What factors contribute to success and failure in the First Year at Medical School?

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Abstract

Applicants to Medical School must be academically successful to secure a place at university. Despite their success in secondary education and the stringent entry criteria, a significant number of students fail summative assessments at the end of their First Year. This gives rises to the following question: "Why do previously high achieving students fail in the university system?"
Existing models seek to distinguish between voluntary and involuntary withdrawal from university and to explain academic withdrawal in the context of an individual's academic and social integration into a new educational environment, their commitment to the institution and their commitment to Medicine as a career. However, much of the existing literature on failure in the early years at Medical School has focused on pre-university academic ability, as demonstrated by grade achievement at the end of secondary education, and/or faculty's perspectives of student failure.
This dissertation adopts a qualitative approach to understanding success and failure in the first year at Medical School from the perspective of medical students themselves. Their perspectives are explored within the model of withdrawal and persistence proposed by Tinto (1975) and interpreted in the context of existing literature on failure in the early years of higher education in general and in Medicine in particular. These findings are further reframed within an analysis based upon Bourdieu's Theory of Practice. This analysis considers the students' field of operation, the relative positions of agents within the field and the capitals which allow them to hold those positions, and the habitus of the agents and the institution itself. Through this analysis, factors that students believe may predispose to success and failure are identified and discussed. This in turn leads to a consideration of how my own understanding and professional practice have developed and might develop in the future.

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Author's declaration: I declare that, except where explicit reference is made to the contribution of others, this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

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BMA	British Medical Association
GMC	General Medical Council
NHS	National Health Service
MSC	Medical Schools Council
PBL	Problem-based learning
VLE	Visual learning environment
OSCE	Observed structured clinical examination
eRoA	Electronic record of achievement

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Introduction. Background: Why is this issue important? Why is the picture changing?

The majority of Medical Students in the UK are undergraduates taking their first degree (BMA 2009). Academic entry requirements are high and entry competitive, with 20,730 applicants for the 6000 places in 2018 (UCAS 2018). To gain entry, candidates must show good performance in recognised academic activities, including A-levels or an international equivalent and the UK Clinical Aptitude Test (UKCAT 2017). In addition, applicants often have to attend a semi-structured interview and demonstrate a commitment to Medicine as a career. Despite these stringent entry criteria and the competitive nature of the selection process, there is a significant attrition rate from medical courses (Arulampalam, Naylor and Smith 2004) and some evidence that this rate is increasing (Arulampalam, Naylor and Smith 2006). Attrition is most likely to occur in the early years of the medical course (Yates 2011). The loss of students from undergraduate programmes is problematic for a number of reasons. One cannot practise Medicine without a medical degree, as this is the only pathway into the profession. The individual and their family may have invested a great deal personally, academically and financially into obtaining a place. For the Medical School, a loss of students represents a loss of income and potential damage to reputation. The latter may impact upon the attitudes of new candidates considering the School as a place to study, of existing students who may feel more anxious, and of the parent Universities and regulatory organisations, including the GMC. There is also a loss to society. Educating Medical Students is expensive and the majority of this cost is met through taxation. The UK does not currently train enough doctors to meet NHS workforce requirements (Mahankali-Rao 2017) and losing students is undesirable at a time when the UK Government has promised to train more doctors in the UK in response to workforce shortages and the political and social uncertainties surrounding the UK's separation from the European Union.

Historically, the medical profession in the UK has been dominated by white, middle class males (BMA 2009), with an imbalance of representation at all levels of the profession, including undergraduates, clinicians and senior leadership roles. Students from a private secondary education background have also been overrepresented at Medical School (HM Government 2012). However, this picture is changing; more than 50% of UK undergraduates are now female and British ethnic minorities are overrepresented on medical degree courses in comparison to the national demographic (GMC 2017). Government policy intends to increase social mobility through access to higher education in general (Leathwood and O'Connell 2003) and Medical School in particular (HM Government 2012, MSC 2018), which may mean offering places on the basis of lower levels of pre-university academic achievement through Widening Participation schemes. Postgraduate entry is also being encouraged (MSC 2018) and there are financial incentives for Universities to

recruit International students into their programmes (HEPI 2018). At the same time, policy makers have emphasised the need to broaden the demographic of the medical workforce in order to increase the representation of all parts of society within the workforce (HM Government 2012, BMA 2015). The impact of these spontaneous and intentional changes in the intake of Medical Students on attrition rates is not yet known. Many previous studies have explored factors that may predict success or failure at Medical School (e.g. McManus et al 2003). These studies were conducted prior to the demographic changes described. Studies have tended to focus on preadmission grades and demographic data that are easily available for cross-sectional, quantitative analysis. In this dissertation, my focus will be on students' perceptions of factors that affect success and failure in the early part of a medical degree course in a single Medical School.

I will consider a model of withdrawal in the context of students' academic and social integration within their institution of study in chapter 1. This model will be further elaborated from the perspective of the work of the French sociologist Pierre Bourdieu, which seeks to develop a relational analysis between the agents operating within a field, the capitals the agents hold and the predispositions that define the 'character' of these agents. I will discuss the theoretical and practical bases of the methodology for the study in chapter 2. The empirical data arising from a questionnaire will be presented in chapter 3 and the data arising from a template analysis of participant interviews will be presented in chapter 4. These findings will be interpreted in the context of the existing literature on success and failure at Medical School, among other Health Professions' trainees and in Education in general in chapter 5. In chapter 6, the findings will be reexamined within the framework of the underpinning theoretical models. Finally conclusions, potential solutions and further areas of uncertainty will be considered.

Chapter 1. A theoretical basis for understanding the relationship between undergraduates, their place of study and the risk of failure.

Tinto (1975) undertook a major review of the literature on attrition from higher education with the purpose of synthesising a model to explain withdrawal. While this paper was published in 1975, it remains a seminal study in the theoretical understanding of persistence and withdrawal. Tinto (1975) identifies a number of possible reasons why a student might leave university prematurely, distinguishing between involuntary withdrawal, where the student has no choice about leaving usually in relation to academic failure, and voluntary withdrawal, where students choose to leave for a range of reasons (Tinto 1975, p89). This distinction is important, because the underlying factors that lead to these outcomes may be different. A large study of withdrawal from UK Medical Schools acknowledged that this distinction could not be made (Arulampalam et al 2004). Tinto (1975) identifies that much of the literature focuses on defining the characteristics of successful and failing students. However, he claims that:

> 'Knowing…to what degree an individual's measured (academic) ability and social status relate to the probability of his leaving college does not mean knowing how these attributes affect the process of dropping out from college' (Tinto 1975, p90).

In other words, simply identifying the characteristics of a group of students defined by an outcome does not explain how that set of characteristics leads to that outcome. Understanding the processes leading to success or failure requires 'a theoretical longitudinal model that links various individual and institutional characteristics to the process of dropping out' (Tinto 1975, p90) and this was Tinto's purpose.

Tinto's proposed model takes account of individual characteristics and 'dispositions relevant to educational persistence' (Tinto 1975, p93). These include a student's background, in other words their prior experiences, their current and future ambitions, in terms of the expectations they have for their university educational experience and their career intentions, and their degree of motivation, both to succeed personally, but also to succeed within their chosen place of study. The latter, defined as 'institutional commitment', is determined by a balance between those reasons favouring a student's choice of institution weighed against the alternative institutions that either they have rejected or that have rejected them. Academic environment, social conditions or both create the circumstances that predispose a student to persist and these must be 'specified in a longitudinal process of interactions' (Tinto 1975, p94), meaning that they can only be understood by considering all of the elements that might impact upon a student, while recognising that these influences act over a period of time. This historical context is important, because wrong conclusions may be

reached or correct inferences rejected in analyses of cross-sectional data that ignore this time element.

Individual students enter an institution with a variety of attributes, experiences (academic and social) and family backgrounds. These combine to determine the educational expectations and commitment that the individual brings with them into the institutional environment. Student characteristics associated with persistence or dropout include family background, personal ability, flexibility in a changing environment, educational experiences prior to university and expectations with regards to future attainment (Tinto 1975, p99). However, Tinto claims that integration into the academic and social systems of the college is the most important factor in determining persistence within an institution (1975, p95). The more integrated the student becomes, the greater their commitment to the institution and the goal of course completion (Tinto 1975, p96).

Once a student has entered an institution, they interact with faculty, administrators and other students at social and academic levels (Tinto 1975, p103). According to Tinto, every interaction creates opportunities to integrate with the system. Tinto (1975, p106) considers social integration to depend on successful interactions between the student, with their particular set of characteristics, and other people, each with their own set of particular characteristics. These characteristics can be highly variable and the degree of congruence, or incongruence, between the individual and those they encounter, will result in varying degrees of fit and consequently varying levels of integration. The existence of support networks and the subcultures that exist within the institution will moderate the possibilities for integration. Successful social integration, both with faculty and peers, will increase institutional commitment and enhance opportunities for academic integration. Tinto (1975, p108) suggests that an individual's choice to persist or withdraw in relation to their degree of social integration is independent of academic ability.

Academic integration can be considered as the student's ability to engage with the institution's faculty, pedagogy and assessment regime in order to meet the explicit standards set by the institution. Institution's academic systems are often characterised by inflexibility, with students required to adopt the values and standards of the institution. An individual student's development, progression and, ultimately, success is judged against the norms of the system (Tinto 1975, p104). The degree of congruence between the academic development of the individual and the norms of the institution will determine persistence or withdrawal (Tinto 1975, p106).

Social and academic integration are neither mutually inclusive nor exclusive, but their distinction is important to Tinto's model. A student must integrate with the institution. The degree of integration will vary and requires the student to re-evaluate and modify their existing internal structures, including their commitment to the institution and to the goal of completing their course (Tinto

1975, p94). The availability of resources, facilities, and the composition of the faculty will impact upon how students integrate and develop. Voluntary withdrawal is more likely if there is disharmony between a student and the 'normative climate of the institution that establishes certain roles as appropriate to the institution' (Tinto 1975, p106). In other words, a student that does not fit into the social mix of the institution is more likely to leave. Voluntary withdrawal may also occur if a student's academic expectations or needs are incompatible with the academic system specified by the institution or its faculty. This may be important in a degree leading to a professional qualification, such as Medicine, where a particular set of practices and standards define what is, and is not, acceptable. In contrast, involuntary withdrawal is most often related to inadequate academic development (Tinto 1975, p106). Economic factors may also influence persistence, a student's level of commitment representing the balance of the perceived economic benefits that come with success, including the academic degree, personal satisfaction, and future earnings, weighed against the potential costs, including financial outlay, loss of income from employment while studying, time commitment, dissatisfaction, and personal consequences of failure (Tinto 1975, p97).

In summary, Tinto's synthesis of the literature available in 1975 found that academic dismissal and voluntary withdrawal were different. These events occurred among individuals with a range of characteristics that had developed over time and within specific environments. These characteristics influence the degree of integration experienced by a student upon entering an academic institution. Voluntary withdrawal most commonly results from an incongruence between the individual and the academic or social climate of the institution. Involuntary dismissal is usually associated with poor academic performance.

Tinto's analysis can be elaborated further through the writings of Bourdieu (Robbins 1993). Bourdieu claims that 'human action is constituted through a dialectical relationship between individual thought and activity and the objective world' (Grenfell and James 1998, p14). Individuals operate within a world, which is defined by a series of social spaces (Grenfell and James 1998, p157). These spaces are structured, with 'systems of relations of power and relations of meaning' (Bourdieu and Wacquant 1992, p7). For Bourdieu, a social space is conceptualised as a field, which consists of 'a set of objective, historical relations between positions anchored in certain forms of power' (Bourdieu and Wacquant 1992, p16). A field 'prescribes its particular values and possesses its own regulative principles' (Bourdieu and Wacquant 1992, p17). These values, rules and practices are often not explicit (Grenfell 2008, p217), but they are uncontested and, encompassed within the term 'doxa', represent the unquestioned belief in the importance and worth of participating within the field (Bourdieu and Wacquant 1992, p73 and p98). Bourdieu used field in a number of ways (Hardy in Grenfell 2008, p230). Primarily the field is a defined space,

comprising a number of organising structures, each with its own legitimate knowledge and ways of doing things (Thomson in Grenfell 2008, p 66). However, there is also the 'field of battle', where agents struggle for dominance, and the field of play, where participants have their position, need the skills to play, acquire 'a feel for the game' and must abide by the rules (Thomson in Grenfell 2008, p 66). Agents may have different levels of commitment to, or investment in, playing the game, referred to as illusio – 'a tacit understanding of the value of the stakes of the game as practical mastery of its rules' (Bourdieu and Wacquant 1992, p115).

Fields do not exist in isolation. Fields can exist within other fields and may overlap with multiple other fields. Each subfield has its 'own logic, rules and regularities' (Bourdieu and Wacquant 1992, p104). Equally, individual agents may not operate in a single field, but move between fields or operate in multiple fields simultaneously, occupying different positions with varying degrees of authority in each.

When an individual encounters a field, they will respond to their experiences within it according to their predispositions and ways of thinking. In turn, their dispositions and ways of thinking may be reshaped by experiences within the field. Bourdieu's premise is that each individual's thoughts and activity are encompassed within habitus, where:

> 'Habitus consists of a set of historical relations "deposited" within individual bodies in the form of mental and corporeal schemata of perception, appreciation, and action' (Bourdieu and Wacquant 1992, p16).

The habitus is therefore formed by the individual's exposure *over time* to their social and educational environment, Bourdieu and Passeron arguing that experiences in early life are the most influential (Bourdieu and Passeron 1977, p71). Habitus is not fixed, but can evolve and adapt in response to new experiences. However, the dominance of early exposures means that the habitus encodes a person's social inheritance (Robbins 1993). Social inheritance may determine the opportunities that are available to an individual through the expectations of the individual and those around them, a phenomenon that Bourdieu and Passeron referred to as the subjective expectation of objective probabilities (Bourdieu and Passeron 1977, p156).

Habitus interacts with the field in two ways.

> 'The field structures the habitus, which is a product of the embodiment of the immanent necessity of a field…Habitus contributes to constituting the field as a meaningful world, a world endowed with sense and value, in which it is worth investing one's energy'. (Bourdieu and Wacquant 1992, p127).

In other words, the field shapes or reshapes the habitus of the individual, which is essential if the individual is to flourish and succeed within the field. At the same time, the habitus makes sense of

the field, giving it value and making it a place in which the individual wants to remain and to operate. Bourdieu argues that an individual, or agent, will feel comfortable within a field of which they are the product; in other words, in which they have developed (Bourdieu and Wacquant 1992, p127). They recognise this world and how it operates or functions, because they have been structured by it and contributed to its structure. The 'field and habitus are mutually constituting' (Grenfell and James 1998, p16). In contrast, an agent will not be comfortable in an unfamiliar field, where the structures and functioning are different and clash with their habitus. In Bourdieu's terms they will not be a 'fish in water' (Bourdieu and Wacquant 1992, p127).

Capital is a further central element in Bourdieu's description of the relationships and interplay between fields and the agents that occupy them (Bourdieu and Wacquant 1992, p108). Bourdieu distinguished between cultural capital, a product of upbringing and education, economic capital, a representation of wealth, and social capital, a product of the network of social relations (Bourdieu and Wacquant 1992, p119). These capitals are assigned differential values within the field. The product of the rules and positions of authority within a field also gives rise to symbolic capital, invested in agents by the field itself (Bourdieu and Wacquant 1992, p119). Each agent operating within a field will hold varying amounts of these different forms of capital. Possession of capital will determine which positions are open to an individual, the relative positions between individuals and consequently who holds power within the field (Bourdieu and Wacquant 1992, p16).

