (*Discourses of WA on UK medical school websites*) revealed that on UK medical school webpages, justifications for WA were presented within an

admissions system of academic meritocracy. Individuals with desirable 'merit' were constructed as those with high academic ability and a commitment to study medicine. This result concurs with previous studies that have confirmed medical schools' tightly held belief in academic meritocracy and a foregrounding of academic excellence (Cleland et al., 2015; Razack et al., 2012, 2015).

Study One's findings contribute new insight however into the potential implications of these presentations on non-traditional applicants' perceptions of suitability for medicine. The Foucauldian framework (p.103) **Conceptual Framework**

illuminates that, in the texts, medical schools discursively positioned themselves in a position of power as the 'providers' of WA, whereas non-traditional applicants were presented in a position of disadvantage and deficit. Within this position, non-traditional applicants were the sole 'beneficiaries' of WA: texts did not explicitly or implicitly report that the inclusion of non-traditional applicants would benefit medicine. This also implies that non-traditional attributes are not valued in, or suitable for, the profession.

Razack et. al's Canadian studies conclude that the predominance of discourses of academic excellence may act as a barrier to greater inclusion within the profession (Razack et al., 2012, 2014, 2015). Findings in Study One align with this conclusion but also go further by suggesting that these discourses may also potentially exacerbate the underlying concerns of potential applicants from non-traditional backgrounds.

10.2.3 School Teachers' Perceived Role in WA to Medicine

Current medical students previously educated at UK state schools, report negative experiences, lack of encouragement and poor quality guidance from their high school teachers (Mathers and Parry, 2009; McHarg et al., 2007; UCAS, 2015). School teachers are however recognised as a key channel for pupils to access information about medicine and WA initiatives and therefore their lack of support may present a substantial barrier to WA (Medical Schools Council 2016; McHarg et al. 2007; Fleming and Grace 2014).

However, no UK studies had investigated the teachers' own perspective on this issue, instead basing conclusions about their motivations and attitudes solely on the accounts of their pupils. The core aim of Study Three (*Teachers' perceived role in WA to medicine*) was thus to contribute the high school teachers' voice to discussions about WA to medicine (introduce an original perspective), and thereby develop new understanding about the values and incentives that underlie and shape teacher behaviour.

Findings revealed that teachers reported many of the same behaviours as pupils and current medical students have in previous studies, however, they perceived the intent behind these behaviours differently. For example, they did not intend for their advice to discourage pupils from medicine (as some pupils had previously reported that they did). Instead, teachers intended to neither strongly encourage or discourage pupils from a particular career. They reported that they principally valued the pupil's freedom to make their own decisions and, as a result, avoided strong interventions which might reduce pupils' freedom to choose freely. Moreover, teachers perceived an application to medicine as a 'risky' choice so were cautious in their language when discussing this with pupils.

These findings were illuminated by the novel theoretical frame used: a combination of Sen's capability approach and Bernstein's concepts of classification and framing (p.200). This helped explain how teachers' messages might be perceived as discouraging, even if they did not intend them to be so.

Although teachers expected that many of their pupils would not meet the academic requirements for medical school, they nonetheless reported that pupils from a diverse range of backgrounds would make excellent doctors. They did not report stereotypical views about the profession or worries about 'identity fit' for their pupils. These findings contradict previous conclusions made about their motivations (Mathers and Parry, 2009; McHarg et al., 2007).

10.2.4 Non-traditional Pupils' Changing Perceptions of Medicine

Sociocultural factors are commonly cited as a key barrier deterring young people from non-traditional backgrounds from considering, or aspiring to, medicine (Cleland et al., 2012). At the time of starting this doctorate, key UK studies exploring school pupils' attitudes' to medicine were approximately a decade old (Mathers and Parry, 2009; McHarg et al., 2007; Robb et al., 2007). Meanwhile, over this time, the Higher Education sector has undergone substantial change, with a focus on student choice, higher participation and wide-spread WA initiatives (DBIS, 2016; Medical Schools Council, 2016).

Study Four (*Exploring school pupils' perceptions of medicine*) thus aimed to contribute up-to-date knowledge about non-traditional pupils' perceptions of medicine in this new context.

The study revealed two key findings: (1) that non-traditional pupils did not perceive that sociocultural factors would deter them from aspiring to medicine; and (2) pupils valued and relied upon 'hot knowledge' (Ball and Vincent, 1998) and role models in forming decisions about the career.

The first of these findings demonstrates a substantial change from the attitudes of participants in previous studies and demonstrates the extent to which non-traditional pupils' perceptions of the profession may have changed within the decade.

The second finding reinforces existing knowledge about the enduring importance of 'hot knowledge' in shaping non-traditional pupils' views of medicine (Cleland et al., 2012; Gartland, 2014; Greenhalgh et al., 2006; McHarg et al., 2007; Southgate et al., 2015; Wouters et al., 2017). However, the application of the 'reflexive habitus' (an adaptation of Bourdieu's classic concept) within the study contributed a novel and nuanced understanding of *how* this happens on a theoretical level.

Since the completion of the analysis for Study Four, a study investigating non-traditional UK school pupils' perceptions of medicine has been published (Martin et al., 2018). This single-site study focussed on external deterrents (predominantly lack of information), rather than perceived cultural differences or underlying values. However,

their related findings align with those of Study Four: for example, participants did not report concerns about ‘fitting in’ or elitism in medicine.

10.2.5 Findings in relation to the wider WA landscape

The findings and insights produced in this thesis are predominately situated within the subfield of ‘WA to medical higher education’. However, these are nonetheless linked to wider issues and emerging trends within WA to Higher Education (HE) more generally.

The thesis contributes to wider ongoing conversations about the role of WA and HE in promoting social justice within society: for example, whether approaches to WA should prioritise social justice for the highly-able individual applicant and/or greater inclusion and the needs of employers (Boni and Walker, 2013a; Bowl and Hughes, 2013; Jones and Thomas, 2006; McCaig and Adnett, 2009). These debates are strongly linked to wider political factors and the impact of an increasingly stratified, competitive HE landscape on this process (Marginson, 2017; Unterhalter, 2013).

The thesis also relates to a growing area of research that questions and problematizes ‘deficit discourses’ in WA, particularly in relation to potential applicants from non-traditional or disadvantaged backgrounds (Jones and Thomas, 2006; O’Shea et al., 2015; Smit, 2012). These enquiries investigate the benefits and shortcomings of a ‘meritocratic’ model of inclusion dominant within ‘elite’ institutions’ approaches to WA (McCaig and Adnett, 2009; Sheeran et al., 2007). All medical schools can be considered ‘elite’ given their limited student places and thus competitive entry requirements (Marginson, 2017). Research using the ‘capabilities approach’ is increasingly recognised as a possible way to ‘reframe’ and re-conceptualise socially just university access away from a ‘deficit’ model (Boni and Walker, 2013b; Hart, 2012; Harwood et al., 2017; Walker, 2005; Watts and Bridges, 2006; Wilson-Strydom, 2017) (see e.g. Study Three, p.192).

Finally, the thesis contributes to wider discussions about the contemporary norms and expectations within the HE landscape from the point of view of those within it: for example, how potential applicants make decisions about HE participation, and how

they imagine themselves within a rapidly-changing HE system and subsequent graduate job market (Gartland, 2014; Harrison, 2017; Stephens et al., 2015; UCAS, 2015).

10.3 Critical reflections on the Research Design and Process

The previous section has outlined the contributions of the research to the knowledge base and highlighted the key strengths of the thesis. This section reflects upon the overall research design and considers its limitations.

As each study presented in the thesis discusses its own limitations, these will not be reiterated in this section. Rather, issues pertaining to the design of the whole thesis are considered.

Choice of Data Source

My decision to focus on websites in Study One (*Discourses of WA on UK medical school websites*) was based on the accessibility of these texts to a wide range of audiences and the opportunity to include material from a wide range of UK medical schools. Websites were also reported as the primary information source used by applicants to inform their university choices (The Student Room, 2016). I decided not to triangulate this data with interviews with medical school staff or policy documents as had been done in other programmes of work (see e.g. Razack et al. (2015)), because Cleland et. al's recent study (2015) had already investigated the views of Admissions Deans and found their opinions on WA to be conflicting. Instead, I used the findings from these previous works to build the foundations of my study design.

Upon reflection however, an examination of the more 'informal' discourses of medical school staff and students might have added additional value to the thesis. For example, findings in Study Four (*Exploring school pupils' perceptions of medicine*) foregrounded the importance of 'hot knowledge' (information passed on from others (Ball and Vincent, 1998)) in shaping non-traditional pupils' cultural perceptions about medicine. The inclusion of 'hot' information sources, as well as the 'cold' source of the websites might have thus contributed an important additional perspective.

Moreover, in Study Four participants reported their non-traditional experiences as a benefit to the medical profession - ideas that were not found on the websites (see section 10.2.1). Future research might thus usefully discover whether medical schools' 'hot' sources of advice might promote these messages to non-traditional applicants.

Anticipating Expectations

I deliberately chose to interview a small number of participants in Study Three (*Teachers' perceived role in WA to medicine*), as I aimed to investigate teachers' values, perceptions and motivations in a detailed way. Smaller sample sizes offer advantages in this type of qualitative work (Crouch and McKenzie, 2006).

Presenting this work – particularly to audiences within medicine, whose backgrounds are mostly in the natural sciences – made me reflect and think more critically about how my work might be received and how far I should adapt my design/arguments to meet audience expectations. For example, before undertaking the study I had not considered the limitations to 'face-validity' and credibility that a small sample size might pose to an audience that is less familiar with, and in some cases distrustful of, qualitative work.

One of my key aims for the thesis was to produce knowledge which could be useful for WA practitioners, so designing and creating findings which the intended audience considers credible is important, otherwise it will make no impact. However, both ethically, and in terms of creating useful knowledge, it is still important to prioritise an effective study design – perhaps above concerns about how the study will be received by critics (both intended audiences and peer reviewers).

On balance, I decided to keep the original research design (and small participant group) of Study Three rather than superficially try to increase the study's face validity. However, the experience heightened my awareness of this conflict, which presumably is common – at least on a subconscious level - and helped me expose a potential bias to my work.

Undertaking Pilots

In Study Four (*Exploring school pupils' perceptions of medicine*) I decided to focus on school pupils' cultural perceptions of medicine. The method of data collection (focus group interviews with a task-based activity) was well received and the approach produced the novel - and unexpected - finding that pupils did not perceive sociocultural differences as significant barriers.

Despite these positive outcomes, on reflection, I think a pilot would have been beneficial. Firstly, a pilot session might have alerted me to the unexpected findings, and thus allowed me to adjust the research design to widen the scope of the study (my research design was premised on the assumption that participants would perceive sociocultural barriers, but it turns out they did not!) This was a novel finding in itself, but perhaps with careful planning I could have dedicated more time in the focus groups to other areas (e.g. structural or material barriers). These questions would be useful to consider in future research.

Moreover, I think a pilot prior to Study Three (*Teachers' perceived role in WA to medicine*) would have also been beneficial. Although I felt well prepared in advance through interview training and practice (see Box 10.1), I did not anticipate how nervous as I would be in the first interviews, nor how tiring I would find conducting these. Had I undertaken a pilot, I might have gone into the earlier interviews more confidently and would not have arranged such a tightly-packed interview schedule.

Broad conclusions vs specific recommendations

Through the thesis, I aimed to create knowledge which would be of practical value to WA practitioners and researchers. As a result, I chose a research design that included the views of multiple stakeholders in multiple locations across the UK. Findings subsequently produced a number of recommendations that might be implemented by medical schools, teachers and policy makers across the UK (see section 10.4.1).

At the start of the doctorate, I was however, perhaps a little naïve about the extent to which I would be able to take *both* a broad-brush approach *and* provide concrete, practical advice to WA practitioners in any one specific context. WA initiatives are most successful if tailored to the specific educational and social needs of the local

community and the unique value-set of the medical school in question (J Cleland et al., 2012; Cleland et al., 2015). As a result, had I chosen a research design that had concentrated on one context and one population, it may have allowed more scope to create applicable findings of 'what works' in WA. For example, a case study design might have focussed on a small group of medical schools and their partner WA high schools (Merriam, 2000; Yin, 2003). The inquiries would have then been able to explore the motivations, activities, perceptions and communications of individuals with this case in more depth and provide more targeted practical advice for a smaller group (Stake, 1995).

Nevertheless, both approaches are useful and produce practical knowledge, and the 'broader' approach still created tangible recommendations.