In summary, both field and habitus have structure and give rise to structure. Individuals will enter the field with different thoughts and perceptions – their individual habitus. They also hold different forms and amounts of capital. Capital has more or less worth, according to the actual and symbolic value placed upon on it by the field (Grenfell 2008, p218). By virtue of the capital held, individuals will occupy different positions, giving rise to relations of power and hierarchy. Objective conditions within the field will interact with the individual habitus. Exchanges between individuals within a field can be interpreted in terms of 'productive schemes of thought' or *connaisance* and 'interpretative schemes of thought' or *reconnaissance* (Grenfell and James 1998, p164). There will be varying levels of 'match and mismatch between ways of thinking' (Grenfell and James 1998, p164). Individuals with a habitus that is closest to the orthodoxy, or legitimate activity, of the field are likely be more receptive to, and productive within, the field. Conversely, when habitus is not aligned to the field, individuals are likely to be less receptive and productive. This balance will depend on the ability of the individual to recognise the legitimate ways of behaving and their ability to translate this into productive activity.

Bourdieu's framework of analysis, incorporating a series of interrelated fields, occupied by interacting agents that have various levels of capital(s) and differing dispositions, which are in turn

the product of their social and educational development, embodied as the habitus, can be related back to Tinto's model (1975). The university represents an academic field. Students enter this field with their individual habitus, the product of their family upbringing and primary and secondary education. Their habitus has developed over time within overlapping, but specific and varied social and academic fields. Each student arrives with different levels of economic, social and cultural capital. The university, as an institution, has a set of rules and standards, both written (explicit) and unwritten (implicit), which must be adhered to. The faculty, who represent that institution, are also individuals, constituted with their own habitus, restructured through prior experience, and endowed with capital, actual and symbolic, that allows them to occupy their position within the institution. The progress of a student within the institution is likely to depend on their commitment, or illusio, and their interactions with the institution, the faculty and their peers. Students with a habitus appropriate for the university, or whose habitus is easily restructured in response to experiences within the university, are likely to have a different experience to those students whose habitus is very different or is resistant to restructuring. The exploration of the interactions between habitus, field and capital may therefore prove fruitful in examining Tinto's longitudinal process of interactions, seeking to explain the reasons for academic failure as a reason for academic withdrawal. In the next chapter, I will discuss a practical framework for using Bourdieu's ideas, encapsulated within the term 'A Theory of Practice', to undertake the empirical research required to investigate these relations. I will further outline a methodology to undertake my proposed study.

Chapter 2. Methodology for study.

1) Theoretical approach. Success or failure within the university system is a social phenomenon. Bourdieu advocated an approach to investigating the social world that attempts to avoid the usual dichotomy of the objective versus the subjective, by focusing attention on both the objective structures and institutions of interest and the nature and extent of the individual agents' participation within them (Bourdieu and Wacquant 1992, p11). This allows for external objectivity, through the definition of the structures within which agents operate, while maintaining internal subjectivity, by reintroducing the individual's perceptions and understandings of the world (Bourdieu and Wacquant 1992, p11). Bourdieu's analysis follows a three level approach (Bourdieu and Wacquant 1992, p104), allowing the researcher to 'discover and theorise the practice of the researched' (Grenfell and James 1998, p158). In other words, direct observation and analysis of a phenomenon leads to the uncovering of the principles and theories that underpin the phenomenon. Construction of the research object represents the first level. This goes beyond a simple statement of the name of the phenomenon under investigation. In identifying 'Medical Student' as the object of research, it is important to recognise everything implicit in the 'word itself' as a social construct. This includes its meaning to wider society, to students themselves and to the researcher. Grenfell (2008, p220) states 'different factions of the academic field use words as elements in their struggles for dominant positions'. The researcher can only avoid preconceptions and unconscious bias through their construction of the research object (Grenfell and James 1998, p158). This reduces the risk of 'misrecognition', whereby the current orthodoxy is accepted because the structures in place have the appearance of being equitable and democratic (Grenfell and James 1998, pp 22).

Having defined the research object, it needs to be understood in the context of the social space in which it encounters the objective world. Bourdieu and Wacquant argue that this is because agents are:

> 'Socially constituted as active and acting in the field under consideration…It is knowledge of the field itself…that allows us best to grasp…their point of view or position…from which their particular vision of the world…is constructed' (Bourdieu and Wacquant 1992, p107).

The field sets the limits, or specifies the context, of the activity of interest. This field is a structured space, within which the dominant forces operate to maintain that structure (Grenfell and James 1998, p161). Upon entering the field, an individual will interact with other agents and experience events (Thomson in Grenfell, 2008 p 65). The outcomes of these encounters will depend on the congruence between that individual's habitus and the accepted practices of the field. For the researcher to understand these interactions, it is necessary to visualise the field as a whole, the

agents within it and the relative positions that they hold. This is termed a relational analysis (Grenfell and James 1998, p162).

Bourdieu described three levels to a field analysis (Bourdieu and Wacquant 1992, p 105, Grenfell and James 1998, p168). At level 1, the field of interest is positioned in relation to all other interrelated fields, including the acknowledged field of power (Grenfell 2008, p222). At level 2, the structural topography of the field and the structure of relations between the agents who compete for positions and authority within the field are mapped out (Grenfell 2008, p222). This includes an analysis of the positions that individuals occupy, the capital they hold and how capital determines their relative positioning. At level 3, the habitus of individual agents within the fields is analysed. This analysis will include the agent's background, trajectory and relative positioning (Grenfell 2008, p222). This three stage process gives rise to a system of relations between individuals. Individual habitus will explain an individual's position within the field and how this reflects the ruling principles of logic of the field (Grenfell 2008 p222).

The actions and interactions of the researcher in conducting and presenting their research are a further fundamental component of Bourdieu's method. All agents hold positions within the field and this includes the researcher, who is engaged in the same social world and subject to the same theory of practice as the research object (Grenfell and James 1998, p157). Bourdieu argues that only through 'participant objectification' can the researcher position themselves in relation to the research object (Grenfell and James 1998, p176). This allows the researcher to identify their own academic relation to the field and their own interests within the field. This underpins reflexivity, which:

> 'Draws attention to the interests of the observer…the observer is made visible in the data analysis' Grenfell and James (1998, p156).

Through reflexivity particular research errors can be avoided (Bourdieu and Wacquant 1992, p39). The researcher is made aware of their own social origins and academic trajectory, their position within the field of power and the forces that allow them to occupy that position. More importantly, they can be alerted to intellectual bias arising from assumptions based on unquestioned acceptance of the legitimate practices of the field. This allows the researcher to 'render explicit what…is taken for granted' (Bourdieu and Wacquant 1992, p68).

2) Methodology. As discussed in my OS2 assignment, all year 1 students (n=141) were invited to complete an on-line questionnaire through the VLE at the beginning of their second term. The questionnaire asked students to record details of their demographics, socioeconomic background and how they felt about their studies at two stages of their academic career, namely during the final year of secondary education and the First Year of Medical School (appendix 1). The responses to

Likert-type scales are presented and comparisons between the two time points made by Wlicoxson rank sign test (Chapter 3).

In the initial protocol, my intention was to invite sixteen First Year students to take part in one-to-one interviews based on the results of their First Year assessments. One group of students would have been successful (maximum 10) and the other students would have failed (maximum 10). The interview schedule encompassed semi-structured interviews based on projective vignettes.

In the **first vignette** the interviewee was asked the following question:

> "I want you to imagine an 18/19 year old man/woman who has been successful in gaining a place at medical school. After a year of study he/she takes their first year examinations and gets excellent marks. What factors do you think would contribute to this student's success?"

The participant was allowed to discuss their ideas, perceptions and beliefs about any factors which would contribute to a student being successful in their end of year assessments.

In the **second vignette** they were asked:

> "I now want you to imagine a different 18/19 year old man/woman who has been successful in gaining a place at medical school. After a year of study he/she takes their first year examinations and fails. What factors do you think would contribute to this student's failure?"

Again, the participant was allowed to discuss the same range of opinions about a student that had been unsuccessful. These two questions formed the basis of the interviews, with the intention that participations should be free to raise the issues that they believed were important to both success and failure during the first year at Medical School. An inductive approach was taken, asking further questions to develop and fully understand each participant's responses. Each participant was asked a number of supplementary questions if they had not discussed areas of interest. These included:

Additional questions

1) "Have you had to change your approach to learning since coming to university?"
2) "Do you think that students get enough support from their teachers at university compared to at school?"
3) "How difficult do you think the university course is compared to school?"
4) "Is examination success/failure mostly attributable to the teaching, the assessment or the student?"

Finally, participants were asked to discuss their own background in order to contextualize their position as a student within the School.

It was clear from the number of responses to the questionnaires that I would not be able to recruit an adequate sample size for the interviews. It was therefore necessary to consider whether to continue

with the project. The proposed interviews were based on vignettes of hypothetical students experiencing success or failure. All students in Years 1, 2 and 3 at Medical School are sufficiently close to Year 1 to have a good memory of their experiences at A-level and during the First Year at Medical School. First Year students can progress from Year 1 into later years despite having experienced failure. For example, they may have failed a Formative assessment, which would not affect progression, or a Summative assessment, which they subsequently passed at resit. In addition, students could progress from one year to the next with a 'Borderline Fail', a concept that allows progression with an assessment grade that has not achieved a Pass, but is sufficiently close to Pass to allow the student to remediate within the next academic year. All students are part of a community of students who share experiences and most students will know of others who have been both successful and unsuccessful in an assessment. All students have experienced secondary education and First Year at Medical School. For these reasons, it is reasonable to assume that all students are able to hold and express opinions about success and failure in assessment. Therefore, an amended protocol was submitted proposing that students in Years 1, 2 and 3 would be invited to take part in the interview phase of the study, without the need to complete the questionnaire and without having to declare or acknowledge their previous assessment results to the interviewer. The interviews still focused on the experience in the First Year.

I conducted the interviews over a three months period. The same schedule was used for each interview, with each question included during the course of the interview. Additional questions were used to clarify any specific comments made by interviewees. Where an interviewee spontaneously raised issues that might not have been covered by the schedule, they were explored with the interviewee when relevant to the research topic. Each interview was audio-recorded, transcribed, imported into NVivo™ and read from beginning to end, to confirm that the transcript made sense and was in accordance with my notes written during the interview. Each interview was reread to ensure familiarity with its content.

Fourteen students agreed to take part in the interviews. The interviewees are referred to as 'the participants' throughout the text. Participants are characterised by their year of study, graduate entry (as opposed to school leaver), ethnicity, gender, the type of school attended for secondary education and who they lived with in the First Year at Medical School. Two participants had paid employment.

Table 1. Details of the Participants in the Interviews.

	Year	Entry	Ethnicity	Gender	School	Living with
Participant 1	1		Caucasian	Female	Grammar	students
Participant 2	2		Caucasian	Female	State	students
Participant 3	3		British Asian	Male	Grammar	students
Participant 4	3	Grad	British Asian	Male	Grammar	students
Participant 5	2		British Asian	Male	Fee paying Grammar	students
Participant 6	2		Caucasian	Male	State	students
Participant 7	2		Caucasian	Female	Private	students
Participant 8	3		Caucasian	Male	State	home
Participant 9	1	Grad	Black	Female	Fee paying international school	students
Participant 10	1	Grad	Caucasian	Female Gr	State (holiday work)	students
Participant 11	3		Caucasian	Female	State; fee paying sixth form	students
Participant 12	3		SE Asian	Female	Fee paying international school; A-levels in UK	
					Part-time job (voluntary)	students
Participant 13	1		Caucasian	Male	State; private tuition	students
Participant 14	1		Caucasian	Male	State	students

The participants were assigned pseudonyms to maintain their anonymity.

Table 2. Participant Pseudonyms.

Participant 1	Clare
Participant 2	Anne
Participant 3	Aroon
Participant 4	Kiran
Participant 5	Sanjay
Participant 6	Alan
Participant 7	Margaret
Participant 8	Paul
Participant 9	Meria
Participant 10	Sarah
Participant 11	Kate
Participant 12	Hong
Participant 13	Stuart
Participant 14	Tim

A template analysis was undertaken as described by King (2004, 2008), using an a priori template that included a small number of nodes that I believed would be important to success and failure based on the published literature on university failure (Christie, Munro and Fisher 2004, Mcloughlin 2009, Yates 2011). During coding, new nodes emerged from the conversations, ensuring that all comments from students were assigned to a node. This is consistent with the top down, bottom up approach advocated in template analysis (King 2008). Nodes were grouped into primary and secondary nodes. Quotes are presented to support the claims made in the results section (Chapter 5). Quotes have been attributed to individual students. Quotes are edited to be concise, but retain their original meaning.

3) Ethics considerations

The study protocol was reviewed and approved by the Ethics Committees of the University of Glasgow's School of Education and the Medical School where the researcher worked and the students studied. Three predominant ethics risks were identified. Firstly, the researcher has a particular position and status, which could both shape their beliefs, but more importantly create a dependent relationship between the researcher and the participants. The researcher is the Associate Dean for Assessment, a senior clinical lecturer and a senior clinician. The participants were first year medical students, subject to an assessment regime that has consequences for their progression. Secondly, the study explored a number of the areas that can be regarded as sensitive in nature. These included gender, ethnicity, social class, widening participation and employment. Thirdly, students were interviewed about summative assessments and some of them may have experienced failure. However all of the participants were still on the MB BS programme, would have opportunities to re-sit and would have to fail more than one theme of assessment before their course was terminated.

There were therefore issues around the researcher being open to their own position and internally reflexive in order to understand their position and influence on the research. This was accounted for in the chosen methodology. The participant information made it clear that the researcher who is the Associate Dean for Assessment, would be the interviewer. Interviews were conducted in an office space that students were familiar with and had used for clinical communication skills teaching. The interviews were based on case vignettes, which are reported to be a less threatening way of addressing difficult subjects. While the research interviews had the potential to include the discussion of difficult subjects (such as failure), they were also an opportunity for participants to reflect on their experience and think about what may have contributed to these difficulties and potential solutions. The use of an independent interviewer may have reduced the potential for any

power imbalance, but the researcher's personal knowledge and experience created common ground with the interviewees. The researcher is an experienced undergraduate and postgraduate educational supervisor and has experience of counselling under- and postgraduate trainees with both academic and personal difficulties. The researcher was aware of the boundaries of their role in the research project and of the correct channels for directing students to additional support and advice if required. While the researcher had overall responsibility for the assessment programme within the School, they were not directly responsible for grading individual students. Decisions about students are made by fully constituted and quorate Examination Boards using anonymous data.

In summary, in this chapter I have outlined Bourdieu's proposed structure underpinning the empirical investigation of social practices. I have also described my chosen methodology, highlighting the principle ethical considerations involved. In the next two chapters I will present the results of the questionnaire and of the template analysis of the participant interviews.

Chapter 3. Results – Questionnaire.

Only seventeen students attempted to complete the on-line questionnaire (Appendix 1) and fourteen answered all questions. Nine described themselves as born in the UK and of white background, one born in the UK and of Black background, and two born outside the UK and of Asian background. One preferred not to say. Three had been in paid employment during their medical studies.

The majority attended lectures 'almost always' or 'frequently', but some 'occasionally' or 'never'. The majority watched lectures on the VLE 'almost always' or 'frequently'. Only one student reported only 'occasionally' attending lectures in person and 'rarely watching on the VLE. Ten of the respondents felt that they were able to identify their goals in self-directed learning. All reported keeping up with their studies and the answer to this question correlated with not being behind with studies. All but two relied on lectures and workbooks to cover their learning needs, although all but five respondents also reported using additional learning resources 'almost always' or 'frequently'. Respondents reported studying an additional 0 to 8 hours a day on weekdays and 0 to 9 hours a day at weekends.

All but one reported studying most effectively on their own 'almost always' or 'frequently'. This answer correlated with the response to the question about studying in groups, with only one respondent reporting that they studied most effectively in a study group 'frequently', and the rest responding 'occasionally', 'almost never' or 'rarely'. Nine out of 14 reported enjoying problem based learning 'almost always' or 'frequently'. No respondent expressed a preference for working in groups of the same gender and only one student, who was born in Asia and attended a fee paying school, expressed a preference for working in groups of the same ethnic background.

The questionnaire asked about a number of sources of anxiety, with students ranking their response on a 4 point scale from 'I never feel anxious about this' to 'I very often feel anxious about this'. Students were asked to give a rating for their feelings about the following potential sources of anxiety they may have experienced in their final year at school and during their First Year at university: Time pressure; Volume of work; Memorising facts; Emphasis on examinations; Competition; Familiarity with the course; Relationship with tutors; Fear of failure; Loneliness; Sport and recreation; Finances.

Responses were then scored as shown in table 3.

Table 3. Codes for participants' self-reported level of anxiety.

1 = I never feel anxious about this
2 = I feel anxious about this, but not very often
3 = I often feel anxious about this
4 = I very often feel anxious about this

The responses for each student are cross-tabulated, with the response at school in rows and the response at university in columns. For example in the first table, 'Time Pressure', of the 8 students that recorded a score of 2 for their experience at school, one recorded a score of 2 at university, four a score of 3 and three a score of 4. A separate table is shown for each potential source of anxiety.

Table 4. Comparison of students' self-reported level of anxiety in relation to time pressure between the final year at secondary school and the first year at Medical School.

Time Pressure

Count

		University			
		2	3	4	Total
School	1	2	1	1	4
	2	1	4	3	8
	3	1	0	0	1
	4	0	1	0	1
Total		4	6	4	14

Table 5. Comparison of students' self-reported level of anxiety in relation to the volume of work during the final year at secondary school and the first year at Medical School.

Volume of work

Count

		University			
		2	3	4	Total
School	1	1	3	1	5
	2	0	1	3	4
	3	0	3	2	5
Total		1	7	6	14

Table 6. Comparison of students' self-reported level of anxiety in relation to memorising facts during the final year at secondary school and the first year at Medical School.

Memorising facts

Count

		University				
		1	2	3	4	Total
School	1	1	2	2	0	5
	2	0	1	2	0	3
	3	0	2	3	1	6
Total		1	5	7	1	14

Table 7. Comparison of students' self-reported level of anxiety in relation to the emphasis on examinations during the final year at secondary school and the first year at Medical School.

Emphasis on examinations

Count

		University			
		2	3	4	Total
School	1	0	1	1	2
	2	0	2	2	4
	3	3	1	1	5
	4	0	2	1	3
Total		3	6	5	14

Table 8. Comparison of students' self-reported level of anxiety in relation to competition with peers during the final year at secondary school and the first year at Medical School.

Competition

Count

		University				
		1	2	3	4	Total
School	1	2	1	2	0	5
	2	1	1	0	1	3
	3	5	0	0	0	5
	4	1	0	0	0	1
Total		9	2	2	1	14

Table 9. Comparison of students' self-reported level of anxiety in relation to their familiarity with the course during the final year at secondary school and the first year at Medical School.

Familiarity with course

Count

		University			
		1	2	3	Total
School	1	3	6	4	13
	2	0	1	0	1
Total		3	7	4	14

Table 10. Comparison of students' self-reported level of anxiety in relation to their relationship with their tutors during the final year at secondary school and the first year at Medical School.

Relationship with tutors

Count

		University			
		1	2	3	Total
School	1	7	2	2	11
	2	0	2	1	3
Total		7	4	3	14

Table 11. Comparison of students' self-reported level of anxiety in relation to their fear of failing assessments during the final year at secondary school and the first year at Medical School.

Fear of Failure

Count

		University			
		2	3	4	Total
School	1	0	0	5	5
	2	1	2	0	3
	3	0	0	2	2
	4	1	1	2	4
Total		2	3	9	14

Table 12. Comparison of students' self-reported level of anxiety in relation to loneliness during the final year at secondary school and the first year at Medical School.

Loneliness

Count

		University				
		1	2	3	4	Total
School	1	1	0	3	2	6
	2	2	2	3	0	7
	3	0	0	1	0	1
Total		3	2	7	2	14

Table 13. Comparison of students' self-reported level of anxiety in relation to time available for sports and recreation during the final year at secondary school and the first year at Medical School.

Sport and Recreation

Count

		University				
		1	2	3	4	Total
School	1	3	3	4	1	11
	2	1	1	0	0	2
	3	0	1	0	0	1
Total		4	5	4	1	14

Table 14. Comparison of students' self-reported level of anxiety in relation to their personal finances during the final year at secondary school and the first year at Medical School.

Finances

Count

		University				
		1	2	3	4	Total
School	1	1	6	3	3	13
	2	0	0	0	1	1
Total		1	6	3	4	14

Differences in the responses between school and university were explored in a comparison made by Wilcoxon Signed Ranks test, which is appropriate for nonparametric data, where the data is ordinal. For each potential source of anxiety, the scores at university (U) are compared to the scores at school (S). A negative rank suggests lower scores for the individual at university in comparison to school. A higher rank indicates higher scores for the individual at university. A tie indicates the same score at university and school. These data are shown in table 15.

Table 15. Analysis of the significance of differences in levels of anxiety during the final year at secondary school and the first year at Medical School. For each potential source of anxiety, the number of equal (ties), positive and negative ranks are shown. A negative rank suggests greater anxiety at secondary school; a positive rank suggests greater anxiety at university.

Ranks

		N	Mean Rank	Sum of Ranks
TimeU - TimeS	Negative Ranks	2	4.50	9.00
	Positive Ranks	11	7.45	82.00
	Ties	1		
	Total	14		
VolumeU - VolumeS	Negative Ranks	0	.00	.00
	Positive Ranks	11	6.00	66.00
	Ties	3		
	Total	14		
MemoryU - MemoryS	Negative Ranks	2	4.00	8.00
	Positive Ranks	7	5.29	37.00
	Ties	5		
	Total	14		
ExamsU - ExamsS	Negative Ranks	5	4.50	22.50
	Positive Ranks	7	7.93	55.50
	Ties	2		
	Total	14		

CompU - CompS	Negative Ranks	7	6.43	45.00
	Positive Ranks	4	5.25	21.00
	Ties	3		
	Total	14		
FamiliarU - FamiliarS	Negative Ranks	0	.00	.00
	Positive Ranks	10	5.50	55.00
	Ties	4		
	Total	14		
TutorU - TutorS	Negative Ranks	0	.00	.00
	Positive Ranks	5	3.00	15.00
	Ties	9		
	Total	14		
FailureU - FailureS	Negative Ranks	2	4.50	9.00
	Positive Ranks	9	6.33	57.00
	Ties	3		
	Total	14		
LonelinessU - LonelinessS	Negative Ranks	2	3.00	6.00
	Positive Ranks	8	6.13	49.00
	Ties	4		
	Total	14		
SportU - SportS	Negative Ranks	2	3.00	6.00
	Positive Ranks	8	6.13	49.00
	Ties	4		
	Total	14		
FinanceU - FinanceS	Negative Ranks	0	.00	.00
	Positive Ranks	13	7.00	91.00
	Ties	1		
	Total	14		

Based on the Wilcoxon Signed Ranks test, students reported higher levels of anxiety at university than at school in relation to time pressure ($p<0.01$), volume of work ($p<0.01$), familiarity with coursework ($p<0.01$), their relationship with tutors ($p=0.04$), fear of failure ($p=0.03$), loneliness ($p=0.03$), time for recreation and sport ($p=0.03$) and finances ($p<0.01$).

There was no apparent difference in the emphasis on the memorisation of facts ($p=0.07$), examinations ($p=0.18$) or competitiveness ($p=0.3$).

Chapter 4. Results – Participant interviews.

The interviews were explored in a template analysis as described in the methodology chapter. Nodes were identified and refined as described under methodology (King 2004, 2008), until all of the participants' comments had been captured within at least one node. The final node structure is shown in Appendix 2.

The data from each node and from intersecting nodes were explored to construct themes for discussion. These themes form the basis of my discussion. Each theme is presented with a heading, an interpretation of the key findings and supporting evidence in the form of the participants' voices. Participants are identified by their pseudonym to preserve their anonymity.

The themes that I will discuss include:

1. How you work and how you learn

   A-level and school; First Year at university; The practice of work; The approach to Learning; Learning opportunities; Independent study
2. Transition
3. Support
4. Knowing where you are
5. Personal attributes
6. Examinations / Assessments
7. Graduate entrants to Medical School
8. Work-life balance
9. Ethnicity
10. Gender
11. Exceptional circumstances

Summary

1. How you work and how you learn

Participants discussed how they approached learning and managed the work of studying. They considered these activities in relation to the last years of secondary education and to the First Year of Medical School. These two periods had different characteristics.

A-level or school. A-level curricula were clear and their associated resources and revision materials were located in well-defined spaces, freely available and clearly signposted by teachers. Curriculum content was contained in a single or limited number of textbooks. Students were confident that they had learnt the curriculum through mastering the content of this textbook. This content linked directly to the final assessment. The following quotes demonstrate the participants' views on A-level and school experiences:

> "In A-level it was very obvious what you had to learn. It was more just straight out of a textbook" Margaret
>
> "A-levels, you were given a textbook and you read it three times and you pass the exam because everything is in there". Alan

The knowledge content within the A-level curriculum had its foundations in, and built upon, learning from previous years, as indicated below:

> "With A-levels you're really building from eight or nine all the way up. Whereas *at university* it's completely new. It's completely separate to A-levels". Stuart

Teachers directed and drove student learning towards passing assessments. 'Spoon feeding' was commonly used, e.g.:

> "You'd have a teacher teaching you everything, explaining it. They're there on hand to tell you how to pass your exam. You'd have revision organised within the school and teachers to push you if you were falling behind your target grade". Clare
>
> "It was just…attending classroom sessions and being spoon fed information". Aroon
>
> "So you could just really learn by rote and get things in your head that way. You'd almost know what questions were gonna come up". Anne

These methods might allow well-supported students with a passive approach to learning to do well in assessments. For example:

> "At school, if you're quite bright and you turn up and you've got supportive parents, it's quite easy to do well. You're spoon fed the information and you don't have to do that much yourself, apart from turn up". Sarah

The passivity of learning at A-level was consequent on 'information filtering in' through repetition, was associated with a teacher- and assessment-driven focus and was neither student-led nor independent, as supported by:

> "You're fed a lot of information at school. You're told exactly what you need to know. Very little independent learning is done. You're told what you need to know, you learn it and then reproduce that in the exam". Sanjay

This contrasted to the experience at university:

> "At uni you have to go away and do the reading. If there's a difficult concept, you have to take the time to understand it yourself. It's not like a teacher will sit with you and hold your hand until you get it". Clare

Past examination papers were discussed frequently. They allowed students to identify what content they needed to master, the level of learning required and the standard that they had reached. Any deficiencies could be identified and remediated by reference back to standard textbooks. Past papers gave students the perception that they could identify the questions that would appear in future examinations. Examples include:

> "I mainly used to do past examination papers and from there I could see where I was in terms of the level. Because there were so many around you could just go through them, see what you needed to learn, and then just read about it in specified textbooks". Kiran

> "There'd be a lot of past papers available…and you'd almost know what questions were gonna come up". Clare

First Year at University. The First Year at Medical School was a period of significant change in learning for students. They had to study a new subject, while adapting to a new environment and lifestyle. Understanding the structure of the course and the support available during this period of change were key components to success in this new academic field. Kate highlighted that many factors could influence a student's opportunities for success during this period of change:

> "Obviously understanding the course and getting the right support from the Medical School would be very important, but I think for me there's a lot of other things that could come into play in the first year". Kate

From participants descriptions of their experiences of studying during their First Year at university there appeared to be three key elements in 'the work' of being a student. These related to engagement in the practice of work, the approach to learning, often referred to as 'learning style', and the approach to assessments. Each of these elements had its foundations in prior experience, either at school or during previous undergraduate studies, but was different at university and subject to further change or evolution. These elements will now be considered individually.

The Practice of Work. The practice of work included working hard, learning independently, managing time and being self-aware, self-reflective, flexible and consistent. It was characterised by struggles and challenges. Working hard underpinned the 'practice of work'. Doing enough work

was a key component, mandated by the sheer volume of the curriculum. For example:

> "There's so much to learn that you actually need to put a load of time in to learn it. If you don't put enough time in, you won't know the stuff. You won't be able to progress". Tim

However, there was a distinction between simply doing a lot of work and working effectively, as explained below:

> "How they work, not just that they work hard. Working in a way that they cover everything and take in the information and they understand it…Some people, they'll do a lot of hours, but it's not going in. They're…not actually using their time usefully". Sarah

Using time effectively might relate to students' approach to learning (see section on Approach to Learning). For example:

> "You can spend an hour going through a big textbook, trying to understand the concept, but if you understand it through videos and interactive things, or by explaining it to people, then you can gain the same knowledge and understanding in ten minutes, rather than that hour. That would be better studying". Tim

Working hard included the ability to prioritise studying over other activities:

> "It's an attitude towards work. Being able to prioritise work over other things". Sanjay

Participants offered definitions of working hard, characteristics including an attention to all learning outcomes, keeping on top of workload, good attendance, persevering and maintaining a certain pace. This is illustrated here:

> "Going through all the learning outcomes…attending PBL, lectures, all of them, and making sure they watch them back as well, instead of just watching them once. You have to keep on top of it and go through things over and over again to make sure that it's in your head". Aroon

A consistent approach over time was important, allowing time to learn, to revise and to have breaks. Being consistent was associated with being prepared. This approach of spreading work out across the year contrasted to some students' approach to A-levels. For example:

> "I think it would be consistent hard work throughout the year and just being prepared. Being thorough with all the work throughout the year". Sanjay
>
> "A continual working regime over the course of the entire year, as opposed to studying at A-levels, where generally a lot of the work is done before the exams". Stuart

Being consistent required organisation and time management. The change from a structured school day with a fixed start time and compulsory lesson plan to an essentially voluntary and self-directed timetable required students to take responsibility for structuring their time and to make choices

about which resources to use. Within the freedom of undergraduate life this could be challenging. This is shown here:

> "At A-level, I was never really one for making timetables or making to-do lists, but I feel with Medical School it was important that you did those things". Stuart
>
> "It's not only a new subject, but it's a new way of learning and a new structuring of your time. All of a sudden, you don't have school every single day. You've got optional lectures…you can choose not to go and it becomes all about time management. A lot of students aren't very good at that. It's tough". Margaret

An effective timetable allowed co-ordination of learning activities and efficient task management. It was important that work was dealt with and did not have to be revisited. It also created time for leisure and socialisation. Organisation and time management were important in establishing routines and reducing the risk of becoming overwhelmed. This is demonstrated here:

> "Students that tend to do well have a good timetable. They'll be organised. They know what they want to be achieving". Kiran
>
> "Ensuring that they get everything done that they're supposed to do each week. Staying on top of things. And also managing to have down time and sleep". Sarah
>
> "So if I'd done something, learnt it, I never felt this burden to go back, or that I had this pile of work stacking up behind me". Sanjay
>
> "And I think having a set time for work is always a good idea…so that you're not overworking too much in the evening and then not able to get up in the morning". Anne
>
> "I think having a lot on your plate really early on can just be really overwhelming. It's a lot about time management, being organised". Meria

Being consistent did not necessarily equate with engaging in all of the programmed activities. A student could work consistently, but independently of organised learning. Students might make a choice as to whether or not they wanted to attend, and this choice might align to their preferred method(s) of study. For example:

> "Depending on how you learn, there are students that attend everything, put all the work into PBL. That is what is making sure you're up in the morning, that you're working every day. But there's also students who don't attend as much, but if they're not at the lecture they're probably in the library going through that lecture. So depending on how you work, as long as you're working consistently". Meria
>
> "Some people don't go because they don't like lectures or they prefer to watch on catch-up. If you have a consistent work pattern that works for you and you find that early enough, then that must help". Sanjay

Being consistent could help to maintain morale and reduce future burden of work, e.g.:

> "The aim for me was to be consistent so I never felt behind. I never felt the need to catch up and that helped me mentally. I never felt this big burden I had to climb. I was always managing to stay on top of things". Sanjay

It was essential to keep up to date with work. There was insufficient time to go over things repeatedly and it was important to not fall behind, because the volume and pace of work meant that once one was behind it was impossible to catch up again. Each week new learning outcomes were encountered and it was difficult to go back to earlier work at a later date. For example, participants said:

> "It is a big shift, because you do something one week and the next week you have to move on. You can't go over and over something until you understand it very well. You must make sure you understand it and have your resources in place, cos if not you'll be behind. It's fast-paced". Clare

> "When you don't do the work in one week, then the next week you're learning new stuff, as well as trying to recover whatever you haven't done the week before". Hong

> "The lectures have a lot of the content that you really need to know. If you miss that, then it's hard to catch up". Aroon

Attempting to catch up simply meant that new work was omitted:

> "Students just miss out quite a chunk of a block, because they're trying to get up with everything else from earlier on in the year". Aroon

Consistent working was particularly important in relation to how students revised for assessments. The volume of work and complexity of the course meant that attempting to leave work until the immediate pre-assessment period would be stressful and unlikely to lead to success:

> "You had to do your work every week or so, otherwise it will just stack up and by the end of the year there will just be too many things to actually learn before the exam". Hong

> "Believing you can do a traditional A-level sort of year and do the majority of your work right before exams …would be a predictor of doing worse in your exams". Stuart

A failure to work consistently throughout the year was likely to lead to examination failure. For example:

> "I definitely don't think it's possible to pass your first year Medical School exams without studying continuously over the course of the year". Stuart

Starting with good intentions, but becoming less consistent over time could also contribute to failure, e.g.:

> "*(Unsuccessful students)* just kind of slacked off progressively". Clare

> "Sometimes the level of work that the students do tends to decline over the year. They'll attend everything in the first two weeks and then eventually they'll stop attending lectures completely". Aroon

The workload or volume of work during the First Year at Medical School was an important issue. The sheer quantity of work was central to this. This is shown here:

> "Medicine's incredibly demanding in terms of workload and work hours". Sanjay

Graduate entrants had a potential advantage, in part because they may have covered some of the content before. This was the case for students with biomedical or biosciences degrees:

> "This year's been a refresher of everything I've already done. I've found it easy, but if I'd come straight from school then it would be difficult…in the sense that you've got to learn a lot of information". Sarah

Graduates still perceived that the First Year at Medical School represented an increase in workload:

> "It's less about how difficult the material is, but how much of the material you have to do…there's just sooooo much". Meria

This workload was associated with the need for students to commit a great deal of time and effort to their studies and this was considered to be difficult to achieve. This commitment was necessary regardless of academic ability, e.g.:

> "You've got to put in hours after hours with these lectures and PBL, to get the most from it. It's difficult in the first year". Alan
>
> "You can't just be naturally bright and good at getting your concepts, because there's so much to learn. You have to work at it and study it". Paul

Despite an anticipation that Medicine was going to be a challenging course, the volume of work exceeded these expectations and was a shock to some students. For example:

> "Coming into Medical School you know how tough it's gonna be and that it's really, really, really difficult. Not just getting in, but to stay in and to do well. You have this idea of how hard it is, but it exceeds that expectation. Well above it". Meria
>
> "I think it can be a bit of a shock to the system when you realise how much you've got to work". Alan

The volume of work affected the possibilities for success in a number of ways. Some students might not be able to accurately assess the amount of work that was required. This is shown here:

> "I think underestimating…the amount of things you cover in a year, cos it is so much". Clare

In a spiral curriculum, topics are encountered in one context early on in the course and returned to in greater depth and with more clinical content each year. An ability to recognise the correct level of

knowledge and understanding required in year 1 was important. This impacted on the volume of work required:

> "You could go as deep into it or skim along the surface as you wanted to. I found it quite hard to pitch it in the first year. I wasn't sure how simple, how difficult, how deep to go. There was a massive range within my group as well". Clare

An inability to identify the appropriate combination of volume and depth of knowledge could contribute to failure. This was exacerbated by an unwillingness to work the required number of hours. These quotes illustrate this:

> "Not realising how much work, how much depth, they need to know things". Sarah
>
> "Somewhere along the line they misinterpreted or misunderstood how much work had to be put in. By the time you realise, it's too late". Meria
>
> "You fail if you don't do the work. But sometimes it's not being able to gauge how much work there is to do, cos unfortunately it's a lot". Alan

Some students felt that the workload was so great that they had to acknowledge that there was simply too much information to memorise and change the way that they dealt with the workload. This might involve adopting strategies to work answers out from underlying principles rather than relying on factual recall. For example:

> "I can't cover every single thing in revision and it won't all stay in my head. There is the shift from you will need to know everything and you can predict the exam paper, to you should know enough that you should be able to work things out logically and within a clinical context". Clare

Not all students agreed that it was possible to 'work things out' and some felt that this contributed to the high workload, especially in the First Year where there were lots of new words and terms to learn. All of this had to be committed to memory:

> "The volume of content is worse in the first year. There's a lot of new terms that you need to know. A lot of plain facts that you just need to learn. With A-levels you could work out something rather than just having to know it". Aroon

Students recognised that there were many elements to the medical course and commented on the difficulty of creating links between the knowledge gained in different parts of the course. For example, knowledge of basic sciences had to be applied in a clinical context through communication and physical examination skills, and then translated back into academic skills to acquire further information. This is demonstrated here:

> "It's not just learning the knowledge. It's then applying it to patients and to be able to perform physical examinations and to search Medline". Anne

The clinical or practical skills were new and, for some, these skills were more difficult and required different approaches to learning. In particular, many of these skills could not be learnt from a book:

> "*(Clinical work)* makes the content more difficult because you've got to learn about signs and symptoms, consultations, examinations and it's stuff you can't really learn from books". Tim

The high volume of work and the nature of the content of the curriculum meant that students could not rely on passively absorbing information. They had to work at building and interweaving content. Students that had previously passed exams with little effort might struggle to adapt to this new workload. For example:

> "There's so much you need to learn that you can't just learn it by letting the information slowly filter in. With A-level, it's very much understanding a basic concept and then being able to apply it. That's quite different to Medicine, where you have to do that plus learn lots of knowledge that…doesn't feel like it necessarily fits together". Paul

This workload had the potential to have an adverse effect on physical and/or mental well-being, e.g.:

> "When you're faced with so much to do and you're just overwhelmed, but you're like really overwhelmed. If I'm already doing so much and I'm not getting anywhere, you just say to yourself "For the sake of my mental health, my wellbeing, I'm gonna take it easy". When you're feeling there's so much to do, you tend to fall into bad habits. You're not sleeping. You're not eating properly. You're drinking way too much coffee. It's not healthy" Meria

<u>The approach to learning</u>. Participants perceived that there were different approaches to studying and knowledge acquisition. They emphasised the importance of knowing which ways of studying were effective for an individual to be successful, but acknowledged that different techniques could work for different people. This required individual awareness of what did or did not work. It was important to find effective techniques as quickly as possible, in order to use time efficiently and to avoid wasting opportunities. Having the right skills at the start of the First Year could be beneficial:

> "Someone doing well in the first year, they'd have a good awareness of how they study…They need that ability to know what works for them…If somebody knows from the beginning what works well for them, then they can be employing that straightaway". Paul

Participants were able to identify learning methods that worked well for themselves. This might involve complex activities, developed and carried out over time:

> "It definitely took me a lot of first year. I can't really remember when I changed. It was obviously a gradual development, but it took me a while to find what worked for me". Kate

For example, Stuart described their approach to understanding a complicated piece of nervous system anatomy as follows:

> "The spinal tracts require quite a few visits to understand it properly. If I sat down and tried to learn it, going through it over and over again, I found that was less effective than doing it once and then coming back to it in a week's time. If you know it's something you're struggling with, you can come back to it. I drew the tracts out and stuck them to my wardrobe and then just tried to read them three or four times a week when I was getting changed. I feel like that helped because you keep refreshing all the time". Stuart

This did not mean that everyone approached their learning in the same way and there was recognition that different approaches worked for different people, as shown here:

> "Different people learn in different ways. Some people like to use videos, some people like to use textbooks; working in groups, working by yourself. Everyone learns differently. It's finding the way that works best for you and using it, because if you can work better you can do more work in the same amount of hours". Tim
>
> "Some people are definitely visual learners whereas others prefer to hear things". Anne
>
> "I draw things out. Some people make condensed notes. That works for them". Sarah

What mattered was that individuals recognised what was working for them, e.g.:

> "I revise in a different way to my housemates, but we all did well. But we knew what works for us. Some people will go to lectures and take notes, and they'll attend every lecture. Other people won't and they'll watch them at home, but then they could both do well. It depends what works for them". Sarah

Successful students used their previous experience to identify useful learning strategies. They may have tried different approaches, embraced those that were effective and rejected those that were not. This process required self-reflection and a willingness to change if their current techniques were not working. Change might come in response to personal experience, comparison with peers, to feedback or to formative assessments. Experience included trial and error. Illustrative examples include:

> "They'll have tried and tested methods which have helped them do well; and if something doesn't work they're more than happy to change. They'll be flexible. If this didn't work last time, try this way". Kiran
>
> "I've realised that flash cards are the way for me, quizzing myself constantly. Whereas in first year, I was dead set on making loads of notes by hand. I don't know why I thought that would be the right thing to do. It didn't really work. I had to keep changing and trying new things until I found a way to make things stick". Kate

> "It's practice in the sense of having struggled before. A self-awareness and realising, maybe halfway through the year, I'm not keeping up. I don't get it as well as I should do or as well as my peers do. I should be working harder". Paul
>
> "For me it was just trial and error. I tried a couple of things. I thought this works, I like this, and I used it". Tim

The medical curriculum and method of delivery were different to A-level. Knowledge was not built on prior learning, but represented entirely new concepts and information. This created challenges and required different solutions:

> "In first year it's expected that you learn a lot on your own with a textbook or watching lectures online. That makes it challenging if that doesn't work so well for you. If you prefer having things talked to you and asking questions and discussing it with a tutor then that does make it harder compared to school work". Paul

Kate made a distinction between focusing on learning concepts and memorising a mass of facts. Discussion was central to their method of grasping these concepts, as shown by:

> "There are some things that you do need to just memorise. But for the bigger concepts of how things worked, you definitely have to understand them. Taking down pages and pages of notes from a textbook was not the way to do that…
>
> Using flash cards and white boards to draw out diagrams and talking them over with friends to make sure you really understand it, rather than just memorised it by copying it down on a piece of paper ten times". Kate

Students recognised that they might use different learning methods in response to different challenges and that techniques that had been successful for A-level might not transfer to university practice. For example:

> "In school I just took loads and loads of notes. I tried to do that when I got here, endlessly copying from textbooks. It just didn't work. I ended up with thousands of pieces of paper, cos there's lots and lots of Medicine to learn, and I never looked at them again, because I had too many". Kate
>
> "I didn't really make notes before coming to university. I just learnt the stuff. Maybe read it through in the textbook a couple of times, then it was stuck in there. Before A-levels, I'd do past paper after past paper after past paper; that would be it. Since coming here I've had to actually write up notes. A lot of notes". Tim
>
> "I learnt every different exam cycle I've ever gone through. I approached A-levels differently to GCSEs and I've approached 1st year exams differently to A-levels. I think that

the nature of what you're learning is just inherently completely different and what worked one year might not work another year". Margaret

These changes were a response to experience and reflection:

"I think that's something you learn as you get older…I think you learn every revision period. You learn new techniques and new tips and every year you're learning where you went wrong". Alan

Strategies that had been successful in one setting might not be successful when translocated into another. A number of students discussed using flashcards as a learning aid, while another explained why they might be unhelpful in a medical course:

"It's quite structured in school. Some people might make flash cards out of one textbook, because they know that everything in that textbook is relevant. If somebody tried to make flash cards from a *(medical)* textbook that would take a lot of paper and time". Anne

Students had to make these changes in a dynamic situation, when they were facing many new challenges. This was not easy, e.g.:

"There's a lot happening. You have PBL, lectures, anatomy. There's so much happening that you're not used to and have never encountered before". Meria

"I found it quite hard to come in and do the learning style differently". Clare

Lack of success could be attributed to difficulty with finding the right learning style or a reluctance to change. Retaining habits developed during A-level might be unhelpful. This is supported by these quotes:

"The way of teaching and learning is very different and not what they'd expected or could adapt to very quickly. Although they put a lot of work in, the methods that they were used to haven't been as effective". Anne

"If they continue to do the stuff that they did at school… that doesn't really fit the university". Hong

"I think a less successful student is someone who doesn't know what works for them. Maybe their first few weeks of studying aren't really worth it. They're not actually getting anything into their head, cos they're doing it completely the wrong way". Paul

Understanding how you worked also required a recognition of the effects of the work environment, especially in relation to independent study. Different spaces became associated with different activities:

"I have my free time in my halls, but I would go to the library to work. I think having that distinction between the two was really important". Stuart

Developing a successful approach to learning was important, but did not compensate for the need to

do enough work, e.g.:

> "There's no point in knowing the best way to study if you don't actually study too much". Tim

In addition to an effective approach to learning, students needed to be able to identify and capitalise on available learning opportunities and resources.

Learning opportunities. Plenary lectures are a primary teaching resource in First Year. Lectures are recorded and uploaded to the VLE. This allows students to attend lectures in person, to watch lectures on-line or to do both. Participants had different views on which approach was best. This is illustrated with examples of students' various perspectives. Kiran was particularly expansive on why attending lectures in person was important for immersion in the whole learning experience:

> "*(Successful students)* attend all the lectures. They're actively listening. Being in a lecture environment with other students tends to engage you and make sure that you're gonna be listening with a hundred percent concentration and trying to absorb as much information as you can. If you're listening to lectures *(on the VLE)* there's a tendency to passively listen and you won't be able to see what aspects the lecturers are emphasising as being more important. You don't get the whole experience. When you go into a lecture hall, it's not just what's being said. It's how it's being said. What points are being emphasised and what picture is being portrayed. When you listen to lectures *(on the VLE)* you're missing out on so many different aspects which would have assisted in the whole learning experience". Kiran

Stuart appeared to agree, in attributing futures examination failure to poor lecture attendance:

> "I would definitely say lower attendance at lectures would be a predictor of doing worse in your exams". Stuart

However, Alan clearly disagreed and Tim felt that different approaches worked for different people:

> "Your personal characteristics determine whether or not the way that things are taught is good for you. I can't sit through lectures. I'm one of those people that never shows up. If this was entirely a lecture-based course, I wouldn't be here". Alan
>
> "Going to the lectures helped me, but I know people who passed and only really watched lecture capture or used the notes. Finding the right way to study is the big thing. If you find the right way, you can study effectively". Tim

Sanjay felt that lecture attendance diminished quickly over the course of the year, but that a consistent approach to the learning outcomes was more important than whether or not someone attended lectures in person.