The use of multiple methodologies and theories

In this thesis, I utilised a wide range of different methodological and theoretical approaches (see section 1.5 for an overview). In this section, I present a reflexive discussion on the gains and difficulties associated with adopting this varied approach, and consider whether aspects may point a way forward in WA research.

Academically, I found the flexibility and variety within the thesis to be highly stimulating and rewarding. For example, the use of both critical discourse analysis and thematic analysis taught me to analyse qualitative data in two distinct ways. In Studies One and Two, I adapted and combined existing analytical approaches to create my own analytical frameworks, which maximised their usefulness in answering my specific research questions (see p.106 and p.139). Throughout the thesis, I explored a wide variety of sociological theories and experimented with how these illuminated my research findings in a multitude of different ways. For example, in Study Three, this led me to combine aspects of Sen's Capabilities Approach and Bernstein's concepts of Framing and Classification to create a unique theoretical framework (see p.200). I am aware of only one other reference which combines these concepts (McLean et al., 2013). Therefore, although this combination is still in the very early stages of

development, I think it has a lot of generative and explanatory potential and hope it will be explored and tested further elsewhere in WA research.

WA to medicine can be considered a complex and ‘wicked’ problem which benefits from considering ‘old problems in new ways’ (Cleland et al., 2018). Throughout the thesis, I aimed to consider how things currently ‘are’ in WA to medicine, and tried to push thinking to new conceptualisations of how things ‘could be’. One of the main advantages of my flexible and critical approach was therefore to well position the thesis to contribute fresh, challenging and original research to the field (see 10.2).

Nonetheless, this approach also presented many difficulties, especially as a novice researcher. Eschewing established approaches increased the challenge of correctly understanding, applying and presenting these complex analytical and theoretical ideas in a justifiable way. (Established theories and ideas are established because they are well recognised for their useful properties!) Although my frameworks created new ideas, these could be unwieldy to use – for example, instead of narrowing focus, they sometimes raised more questions than they answered and my analysis could feel time-consuming, perplexing and frustrating. This was challenging and meant I required support from my supervisors and a network of experts in various fields. The breath of approaches reduced my ability to become an ‘expert’ in any one approach. Finally, as each analytical and theoretical framework is specifically tailored the research questions in this thesis, their immediate transferability to other research is reduced.

Nonetheless, for me, the advantages of using a range of methodological and theoretical approaches in my PhD outweighed the disadvantages. The plurality of approaches challenged me to thoroughly explore and understand every part of the research process – from the fundamental ontological and epistemological stances to the selection of a particular theoretical lens. As a researcher, I have welcomed the ways in which my thinking and critical capacity has been vastly developed through my wide exploration and varied experiences in this field.

A white, middle-class gaze on WA research

“...and they call us ‘hard to reach’, you know what I mean? And like we’ve said before time and time again, we ain’t hard to reach, it’s them who are not doing their job properly...if you need to read the latest bit of research to find out how to engage with working-class people, you should be doing something else”

In the above quotation, a participant in Loveday’s study (2015, p.578) expresses his frustration with some academics’ and educational practitioners’ attempts to attract those who they perceive as ‘disengaged’ from Higher Education (HE) whilst simultaneously reinforcing through their language and behaviour that these groups are ‘problematic’, ‘lacking’ or in need of ‘civilising’ to be suitable for university (a middle-class space).

The critical and reflexive processes inherent in completing this PhD have made me increasingly aware of the impact of a ‘white, middle-class gaze’ on WA research, policy and practice. As a researcher (and formally an educational practitioner) whose background is wholly ‘traditional’ (see section 1.1 and Appendix C), I have critically questioned whether, and how, I might best position myself and my research to respectfully draw conclusions and recommendations to inform WA – a policy directed at communities of which I am not part.

For example, in the first part of the thesis (Studies One and Two) I explored how the value of WA was expressed by UK medical schools. As discussed above (10.2.1), this revealed a ‘meritocratic instinct’ which is shared by many elite institutions (McCaig and Adnett, 2009, p.34). This perspective on WA was familiar to me given my former experiences attending and working in an elite HE institution (see Appendix C).

However, when I investigated the potential implications of this discourse on potential applicants’ subjective experiences (see p.115) and explored alternatives ‘ways of thinking’ about the role of WA in the literature, I was challenged to question this taken-for-granted ‘gaze’ on WA. I now question that it actually may work to only ‘widen access’ to a certain ‘acceptable’ group (defined by those already within HE) and to reproduce the dominance of current systemic structures rather than question and challenge these.

The increasing use of the capabilities approach (see e.g. p.200) is perhaps one way to help mitigate the dominance of the ‘white middle-class’ gaze on WA. This approach positions individuals in central focus, recognises and respects their ability to make their

own reasoned choices (Boni and Walker, 2013b). This approach may thus reduce the temptation for ‘traditionally’ situated researchers to transfer their expectations and assumptions to others, and instead encourage the creation of spaces in which individuals may make choices they value (see p.215 for an applied discussion).

Furthermore, in section 10.4.2 (p.273) I have suggested the increased use of participatory, collaborative and action research in future WA research. The active involvement of communities affected by WA policy includes their voices in the debate and may help empower them to exert greater influence over policies that affect them. Although I initially chose not to perform participant validation of my studies (see p.182), upon reflection and at the end of my PhD, I would reconsider this decision. Although participants might not know the theories or acknowledge their ‘hidden bias’, I now think that I should have better trusted them to recognise their own experiences and been more open to including their interpretations.

To mitigate the impact of a ‘white middle-class gaze’ and to avoid creating further divisions (as suggested in the opening quote above) I conclude that creating a space in WA research for targeted communities, and respecting their perspectives, is paramount.

10.4 Thesis Recommendations

In this section, I present recommendations developed from the key findings of the doctorate. These are initially practical suggestions to aid progress in WA to medicine. I then consider some wider implications of the work for future research.

10.4.1 Practical Recommendations

Several implications for practice and policy arise from the findings of this thesis:

Medical schools should critically examine their language and reflect on the wider discourses of WA that may be shaping, and shaped by, their language. Whilst doing so, they should not only focus on the intention behind their messages, but also consider the range of possible audience interpretations.

If medical schools believe that non-traditional applicants have additional benefits to offer medicine through their diversity, they should edit their website texts to better reflect this institutional stance.

Medical schools should acknowledge teachers' perception of medicine as 'risky' as legitimate and seek to address this. For example, medical schools could highlight: the number of 'second chances' available in UK university application system should a medical application be unsuccessful (UCAS, 2017); the additional medical school places recently made available (Roberts and Bolton, 2017; Scottish Government Newsroom, 2016); and medical schools' increased emphasis on selecting for desirable personal attributes and academic ability, rather than strictly attainment (Patterson et al., 2016a). Additionally medical schools should build more support into WA initiatives for pupils who are unsuccessful at application, reflecting this as the norm (approx. 50% of UK school-leavers are successful in their applications, fewer from non-traditional groups (Steven et al., 2016)).

If school teachers believe that their pupils have the potential to become good doctors (as they report they do), they should help pupils recognise this potential themselves and build their confidence. They should reflect on their reactions and language when discussing medicine with pupils, and consider how pupils might see their cautious advice as a reflection of the teachers' lack of confidence in them, even if this is unintentional.

In high schools with low aspiration to medicine, teachers may need to become more comfortable with a role that includes 'pushing' their pupils to consider medicine if they are to stimulate social mobility rather than social reproduction in career choice. They may also need to become more comfortable with encouraging pupils for a 'risky' university application, despite the high potential for disappointment.

Medical schools should continue with, or prioritise further, WA activities that expose non-traditional potential applicants to the medical 'field' (setting, environment) and role models within this. These applicants find this exposure very useful when building impressions of themselves in the career.

Medical schools should recognise the high academic entry requirements as an enduring and substantial barrier to those from non-traditional groups, especially considering the large inequalities in opportunity and attainment in the UK's pre-university education system (Chowdry et al., 2013; Jerrim and Shure, 2016). Medical schools cannot address this issue alone, however they should be open to broader changes designed to help tackle it: for example, WA policies, adjustments to market pressures, and cultural change.

Policy makers should acknowledge the underlying tensions and competing pressures potentially hindering progress in WA. These may be caused by the dual imperatives on medical schools to promote both inclusivity through widening access, and exclusivity in a neoliberal Higher Education marketplace. Medical schools must also comply with regulatory and advisory bodies. These conflicting pressures thus need to be identified, managed and aligned when designing effective WA policies or guidelines.

10.4.2 Recommendations for Future Research

This thesis focusses on WA to medicine within the UK context. WA is, however, an international issue and many other countries are engaged in similar initiatives and have similar concerns. International comparison studies to examine stakeholder's values, perspectives and discourses would add substantial value to the literature in this area. Comparisons between countries which, like the UK, have large educational and socioeconomic inequalities (e.g. the USA) and those which currently have more equal distributions of socioeconomic capital amongst society (e.g. Netherlands) would be especially interesting.

Similarly, future comparison studies in relation to teachers and high school pupils' perceptions of medicine would also enhance the scope of our understanding. These could compare the values, attitudes and subsequent behaviours of teachers and pupils working in different school types within the UK: WA eligible state schools; non-WA eligible state schools; selective state schools such as grammar schools; and private/fee-paying schools. It would also be valuable to capture the views of individuals in high schools that are eligible for, but do not engage with, medical schools' WA activities.

More broadly, this thesis demonstrates the importance of the inclusion of different stakeholder's voices in research about WA to medicine. Findings suggest that for WA to be successful, stakeholders must identify and acknowledge each-others' underlying motivations, values and perceptions, and work together to align conflicting pressures which hinder progress in WA. Future research to explore stakeholders' mutually influential network of communications and power structures could therefore help clarify these underlying principles, explore how and why they might conflict, and suggest possible avenues for positive change.

To make future research more socially accountable, research projects should not only include, but actively involve, stakeholders in the research process itself (Boelen, 2016). For example, this could include participatory or action research projects, that draw on the affected communities to identify and address their key educational and social needs.

The role of WA in socially accountable medicine is another fruitful area for future research. For example, existing literature suggests that medical schools that select a more diverse cohort of students, including those from underserved and non-traditional communities, are more likely to produce doctors who will choose to work in underserved locations and specialities (see e.g. Dowell et al., (2015); Larkins et al., (2015) and Morrison (2017)). However, the relationship between a non-traditional background and a desire to work in underserved areas is very complex and associated to many factors (Gorman, 2018; Griffin et al., 2016; O'Connell et al., 2017; Phillips et al., 2018). With a growing workforce crisis looming in the UK (GP Taskforce, 2014; NHS Improvement, 2016) the need to understand how these factors relate is a growing imperative.

Finally, the thesis' findings suggest that perceptions of medicine may be changing rapidly in connection to the changing context of WA and Higher Education in the UK. For example, the findings of Studies Three (*Teachers' perceived role in WA to medicine*) and Four (*Exploring school pupils' perceptions of medicine*) reveal substantial differences in the perceptions of non-traditional pupils and their teachers in comparison to older studies (see sections 10.2.3 and 10.2.4). This demonstrates how quickly knowledge on this topic may become dated, devaluing the evidence-base on

which WA initiatives are designed. Future research should provide a more consistent focus on cultural change within WA to medicine to avoid understandings from the past downplaying or silencing the key issues of the present.

10.5 Conclusions

In this thesis, I aimed to contribute original insight into the sociocultural and communicative factors influencing key stakeholders in widening access (WA) to medicine, and to produce findings useful for WA practitioners and researchers.

Initiatives to widen access hold the potential to transform the lives of disadvantaged young people and to enhance the capabilities and social accountability of the medical profession. However, these high ideals have largely not yet been realised.

This thesis thus offers a timely examination of the pathways of mutual influence between key stakeholders in WA (medical schools, high school teachers and potential applicants) and examines their underlying motivations, perceptions and values. In doing so, it exposes and evaluates factors that may be working to impede progress in WA to medicine.

Findings clearly indicate that ongoing dilemmas, conflicts and challenges remain regarding how WA should be enacted, by whom, and for what cause. In their publicity material, UK medical schools communicate a resistance to fundamental cultural and systemic changes that may enable real progress in WA. They also provide no recognition of the strengths of diversity. School teachers in WA eligible high schools remain cautious about whether their pupils will meet the entry requirements and are reluctant to strongly advocate the profession.

The thesis explores the reasons underpinning these attitudes and offers recommendations to catalyse change. These include encouraging medical schools to critically reflect upon their attitudes to WA and alter their communications accordingly. Medical schools should provide teachers with targeted support to address their concerns of 'risk' in a medical application, as well as embrace and embolden the larger scale systemic change required to increase the chances of non-traditional pupils being accepted.

In contrast, the thesis reveals that non-traditional school pupils appear to have accepted and embraced the ideals of WA. These potential applicants reported that sociocultural difference would not prevent them from aspiring to the career and some even described their ‘difference’ as a strength to benefit patients and the profession. These pupils’ aspirations are an encouraging sign for the future of WA.

Overall, medical schools have a significant part to play in WA to medicine but cannot do this alone: the thesis reinforces how the successful enactment of WA policies relies on the identification and alignment of diverse stakeholders’ perceptions, values, experiences and incentives. Resistance by some stakeholders is contrasted by new thinking by others. By examining the values and perceptions underlying stakeholder behaviour, this thesis contributes novel insight into stakeholder behaviour and considers what can be done to enable further progress.

10.6 References for Chapter 10

Association For Medical Colleges (AFMC) (2010) *The Future of Medicine in Canada*. Ottawa. Available at: <https://www.afmc.ca/future-of-medical-education-in-canada/medical-doctor-project/> (accessed 20 October 2015).

Archer L (2007) Diversity, equality and higher education: a critical reflection on the ab/uses of equity discourse within widening participation. *Teaching in Higher Education* 12(5–6): 635–653. DOI: <http://dx.doi.org/10.1080/13562510701595325>.

Ball SJ and Vincent C (1998). “I heard it on the grapevine”: “hot” knowledge and school choice. *British Journal of Sociology of Education*, 19(3), 377–400. <https://doi.org/10.1080/0142569980190307>

Boelen C (2016) Why should social accountability be a benchmark for excellence in medical education? *Educación Médica* 17(3): 101–105. DOI: 10.1016/J.EDUMED.2016.06.004.

Boni A and Walker M (2013a) Higher education and human development: towards the public and social good. In: Boni A and Walker M (eds) *Human Development and Capabilities: Re-imagining the university of the twenty-first century*. Abingdon: Routledge.

Boni A and Walker M (2013b) *Human Development and Capabilities: Re-imagining the university of the twenty-first century*. Abingdon: Routledge.

Bowl M and Hughes J (2013) Discourses of 'Fair Access' in English Higher Education. *Widening Participation and Lifelong Learning* 15(4): 7–25. DOI: 10.5456/WPLL.15.4.7.

Chowdry H, Crawford C, Dearden L, et al. (2013) Widening participation in higher education: analysis using linked administrative data. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 176(2): 431–457. DOI: 10.1111/j.1467-985X.2012.01043.x.

Cleland J, Dowell J, McLachlan J, et al. (2012) Identifying best practice in the selection of medical students: literature review and interview survey. Report for the Medical Schools Council. London.

Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical Education* 49(1): 25–35. DOI: 10.1111/medu.12502.

Cleland J, Patterson F and Hanson MD (2018) Thinking of selection and widening access as complex and wicked problems. *Medical Education*. Early Online. DOI: 10.1111/medu.13670.

Crouch M and McKenzie H (2006) The logic of small samples in interview-based qualitative research. *Social Science Information* 45(4): 483–499. DOI: 10.1177/0539018406069584.

Department for Business Innovation and Skills (DBIS) (2016) *Success as a Knowledge Economy: Teaching Excellence, Social Mobility & Student Choice*. London.

Dowell J, Norbury M, Steven K, et al. (2015) Widening access to medicine may improve general practitioner recruitment in deprived and rural communities: survey of GP origins and current place of work. *BMC Medical Education* 15(1): 1–7. DOI: 10.1186/s12909-015-0445-8.

Fleming MJ and Grace DM (2014) Widening the lens : Utilizing teacher perspectives to assess widening participation efforts in Australian higher education. *Widening Participation and Lifelong Learning* 16(2): 46–63. DOI: 10.5456/WPLL.16.2.46.

Francis B, Mills M and Lupton R (2017) Towards social justice in education: contradictions and dilemmas. *Journal of Education Policy* 32(4): 414–431. DOI: 10.1080/02680939.2016.1276218.

Gartland C (2014) *STEM Strategies: Student Ambassadors and equality in Higher Education*. London: Institute of Education Press, University of London.

Gorman D (2015) Developing health care workforces for uncertain futures. *Academic Medicine* 90(4): 400–3. DOI: 10.1097/ACM.0000000000000644.

Gorman D (2018) Matching the production of doctors with national needs. *Medical Education* 52(1): 103–113. DOI: 10.1111/medu.13369.

GP Taskforce (2014) *Securing the Future GP Workforce: Delivering the Mandate on GP Expansion*. Department for Health & Medical Education England. London.

Graham C (2013) Discourses of widening participation in the prospectus documents and websites of six English higher education institutions. *British Journal of Sociology of Education* 34(1): 76–93. DOI: 10.1080/01425692.2012.692048.

Greenhalgh T, Russell J, Boynton P, et al. (2006) 'We were treated like adults'-- development of a pre-medicine summer school for 16 year olds from deprived socioeconomic backgrounds: action research study. *BMJ* 332(7544): 762–7. DOI: 10.1136/bmj.38755.582500.55.

Griffin B and Hu W (2015) The interaction of socio-economic status and gender in widening participation in medicine. *Medical education* 49(1): 103–13. DOI: 10.1111/medu.12480.

Griffin B, Porfeli E and Hu W (2016) Who do you think you are? Medical student socioeconomic status and intention to work in underserved areas. *Advances in Health Sciences Education* 22(2): 491–504. DOI: 10.1007/s10459-016-9726-1.

Harrison N (2017) Student choices under uncertainty: bounded rationality and behavioural economics. In: Mountford-Zimdars A and Harrison N (eds) *Access to Higher Education: Theoretical Perspectives and Contemporary Challenges*. Oxon: Routledge, pp. 85–100.

Hart CS (2012) *Aspirations, Education and Social Justice: Applying Sen and Bourdieu*. London: Bloomsbury Publishing.

Harwood V, Hickey-Moody A, McMahon S, et al. (2017) *The Politics of Widening Participation and University Access for Young People: Making educational futures*. Abingdon: Routledge.

Jerrim J and Shure N (2016) *Achievement of 15-Year- Olds in England: PISA 2015 National Report*. London.

Jones R and Thomas L (2006). The 2003 UK Government Higher Education White Paper: a critical assessment of its implications for the access and widening participation agenda. *Journal of Education Policy*, 20(5): 615–630.
<https://doi.org/http://dx.doi.org/10.1080/02680930500222477>

Larkins S, Michielsen K, Iputo J, et al. (2015) Impact of selection strategies on representation of underserved populations and intention to practise: international findings. *Medical Education* 49(1): 60–72. DOI: 10.1111/medu.12518.

Loveday V (2015) Working-class participation, middle-class aspiration? Value, upward mobility and symbolic indebtedness in higher education. *The Sociological Review* 63(3): 570–588. DOI: 10.1111/1467-954X.12167.

Marginson, S (2017) The stratification of opportunity in high participation systems (HPS) of higher education. In A Mountford-Zimdars and N Harrison (Eds.), *Access to Higher Education: Theoretical Perspectives and Contemporary Challenges*, pp. 33–48. Oxon: Routledge.

- Martin AJ, Beska BJ, Wood G, et al. (2018) Widening interest, widening participation: factors influencing school students' aspirations to study medicine. *BMC medical education* 18(1): 117. DOI: 10.1186/s12909-018-1221-3.
- Mathers J and Parry J (2009) Why are there so few working-class applicants to medical schools? Learning from the success stories. *Medical Education* 43(3): 219–228. DOI: 10.1111/j.1365-2923.2008.03274.x.
- Mathers J, Sitch A, Marsh JL, et al. (2011) Widening access to medical education for under-represented socioeconomic groups: population based cross sectional analysis of UK data, 2002-6. *BMJ (Clinical research ed.)* 342: d918. DOI: 10.1136/bmj.d918.
- McHarg J, Mattick K and Knight L V (2007) Why people apply to medical school: implications for widening participation activities. *Medical Education* 41(8): 815–21. DOI: 10.1111/j.1365-2923.2007.02798.x.
- McCaig C and Adnett N (2009) English Universities, Additional Fee Income And Access Agreements: Their Impact On Widening Participation And Fair Access. *British Journal of Educational Studies* 57(1): 18–36. DOI: 10.1111/j.1467-8527.2009.00428.x.
- McLachlan JC (2005) Outreach is better than selection for increasing diversity. *Medical Education* 39(9): 872–5. DOI: 10.1111/j.1365-2929.2005.02257.x.
- McLean M, Abbas A and Ashwin P (2013) University knowledge, human development and pedagogic rights. In: Boni A and Walker M (eds) *Human Development and Capabilities: Re-imagining the university of the twenty-first century*. Abingdon: Routledge, pp. 30–44.
- Medical Schools Council (2014) *Selecting for Excellence Final Report*. London.
- Medical Schools Council (2016) *Implementing Selecting for Excellence: A progress update*. London.
- Merriam SB (2002) *Qualitative research in practice: examples for discussion and analysis*. San Francisco, CA: Jossey-Bass.
- Milburn A (2012) *Fair Access to Professional Careers. The Independent reviewer on Social Mobility and Child Poverty*. London.
- Morrison A (2017) The Responsibilized Consumer: Neoliberalism and English Higher Education Policy. *Cultural Studies ↔ Critical Methodologies* 17(3): 197–204. DOI: 10.1177/1532708616672675.
- NHS Improvement (2016) *Evidence from NHS Improvement on clinical staff shortages*. London. Available at: https://improvement.nhs.uk/uploads/documents/Clinical_workforce_report.pdf (accessed 26 July 2017).
- O'Connell TF, Ham SA, Hart TG, et al. (2017) A National Longitudinal Survey of Medical Students' Intentions to Practice Among the Underserved. *Academic Medicine* 93(10): 90-97. DOI: 10.1097/ACM.0000000000001816.

- O'Shea S, Lysaght P, Roberts, J and Harwood V (2015) Shifting the blame in higher education – social inclusion and deficit discourses. *Higher Education Research & Development*, 35(2): 322–336. <https://doi.org/10.1080/07294360.2015.1087388>
- Patterson F, Knight A, Dowell J, et al. (2016) How effective are selection methods in medical education? A systematic review. *Medical education* 50(1): 36–60. DOI: 10.1111/medu.12817.
- Phillips JP, Wendling AL, Fahey CA, et al. (2017) The Effect of a Community-Based Medical School on the State and Local Physician Workforce. *Academic Medicine* 93(2): 306–313. DOI: 10.1097/ACM.0000000000001823.
- Razack S, Maguire M, Hodges B, et al. (2012) What Might We Be Saying to Potential Applicants to Medical School? Discourses of Excellence, Equity, and Diversity on the Web Sites of Canada's 17 Medical Schools. *Academic Medicine* 87(10): 1323–1329. DOI: 10.1097/ACM.0b013e318267663a.
- Razack S, Lessard D, Hodges BD, et al. (2014) The more it changes; the more it remains the same: A Foucauldian analysis of Canadian policy documents relevant to student selection for medical school. *Advances in Health Sciences Education* 19(2): 161–181. DOI: 10.1007/s10459-013-9468-2.
- Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.
- Robb N, Dunkley L, Boynton P, et al. (2007) Looking for a better future: identity construction in socio-economically deprived 16-year olds considering a career in medicine. *Social Science & Medicine* 65(4): 738–54. DOI: 10.1016/j.socscimed.2007.03.011.
- Roberts N and Bolton P (2017) Briefing Paper 07914: Medical school places in England from September 2018. House of Commons Library. London.
- Scottish Government Newsroom (2016) Scotland's first graduate entry medical programme. Available at: <https://news.gov.scot/news/scotlands-first-graduate-entry-medical-programme> (accessed 24 July 2017).
- Sheeran Y, Brown BJ and Baker S (2007) Conflicting philosophies of inclusion: the contestation of knowledge in widening participation. *London Review of Education* 5(3): 249–263. DOI: 10.1080/14748460701661302.
- Smit, R (2012) Towards a clearer understanding of student disadvantage in higher education: problematising deficit thinking. *Higher Education Research & Development*, 31(3): 369–380. <https://doi.org/10.1080/07294360.2011.634383>
- Southgate E, Kelly BJ and Symonds IM (2015) Disadvantage and the 'capacity to aspire' to medical school. *Medical education* 49(1): 73–83. DOI: 10.1111/medu.12540.
- Stake RE (1995) *The art of case study research*. Thousand Oaks, CA: SAGE Publications.

Stephens NM, Brannon TN, Markus HR, et al. (2015) Feeling at Home in College: Fortifying School-Relevant Selves to Reduce Social Class Disparities in Higher Education. *Social Issues and Policy Review* 9(1): 1–24. DOI: 10.1111/sipr.12008.