> "In the first month of the first year, most people are going to all the lectures. As the year progresses you find some people will go, some people stop going, some people go to some. People find the work pattern or rhythm that works best for them". Sanjay

Hong recognised by Second Year that attending the lectures *per se* was insufficient. Lecture content had to be actively studied:

> "In first year I went, but I didn't actually go through the slides again. In second year I made an effort to watch the lecture again, which I think really helps. There's a lot of little details in the lecture that I don't really remember until I go through them again". Hong

Lectures contained a large part of the curriculum content. They helped to define learning outcomes and were a valuable way to support students in creating their personal learning resources, e.g.:

> "The lectures outline what the big take-home message is". Tim

> "The lectures have a lot of the content that you really need to know. If you miss that then it's quite hard to catch up". Aroon

However, successful students recognised that the lectures only provided a basic structure for their learning, which had to be developed through PBL and self-directed reading. All of these learning opportunities had to be 'brought together' into a unified whole. This contrasted to the experience at school, where a lesson encompassed everything that one needed to learn. For example:

> "With a school curriculum you go to your lessons and everything that's said in the lesson is what will come up, and your homework will just be to consolidate that lesson. Whereas with university, in lectures you're given the basics and then it's up to you to go and read around it and to fill in the gaps and to make sure you understand it". Anne

> "I've had to take the lectures as the core and then work around it with PBL and extra reading and everything, and then try, during revision, to find a way to bring it all back together". Anne

Some students might fail to recognise that not everything that they needed to learn was included in easy to receive formats, such as lectures, as illustrated by:

> "They think that if they learn everything in the lectures, they've got a good chance of being able to pass. So instead of doing the extra work, some people focus too much on the basics and it's quite difficult then to *(pass)*". Anne

Textbooks remained important, but were perhaps less central to some students' experience of the medical course. This partly reflected the fact that not all of the information required was contained in a single text and that accessing textbooks required personal effort. This created a new level of complexity compared to studying for A-levels. For example:

> "At school everything's in a textbook. The whole course is there. Whereas in Medicine it's not. You have to go out and do it yourself. That requires a different approach to learning". Margaret

> "There's an acknowledgement that you're not gonna be able to get it from one book. That's a bit of a step up". Alan

> "Lectures have references at the end. I'd go through it, but a lot of it was online textbooks and I would skim through it. I wished I'd made more use of the library and their resources in terms of the books and used that as a learning source as opposed to just the lectures". Meria

Some participants recognised the importance of using multiple sources of information and relied on textbooks as their primary source of learning:

> "I never used textbooks outside of those specific textbooks for A-levels. But I've got thirteen or fourteen textbooks out of the library at the moment. That's how I like to learn. Reading textbooks mainly". Tim

This student used the textbooks to create notes as their primary learning resource:

> "I use the textbooks to help with writing up PBL and lecture notes. At the end of each block I combine it to create an overview of the system". Tim

Creating notes from lectures to use as a personal resource was a new experience, which school had not prepared students for. Preparing notes from a lecture was a difficult skill that had to be learnt in its own right:

> "Before I'd gone to uni I'd never seen *(a lecture)* in an academic situation and definitely not *(based my)* entire learning on it. It was very new for me. When you first go you don't know whether to sit there taking notes the entire time or to listen to the person the entire time. Luckily ours are all recorded. I find it much easier to listen and then go back and write notes afterwards. I think that's something that comes with practice. It's a big transition to go from having a teacher-classroom situation to a lecture. They're very different ways of teaching". Margaret

> "I think it was tricky coming to uni and learning what to write down from lectures and how to take that information down". Margaret

These notes were important as they created a vital resource for revision purposes. Notes that were too extensive, illegible, or borrowed from someone else might not be useful. These examples illustrate this:

> "I would take notes handwritten in lectures. I very quickly found that I was accumulating fifty/sixty pieces of paper a week…

Other people who were really well organised would either handwrite their notes and then type them up, or just type them up in lectures. When it came to revise, they had a Word document for each block. Being able to instantly see all of the content they need to know, or to go to where you know you're weak, or to quickly look something up, I think that's a really good strategy". Stuart

"Writing everything by hand will be your downfall, because you won't be able to look it up or you won't be able to review it as easily as you might if it was on the computer". Stuart

If notes were not organised during the course, then revision time was spent creating resources rather than revising:

"It's important to be organised…

I found when it got to Easter, I spent quite a bit of Easter organising my notes rather than actually revising". Stuart

Resources. Learning involved creating resources from lectures, but the lectures alone were not enough. Students also needed to be adept at identifying and accessing additional learning resources. This involved processes that were different from A-level, particularly in relation to the use of university facilities and accessing information across dispersed formats and locations, including the unregulated internet. This required engagement, effort and attendance. Examples include:

"I wish I'd learnt to use the library a lot earlier last year. Having access to resources is *(important)*. Things like learning how to use eBooks, how to find your own books online in PDFs and things…that's a skill that is very useful". Alan

"There's plenty of sessions available that you can go to, especially things like the anatomy sessions, and some students are constantly missing from those sessions" Aroon

"*(Successful students)* have a lot of different resources. They'd use books from the library and videos. There's plenty of YouTube videos available. There's other sorts of interactive resources…flash cards as well". Aroon

A successful learner was able to recognise which resources worked for them, but was also able to organise and retrieve resources when required:

"Knowing what resources worked for them, knowing where they were, how to access them…

Using the resources that worked with their style of learning". Clare

A failure to access resources might contribute to failure. For example:

"They wouldn't use resources as effectively". Aroon

"If you've struggled from the start of the year to find your own things, you're gonna struggle forever. The faster you can get a hold of being able to find your own research is

good. If you've done an undergraduate *(degree)* and you know how to find information then you're doing well, but otherwise you need to jump in at the deep end and make sure that you can find the books on demand". Alan

Student-generated resources needed to be self-generated. Using another student's notes removed the necessary active participatory element of the learning cycle that embedded knowledge:

"Certain students want the easy way out and it doesn't always help. When you're using other people's notes, you're not actively making those notes. You're less likely to be able to retain the information. You don't know what you understand and what you don't understand, because you're relying on someone else's notes". Kiran

Students that were unable to identify, access and use resources might be at an increased risk of failure:

"They didn't know how best to get information…underestimating or not knowing where resources were". Clare

The complexity of learning. Learning at Medical School was complex. It required acquisition of facts, including a language of new words and terms, an understanding of basic principles, integration of new with existing knowledge, creating links between multiple scientific and clinical disciplines and application of knowledge in diverse settings, including clinical placements. Core knowledge had to be acquired before it could be assimilated with existing knowledge and then applied appropriately. However, simple recall was not enough to be successful, participants emphasising the need to understand and apply their knowledge. For example:

"…apply the knowledge which they've already learnt, as opposed to just focusing on trying to remember the knowledge in the first place, because knowing the content is one thing and then being able to apply it is another thing. And you can't apply unless you know the content fairly well". Kiran

"It's not really any good just remembering the information. You've got to understand it as well. You need to cover everything in enough depth, but if you don't understand it, it doesn't matter *(help)*. Sarah

This required an awareness of which topics critically underpinned everything else and had to be grasped immediately and which could be revisited later:

"Things that you learnt at the beginning of the year fall in two. One you learn. It's a foundation for everything else. You don't need to relearn it, because you understand it. It comes up over and over again. The other haven't come up again. You've just forgotten and so you need to know when to bring that back into your learning". Paul

Developing understanding rather than recall was associated with a more adaptive use of knowledge

in the future. For example:

> "If someone's using a way of studying that may not be the best for them, they may find it difficult to understand certain processes. So they may learn by repetition, but not gain a deeper understanding of how it all fits together. When they're confronted with a question beyond "this does this does this", like "what if this happens", they're not sure of the answer". Tim

The complexity or difficulty of understanding a topic could become a barrier to learning. Some students might simply decide that a concept was too difficult and dismiss it from their personal agenda. Tim explains:

> "They think it's too difficult to learn because their way of learning isn't correct. They try to learn it one way, but it doesn't sink in. So they may write it off as too difficult, which would then put a mental barrier on studying it again". Tim

Learning about the basic sciences, often acquired from lectures or reading, needed to be integrated within the context of clinical practice. This required the construction and application of 'connections'. Students needed to understand this, e.g.:

> "With Medicine everything's connected and everything links up. You can't really study things *(in isolation)*. Although we're taught by block or by system, you can't quite study it as separately as that". Paul

> "If you can learn that one thing early then you can get the topics connected. If you understand the immune system well, you can have a much better understanding of autoimmune conditions because they're all similar in a sense. Whereas if you don't bother learning the immune system, then all your autoimmune diseases are completely separate diseases. Having that one core topic helps, even though the diseases are quite separate. You can connect them and that makes things simpler to learn". Paul

Participants felt that these connections were strengthened by working in a group with a facilitator who was a clinician, who they identified as a legitimate practitioner. Recognising that the practitioner thought that knowledge was relevant to patient care reinforced learning that had occurred in other settings. This is shown here:

> "The discussion part of PBL is useful, especially when you have a facilitator in the room who's a doctor. They can chip in little stories about patients and clinical information, especially in the first few years, when you're learning more about processes and systems rather than clinical knowledge". Aroon

This also occurred in a clinical placement context:

> “The way the curriculum is structured is that what you're learning about that week in PBL and lectures is what you'll see on placement as well. If we're learning about strokes, I can probably recall the patient that we saw that had a history of stroke. Seeing someone who had an event and had lost the power on one side, was quite shocking for me. It's something I can recall. In exams, when we got a question on strokes, I can remember thinking back to the patient and that might answer the question for me”. Stuart
>
> “If you’ve used information, it goes in much more quickly and *(you)* remember it so much better, cos you remember the patient, the GP and the event”. Alan
>
> “Adding to that contextual knowledge was something that I really benefited from. I could recall several times when I was sitting exams, I would remember patients that I'd seen on clinical placement, being able to remember risk factors for a certain disease because I could remember the patient. Clinical placement was really important for me passing exams”. Stuart

In addition to integrating learning across subjects, successful students could also integrate learning between different formats. For example, this might mean being able to acquire information in one format, reinforce it in a second format and then apply it in yet another:

> “You go to a lecture *(and)* you get a good idea of the main themes, the objectives. You then work through PBL outcomes and then you talk through it and make sure that you understand the content”. Kiran
>
> “Varying what you do so that the information goes in. Doing things like group discussion or like testing each other can be good for revision”. Meria

The availability of different types of learning opportunity was seen as advantageous. While different students might have a preference for a particular form of interaction, there were so many different opportunities available it was likely that all needs could be accommodated. This might be through a preference for working as an individual or in groups, for basic science rather than clinical practice, attending lectures, group discussion or using textbooks, and so on:

> “If someone doesn't like the way things are taught at the Medical School *(they)* can learn it different. If they don’t find lectures helpful, they can learn from a textbook”. Paul
>
> “I think there’s a good mix in year one, with lectures, PBL and clinical skills. Things get taught in a variety of different ways and you cover things from different angles. It does tend to meet learning styles for visual learners, for audio learners, and you tend to see things in more than one respect”. Kiran
>
> “If it's quite clinical straight away, that might work for some people. If it's really dry science, that could put people off. Here, there's PBL and skills and placement, straight from

first year. You've got a mix of everything. You've also got lectures, labs and anatomy. If you're not a lectures sort of person, then you're not necessarily gonna fail because there's other ways you can learn". Sarah

"That balance is good. The lectures will work better for some, PBL for others. Having both gives you options and both have their advantages and disadvantages. With it being fifty-fifty you can't really argue that it favours one set of people". Sanjay

However, there were also disadvantages to having a wide variety of formats, specifically if this led students to focus only on areas where they felt comfortable, while neglecting other components of the course. For example:

"They might find that they learn well in lectures, but they don't learn well in PBL and they learn well in placement but they don't learn well in biopracticals…you need information from each of these components. The area that they struggle with might not be something that they focus on as much because it's difficult for them. So they neglect that in favour of everything else, but then drop the marks". Anne

Independent study. Participants recognised that the taught Medicine curriculum did not provide all of the information that was required to be successful. Students also needed to undertake independent study. Not everybody thought that the need for or the amount of independent study required were explicit from the outset:

"A lot of people who haven't done a degree before, I think it's a shock to them the amount of self-directed learning that you have to do". Clare

"At university you're doing lots of independent learning. You have to find out lots of things for yourself, go out on your own and find things. That can be daunting or difficult for some people to adapt to". Sanjay

Independent study was new for school leavers and contrasted to their A-level experience, as illustrated here:

"At school I got spoon-fed. I came here and had to do it all myself". Clare

"A lot of content is not taught. In lectures they give you a brief overview…a lot of the teaching would be highlighting what's important and what you're expected to know, but you wouldn't get taught it. You had to learn it. At A-levels you were taught it until you learnt it". Stuart

"We had a lot of reading lists that we have to read…to study without being spoon-fed like in school". Hong

Independent study was necessitated in part by the breadth of the medical curriculum, e.g.:

> "Medicine is so broad that you will have to look aside from the curriculum and do your own research. You find *(yourself)* doing a lot more independent learning and doing more for yourself without being told you need to go and do this specifically". Sanjay

This degree of independent learning could be difficult to come to terms with. Good habits had to be developed and then maintained over time, as this quote suggests:

> "It's whatever habits they get into once they come to university. Whether they decide to become proactive in their independent working or not. Or whether they take a backseat attitude and do the minimum they have to". Sanjay

Choosing your Medical School. Participants recognised that different Universities structure their courses differently and this might impact on student success. A student might achieve better outcomes if they chose a Medical School with a curriculum and teaching methods that suited their learning preferences. They also felt that they had relatively little choice over which School they attended, as shown here:

> "…whether or not the course structure suits them, because different Medical Schools teach in a different way". Sarah

> "You've got to choose one that fits your own characteristics. Although choosing a Medical School is an odd thing, cos you just go to the one that gives you an offer. But I'd say it's mainly about just making sure you're at the place that teaches you right". Alan

Revision before assessments. Participants placed emphasis on learning to pass assessments as one of their main objectives. Passing assessments required a good command of the knowledge covered during the course of the year. This was connected with adjusting to new ways of learning and could be achieved by being organised and working hard, consistently and efficiently:

> "The first thing they have to do is get used to the new way of learning and then just make sure they keep on top of all the knowledge that they've learnt throughout the year, rather than trying to do it all at the end of the year before exams". Kiran

Being organised included timetabling, planning, keeping up to date with coursework, and having well organised resources. Revision could not be left until the immediate pre-assessment period, for a number of reasons. Resources needed to be ready to use and the sheer volume of work prevented cramming. Participants highlight these points:

> "Students who do very well, they keep up with the course. They're not lagging behind. They're not making any notes towards the end of the year, because they already have their notes". Kiran

> "It's about the workload. If they are not doing it in a reasonable time, if they left it until the end of the year, it is really difficult to catch up when you have fallen behind". Hong
>
> "Trying to cram a Medical School year, first year, into the four weeks before exams, is definitely not possible". Stuart

Information had to be actively used, otherwise it would be forgotten and had to be relearnt as new information:

> "Leaving it too late can be a problem, because by that point you've forgotten it completely. You have to learn it again like it's new, just before the exam". Paul

A number of students discussed the importance of learning over time and of building the connections discussed above. This meant that information was 'anchored'. They suggested that cramming was not a useful way of learning, because there was no anchoring:

> "If you learn everything in two months, there's nothing anchoring the memory anywhere. You've just crammed at the end. If you've used it throughout the year, you've got lots of separate little memories using the knowledge". Alan

The same participant thought that the formative assessments could help the process of developing anchors:

> "If you go through one of the formatives together afterwards…it just makes that whole anchor". Alan

An inability to manage learning across the year could contribute to failure. For example:

> "A student who fails a year would get themselves into a situation where they've got too much to do before the exams and they're not up-to-date". Aroon

Students that were unsuccessful were thought to have the potential to succeed, but they may have underestimated the amount of time required for revision. This is illustrated here:

> "They're capable. They're smart enough. They can put in the work, but maybe they underestimated how difficult it might be. Maybe throughout the year *(they thought)* "I'll do the bare minimum now and then during the Easter holiday I'll put in all the work". And then just realise towards the end that there's so much to learn". Meria

All students that had obtained a place at Medical School have extensive experience of sitting and passing assessments. However, participants explained why the experience of revising for A-levels might not prepare one for the reality of university. For example:

> "I ran into difficulties when it came to the exams because I wasn't so good at the revising. Coming up to the exams, I wanted to go back and learn things that we'd covered at the beginning of the year and I wasn't really sure what worked for me. In first year my exam results weren't that good. They were better in second year because I'd had a bit more

experience. Writing notes didn't work that well. I didn't know that in first year because I'd never had to really work and push myself. I was happy just doing practice exams for A-levels". Paul

In fact, previous experience may have created a false sense of security:

"When people tell you that something is really hard, that you have to start working now and there's so much to do, you acknowledge that, but you also think "Yeah, but the last ten years I've waited till it's a bit closer to the end and I've gotten what I needed for A-level. I can do the same"". Meria

Most participants reported that A-level revision focused around past papers. A similar resource did not exist for Medicine and they were no longer able to rely on this familiar method of learning to pass assessments:

"For A-levels…I ended up doing all the practice papers for that syllabus because that worked for me. Doing the same questions over and over again. And that doesn't work for Medical School, because there aren't the standard national practice papers available". Paul

An effective timetable also included breaks for relaxation.

"(Successful students) know when to take a break so that they don't overwork before exams". Aroon

<u>How hard are A-levels compared to university?</u> These discussions about how you work and learn included many comparisons between experiences at A-level and at university. A central theme was the relative difficulty of A-level and university courses. Participants did not agree on whether their work in First Year was more difficult, of a similar standard or easier than their experience of A-levels, with all three opinions expressed. There was general agreement that the volume of work was greater. Some illustrative examples of participants' views on this topic are shown below:

A-levels are harder?

"It's much harder in the respect of how much you need to know. That's a lot harder, because the quantity is insane. But the actual academic depth? I would have said A-levels were more difficult. That's when it becomes frustrating, because it's more about you need to remember all these things". Margaret

"I found A-levels harder, which usually gets a couple of dirty looks from my colleagues, but it's just the context of learning. Although this is harder stuff to learn, because of how it is given *(taught).* This is an easier course in terms of what you're to learn, just go out and learn it. Whereas A-levels there was a lot more… trying to figure things out" Alan

"The content itself is easier than some A-level subjects that we do. I did A-level physics and I thought that was really difficult". Hong

"A vast majority of the content for Medicine…doesn't require the sort of conceptual understanding of certain things that I did in physics A-levels, that I found were very difficult to get my head round". Stuart

There is no difference?

"Difficulty didn't change. Academic workload was the increase for me". Sanjay

"It's not the understanding of what we learn, it's just that we have to learn is so much". Sanjay

First Year is harder?

"It's more difficult. Because there is so much. When you're at school, you might do eight or nine subjects and here it's Medicine, one subject. But it's not. When you break it down, there is so much to learn. That's the thing that's most difficult. The amount of information". Aroon

"It is quite a lot harder. That's due to what you're learning and the way Medicine is – the volume of information and some of it's quite difficult and complex". Paul

"It's similar in terms of how much you have to do, but I would say it's a lot more challenging academically. That's a big difference". Meria

The simultaneous change from teacher-centred learning and family-centred living to independent learning and living added to the burden of the increased volume of work:

"It's a lot more difficult, because there's a lot more independent learning involved and at the same time you've got to deal with semi-independent living. The step-up's quite big, because you've got that whole life shift and throughout the year you've got to put more hours in and do more work". Tim

The addition of the clinical domain of Medicine and the realisation that large parts of the curriculum content represented new knowledge added a further level of difficulty and complexity. This came at the same time as personal independence, greater social opportunities and freedom from strict school supervision. For example:

"It is a lot more complex. As well as the academic stuff, you've got all the clinical side to learn as well". Tim

"It's the new stuff that we're exposed. In university you have a bit more freedom when you're studying and society and things like that, but at the same time you have a new responsibility to actually do it yourself and not get tracked all the time by teachers". Hong

Despite the change in nature of the content and the increased amount of work, participants felt that anybody who was capable of gaining a place at Medical School would have the ability to manage the First Year curriculum:

> "If you're clever enough to get the A-level grades to get in, I feel like you should definitely be able to understand the first year content". Kate

2. Transition – the move from school to university.

As can be seen from the discussion so far, the First Year at Medical School was a period of transition, both in terms of academic (teaching and learning environment) and social (personal circumstances and environment) activity. Participants recognised the significance of this social change:

> "Aside from working it'll be things like coming to university, the transition from home to away from home". Sanjay

> "There's just so many new things going on. It's not necessarily the course. It's just a whole new experience. A whole new uni- world you've entered. It can feel like a massive change". Kate

This transition was further characterised by participants and had consequences, which extended beyond the academic field of Medicine. At their most mundane, changes related to the basics of managing day-to-day living arrangements. Sarah explained how they had previously just concentrated on schoolwork, because everything else was taken care of for them. Developing new routines of daily living was disruptive:

> "I just found it very difficult to get used to cooking for myself, doing all my washing, keeping on top of life, as well as my course. When you're at home…your only job is to go to school". Sarah

> "I found my final year at A-level a lot easier than I found first year of Medical School. I think that's mostly due to getting settled and sort of finding your feet, whereas at home, you can just focus on your studying and everything else is done for you". Stuart

> "I wasn't very settled. You can call it being homesick. I didn't have a routine". Stuart

On a wider scale, transition required a new set of skills and aptitudes associated with the academic and social opportunities and challenges that had opened up. These opportunities created new pressures and challenges. For example:

> "You're in a different learning environment, a different social environment and there's a lot of pressure on. Not just being in Medical School. Being in university, in general. For a first year student to make the most out of it, you want to do well academically, but you also want to do other things outside. There's a lot of prioritising involved". Meria

Participants identified the difficulties of social disruption associated with moving away from home, adapting to a new place and work environment, meeting new people and making new friends, e.g.:

> "I found it very difficult in the first year, cos it was new style, new place, new people". Clare

> "If you're just having a miserable time moving away from home and you miss your mum and your cat and you've got a pile of washing up to do, I think it's very easy to let it all get on top of you in first year, when you have so many new things". Kate

While acknowledging these challenges, participants also felt that the First Year was a critical period for academic transition and students needed to be able to adapt in order to be successful. This adaptation had to be rapid. The academic transition was characterised by a change to identifying one's own learning needs, independent learning and self-motivation:

> "Getting into routine early on is really important, because the ebb and flow of university life is definitely different to living at home and without being settled you can't really expect someone to work as well as they could". Stuart

> "Being able to adapt to that quite quickly and understanding that a lot of the work you have to do for yourself and being really self-motivated and being driven…They've obviously performed really well at sixth form so they are bright enough, but being able to push yourself is something that first year is all about. Compared to other years, first year is more pivotal in the sense that you're adapting a lot more to it". Meria

These changes also occurred at the same time as students encountered an increased workload:

> "It's a lot of information to take in and I think if you couple that with getting used to being away from home and having to learn how to learn in a different way, then it would be quite difficult". Sarah

Factors that might influence transition were discussed. These included personal support networks, personal problems, financial concerns, the type of school that students had attended and previous experience of independent learning. These topics are illustrated below:

> "If they're used to doing a lot of the work by themselves and just being very self-motivated, that could somehow help the transition. Also who you surround yourself with and the support you're getting. So maybe if you don't have a lot of financial worries or a lot of personal issues going on, you're able to focus on other things, whereas if the student had other personal issues, that could affect their transition". Meria

Events early in the university course might impact on the success or otherwise of transition. Early achievements might be facilitative, but setbacks might have a negative effect. For example:

> "A sense of feeling you've accomplished something can help with your…transition. If you feel like you've come in and you're doing well and engaging in all the academic things, that helps your transition because you feel you're on this path and you feel comfortable.

> Whereas if you were behind, that takes a toll on your self-confidence. That does hinder your transition". Meria

Transition had the potential to affect a student's mood and vice versa. This might in turn influence success, a poor transition leading to unhappiness, resulting in a lack of success:

> "If you're struggling to move away from home…you're gonna find Medicine more difficult, if you're not happy in your life generally". Kate
>
> "Do they feel settled at university? Have they settled in to where they're living, who they live with and got a nice group of friends? Do they miss home? How happy they are at uni? Do they enjoy the course? If they don't, then they might be more likely to struggle". Sarah
>
> "You could have a very bright student who did all the work that they're supposed to do, but they may have struggled, whether it be in settling at university or just the workload or just other personal issues that come into play". Meria

Students who had always been 'top of the class' might struggle when they realised that they were surrounded by equally high achieving peers and that they could no longer attain high grades as easily as they had. Clare explains:

> "I didn't get excellents because I was an eighteen/nineteen year old girl in the first year of Medical School and I found it quite hard to come in and do the learning style differently and things like that…
>
> I found it very difficult in the first year, cos…everyone was very good as well. I think that's the other change – everyone is very, very able". Clare

Another aspect of the transition process was the realisation that the course might not meet expectations or that prior expectations of the time and effort required for success were unrealistic. This might make taking a second degree easier. A graduate student commented:

> "When I did my first degree, I hated my course to begin with and I didn't really know why, cos that was what I wanted to do and I'd spent ages deciding. So when I started and it wasn't what I was expecting, I felt I don't want to be here". Sarah

3. Support.

Support came from a number of sources, including people, such as teachers, peers, friends and family, and organisations, such as schools and universities. Participants' perceptions of the support available and the roles played by individuals and organisations were different and changed between secondary school and Medical School.

Support from teachers and tutors. Participants had a common understanding of the role of schoolteachers and their own relationship with them. This relationship developed over a long time during which teachers were a continuous, daily presence. Teachers identified learning content and

resources and provided external motivation to work hard. Participants identified a ‘closeness’ to their teachers:

> “I seem to remember feeling a lot closer to my teachers at school. You had the same teacher normally over two years. You spent a lot more one-on-one time with them, in a smaller classroom. You’re with that person for however many hours a week”. Margaret
>
> “When you’re at school, you sit in a classroom and there’s a teacher and that’s how it is every lesson. A teacher who stares over your shoulder at everything you do; and then sets homework; and then expects you to have that homework in for the next lesson; and then gets it marked; and then gives you feedback; and then you take that feedback on; and then you do the next lesson. And it just repeats like that”. Anne

Participants had an expectation that their schoolteachers would teach them, directly transferring information, e.g.:

> “You expect them to teach you and to tell you what the thing you’re meant to learn is”. Paul
>
> “In sixth form you almost get spoon fed the information that you need to learn. It’s all there in the curriculum. You just get handed a book”. Aroon

Schoolteachers were felt to be personally responsible for a pupil’s learning:

> “And the teacher is very much responsible for each of you, so has an individual relationship with each of you”. Margaret
>
> “At school the support is more academic. It's “I don't understand this. Can you explain it Mr Chemistry Teacher?”” Stuart

Perceptions of university tutors differed in a number of way. Lecturers were still responsible for identifying and delivering curriculum content, but in a more distant, didactic format. For example:

> “Lectures are less interactive than at school, but…the lecturers know what they're meant to teach us and they do”. Tim

However, they were not directly responsible for a student’s learning, with a recognition that students had moved to a different paradigm and were now responsible for their own learning. This was captured by the frequent use of the term ‘adult learners’. This altered the student-teacher relationship. This is captured here:

> “I think it's a different sort of support, because at university you're an adult learner and it's on you, whereas *(at school)*…you were very much a child learner and they were responsible for that”. Clare

A consequence was that university tutors would not continually check to see that a student was keeping up:

> “It’s not strict follow-up like it is in school, where you’ve got a tutor constantly on your back”. Anne

This difference between teachers imparting information and ensuring understanding at school and a student’s responsibility for their own learning at university was a common theme, as illustrated below:

> “At university, it’s much more “here’s the information, now you need to learn it yourself”. It’s self-directed learning, which I think was a challenge for me and a lot of other students. Having to adapt to learning things on your own”. Paul

> “At school you’re given all the information so that you do understand it, and if you don’t the teacher will pick up on it. At university, if you don’t understand it then it’s up to you to go and do something about it”. Anne

> “If there's a difficult concept, you have to take the time to understand it yourself. It's not like a teacher will sit with you and hold your hand until you get it”. Sarah

Despite this change in relationships between school and university, participants still reported that university tutors were available to provide support. Indeed, the Medical School was perceived to be an open and supportive environment:

> “You could basically go up to any member of staff if you had a problem. I wouldn't feel uncomfortable going to anyone”. Kate

There were different kinds of tutor and their roles were discussed. PBL tutors had the most immediate relationship, predominantly because participants saw them in a small group every week from the first week of the course. Clinical skills and clinical placement tutors could fulfil a similar role:

> “PBL tutors are the first person that most people would go to”. Kate

> “You have more opportunity to ask a question if you're not sure of something. If you've got PBL, you can ask your tutor. You've got that twice a week and you've got the regular contact with them; and the same with your skills tutor and your placement tutors”. Sarah

A key function of these tutors was to act as a ‘guide’, e.g.:

> “And I think that it's really important that the tutors guide the students through first year”. Hong

However, the role of the PBL tutors was very much one of facilitation rather than content expert. Most students recognised this, but they might take more or less time to reach an acceptance of this facilitator role. The facilitator could be viewed positively, especially when guidance and support where provided, but might be problematic for students who expected their tutors to provide explanations and answers. Two participants illustrate how students might react to this tutor role:

> "In PBL *(the tutor)* was quite good, because he didn't teach us, he just facilitated our learning; so suggested areas we should cover if we were wandering off down the wrong track, but didn't take over and teach us himself, so it helped our independent learning, which helped our own studying". Tim
>
> "The PBL tutor as the facilitator, it's less directly academic. Someone brought something up and said "I don't understand this, can you explain it?" And the PBL tutor said "I don't explain that. I don't know that because I'm a GP. I don't have that sort of advanced knowledge in that field, but here's how you can look it up". It's definitely directing and facilitating study rather than being the resource themselves…
>
> I think certain students might struggle with being told "I don't know that, look it up". But I think the vast majority would understand it very quickly". Stuart

Others felt that it was more helpful if tutors were more forthcoming with information:

> "If the tutors…give very little detail, then I think students tend to get a bit lost. It's always easier if the tutor actually tells you". Hong

Identifying learning outcomes was a challenge for First Year students and signposting these outcomes was a key role of the guide:

> "It's really useful when they *(tutors)* say the bit that you really need to remember and tell you that this is really important…these are things that you actually have to know…this is the bit that students tend to get wrong or tend to forget. It's a signpost thing". Hong

The student-tutor relationship was different from that with a school teacher, partly because of the increased maturity of the student. For example:

> "The nature of the relationship's different because you're older and it's a different format. In A-level you probably needed that support more, whereas a PBL tutor, as long as they're nice and approachable, I think you'd feel if you had a problem you could go to them. Whereas a teacher in school, I think you had a much closer working relationship. But I think that's just the nature of getting older and doing more advanced, mature things. University is independent learning". Margaret.