Steven K, Dowell J, Jackson C, et al. (2016) Fair access to medicine? Retrospective analysis of UK medical schools application data 2009–2012 using three measures of socioeconomic status. *BMC medical education* 16(1): 11–21. DOI: 10.1186/s12909-016-0536-1.

Stevenson J, Clegg S and Lefever R (2010) The Discourse of Widening Participation and Its Critics: An Institutional Case Study. *London Review of Education* 8(2): 105–115. DOI: <https://doi.org/10.1080/14748460.2010.487328>.

The Student Room (2016) The Conversion Report. Brighton. Available at: <http://tsrmatters.com/new-student-insights-conversion-report-2016/> (accessed 7 May 2016).

Universities & Colleges Admissions Service (UCAS) (2015) Through the lens of students: how perceptions of higher education influence applicants choices. London.

Universities & Colleges Admissions Service (UCAS) (2017) UCAS Homepage. [Internet] Available at: <https://www.ucas.com/> (accessed 4 December 2017).

Unterhalter E (2013) What's wrong with global inequality in higher education? In: Boni A and Walker M (eds) *Human Development and Capabilities: Re-imagining the university of the twenty-first century*. Abingdon: Routledge, pp. 44–52.

Walker M (2005) Amartya Sen's Capability Approach and Education. *Educational Action Research*. Available at: <https://www.tandfonline.com/doi/pdf/10.1080/09650790500200279> (accessed 27 July 2018).

Watts M and Bridges D (2006) Enhancing Students' Capabilities? UK Higher Education and the Widening Participation Agenda. In: Deneulin S and Sagovsky N (eds) *Transforming Unjust Structures: The Capability Approach*. Dordrecht, Netherlands: Springer, pp. 143–160.

Wilson-Strydom M (2017) Widening access with success: using the capabilities approach to confront injustices. In: Mountford-Zimdars A and Harrison N (eds) *Access to Higher Education: Theoretical Perspectives and Contemporary Challenges*. Oxon: Routledge, pp. 113–128.

Wouters A, Croiset G, Isik U, et al. (2017) Motivation of Dutch high school students from various backgrounds for applying to study medicine: a qualitative study. *BMJ open* 7(5): e014779. DOI: 10.1136/bmjopen-2016-014779.

Yin RK (2003) *Case study research: design and methods*. Thousand Oaks, CA: Sage Publication

Appendices

Appendix A: Invited Commentary, Medical Education

Invited commentary for article:

Marceau M, Gallagher F, Young M, et al. (2018) Validity as a social imperative for assessment in health professions education: a concept analysis. *Medical Education* 52(6): 641–653. DOI: 10.1111/medu.13574.

Commentary appears in Medical Education and can be cited as:

Alexander K and Cleland J (2018) Satisfying the hydra: the social imperative in medical school admissions. *Medical Education* 52(6): 587–589. DOI: 10.1111/medu.13586.

Satisfying the hydra: the social imperative in medical school admissions

In this issue of *Medical Education*, Marceau and colleagues' concept analysis explores and delineates 'validity as a social imperative' by delving into the literature on assessment in healthcare professions education (HPE). Marceau et al. tease out the usage of this multifaceted concept, how it is characterized, what led to its emergence in this form, and to consider what the consequences of the concept might be. They conclude that some of the findings stretch or exceed the limits of traditional validity frameworks: These include the responsibility of HPE to anticipate the "consequences of assessment decisions for individuals and society"; and to accommodate "society's increasing concern about the validity of assessment" (Marceau et al., 2018).

Reading the study, we were struck by the influence of 'validity as a social imperative' in the medical school admissions process. Around the world, entry to medical school characterises a high-stakes assessment – arguably the highest-stakes assessment a doctor will undertake in his or her career. The imperative to ensure that this assessment process is valid - selecting and rejecting the 'right' individuals on their

ability and skills - sits at the core of western democracies' notion of meritocracy. Moreover, as "gatekeepers" to the profession, medical schools must keep a keen eye on who gains entry, particularly in systems with controlled numbers of students and high retention rates.

There is also a growing imperative that those assessed as suitable for medical school will go on to meet the healthcare needs of the whole population. This pressure stems from workforce crises and shortages in a number of countries (Gorman, 2018). There is increasing concern that although current selection methods may select appropriately in terms of validity for individual competence, at the same time they may also actually "narrow" rather than increase diversity, thus perpetuating the recruitment of medical graduates who wish to work in certain specialties in mainly affluent, urban locations.

These concerns for 'social validity' at both the individual and societal level exemplify one aspect currently stretching traditional validity frameworks: the need to anticipate the future consequences of selection decisions for individuals and wider society.

These imperatives have started to permeate through the planning, implementation and evaluation of admissions processes. For example, medical schools run specific programmes to admit applicants intending to practice in rural areas (Kwan et al., 2017; Wenghofer et al., 2017) and increasingly use 'contextual admissions', a process in which the social background of the applicant is taken into consideration when assessing their attainment (Moore et al., 2013). Recent initiatives offer a more nuanced approach to selection: focused on individual ability; attentive to workforce needs; and mindful of systemic barriers facing some applicants.

Predicting optimal outcomes from these tools is complex however, and demands additional complexity and transparency (Boliver et al., 2017; Griffin et al., 2016). As a result, medical schools require resources to plan, implement, evaluate and disseminate initiatives. Moreover, they must be in the position to afford to take (well-calculated) risks about who to select, and continue do so for long enough to muster sufficient change over sufficient years for longitudinal research to take root. This presents many challenges, particularly for medical schools situated in neoliberal Higher Education markets: from concerns about a public outcry when a "lesser" qualified applicant is

accepted instead of one with an excellent grade point average, to the (perceived) risks of a jeopardised market position.

Moreover, monitoring the consequences of selection further than medical school (where impact really counts) requires joined-up data sources that can track doctors' career paths through further assessment phases in a robust and secure manner. Unfortunately, the availability of a foundation of high-quality longitudinal research data is often in scarce supply (Gorman, 2018), with some notable exceptions (Dowell et al., 2018; Kaur et al., 2014). The potential of longitudinal data sources is considerable, and leads us to echo Marceau et al.'s calls for greater support of those responsible for assessment management and monitoring – not only on the ground at each local centre, but also to link in to national data repositories and research networks.

The second social imperative - society's increasing concern about the validity of assessment - is also starkly evidenced at the point of admissions. In our own context of the UK, with headlines questioning: "Why is there so little social diversity in medicine?" (Aziz, 2017) and warning of: "North Wales' GP shortage - escalating crisis" (BBC, 2017) the public's eye is often fixed on the profession's gatekeepers to respond.

A range of stakeholders heavily invest in the admissions process. Anyone who has experienced medicine admissions - from either side - in recent years is well aware that applicants, potential applicants, their families and teachers expect transparent and credible selection criteria and processes, which they will rigorously study. Perceived inequities are often challenged with letters, lawyers and calls to the press. And caught in the midst of such a high-stakes and life-changing assessment, with fierce competition for places... why shouldn't they?

These factors have resulted in politically-charged discussions about what constitutes 'fairness' in admissions, adding to concerns over the 'validity' of admissions processes (Patterson et al., 2016b). Debates surrounding what is 'fair' for the individual applicant versus/including what is 'fair' for overall society and the workforce make this a many-headed beast, which may challenge both the medical schools' and the profession's deeply held beliefs (Alexander, Fahey Palma, et al., 2017; Razack et al., 2015).

Diverse socio-cultural factors and local pressures mean there is likely to be no blanket solution, and society's expectations of evidence of 'credible' assessment varies from context to context. 'Credible' may also mean 'comprehensible': as we strive for increased accuracy and predictive validity, the complexity of the process may become overwhelming and yet again diminish transparency. In this case, some small efforts may make a difference: in the UK, medical schools have responded to demands for clear and accessible information about their entry requirements by collating these into one booklet for comparison, with instructions for use and a universal layout (Medical Schools Council, 2017).

Marceau et al.'s article suggests the consequents (direct results) of assessment procedures that are better planned and documented, and decisions that are shared transparently with society at large, include increased trust between the healthcare professions and those they serve. Trust is something that cannot be forced and these measures seem a reasonable act of cooperation. We hope medical admissions is already setting off down this path.

Finally however, it is perhaps also worth considering what "validity as a social imperative" means to the communities working within healthcare. Within UK medicine, students and trainees increasingly desire transparency, and challenge what they consider invalid rigidity in the career (UKSTSG, 2017). So instead of a 'them' (society) and 'us' (healthcare professions) standoff, perhaps we should also consider the social imperatives 'inside' the professions in order to keep and build the trust of our future and current staff.

References

Alexander K, Fahey Palma T, Nicholson S, et al. (2017) 'Why not you?' Discourses of widening access on UK medical school websites. *Medical Education* 51(6): 598–611. DOI: 10.1111/medu.13264.

Aziz Z (2017) Why is there so little social diversity in medicine? [Internet] *The Guardian*. Available at: <https://www.theguardian.com/healthcare-network/views-from-the-nhs-frontline/2017/mar/13/diversity-medicine-nhs-state-schools> (accessed 17 February 2017).

- BBC (2017) North Wales' GP shortage - escalating crisis, medic warn. [Internet] Available at: <http://www.bbc.co.uk/news/uk-wales-40876801> (accessed 17 February 2017).
- Boliver V, Crawford C, Powell M, et al. (2017) Admissions in Context: The use of contextual information by leading universities. The Sutton Trust. London.
- Dowell J, Cleland J, Fitzpatrick S, et al. (2018) The UK medical education database (UKMED) what is it? Why and how might you use it? *BMC Medical Education* 18(1): 6. DOI: 10.1186/s12909-017-1115-9.
- Gorman D (2018) Matching the production of doctors with national needs. *Medical Education* 52(1): 103–113. DOI: 10.1111/medu.13369.
- Griffin B, Porfeli E and Hu W (2016) Who do you think you are? Medical student socioeconomic status and intention to work in underserved areas. *Advances in Health Sciences Education* 22(2): 491–504. DOI: 10.1007/s10459-016-9726-1.
- Kaur B, Carberry A, Hogan N, et al. (2014) The medical schools outcomes database project: Australian medical student characteristics. *BMC Medical Education* 14(1): 180. DOI: 10.1186/1472-6920-14-180.
- Kwan MMS, Kondalsamy-Chennakesavan S, Ranmuthugala G, et al. (2017) The rural pipeline to longer-term rural practice: General practitioners and specialists. *Mercer AM (ed.) PLoS ONE* 12(7): e0180394. DOI: 10.1371/journal.pone.0180394.
- Marceau M, Gallagher F, Young M, et al. (2018) Validity as a social imperative for assessment in health professions education: a concept analysis. *Medical Education* 52(6): 641–653. DOI: 10.1111/medu.13574.
- Medical Schools Council (2017) Entry requirements for UK medical schools 2018. London.
- Moore J, Mountford-Zimdars A and Wiggans J (2013) Contextualised admissions : Examining the evidence. Report to SPA The Supporting Professionalism in Admissions Programme. Cheltenham.
- Patterson F, Knight A, Dowell J, et al. (2016) How effective are selection methods in medical education? A systematic review. *Medical Education* 50(1): 36–60. DOI: 10.1111/medu.12817.
- Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.
- UK Shape of Training Steering Group (UKSTSG) (2017) Report from the UK Shape of Training Steering Group. London.
- Wenghofer EF, Hogenbirk JC and Timony PE (2017) Impact of the rural pipeline in medical education: practice locations of recently graduated family physicians in Ontario. *Human Resources for Health* 15(1): 16. DOI: 10.1186/s12960-017-0191-6.

Appendix B: Invited Commentary, Perspectives on Medical Education

Invited commentary for article:

Young ME, Thomas A, Varpio L, et al. (2017) Facilitating admissions of diverse students: A six-point, evidence-informed framework for pipeline and program development. *Perspectives on Medical Education* 6(2): 82–90. DOI: 10.1007/s40037-017-0341-5.

Commentary appears in Perspectives on Medical Education and can be cited as:

Alexander K, Cleland J and Nicholson S (2017) Let us not neglect the impact of organizational culture on increasing diversity within medical schools. *Perspectives on Medical Education* 6(2): 65–67. DOI: 10.1007/s40037-017-0342-4.

Let us not neglect the impact of organizational culture on increasing diversity within medical schools

In this issue, Young et al. present a six-point framework for pipeline and program development, intended to increase diversity in Canadian medical schools (Young et al., 2017). Using a framework of knowledge translation, the authors emphasize the key role of collecting and monitoring longitudinal diversity-related data in designing, implementing and evaluating diversity-related initiatives. Young et al. argue the use of such data will not only improve best practice, but will also help build more tailored structures for lasting change.