Participants perceived a difference in their relationship with the lecturers who delivered keynote lectures in comparison to their tutors. Lecturers were transient, delivering occasional lectures, and remote, appearing in front of the year group to deliver a didactic talk:

> "Lecturers are quite distant. You could email them if you didn't understand something. It's probably cos there's so many students and the nature of the lectures. You're just talking at people, but I definitely don't feel like a lot of us would say that we spend as much time with

> our lecturers as we'd like to. It just seems to be that they're there for that hour and then they're not and we don't see them *(again)*". Margaret

This distance was problematic, mainly because lecturers were seen as content experts, whereas PBL tutors were seen as facilitators. This meant that lecturers could offer a level of academic support that PBL tutors could not:

> "The PBL tutor was there more for advice…for any problem surrounding work but not for content itself. We never really have that one person who we can go to and talk about academic content concerns". Sanjay

Students could obtain information from a lecturer, but they had to be personally motivated to ask their questions as shown here:

> "A lecturer gives you their email address and the option if you need to contact them. So it might be that people have questions, but they don't actively follow that up because there's not somebody there saying you should". Anne

PBL tutors did have a role in helping students to identify the correct level of knowledge acquisition for their stage of the course, which was important in a spiral curriculum. They were also able to help students integrate their knowledge between basic and clinical sciences:

> "PBL facilitators know what detail you need and the clinical aspects that are more important, and they can facilitate you towards getting the right amount of detail as well". Aroon

The relationship between a student and their tutors was one of the factors that might influence academic success. Important elements of the relationship included feeling that there was a support network in place, that a tutor was both available and approachable, and that the relationship was 'good':

> "…things like tutors, if you feel you want that sort of formal support or formal advice network then that's obviously quite important" Sanjay
>
> "…things like their tutors, if they have a good relationship, and can ask questions". Sarah

This relationship was different from school and required work. Alan discussed their initial difficulties of becoming a discussant in a shared conversation with their tutor, rather than a passive recipient of information:

> "I think it's quite difficult to get a personal conversation with a tutor or a lecturer or facilitator because of this sort of perceived gap. We're more on a level pegging here. It's not the tutor telling us. They're trying to get us to discuss and learn things, so you feel a bit more like you can just ask a question rather than just ask for an answer from a teacher,

which is nice. Once you have a conversation with a tutor or a lecturer then you're doing much better…but sometimes getting that is a bit more difficult". Alan

Teachers and tutors could provide support for both academic and pastoral issues. Participants differed in their views on the availability of support at school and at university. Reasons for their different opinions may have reflected class sizes at school, tutor group sizes at university and the personal or job characteristics of the tutors and students involved. In school, teachers were immediately available and positioned to identify students that needed support. This was an active process, with problems managed once identified. This is illustrated here:

"School teachers tend to be more proactive…if they can see that you're struggling they will come and ask you about what you're struggling with, why you're struggling". Aroon

"I think I got more support at school, because it's easier to find a teacher. We had a personal tutor that we could always find. At Medical School, most people are clinicians. Even though they are really keen on helping you, there's only so much time that you can find them. Otherwise it's email or phone, which is good, but it's not that helpful compared to face to face talking". Hong

University tutors were not always in a position to identify students who were struggling or in need of support. Instead, the responsibility lay with the student to approach the tutor and ask for help:

"At university, because there's so many students, one lecturer would not necessarily know where a student is, especially because we don't have a lot of contact time. So I think the student has to actively seek out support if they need it. In school it's more of a passive process". Aroon

"At university they're always there…for support, but it's more you're an adult learner, you're responsible for it. I think if I needed support though it would have been there. If I'd gone and asked more questions they'd have been supportive". Clare

"With your personal tutors and clinical skills tutors you do get support. It's less about the support being there, but more about the students reaching out". Meria

"I got more *(support)* at uni, because PBL groups are so small. PBL tutors are your main source of support. You're meeting them twice a week. If you've got something on your mind, it's so easy to hang behind for two minutes at the end and tell them what you're worried about. It doesn't have to be like a big formal meeting or anything". Kate

However, the dispersed nature of the course meant that a single tutor might not be able to recognise when a student was struggling. For example:

"It's difficult 'cos a PBL tutor only gets to see you in the PBL setting and judge your standard based on that. It could be harder to pick up people who need more academic

support if they're not recognising it themselves". Margaret

The onus was therefore on the student to recognise and acknowledge that there was an issue that needed to be addressed. Different students might be more or less able to do this:

"If you're self-aware and you know that you need help and support or things aren't going well…the support's there for everyone. It's just whether they acknowledge it and go search for it". Clare

"If the student is more active rather than passive, then they might seek out the information more readily. The support is definitely there if you need it…

Some students can be quite difficult. They don't seek support when they really need to, and instead they just try to do…whatever learning that they have to do by themselves, not seeking the right support". Aroon

A willingness to ask for help, and to listen to the advice given, was seen as an important difference between successful and unsuccessful students. Successful students sought and engaged with support from tutors, and others, in a timely fashion. They were able to do this at an early stage and over relatively minor concerns, as shown here:

"They're able to find support when they need to…

People who realise quite early on that even if they feel like their problems are not to scale, they still feel like they can go out and ask for support. Even if it means just having a conversation with a tutor about something that's worrying you or could be hindering your academic abilities, rather than waiting until things go really, really bad". Meria

"The successful student is more likely to address any issues they might have, whether it be by themselves and just acknowledging it and making sure they do something towards it, or finding support through their friends or their academic tutors or family or anything. They're more likely to be proactive in that sense and not just shove things under a rug". Meria

In contrast, unsuccessful students were thought to avoid seeking support from their tutors:

"*(They)* don't ask tutors for help…

If they were asking and talking to their tutors and communicating more effectively, that would help" Kiran

No one expressed a belief that there were groups of students who were intentionally or unintentionally excluded from support:

"I don't think there are any barriers discriminating against who can and who can't get support. I think it's very equal the way it's done". Anne

"I never heard of a tutor refusing to help, but a student needs to ask. A tutor doesn't know that a student wants help if they do not ask". Kiran

The institution did have mechanisms to identify students in need of additional support. Formatives assessments might be one tool that facilitated this, even when a student was reluctant to acknowledge that there was a problem.

> "Certain students will have the support find them more readily, because if they're known to be struggling already then the support will find them throughout the year, rather than let you struggle in silence". Stuart

> "…formatives, where the uni can actually identify students who maybe aren't doing as well as they'd like. Then they can approach them, cos I think students might be reluctant to approach the uni". Kate

However, the institution did not impose support and most students did not need additional support. Participants felt that imposition would be intrusive and wasteful of resources, e.g.:

> "Support is definitely there at university if you choose to seek it out, but it's not thrust upon you. It's not "Let's have a weekly meeting to talk about how well you're doing". For a vast majority of students I don't think that'd be a valuable use of time". Stuart

Potential barriers that prevented students from approaching tutors were discussed. A student who lacked self-awareness, or who was unable to recognise how difficult the course should be, might not realise that they were struggling and needed support. For example:

> "Because Medicine's so difficult anyway, everybody struggles with it. It can be difficult to know when you're struggling to the point where you actually need to get help. Where do you draw the line between just thinking that it's a hard course and thinking that actually you do need some more support?" Kate

In a diffusely delivered curriculum with many points of contact, students had to be able to identify the correct person to talk to if they did need support. Confusion might arise when identifying the correct person for academic as opposed to personal issues, for example.

> "Knowing who to go to talk to, whether they want to talk about the work or whether they want to just talk about anything else". Anne

The relationship between a student and tutor might depend on individual personalities. Not all tutors are the same and some might be more difficult to approach. A tutor that was felt to be approachable by one student, might be perceived differently by another:

> "Certain tutors might be more approachable than others. Obviously, everyone's different and people get on with different people. You might really clash with your tutor or you might really get on with them. Somebody else might really like the tutor that you don't". Sarah

> "I think it is a lot about the personality of the tutor. Everybody will have difficulties approaching somebody, but I think that would be the largest factor – the relationship with the tutor". Alan

Students might be unwilling to speak to tutors, either in general or about specific issues, as suggested here:

> "You're gonna get people who don't really want to talk to a tutor anyway, who are never going to go and do that". Margaret

Some tutors were perceived as unavailable or too busy, although the perception of availability was interrelated with students' willingness to approach them. For example:

> "Some tutors are a lot easier to find than other tutors…it's how free the tutor is and how busy they are with their work, but also if the students are making the effort to reach out for the tutor". Hong

Fear was also a possible factor in preventing some students from approaching a tutor:

> "There are tutors that people are too scared to approach" Alan

This might relate to the personality of the tutor, or to stereotypical perceptions of how a doctor in training should appear. 'Strong and self-supporting' was offered as a representative expectation:

> "I feel, especially as a medical student, people tend to not want to go and ask for support. Just the fear of "I should be able to do this. I want to be a doctor, so I should be able to handle this". They back away from showing their weaknesses or vulnerabilities…
>
> When I did go ask for support I was thinking "Is he gonna think I'm not tough enough? Is he gonna think I'm too emotional?" Like I should be able to handle this…I don't want him to think that I'm not strong enough or I'm just gonna start crying. So it might be you doubt asking for support based on…an internal thing where you just don't want someone to think you're not capable". Meria

Poor support from tutors could contribute to anxiety and a lack of success:

> "Poor support from tutors can be a stressful situation". Hong

Another potential barrier to either seeking or listening to feedback was the perception that the Medical School would use feedback as a mechanism to reprimand the student and to protect the institution from the consequences of student failure, rather than to support the student. This is demonstrated here:

> "I borderline failed my first formative. I had to have a meeting with my tutor and I thought it was horrible and hated it. I think it would be important not to approach it in a telling off kind of way. You don't want to make them feel really bad that they've failed or they're being punished. It felt like I was being put on record so that the Medical School could keep an eye

on me and that was a bit scary, a confidence knock…I was like "Ooh, I'm gonna fail. I'm gonna be kicked out". I think that situation could be made into a positive thing of being given support". Kate

Some students might prefer to seek support from peers or from outside of the hierarchy of the Medical School or outside of the Medical School itself, finding this a more comfortable alternative:

"A lot of students go to their peers as opposed to tutors, because I think with a lot of students there's a barrier. They don't want to ask tutors". Kiran

"Some people don't like having personal conversations with someone they don't know. They'd rather go to a friend rather than a tutor". Margaret

"They are more comfortable talking to someone outside the Medical School. That's why some people just go to university student support". Hong

An important element of the role of university tutors was the provision of feedback. This feedback gained importance through the tutors' position of authority. This promoted reflection and had the potential to impact on students' affect:

"The only time that you'll get direct compliments or criticism from a person in power or authority, is from them *(the tutor).* It is good where you're able to reflect on how you think you're doing, good or bad". Alan

Teachers and assessment. Participants believed that teachers influenced their success in summative assessments, although they reported different perceptions of the role of school teachers in relation to external examinations (A-levels) and university tutors in relation to internal summative assessments. Students' success in A-levels was important to their schoolteachers, at least in part because the students' results reflected directly upon the teacher and the school. For example, at school:

"It reflects more on the teachers. They're pushing you to get the best for the school. They wanted you to do your best…so it was for them". Clare

"The teachers were under a lot of pressure to get As and A*s, rather than necessarily support the students". Clare

Participants suggested that because schoolteachers were not involved in setting A-levels, their motivations were different from university teachers. Schoolteachers were external to the assessments and driven by a desire to achieve the best possible results. This might even involve 'excessive' support:

"A really cynical part of me always thinks at school it's not the teachers setting the exams, so they're on your side and they're constantly trying to get round the exam boards and find ways to get as many kids to pass as possible". Sarah

> "I remember once in A-level Chemistry, we all failed the ISA. When we had to resit it, the day before my teacher, did a revision session. It was basically the ISA for the next day, so we all did really well. They'll do whatever they can and they don't care as long as you're doing well and passing, cos it makes them look good. Whereas at university they won't cheat the system to get you through". Sarah

In contrast, university teachers were directly involved in setting assessments. Tutors' direct involvement might be useful to student learning, in that they may be able to give explicit guidance on what one needed to learn to pass the assessments:

> "The tutors who set the exams, they give you an indication of what you really need to know". Aroon

> "The lecturers write a lot of the exam questions. So I think everyone generally watches all of them, cos that's where your best source of information's from". Margaret

Peer Support. Peer support can be defined as support received from other people in a similar situation to the person receiving that support. Participants discussed peer relationships with individuals and with groups. Groups involved different members and occurred in different settings. These included other Medical Students in either formal or informal learning groups; students studying for other degrees; groups within a 'work' setting; groups within a 'friendship' setting. Groups had the potential for levels of hierarchy. Some groups included a tutor or facilitator, others only students. Graduate entrant students held a different status to school leavers. Peers were seen as an important source of support, both from academic and personal perspectives. The presence of a 'good' support network and a student's ability to seek and use support from peers and friends were characteristics associated with success. For example:

> "I would say that the successful student was someone who had a good group of friends". Margaret

> "You've got someone to talk to if you need to. You've got that sort of net behind you, if you need it". Sanjay

> "Seeking support from tutors or lecturers, and other friends". Aroon

The converse was a perceived characteristic of unsuccessful students:

> "*(They)* don't talk to peers or share information". Kiran

In addition, students had to be able to work well within their peer groups in order to succeed:

> "Do they get on well with their groups?" Sarah

Peers could take on a range of support roles. They could take on the role of teacher, especially where one person was more able in a particular aspect of the curriculum. This created a sense of both *using* one's peers in this role and of *collaborating* with peers, as demonstrated here:

"Utilising friends who are good at certain things and getting them to teach" Clare

"Having a nice group on the course helps, because then you'll probably work together and help each other out". Sarah

Learning in groups. The opportunity to study and learn in structured groups, including PBL, Clinical Skills and Clinical Placement Groups, was a key feature of the First Year curriculum. Some participants identified this as a new experience, having previously worked alone:

"I started working in groups. I never used to do that. I've always just needed a textbook, media and written notes. I did the whole 'going to the library with a bunch of medics' and we'd draw on the wall and explain things to each other, which was really helpful". Meria

In the First Year, Problem Based Learning exemplified the formal group for propositional knowledge acquisition and Clinical Skills and Clinical Placements the formal groups for a combination of propositional, practical and professional knowledge. Participants identified the act of verbalising an argument as a good way of learning. They encountered new perspectives that they had not considered and confirmed their own understanding through explanation to others:

"The combined knowledge really helps, because people have very different perspectives when looking at things…it's like a little support group, a running partner". Margaret

"A lot of the time I learn best from explaining to other people" Clare

"Someone who doesn't understand something, if you try to explain it to them, then it just make it clearer in your head". Hong

Discussion was a useful way of tackling difficult topics, because shared learning allowed students to resolve issues together:

"The discussion element is really useful if you're stuck on something. Or just talking through a topic, especially difficult topics". Margaret