We wholeheartedly agree that such data are essential. However, Young et al.'s focus on processes, new initiatives and structural change positions the article at the level of organizational and systems-level change. This is potentially problematic as, while systems-level changes may be an important initial step towards reducing functional barriers (to, in this case, increasing diversity within medicine), unless these barriers are also addressed at a cultural level, it is unlikely change will be effective, lasting or genuine (Bamber et al., 2009; Baughan, 2012).

Institutional culture is loosely understood to be the shared assumptions, meanings, beliefs, understandings and ideas held within an organization, school or team – with a focus on values and judgements, rather than procedures and practices (Ashkanasy et al., 2010). In established institutions, culture often errs towards stability and the status quo, largely allowing people to stay within their comfort zones and use established approaches rather than challenging these with innovation and growth (Chatman and Jehn, 1994). Furthermore, medicine, and selection into medical school, are influenced by a pervasive culture based on meritocracy, where the prior academic achievements of applicants may be over-emphasized. Therefore, although an admissions system may be perceived to be effective by those in the institution, (for example, because it processes large numbers of applications efficiently or admits students who historically have low dropout rates), it may not be conducive to achieving ‘newer’ goals, such as those of increased diversity.

For example, and drawing on data from medical schools represented in the Young et al. study, Razack and colleagues (Alexander, Fahey Palma, et al., 2017; Razack et al., 2012, 2015) identified a potential conflict between medical schools’ definition of excellence and a culture that would permit goals for increased diversity (referred to here as widening access) to be met. As a group, medical schools’ discourses reflected that they valued ‘excellence in scholarship’ above other, potentially broader and more inclusive, notions of excellence (Razack et al., 2015). Similarly, Alexander et al.’s (2017) recent discourse analysis of UK medical school websites identified that, while the discourse of widening access for social mobility through academic meritocracy was dominant, a counter discourse for improving the workforce through increased diversity was marginalized. In neither study was widening access displayed as a strength, implying that while institutions may, at one level, acknowledge the need to widen access, and claim to put systems in place which support this, these systems may not be accompanied by a cultural shift towards truly embracing the value of diversity in medicine. Admissions practices, policies and their institutional interpretations may instead act as ‘filters’ (Trowler, 2005) to intercept, moderate and even halt the effective implementation of widening access.

While acknowledgement of the need for cultural change may be especially important at a leadership level, as leaders exercise influence over their organization's culture (Schein, 2004), at the same time, 'top-down' change is more likely to be sustained if it is embraced locally (Bamber et al., 2009; Baughan, 2012). This is clear in medical admissions. For example, Cleland et al.'s study (2015) revealed that the aims of key stakeholders – the government policy makers and those who had to enact directives, the admissions deans – were often not in alignment with regard to widening access goals. Indeed, their data hinted that the political goal of widening access and medical education's goal of producing the best doctors may conflict. Moreover, these and other data (S. Curtis et al., 2014) indicate that those medical schools that embrace widening access at an organizational culture level may be more attractive to applicants from demographic groups currently underrepresented in medicine.

The aims and values of Young et al.'s proposed framework (Young et al., 2017) need to align with the aims and values of those who would be working with it, or the framework's impact is likely to be diluted or superficially incorporated for accountability purposes (Ball, 1994; Braun et al., 2011; Braun, Maguire and Ball, 2010; Cleland et al., 2015). However, only in their very last case study do Young and colleagues really stress the importance of developing markers and data collection processes in partnership with stakeholders. Leaving this as a later step implies to us an assumption that the stakeholders will share their views about increasing diversity. This may not be the case (see earlier) and it is much more likely that any framework will be implemented effectively if the views of stakeholders are sought very early on, to inform the processes of development, implementation and evaluation of change (Craig, 2013; Mattick et al., 2013).

Our final point is that, although cultural change in regard to medical admissions and increasing diversity may be notoriously difficult to enact, it is far from impossible. For example, in many countries medicine has become much more inclusive with regards to gender and some minority ethnic groups – but continues to lag behind in terms of increasing diversity on the grounds of socio-economic class (Griffin and Hu, 2015; Medical Schools Council, 2014c; Milburn, 2012; Saha et al., 2008). It seems clear from patterns of success in increasing diversity that medical admissions are linked to wider

societal issues. This is acknowledged by Young et al., who refer to the participation of Indigenous communities within medical education in the Canadian context. These wider issues must be taken into account when considering widening access and associated initiatives in any setting. However, it is also important to acknowledge very local contextual considerations. Each medical school has its own historical, social and local issues shaping the institutional culture and issues surrounding diversity and inclusion. Medical school A may embrace widening access while medical school B, in the same city, may be less overtly engaged, and the reasons for these differences are probably associated with medical school culture.

We call for more research exploring the influence of the particular cultural contexts: those of the wider socio-cultural, institutional and historical settings, and the complexities of the universities and medical schools within which medical admissions are situated and enacted. These issues may be effectively considered by a meso-level approach to promote and evaluate the necessary cultural change involved in establishing successful widening access programmes and policies (Cleland et al., 2015; Trowler, 2005, 2008).

In conclusion, coherent, evidence-informed frameworks with robust longitudinal data which allow us to evaluate progress are important to assessing the impact of widening access systems-level changes. However, unless there is an accompanying change in culture, we may be implementing superficial systems changes over a cultural status quo that is not conducive to achieving the goals of widening access. Only through a better understanding of the cultures within medical institutions that hamper increased diversity, can we target our efforts to implement lasting change to institutional systems and practices.

References

Alexander K, Fahey Palma T, Nicholson S, et al. (2017) 'Why not you?' Discourses of widening access on UK medical school websites. *Medical Education* 51(6): 598–611. DOI: 10.1111/medu.13264.

Ashkanasy NM, Wilderom CPM and Peterson MF (2010) Introduction to the Handbook of Organizational Culture and Climate, Second Edition. In: Ashkanasy NM, Wilderom

- CPM, and Peterson MF (eds) *The Handbook of Organizational Culture and Climate*. Thousand Oaks CA: SAGE Publications, Inc., pp. 3–10. DOI: 10.4135/9781483307961.n1.
- Ball SJ (1994) *Education Reform: A critical and post-structural approach*. Buckingham: Open University Press.
- Bamber V, Trowler P and Saunders M (2009) *Enhancing learning, teaching, assessment and curriculum in higher education : theory, cases, practices*. New York, NY: McGraw-Hill.
- Baughan P (2012) Culture and culture change in a higher education context: what works and what doesn't? *Learning at City Journal* 2(1): 19–28.
<http://openaccess.city.ac.uk/1259/>
- Braun A, Maguire M and Ball SJ (2010) Policy enactments in the UK secondary school: examining policy, practice and school positioning. *Journal of Education Policy* 25(4): 547–560. DOI: 10.1080/02680931003698544.
- Braun A, Ball SJ, Maguire M, et al. (2011) Taking context seriously: Towards explaining policy enactments in the secondary school. *Discourse* 32(4): 585–596. DOI: 10.1080/01596306.2011.601555.
- Chatman JA and Jehn KA (1994) Assessing the Relationship between Industry Characteristics and Organizational Culture: How Different Can You Be? *Academy of Management Journal* 37(3): 522–553. DOI: 10.2307/256699.
- Cleland J, Nicholson S, Kelly N, et al. (2015) Taking context seriously: explaining widening access policy enactments in UK medical schools. *Medical education* 49(1): 25–35. DOI: 10.1111/medu.12502.
- Craig P, Dieppe P, Macintyre S, et al. (2008) Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ* 337: a1655. DOI: 10.1136/BMJ.A1655
- Curtis S, Blundell C, Platz C, et al. (2014) Successfully widening access to medicine. Part 1: recruitment and admissions. *Journal of the Royal Society of Medicine* 107(9): 342–346. DOI: 10.1177/0141076814538786.
- Griffin B and Hu W (2015) The interaction of socio-economic status and gender in widening participation in medicine. *Medical education* 49(1): 103–13. DOI: 10.1111/medu.12480.
- Mattick K, Barnes R and Dieppe P (2013) Medical education: a particularly complex intervention to research. *Advances in Health Sciences Education* 18(4): 769–778. DOI: 10.1007/s10459-012-9415-7.
- Medical Schools Council (2014) *Selecting for Excellence Final Report*. London.
- Milburn A (2012) *Fair Access to Professional Careers. The Independent reviewer on Social Mobility and Child Poverty*. London.

Razack S, Maguire M, Hodges B, et al. (2012) What Might We Be Saying to Potential Applicants to Medical School? Discourses of Excellence, Equity, and Diversity on the Web Sites of Canada's 17 Medical Schools. *Academic Medicine* 87(10): 1323–1329. DOI: 10.1097/ACM.0b013e318267663a.

Razack S, Hodges B, Steinert Y, et al. (2015) Seeking inclusion in an exclusive process: discourses of medical school student selection. *Medical Education* 49(1): 36–47. DOI: 10.1111/medu.12547.

Saha S, Guiton G, Wimmers PF, et al. (2008) Student body racial and ethnic composition and diversity-related outcomes in US medical schools. *JAMA* 300(10): 1135–45. DOI: 10.1001/jama.300.10.1135.

Schein EH (2004) *Organizational Culture and Leadership*. San Francisco: Jossey-Bass.

Trowler P (2008) *Cultures and Change in Higher Education: Theories and Practices (Universities into the 21st Century)*. New York, NY: Palgrave Macmillan.

Trowler PR (2005) A Sociology of Teaching, Learning and Enhancement : improving practices in higher education. *Revista de sociologia* 76: 13–32.
<http://ddd.uab.cat/pub/papers/02102862n76/02102862n76p13.pdf>

Young ME, Thomas A, Varpio L, et al. (2017) Facilitating admissions of diverse students: A six-point, evidence-informed framework for pipeline and program development. *Perspectives on Medical Education* 6(2): 82–90. DOI: 10.1007/s40037-017-0341-5.

Appendix C: Positionality Statement

I consider myself to be a 'traditional' entrant to Higher Education in the UK: I identify as white, female and middle class, and I grew up in an affluent neighbourhood. All of my immediate family have been to university.

I grew up in North-East Scotland and went to the local comprehensive school, which performed to the national average in terms of attainment and progression to university. Education was highly valued at home and I performed well at school. My secondary education took place under 'New Labour' governments which expanded the numbers of university places in the UK and touted education as the route to success. I automatically assumed I would go on to university and most of my school friends also chose this route.

My parents supported and helped me prepare my university application, encouraged me to pick a subject that I would enjoy and supported me financially. I chose the University of St Andrews to study International Relations and German: I had enjoyed the visiting day, knew a couple of friends attending and I felt 'at home' there. I loved my time as an undergraduate.

After graduating, I started working in Widening Access (WA) at St Andrews – a role I was recommended for by a friend, rather than any prior involvement or interest. (As a student, I hadn't even been aware of WA.) I primarily worked with 14-18 year olds in below-average performing state schools in Fife to encourage them to consider medicine as a career and to support them with their university applications. Working daily with these pupils and their schools, I witnessed many barriers to their chances of success. I also occasionally visited some of the highest achieving and private schools and the contrast in culture and resources available was striking.

My experiences as a WA officer first stimulated me to reflect on how strongly my own decisions had been based on implicit expectations and assumptions. I saw how my path to university had been absolutely expected by those around me and greatly facilitated by the multi-faceted support of my parents.

Through my WA role, I was exposed to individuals, families and schools who had very different expectations and who could not necessarily offer this support with regards to

university. Reflecting on this, I began to see how a life choice that felt 'natural' to me could feel 'alien' to another and vice versa. For example, I met pupils who would not have ever considered St Andrews, medicine or even university generally, despite their clear ability (whereas I had never questioned that I would attend university and find a professional job).

To help understand their perspective, I reflected on the times I had felt out 'of my depth' educationally or 'out of place' personally and tried to acknowledge these insecurities as legitimate. I also tried to expose own my assumptions and use this new awareness to open myself up to accept others' viewpoints. These reflections made me aware of how convenient it can be to fall back on pseudo-empathy or to assume what is 'appropriate' for others rather than actually taking the time and effort to hear and understand their values, motivations and points of view.

I also quickly learnt that it is only through exposure to difference are we made aware that 'our way' is not the only way. As a result, I began to see my own school experience in a new light. I visited many state schools and saw some of my own school experiences (e.g. self-teaching a course because a teacher was on long-term sick leave; an anti-academic culture) reoccurring in new contexts. I found many pupils and teachers accepted these circumstances as the 'norm' - just as I had at the time – rather than feeling they should be challenged. This led to other reflections – for example, why state-school students and teachers may not relate the terms 'educational disadvantage' or 'adverse circumstances' to their everyday experience or might not be supportive of WA even if it stood to benefit them. These type of reflections led me to understand that underlying perceptions are very important if circumstances are to change (e.g. through WA).

My first-hand experience of the UK state school system and experience working in WA has given me extensive background knowledge on which to build a strong foundation for my PhD. I think it is acceptable to use knowledge gained from personal and professional experience to guide the doctorate towards potential areas to investigate (e.g. a focus on stakeholders' underlying values, perceptions and communications). However, I am aware personal experience can be powerful and enduring and that I run a higher risk of bias than with topic I feel less personally connected to. For example,

this bias might lead me to unconsciously favour some findings or interpretations over others if I connect them to one of my past experiences. To mediate this, I am aware I need to carefully reflect throughout the research process and consult with colleagues to ensure designs and findings are strongly evidence-based and developed, analysed and interpreted in a fair and trustworthy way.

The role of WA officer situated me between ‘worlds’ – the academic departments, the central WA and admissions teams, the school teachers, and school pupils. As a result, I gained some insight into these groups’ contexts, interests and cultures, and a basic understanding of why each groups may see the world, and WA, as they do. Although I don’t feel like an ‘insider’ or a particular loyalty to any specific group (e.g. university staff, ex-state school pupil etc.) to help expose any bias, I have written an in-depth reflexive account on the key interactions I have had with each group in both a personal and professional context. I am now aware that I bring these past experiences ‘with me’ to the analysis and that I should assess any parallels I see in the data with a heightened awareness.

Finally, although I am in favour of WA and it is a topic close to my heart, I think I can still be critical about how it is interpreted and operationalised. Reflecting on my time as a WA officer, I am aware of aspects within WA that were unfair and discomforting, or lacked transparency and direction. I have examined my position and believe that my main aim is to better understand, and offer research to improve, WA to medicine through critical, evidence-based and trustworthy research – not simply to champion the initiative.

Appendix D: Ethical Approval, Studies One and Two



College of Life Sciences and Medicine
College Office
Polwarth Building
Forresterhill
Aberdeen AB25 2ZD
Scotland
United Kingdom

Date : 24/02/2016

Dear Jennifer Cleland

What do medical school webpages tell us about attitudes towards widening access?

Thank you for registering your study with the College of Life Sciences and Medicine of the University of Aberdeen. We can confirm that it meets the requirements for ethical review and governance as set out in the University Handbook and are happy for you to proceed with it.

Yours sincerely

Justin H G Williams
Chair, College Ethics Review Board

Patricia Burns
Research Governance Manager

Appendix E: Ethical Approval, Studies Three and Four

From: CASS Staff Ethics
To: [Alexander, Kirsty Elizabeth](#)
Subject: Your Ethical Approval has been approved.
Date: 06 May 2016 16:41:41

Dear Colleague,

You have received this email because you recently submitted an application for ethical approval of a research proposal.

The College Research Ethics and Governance Committee reviewer has considered your application and given approval that in their best judgement, all ethical considerations within the research proposal have been addressed adequately. You can now begin work on your research. Any comments made by the reviewer are copied below.

If, for the purposes of external funders (or other external reviewers) you require a formal letter confirming this approval, please contact your School Ethics Officer in the first instance.

Title: [Investigating School Teachers' and Pupils' Understandings of Suitability for Medicine](#)

SEO: Pugh, Dr Syrithe

SEO Comments: The applicant has been very thorough, and this seems wholly satisfactory from the ethical perspective. I'm happy to approve it.

Committee Reviewer: Gash, John M.

Committee Comments: This is an extremely well-prepared application for ethical approval from the College, with a highly professional set of information sheets and consent forms for a wide range of potential participants and interested parties. All corners have been covered.

[This is an automatic e-mail - please do not reply]

Appendix F: Interview Guide, Teachers

Semi-structured Interviews with Teachers

- Check: Full intro to myself and study incl. aims; interview procedure; outcomes/afterwards; consent; questions?
- Background
 - Role, years at school
 - Tell me a little more about the school, the intake, the surrounding of ____
 - Have you ever advised any pupils considering Medicine?
- The pupils
 - You mentioned ____ (younger first). Tell me more about them.
 - You mentioned girl/boy – more likely to be that gender?
 - Outcomes?
 - How did you identify the pupils? Age? Process?
 - Pupils expressing interest later? Differences in advising these pupils?
- Decisions
 - Experiences of interested pupils deciding against it? (Reasons?)
 - Have you ever had a student who you advised against applying (or had reservations about) and who applied anyway?
 - You mentioned _____. How do you find reaching the balance between supporting and more actively shaping decisions when advising the pupils?
 - Thinking again of that balance – what role do other factors such as (e.g. parents) have as a responsibility for shaping decisions?
 - Outreach
 - When? Choosing students?
 - Their experiences of this? Turn them on to it? Off? Mixed?
- Wrap up
 - Summary of your main points – do you feel these are accurate?
 - Anything we've discussed that you'd like to revisit or any other points you'd like to make?
- Thank you and reminder of 'what's next'

Appendix G: Focus Group Discussion Guide, Pupils

Focus Groups with Pupils

- Introduce: myself, the research done in my team and the study incl. aims
- Explain: FG procedure; outcomes/afterwards; anon/conf.; VOLUNTARY (options)
- Explain: FG ground rules
- Check: consent; personal info sheet; questions?
(Allow 10 minutes)
- Activity: Whole group (or split if necessary)
 - Briefly outline Vaglum's study
 - Place factors in the order you think *the medical students* put them in
(Up to 10 mins)
- Discussion: Whole group
 - Discuss order – top factors, bottom factors, those of interest in other groups
 - What makes you think this?
(Up to 10 mins)
- Activity/Discussion: Whole Group
 - This is for all medical students - separate out genders...
 - What do you think would change in the male/female ranking? Why?
(Up to 5 mins)
- Discussion: Whole Group
 - What would you change if this was your own group's ranking? Why?
 - Which factors are most important to you personally? Why? (Ask individuals)
(Up to 10 mins)
- Wrap up
 - Summary of your main points – do you feel these are accurate?
 - Anything we've discussed that you'd like to revisit or any other points you'd like to make?
 - Reveal the order in Vaglum's study. Gender differences.
 - What other groups have said (compare)
 - What the newer/general literature on the topic says
(Allow min 5 mins)
- Thank you and reminder of ground rules and their rights

Appendix H: Information Sheet, Headteachers

**Institute of Education in Medical and Dental Sciences**

Polwarth Building, Room 2:038

Foresterhill

Aberdeen AB25 2AZ

United Kingdom

Tel: 01224 437251

Email: r01kea15@abdn.ac.uk

Investigating School Teachers' and Pupils' Understandings of Suitability for Medicine**Headteacher Information sheet**

Much research about the admissions process to Medicine has focused on creating the fairest and optimal selection procedures, however less is known about the motivations, influences and experiences of key groups of people negotiating the application process itself – school pupils and teachers.

What is the purpose of the study?

This work aims to explore which factors teachers and pupils feel influence their decision about whether to recommend or apply to Medicine, their motivations and any barriers they perceive to stand in their way. We also wish to gain a better understanding about how 'potential' for Medicine is understood and identified across a broad range of UK schools.

The overall purpose of this research to better inform medical schools' support of, and communication to, school teachers and pupils from a diverse range of schools and backgrounds.

Who will be eligible to take part?*Interviews with Teachers:*

- Any teacher who advises pupils about university and career choices.

Focus groups with Pupils:

- Pupils who are in their final or penultimate year at school and aged between 16 – 18 years.
- Pupils who have gained, or are predicted to gain, the minimum academic requirements to apply for Medicine (a desire to study Medicine is then not required).
- or*
- Pupils who may not have achieved/been predicted to achieve the grades required for entry to Medicine, but have a strong desire to apply, perhaps through alternative routes.

Teachers and pupils will not participate in interviews/focus groups together.

What is required of participants?

Participants will be invited to take part in a recorded interview (teachers) or focus group (pupils) lasting 30-45 minutes. These will take place within the school and will be arranged in conjunction with a designated teacher. Participation is entirely voluntary.

At the start of the focus groups, pupils will be asked to complete an enrolment form to collect personal and educational information. Teachers will be asked some questions about their role in the school.

Interviews and focus groups will discuss which factors teachers and pupils feel influence their decision whether to recommend/apply to Medicine, their motivations and if they perceive any barriers. Through these discussions, we also wish to explore how participants would identify 'potential' or 'suitability' for Medicine.

What will taking part mean for participants and the school?

The project hopes to gain an understanding of the perceptions and experiences that influence an individual's decision to recommend or apply to Medicine. The interviews and focus groups will involve the researcher asking a few questions and guiding the discussion (e.g. Tell me about your experience advising someone who you thought was suitable to apply to Medicine? *or* Tell me about what you think defines someone who is suitable for Medicine?). We are particularly interested in participants' insights and opinions, not their knowledge of the process.

There are no expected adverse outcomes for the school or participants. Headteachers, participants and parents/guardians may request a summary of results of the study or a copy of the published work by contacting the research team.

Consent procedures

Participation in the study is entirely voluntary.

Before participating in the study, all participants will be fully briefed on the study aims and process, data protection and anonymization procedures, and asked to provide written confirmation of informed consent.

Parents/guardians of pupils will be provided with information about the study and asked to provide written confirmation of informed consent for their son/daughter/ward to take part. Pupils will be asked to submit this form before participating in the study.

This study has ethical approval from the Ethics Review Committee of the College of Arts and Social Sciences at the University of Aberdeen.

The researcher wishing to enter schools (Kirsty Alexander) holds a Disclosure Scotland PVG Scheme certificate dated 04/06/16; Disclosure and Barring Service certificate dated 16/07/16.

What will happen to the information?

This study will contribute to the PhD thesis of Kirsty Alexander and subsequent research publications. The PhD is funded by the College of Life Sciences and Medicine at the University of Aberdeen.

The study will comply with the Data Protection Act, and all participants' data and school information will be fully anonymized for publication.

Only those directly involved in the project will have access to data collected. All of the interviews and focus groups will be digitally audio-recorded, transcribed anonymously and

entered into data management and analysis software. References to locality, school, colleagues, peers or any other identifiable details will be removed from the data during the analysis process. Only the research team will have access to recordings. These and the transcripts will be kept for 10 years (as per standard University of Aberdeen processes). They will be stored initially in locked filing cabinets and password-protected computers, then archived once the study has been written up as scientific papers and submitted as part of the PhD thesis.

For more information, please contact:

The study researcher Kirsty Alexander (r01kea15@abdn.ac.uk or 01224 437251)

Her supervisor Prof Jennifer Cleland (jen.cleland@abdn.ac.uk or 01224 437257)

Appendix I: Consent Form, Headteachers



Institute of Education in Medical and Dental Sciences

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Foresterhill

Aberdeen AB25 2AZ

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Tel: 01224 437251

Email: r01kea15@abdn.ac.uk

Investigating School Teachers' and Pupils' Understandings of Suitability for Medicine

Consent form - Headteachers

Please tick

I have read and understood the information sheet, and have had the opportunity to discuss the project with the researcher(s) and to ask any questions.

I agree for this study to be conducted with teachers and pupils within my school, and I understand that I may withdraw this permission at any time.

I understand that the information provided by participants will be held confidentially and results published anonymously.

Name of Headteacher:

Signature of Headteacher: Date:

Name of School.....

Suggested Guidance Teacher(s) contact (name and email).....

.....

I confirm that I have provided information on the project to the above:

Name of Researcher:

Signature of Researcher: Date:

Appendix J: Participant Information Sheet, Teachers



Institute of Education in Medical and Dental Sciences

School of Medicine and Dentistry

Polwarth Building

Foresterhill

Aberdeen AB25 2AZ

United Kingdom

Tel: 01224 437251

Email: r01kea15@abdn.ac.uk

Investigating School Teachers' and Pupils' Understandings of Suitability for Medicine

Participant Information sheet - Teachers

Much research about the admissions process to Medicine has focused on creating the fairest and optimal selection process, however less is known about the motivations, influences and experiences of key groups of people negotiating this process – school pupils and teachers.

What is the purpose of the study?

This work aims to explore which factors teachers and pupils feel influence their decision about whether to recommend or apply to Medicine, and any barriers they perceive to stand in their way. We also wish to gain a better understanding about how 'potential' for Medicine is understood and identified across a broad range of UK schools.

The overall purpose of this research to better inform medical schools' support of, and communication to, school teachers and pupils from a diverse range of schools and backgrounds.

Who will be eligible to take part?

Any teacher who advises pupils about university choices.

What is required of participants?

You will be asked to take part in a recorded interview lasting approx. 30 minutes. These will take place within the school and will be arranged with the researcher at a time which is convenient for you.

The interviews will be informal and only loosely structured. At the start you will be asked a bit about your role, before being invited to discuss some of your experiences and opinions regarding advising pupils for/against applying for Medicine.

We are particularly interested in your insights and experiences – not your knowledge of the medical admissions process!

What will taking part mean for participants and the school?

The project hopes to gain an understanding of the perceptions and experiences that influence teachers' decisions to recommend, or advise against, a pupil's application to Medicine. The interviews will typically involve the researcher asking a series of questions to guide the discussion (e.g. Have you ever advised a pupil to apply for Medicine, or advised them against it? Tell me about the pupil, what was he/she like?)

There are no negative outcomes expected for the participants or their school. After interviews have been completed, you may contact us for a summary of the results of the study or a copy of the published work.

Consent procedures

If you think you would like to participate, we will arrange a meeting for the interview to take place. Before the start of the interview, the researcher will discuss the study with you in more detail and answer any questions you might have. Finally, you will be asked to sign a consent form if you are still happy to take part.

Participation is completely voluntary and accepting or declining to participate will not be detrimental to your interests or career. You may choose to not answer any questions, or withdraw from the study completely at any point during or after the interview.

What will happen to the information?

The study will comply with the Data Protection Act, and all participants' data and school information will be held confidentially and be totally anonymized for publication.

Only those directly involved in the project will have access to data collected. All of the interviews will be digitally audio-recorded (with permission), transcribed and entered into data management and analysis software. References to locality, school, colleagues, pupils or any other identifiable details will be removed from the data during the analysis process. Only the research team will have access to recordings. These and the transcripts will be kept for 10 years (as per standard University of Aberdeen processes). They will be stored initially in locked filing cabinets and password-protected computers, then archived once the study has been written up as articles and submitted as part of the PhD thesis.

This study will be undertaken in order to contribute to the PhD thesis of Kirsty Alexander and resulting published articles. The PhD is funded by the College of Life Sciences and Medicine at the University of Aberdeen.

For more information, please contact:

The study researcher Kirsty Alexander (r01kea15@abdn.ac.uk or 01224 432751)

Or her supervisor Prof Jennifer Cleland (jen.cleland@abdn.ac.uk or 01224 437257)

Appendix K: Consent Form, Teachers



Institute of Education in Medical and Dental Sciences

School of Medicine and Dentistry

Polwarth Building

Foresterhill

Aberdeen AB25 2AZ

United Kingdom

Tel: 01224 437251

Email: r01kea15@abdn.ac.uk

**Investigating School Teachers' and Pupils' Understandings
of Suitability for Medicine**

Consent form - Teachers

Please tick

I have read and understood the information sheet, and have had the opportunity to discuss the project with the researcher(s) and to ask any questions.

I agree to take part in the study, but understand that I can withdraw at any time.

I consent to my interviews being voice recorded.

I consent to my data being shared within the research team.

I understand that the information provided by me will be held securely and confidentially and all results will be published anonymously.

Name of participant:

Signature of participant: Date:

I confirm that I have explained the project to the above participant.

Name of Researcher:

Signature of Researcher: Date:

Appendix L: Participant Information Sheet, Pupils (Scotland)



Institute for Education in Medical and Dental Sciences

School of Medicine and Dentistry

Polwarth Building Rm 2:037

Foresterhill

Aberdeen AB25 2AZ

United Kingdom

Tel: 01224 437251

Email: r01kea15@abdn.ac.uk

Investigating School Teachers' and Pupils' Understandings of Suitability for Medicine

Participant Information sheet - Pupils

Much research about the admissions process to Medicine has focused on creating the fairest and optimal selection process, however less is known about the motivations, influences and experiences of key groups of people negotiating this process – school pupils and teachers.

What is the purpose of the study?

This study aims to explore the factors pupils and teachers feel influence their decision about applying to Medicine, and any barriers they feel might stand in their way. We also aim to gain an understanding of how 'potential' for Medicine is understood and identified across a range of UK schools.

The overall purpose of this research is to better inform medical schools' support of, and communication to, school pupils and teachers from a diverse range of schools and backgrounds.

Who will be eligible to take part?

We would like to invite any pupils who:

- Are in 5th or 6th year at school and aged between 16 – 18 years
 - Have gained, or aim to achieve, the minimum requirements to apply for Medicine (usually AAABB at Higher in subjects including 2 sciences (Bio, Chem, Phys or Maths), and with most National 5s at A or B).
 - You may wish to study Medicine, but this is not required – you might also want to study something else or not be planning to go to university.
- or**
- If you are not predicted the requirements for Medicine, but have a strong desire to apply, perhaps through alternative routes, you are also welcome to take part.

If you are unsure about whether you are eligible, please speak to the teacher who passed you this sheet. Any pupils who require special arrangements are welcome to participate - please just let a teacher know in advance so arrangements may be made.

What is required of participants?

You will be asked to take part in a voice recorded focus group lasting approx. 45 mins. These will take place within the school and will be arranged by a teacher at a time which is convenient for most people.

The focus groups will be informal and the number of pupils in each will vary between schools. At the start of the session, you will be asked to fill in an enrolment form so that we know a little more information about you. You will then be asked to discuss some questions amongst the group (e.g. tell me about why you might (or might not) consider applying to Medicine?)

We are interested in hearing your opinions and experiences about making choices about university - not how much you know about applying to Medicine!

What will taking part mean for participants and the school?

There are no negative outcomes expected for participants or their schools. After focus groups have been completed, you are welcome to contact us for a summary of results or a copy of the published work.

The research team are keen to hear the views of senior pupils, so your participation would be very much appreciated!

Consent procedures

Before the start of the focus group, the researcher will discuss the study with the group in more detail and answer any questions you might have. You will be asked to sign a consent form if you are still happy to take part.

Participation is completely voluntary and accepting or declining to participate will not be detrimental to your interests or schooling, and will not affect any application you might make to any university. You may choose to not answer any questions, or withdraw from the study completely at any point during or after the interview.

What will happen to the information?

The study will comply with the Data Protection Act, and all participants' data and school information will be anonymized for publication.

Only those directly involved in the project will have access to data collected. All of the focus groups will be digitally audio-recorded, transcribed anonymously and entered into data management and analysis software. References to locality, school, peers or any other identifiable details will be removed from the data during the analysis process. Only the research team will have access to recordings. These and the transcripts will be kept for 10 years (as per standard University of Aberdeen processes). They will be stored initially in locked filing cabinets and password-protected computers, then archived once the study has been written up as academic papers/articles and submitted as part of the PhD thesis.

This study will be undertaken in order to contribute to the PhD thesis of Kirsty Alexander and any subsequent publications. The PhD is funded by the College of Life Sciences and Medicine at the University of Aberdeen.

If you might like to participate:

Please let the teacher who passed you this information sheet know and he/she will pass on details of the focus group session

For more information, please contact:

The teacher who passed you this information.

The study researcher Kirsty Alexander (r01kea15@abdn.ac.uk)

Her supervisor Prof Jennifer Cleland (jen.cleland@abdn.ac.uk)

Appendix M: Participant Information Sheet, Pupils (England)



**UNIVERSITY
OF ABERDEEN**

Institute for Education in Medical and Dental Sciences

School of Medicine and Dentistry

Polwarth Building Rm 2:037

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Aberdeen AB25 2AZ

United Kingdom

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Investigating School Teachers' and Pupils' Understandings of Suitability for Medicine

Participant Information sheet - Pupils

Much research about the admissions process to Medicine has focused on creating the fairest and optimal selection process, however less is known about the motivations, influences and experiences of key groups of people negotiating this process – school pupils and teachers.

What is the purpose of the study?

This study aims to explore the factors pupils and teachers feel influence their decision about applying to Medicine, and any barriers they feel might stand in their way. We also aim to gain an understanding of how 'potential' for Medicine is understood and identified across a range of UK schools.

The overall purpose of this research is to better inform medical schools' support of, and communication to, school pupils and teachers from a diverse range of schools and backgrounds.

Who will be eligible to take part?

We would like to invite any pupils who:

- Are in their senior years at school and aged between 16 – 18 years
 - Aim to achieve the minimum requirements to apply for Medicine (usually AAA at A Level in subjects including 2 sciences (Biology, Chemistry, Physics or Maths))
 - You may wish to study Medicine, but this is not required – you might also want to study something else or not be planning to go to university.
- or**
- If you are not predicted the requirements for Medicine, but have a strong desire to apply, perhaps through alternative routes, you are also welcome to take part.

If you are unsure about whether you are eligible, please speak to the teacher who passed you this sheet. Any pupils who require special arrangements are welcome to participate - please just let a teacher know in advance so arrangements may be made.

What is required of participants?

You will be asked to take part in a voice recorded focus group lasting approx. 45 mins. These will take place within the school and will be arranged by a teacher at a time which is convenient for most people.

The focus groups will be informal and the number of pupils in each will vary between schools. At the start of the session, you will be asked to fill in an enrolment form so that we know a little more information about you. You will then be asked to discuss some questions amongst the group (e.g. tell me about why you might (or might not) consider applying to Medicine?)

We are interested in hearing your opinions and experiences about making choices about university - not how much you know about applying to Medicine!

What will taking part mean for participants and the school?

There are no negative outcomes expected for participants or their schools. After focus groups have been completed, you are welcome to contact us for a summary of results or a copy of the published work.

The research team are keen to hear the views of senior pupils, so your participation would be very much appreciated!

Consent procedures

Before the start of the focus group, the researcher will discuss the study with the group in more detail and answer any questions you might have. You will be asked to sign a consent form if you are still happy to take part.

Participation is completely voluntary and accepting or declining to participate will not be detrimental to your interests or schooling, and will not affect any application you might make to any university. You may choose to not answer any questions, or withdraw from the study completely at any point during or after the interview.

What will happen to the information?

The study will comply with the Data Protection Act, and all participants' data and school information will be anonymized for publication.

Only those directly involved in the project will have access to data collected. All of the focus groups will be digitally audio-recorded, transcribed anonymously and entered into data management and analysis software. References to locality, school, peers or any other identifiable details will be removed from the data during the analysis process. Only the research team will have access to recordings. These and the transcripts will be kept for 10 years (as per standard University of Aberdeen processes). They will be stored initially in locked filing cabinets and password-protected computers, then archived once the study has been written up as academic papers/articles and submitted as part of the PhD thesis.

This study will be undertaken in order to contribute to the PhD thesis of Kirsty Alexander and any subsequent publications. The PhD is funded by the College of Life Sciences and Medicine at the University of Aberdeen.

If you might like to participate:
***Please let the teacher who passed you this information sheet know and
he/she will pass on details of the focus group session***

For more information, please contact:

The teacher who passed you this information.

The study researcher Kirsty Alexander (r01kea15@abdn.ac.uk)

Her supervisor Prof Jennifer Cleland (jen.cleland@abdn.ac.uk)

Appendix N: Consent Form, Pupils



Institute for Education in the Medical and Dental Sciences
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 Polwarth Building
 Foresterhill
 Aberdeen AB25 2AZ
 United Kingdom
 Tel: 01224 437251
 Email: r01kea15@abdn.ac.uk

**Investigating School Teachers' and Pupils' Understandings
 of Suitability for Medicine**

Consent form - Pupils

Please tick

- I have read and understood the information sheet, and have had the opportunity to discuss the project with the researcher(s) and to ask any questions.
- I agree to take part in the study, but understand that I can withdraw at any time.
- I consent to my interviews being recorded.
- I consent to my data being shared across the research team.
- I understand that the information provided by me will be held securely and confidentially and that all results will be published anonymously.
- I understand that participation in this project will not influence any application I may make to any university.

Name of participant:

Signature of participant: Date:

I confirm that I have explained the project to the above participant.

Name of Researcher:

Signature of Researcher: Date:

Appendix O: Personal Information Sheet, Pupils (Scotland)



Institute for Education in the Medical and Dental Sciences
School of Medicine and Dentistry
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**Investigating School Teachers' and Pupils' Understandings
of Suitability for Medicine**

Enrolment Form – Pupils

(All this information remains confidential and will be totally anonymised for the study)

Name of Participant:

Name of School:

Current home address:

Current School Year:

What is your gender? MALE FEMALE (please circle)
Have you ever been in care? YES NO (please circle)

Occupation of Parent(s)/Guardian(s):

Please circle one option to best describe your ethnic group or background:

White	Mixed/multiple ethnic groups	Asian/Asian British	Black/African/Caribbean/Black British	Other ethnic group
English/Welsh/Scottish/Northern Irish/British	White and Black Caribbean	Indian	African	Arab
Irish	White and Black African	Pakistani	Caribbean	Any other ethnic group, write in:
Gypsy or Irish Traveller	White and Asian	Bangladeshi	Any other Black/African/Caribbean background, write in:	
Any other White background, write in:	Any other Mixed/multiple ethnic background, write in:	Chinese Any other Asian background, write in:		

What is your religion? (please circle)

No religion Christian Buddhist Hindu Jewish Muslim Sikh Any other religion, write in:

I am considering studying Medicine: YES NO MAYBE (please circle)

Subjects currently being studied and predicted grades (if known):

Level (e.g. Higher, National 5), subjects and grades achieved in most recent exams:

Pupil Signature: Date:

Appendix P: Personal Information Sheet, Pupils (England)



Institute for Education in the Medical and Dental Sciences
School of Medicine and Dentistry
Polwarth Building
Foresterhill
Aberdeen AB25 2AZ
United Kingdom
Tel: 01224 437251
Email: r01kea15@abdn.ac.uk

***Investigating School Teachers' and Pupils' Understandings
of Suitability for Medicine***

Enrolment Form – Pupils

(All this information remains confidential and will be totally anonymised for the study)

Name of Participant:

Name of School:

Current home address:

Current School Year:

What is your gender? MALE FEMALE (please circle)

Have you ever been in care? YES NO (please circle)

Occupation of Parent(s)/Guardian(s):

Please circle one option to best describe your ethnic group or background:

White	Mixed/multiple ethnic groups	Asian/Asian British	Black/African/Caribbean/Black British	Other ethnic group
English/Welsh/Scottish/Northern Irish/British	White and Black Caribbean	Indian	African	Arab
Irish	White and Black African	Pakistani	Caribbean	Any other ethnic group, write in:
Gypsy or Irish Traveller	White and Asian	Bangladeshi	Any other Black/African/Caribbean background, write in:	
Any other White background, write in:	Any other Mixed/multiple ethnic background, write in:	Chinese Any other Asian background, write in:		

What is your religion? (please circle)

No religion Christian Buddhist Hindu Jewish Muslim Sikh Any other religion, write in:

I am considering studying Medicine: YES NO MAYBE (please circle)

Subjects currently being studied and predicted grades (if known):

Level (e.g. AS level, BTEC, A-level), subjects and grades achieved in most recent exams:

Pupil Signature: Date:

Appendix Q: Final Template for Study Three

Template analysis is a type of thematic analysis. During coding, the researcher develops and refines a 'template' with which to code future data. At the end of this process a 'final' template is produced and applied to the whole data set (King, 2004). The template for Study Three (*Teachers' perceived role in WA to medicine*) is presented below:

- Overarching themes are presented in capitals.
- Coding is hierarchical, subthemes are presented in steps below the overarching theme.
- Integrative themes are those which permeate several theme clusters.

1. PERCEPTIONS OF MEDICINE

1.1 Teachers' own perceptions of medicine

- 1.1.1 Application and success rates
- 1.1.2 'Typical' applicants
- 1.1.3 Views on selection
- 1.1.4 Comparisons to Oxbridge
- 1.1.5 The profession

1.2 Teachers' perceptions of their students' view of medicine

- 1.2.1 Factors driving pupils' decisions
- 1.2.2 Medicine in comparison to other subjects
- 1.2.3 Expectations of the career
- 1.2.4 Motivations for the career
- 1.2.5 Deterrents against the career
- 1.2.6 Gender Influence

2. JUDGING A STUDENT'S 'SUITABILITY' FOR MEDICINE

2.1 Indications that a student is suitable

- 2.1.1 Academic Achievement
- 2.1.2 Personal Traits
- 2.1.3 Realisation of potential

2.2 Indications that a student is unsuitable

- 2.2.1 Motivations
- 2.2.2 Expectations
- 2.2.3 Personal Skills

2.3 Uncertainty over whether an aspect is suitable

- 2.3.1 Shyness and under-confidence
- 2.3.2 Disabilities

2.4 Influence of students' backgrounds

- 2.4.1 Strengths
- 2.4.2 Weaknesses

2.5 Predicting the success of students

- 2.5.1 Reapplication
- 2.5.2 Identifying the 'right' pupils
- 2.5.3 Success in applications

3. TEACHERS' PERCEIVED ROLE

3.1 Support and preparation available at the school

- 3.1.1 To meet admissions criteria
- 3.1.2 Interpersonal and cultural skills
- 3.1.3 Course choices
- 3.1.4 Emotional Support
- 3.1.5 Material restrictions
- 3.1.6 Awareness of support at other schools

3.2 Appropriate level of intervention

- 3.2.1 Practical Support
- 3.2.2 Who expresses Medicine as a possibility
- 3.2.3 Balancing 'encouragement'

4. BARRIERS AND FACILITATORS IMPACTING TEACHERS' INFLUENCE

4.1 School factors

- 4.1.1 Peer Group
- 4.1.2 Knowledge gaps
- 4.1.3 Culture
- 4.1.4 School type

4.2 Factors external to school

- 4.2.1 Geographical Location
- 4.2.2 Family Influence and Home lives
- 4.2.3 WA and outreach
- 4.2.4 Previous schooling
- 4.2.5 Media

INTEGRATIVE THEMES

- IT1 Student Confidence
- IT2 Risk in applying to medicine
- IT3 Restrictions and limitations

King N (2004) Using Templates in the Thematic Analysis of Text. In: Essential Guide to Qualitative Methods in Organizational Research. London, UK: SAGE Publications Ltd, pp. 256–270.

Appendix R: Final Template for Study Four

Template analysis is a type of thematic analysis. During coding, the researcher develops and refines a 'template' with which to code future data. At the end of this process a 'final' template is produced and applied to the whole data set (King, 2004). The template for Study Four (*Exploring school pupils' perceptions of medicine*) is presented below:

- Overarching themes are presented in capitals.
- Coding is hierarchical, subthemes are presented in steps below the overarching theme.
- Integrative themes are those which permeate several theme clusters.

1. MOTIVATIONS TO APPLY

1.1 Intrinsic Factors

1.1.1 Pursuit of Fulfilment

1.1.2 Prioritisation of Intrinsic Factors

1.2 Extrinsic Factors

1.2.1 Acceptable Factors

1.2.2 Unacceptable Factors

1.3 Influence of Background

1.3.1 Family Influence

1.3.2 Geographical Location

1.3.3 Past Experiences

1.3.4 Perception of Widening Access

1.3.5 No Influence or Too Varied

1.4 Gender Issues

1.4.1 Intrinsic Differences

1.4.2 Extrinsic Differences

1.4.3 No Differences

1.4.4 Changes and opportunities within Medicine

2. QUALITIES OF A DOCTOR

2.1 Personal Qualities

2.2 Academic Qualities

3. INFORMATION SOURCES

3.1 Hot knowledge

3.2 Cold knowledge

4. SELECTION/APPLICATION PROCESS

4.1 Academic requirements

4.1.2 Challenge off-putting

4.1.2 Negotiating the requirements

4.2 How to 'stand out' in selection

INTEGRATIVE THEMES

- IT1 Changing practices/culture within medicine
- IT2 Identification as in- or outgroup with medical students/Drs
- IT3 Arrogance and selfishness
- IT4 Honesty and Pretence

King N (2004) Using Templates in the Thematic Analysis of Text. In: Essential Guide to Qualitative Methods in Organizational Research. London, UK: SAGE Publications Ltd, pp. 256–270.

PhD Portfolio

Development Log

Box 10.1 Training and development Log

Development Activity	Date	Workload (in Hours)
PhD Development		
Literature Searching (1)	02/02/15	2
Literature Searching (2)	04/02/15	2
Academic Writing	18/02/15	3
Working with Long Documents	19/02/15	3
Creating Posters using PowerPoint	16/03/15	2.5
Qualitative Interviewing Training Course	03/06/15	7
Qualitative Research Practice Series	10/12/15	2
Qualitative Research Methods: Interview Analysis	04/05/16	1.5
Abstract Writing Workshop	30/06/16	2
Thesis Writing Workshop	15/11/16	2
Ethical Challenges of Qualitative Work	18/04/17	2
Presenting Data Visually	05/09/17	2.5
Communicating your Research	23/03/18	2
PhD Progress Monitoring		
Nine month PhD Review Workshop	03/03/15	2
Central Induction	04/03/15	2.5
'Getting Started' with the PhD	13/03/15	2.5
PGR Library Information Session	25/03/15	2
Informed Consent	04/11/15	2
Good Clinical Practice – Core for Researchers (non-drug)	08/12/15	3
PhD with Publications Guidance	27/04/16	1.5

Seminars and Longer Courses		
AMEE Webinar – Reflection in Medical Education	25/02/15	1
AMEE Webinar – Social Accountability	01/04/15	1
InReSH (International Network for Research in Selection to Healthcare) Meeting, Glasgow	20/09/15	4
ASM Researching Medical Education Day	18/11/15	7
NVMO Preconference Workshop ‘Different ways of doing qualitative analysis’	28/04/16	4
Writing Research for Publications Masterclass (3 days)	29/03/17	21
InReSH Meeting, Helsinki	25/08/17	4
Basic Statistics for PhD Researchers (3 days)	18/12/17	21
Other Activities		
Patient Partner for MBChB OSCE (practical) exams	22/05/15	4
Journal Club Presentation	06/04/16	1
PechaKucha Training	01/03/17	2
Beyond Academic Workshop	15/06/17	3
Data Collection – Focus Groups for Gateway to Medicine Evaluation (3 sessions of 2 hours)	2017-2018	6
Reviewed articles for <i>Medical Education and Teaching and Learning in Medicine</i>	Dec 2017	6
	June 2017	6
	Total Hours	140

Research Grants

AMEE Research Grants: April 2018 – Ongoing

- Associate Investigator on project awarded £9,724
- Title: “Unravelling stakeholders’ discourses of selection for medical study and the emotions involved”
- Multi-method study based in the Netherlands investigating public validity in selection

ASME/Wiley Travelling Fellowship: October 2017

- £1995 awarded
- Title: “Promoting Practice in underserved communities and specialities: a pull factor for widening access to underrepresented groups?”
- Fellowship included visits to 3 Australian medical schools
- Aims were to:
 - Learn about how to stimulate cultural change to promote diversity, increase the perceived value of primary care and prioritise social accountability
 - Learn about related recruitment, admissions and curriculum development practices that could be usefully integrated into a UK context
 - Build international research collaborations

Winston Churchill Memorial Trust Travelling Fellowship: January 2017

- Shortlisted candidate
- Title: “Improving outreach in medical education to benefit underserved communities.”

University of Aberdeen College Studentship for 42 month PhD: January 2015

- Full funding for fees, living costs and annual research development fund

Teaching Experience

Formal Teaching Experience

Postgraduate Diploma in Medical Education: February 2018

- Designed, created and led a 2 hour session on 'Fundamentals of Data Management'

Masters Module: MSc in Professional Communication: October – November 2017

- Tutor for module: 'Communication Theory and Analysis'
- 8 students; 6 weeks; 4 hours teaching a week (planned and led seminars)
- Responsible for assessment marking and feedback: two assignments; a presentation

Postgraduate Certificate in Medical Education: September 2017

- Designed, created and led a 1.5 hour session on 'Developing Scholarly Skills'

Supervision Experience

Co-Supervisor of BScMedSci Intercalated Project Student: November – April 2018

- *Project Title: "Non-traditional Students' Experiences of Applying to Study Medicine in Scotland"*
- 20 weeks of supervision (meetings, training in qualitative data analysis, feedback)

Supported MBChB final year Elective Project Student: January – March 2017

- *Project Title: "Evaluation of the Educational Contribution of SCRUMCAPS to Pitch-Side Practice"*
- 8 weeks of support (training in qualitative interviews and analysis, meetings, feedback)

Internal workshops for PGR Students:

“Tips for Effective PhD Thesis Write-up”: March 2018

- 2 hour session for newly started PhDs providing advice on thesis content and structure

“Lessons from an Academic Writing Masterclass”: May and November 2017

- 2.5 hour session to disseminate advice learnt at a 3-day academic writing skills masterclass (see Development Log: Box 10.1)
- Session ran twice due to demand