"We talk about what we do and don't know, which I find really helpful with learning…Questioning each other and testing each other in general". Hong

Participants felt that group discussion created better understanding and retention of information than simply being given a piece of information by a tutor, allowing self-directed learners to share their problem solving skills and their learning:

"As most of our learning is self-directed *group work* is your best source of being able to work things out. You 'get it' better. If you just email a lecturer, you get an answer and you try to remember that. But when you've got a group, you have a big discussion about something and try to come up with a conclusion to the problem". Alan

Discussion within a group allowed students to develop and test their own understanding and identify areas where they needed to focus their future learning:

> "S*uccessful students* are happy to talk through concepts and they know that they're solidifying their own knowledge. They're seeing what areas they don't understand". Kiran
>
> "If you can explain how a concept or process works, you get a better understanding of it yourself". Tim
>
> "If I couldn't explain, did I really understand it myself?" Stuart

The opportunity to help others develop their understanding became rewarding and reinforcing, both by creating the personal motivation to have sufficient understanding to be able to explain a concept and through an affective reward from knowing that one had helped one's peers who were grateful:

> "You're helping out your peers, which makes you feel good. You get that self-satisfaction and that motivates you. For a lot of students who do very well that drives their motivation to make sure that they're on top of things". Kiran

Students that did not take part in discussion did not have these opportunities to test, cement and identify gaps in their knowledge, as illustrated here:

> "Students who have only done on-line, they don't get involved with the discussion as much. I don't think it really sinks in. So the knowledge just isn't there". Aroon

Active participation within a group facilitated learning in other ways. Knowing that one had to contribute to a discussion encouraged a wider reading and preparation, to ensure that one could actively participate, giving rise to what constituted a 'virtuous circle':

> "Some students do a minimal amount of work for PBL sessions and they believe that just reading a textbook from the front to the back will cover them for the rest of the year. Whereas other students tend to do more work for their PBL, where you have to do the work and then discuss it in class. They're more into the discussion and, as a result, they seem more knowledgeable as well…
>
> I try to go into a good amount of detail without going overboard. I try to discuss it as much as possible. I think a lot of the knowledge comes from being in that group, because it turns out that sometimes I don't know something and someone else does, and that would sink in. You feel "OK, I should know that"". Aroon

Learning in a clinical context, through clinical skills and clinical placement groups, was a new experience for most participants. Speaking to patients about complex and sometimes difficult issues and physically examining another person's body were outside normal day-to-day experience, especially for school leavers. These tasks required communication and physical examination skills that had to be learnt and developed through practice. This practice took place in the alien environment of healthcare placements. Sarah had worked as a health care assistant in an in-patient setting:

> "You've got to learn the information, but you've also got to learn communication skills with patients, examination skills, and things like that. If you're not used to being on a ward with patients, that's something you'd have to get used to. And how you talk to people. That's a skill that you'd have to practise, which is different from some degrees and school". Sarah

Groups were an important place for developing these skills, which could not be learnt by an individual in isolation or acquired from textbooks:

> "Doing a mock OSCE with your friends really helps. It's a lot more difficult to do it on your own, revising clinical examination and things like that. It'll always be easier to do it with friends". Hong

Clinical groups were a place where peer-to-peer teaching was not always overt, occurring either through the copying of language or by identifying role models, e.g.:

> "There's loads of little phrases that I picked up from other people that I've just considered to be a standard you want to reach cos they are fantastic phrases". Alan
>
> "In clinical skills and clinical placements, when you see somebody who's absolutely fantastic in consultation. It's something to aspire to. That's where you reflect off each other the most". Alan

Working with peers allowed students to gauge their own level of understanding, to make decisions about the depth of coverage of the curriculum that was required, and to position themselves when trying to assess their level of attainment in comparison to their peers and the requirements of the course. Each of these elements was crucial for success:

> "By talking to…your peers and actively engaging in the PBL process you're more likely to get a good idea of whether you're meeting the outcomes". Kiran
>
> "If you get into a group…it's a lot easier to see where you're at and to think to yourself…am I doing well compared to other people?" Alan
>
> "In peer discussion you'll ask "How are you doing with this topic? I found this really difficult". You're relieved with "So do I". If other people are finding things very easy, then that's a problem. If everyone you're talking to knows more about something than you, then that suggests that you haven't been working hard enough". Paul

This could help to allay anxieties that arose over the course:

> "That's why I found studying with friends so helpful. When I was freaking out "Have I learnt this in enough detail?" They'd say "Yeah, that's what I've done". We'd gauge from how much each other had done, how much we needed to do". Kate

Students who chose to work in isolation did not have this opportunity to gauge their level of work and attainment:

> "If they *(unsuccessful students)* discussed it with friends, then they might get an idea of where they should actually be. If a student's in isolation, then they won't know what sort of knowledge other students have". Aroon
>
> "Students that work on their own tend to miss out things and not realise that they have". Hong

This might in turn lead to less successful outcomes. For example:

> "Success really depends on peer support…if medical students are helping each other or if they are just working on their own". Hong

Working together allowed students to see how their peers approached their studies. Participants acknowledged that there were different ways of doing things and working together allowed them to see what worked well and to identify alternative ways of approaching their learning, trying out techniques that peers were using successfully.

> "Working in teams…allows you to see what your peers and your friends are doing well and how they're going about things. There's a lot of ways people do things. You may find someone's way of doing something is a lot better than what you perceived as being the best way to learn something". Kiran
>
> "In the beginning I stuck to my ways. When I started doing things differently, it was a consequence of…seeing other people doing it, but also realising that maybe I need to up the way I learn a bit…Flash cards and drawings and that. I saw people doing it in PBL and it really helped". Meria

Within their formalised groups, peers were required to provide structured feedback to each other during the year. This was not often talked about and no participant commented on its usefulness.

<u>Informal groups</u> were a site of socialisation, were self-affirming, provided motivation and allowed access to shared learning resources. These groups were a source of friendship and offered an opportunity to develop a shared understanding of the struggles of being a medical student. Examples are given here:

> "It's more of a motivational thing, cos sometimes being at uni and studying, especially studying Medicine, can be isolating from the rest of your friendship group. Term times are different. Workload is different. It's just different from everyone else…
>
> If you have medical students friends …they're always at the second floor in the library which has the boards you can write on. Every time you walk past there's diagrams of the stomach anatomy and stuff there. So just being around that kind of environment. I'm sitting at home, but I know they're there, so I need to get up and go…
>
> And small things, like sending each other information – a really good video…

> And just that feeling that you're socialising, but you're getting work done and it doesn't feel like such a burden. It stops you from feeling as isolated from the rest of the students on campus". Meria
>
> "They have study groups with other people who are in a similar position. Who are struggling through the same things. Just support within those kind of networks". Meria

These informal groups constituted an important site of learning:

> "I learnt so much in my study buddy sessions.
>
> We used to go to the library and quiz each other and stress about the exams and help each other with things that we didn't understand. I'd say that's probably the main way I did my learning in the first year". Kate

Formal group membership was assigned by the Medical School. Participation was mandatory and subject to weekly grading and feedback from tutors, absence monitoring and peer review. The development of informal groups was dependent on students. It was unclear how informal groups formed and how membership was sought, offered or granted. Informal groups appeared to be based around friendship groups or physical places of learning, particularly the library, which functioned as a site of social learning. Kate explains:

> "People I'd met in the course or people from my halls that were doing Medicine and going to the library at the same time as me…
>
> It wasn't a formal thing at all. It was more just if we were in the library, we'd always go and find each other and find a group learning room and use the interactive white board and flash cards and things. But it definitely wasn't a formal thing". Kate

Group members felt that they were open to the whole year, but 'friendship' was an important determinant of membership:

> "The whole year is included, or at least offered to be included. But obviously within that there are friendship circles. I think that's unavoidable. We can't always hang out as a big group of seventy. There's gonna be smaller circles". Kate

To enter a group, a student had to be present and ask to take part:

> "Be in the library. Come and say "Hi". It was just amongst friends really, so if you were kind of in our friend group we just did it". Kate

Individuals were not excluded deliberately, although individuals might exclude themselves:

> "It's not cliquey. I don't think anyone's left out in a malicious way. I think they would be welcome, if they came along in the library and they wanted to join. But I think some people are just more introverted, have a different personality, different interests". Kate

These views were not shared by others. While the library was recognised as a setting that encouraged socialised learning and facilitated group interaction, group membership was felt to be based around existing friendships. Access was available within pre-existing social circles and not easily accessed by those outside of that circle. For example:

> "They were often social groups…I'm sure if you asked, they would let you come and study with them, but it wasn't made explicit. It wasn't people posting on Facebook or on discussion boards "We're going to be in the library. Just come if you want to". It was more "We're a group of friends. We're gonna study at the library together"…I would say a lot of the social groups that were also study groups weren't accessible. It wasn't an open invitation. You would have to be in the social group already" Stuart
>
> "Each group probably isn't open to everybody, cos it's a form of a friendship as well. I haven't really heard of people just joining groups randomly". Tim

Informal groups did not have to study the same academic subject, but could share the same space, time and motivation to learn. The library, as a physical location, became the central point of a shared endeavour, even when students were studying different subjects. This joint enterprise involved friends committing time, peer support coming from the joint pursuit of academic work, as demonstrated here:

> "I would study with a group, but it would be people that were doing other subjects. It wouldn't be group study in the sense that we would all talk about the content. It would be group study in that we'd sit with each other. But we'd be learning completely different things". Stuart

The presence of a hierarchy within a peer group, such as a graduate who was perceived to have more knowledge than an undergraduate, enabled non-members to make an approach:

> "If I saw other medics in the library and I didn't understand something, I would go and ask them. Particularly if I knew they were a postgraduate". Stuart

An extension of the Medical School's formal groups created another basis for the formation of informal groups. This required deliberate action on the part of its members and a sense of being able to work constructively together:

> "You tend to work with people in your PBL or other groups, who all just want to work together". Tim

The effectiveness of groups might depend upon the individuals contributing to them. Formal groups had a diverse membership. This might not be the case in an informal group:

> "Within the PBL group there's a fairly wide range of experience and backgrounds of knowledge, but outside, I guess, it depends on the friendship group". Clare

Other aspects of peer support. A group of friends away from Medicine was also important. Ideally, friends should share a similar work ethic. Sarah discussed that living with engineering and language students was beneficial, because they had similar timetables and commitment to work, whereas living with sociology students might be detrimental because of their lighter workload and laxer work ethic:

> "I think it's good to have a group of friends away from the course to spend time with. But it helps if they're doing similar courses, so they've got a similar work ethic". Sarah

Making comparisons between oneself and peers on other courses could be demoralising because of different expectations and course requirements:

> "If you're comparing yourself to your peers outside of Medicine, you can feel hard done by. It depends how you react to that. Do you just feel annoyed while revising at midnight, or do you just try and fight it and don't do as much work as you perhaps should?" Alan

Medical Students from higher year groups represented a valuable resource, providing an advantage to students with friends in higher years, at least in part by establishing realistic expectations:

> "I think that talking to other years helps a lot. People who have got friends in other year groups do find that easier because they do know a lot more what to expect". Margaret

As discussed previously, peers could provide support for students that were reluctant to seek help from their tutors. It could be easier to approach a friend with a question, the implication being that the security of friendship allowed a student to expose a lack of knowledge that they would be reluctant to acknowledge to a tutor in a position of authority:

> "If you want to ask something, it's always easier to ask a friend compared to asking a professor. That would be a bit scary". Hong

However, while approaching a peer if one was reluctant to speak to a tutor was better than not seeking help, this might not be as satisfactory as engaging with tutors, as suggested here:

> "It's important to ask their peers…if they don't feel they can ask tutors. If they're asking their peers that's another means or mechanism to indirectly get a message. But if they were talking to their tutors and communicating more effectively that would help". Kiran

Working in collaboration with peers did not come naturally to all students. Alan described their initial experience of PBL, how this related to their school experience and impacted on their initial interaction with other students. This needed a recognition that teachers were no longer the primary source of information and that one had to rely on one's peers:

> "The first year of PBL I spoke in double digits at the most. I didn't get PBL at all and that was very much to my detriment. PBL was nothing for me. It was an hour and a half wasted each week. Whereas this year, being more chatty and sociable, I'm learning a huge amount.

That was the big thing. Realising that at school you learn from the teacher, but I didn't have to do that anymore. So I was OK to be here, but I wasn't OK to learn from other students. That was a difficult thing to get into. That was the biggest jump. Having faith in people around you other than yourself".

The absence of competition between students facilitated peer support and peer learning. This was a notable feature of the Medical School:

"Everyone can pass. Some Medical Schools have this whole competition aspect, where you want other people to fail because then you're more likely to pass. We don't have that. It's really important to big up your peers and share notes and do things like that. Working together is a really good way of doing that". Margaret

For peer support to contribute towards success, a student had to be self-reflective, to ask questions about how they were working in comparison to their peers, to choose appropriate comparators and to honestly reflect on any differences that were present. For example:

"If someone asks "How are you getting on with your revision?" and the failing student isn't working that much…they can say "This isn't good. I'm well behind my peers. I should be working harder". Or they could say "It's fine. What I'm doing will work for me" and not do anymore…they're not recognising the fact that other people are doing better than them… Comparing yourself to the right person. If you compare yourself to someone who always seems to get everything first time and knows everything, then it's not that useful. But if you ask peers who are similarly able…

Being honest with them self at that point would make a big difference". Paul

Graduate students occupied a different position to school leavers when discussed as peers. The presence of graduate students in a group was considered to be advantageous. Some participants felt that graduates were fairly distributed amongst groups in relation to school leavers:

"There's enough grads you can go and talk to". Clare

"Someone might be a graduate, who's done it before, and that shared knowledge I think works quite well, which is why PBL works really well". Margaret

Peers as a negative influence. Peers could also have a negative influence on how students studied, how motivated they were and how they felt about themselves. Gauging the required workload against peers on different undergraduate courses might contribute to a medical student making incorrect judgments about what was required. First Years frequently live in university accommodation with students studying for other degrees. Students recognised that the workload in Medicine was different and that their work ethic needed to be set accordingly. Failure to do this could be detrimental, especially if Medical Students adopted the behaviours of students on less

demanding courses. Participants perceived other courses as being less intense, allowing more time for extracurricular activities. Incorrect judgments occurred through passive adoption of lifestyle or active decisions over the balance between work and socialising. These quotes illustrate this:

> "It's a more hours' intensive course and it's sometimes difficult to get that past your mind, especially in first year where you're enjoying freedom". Alan

> "I think it's quite easy to get distracted throughout the year, especially with university and with friends who are from other courses who have more free time". Aroon

> "If you get into groups where you've got students who aren't in Medicine, then you might be less inclined to do the amount of work". Aroon

> "There's quite a lot of peer pressure. There's a lot of people who'll be like "Oh let's go out" and you may say "Oh I've got work which I need to complete" and they'll say "Don't worry, you can do that afterwards"". Kiran

This could be exacerbated by the different levels of attainment required on different degree programmes during the First Year. Medical Students must pass the First Year in order to progress and pass marks are typically between 50 and 60%. However, they might misperceive these requirements from the expectations of students on other courses:

> "Their first year doesn't count towards their final degree. It's a combination of their second and third year. Their benchmark is "I just need a forty percent to pass". You obviously know that you need well more than the forty percent, but it's easy to join in and think we can get just forty-one and we're good. And then next year we can work hard". Meria

> "In first year, when the majority are living with people who are doing different degrees, they might have different exam dates to you. They might not have as much work. The first year of a lot of courses doesn't actually count. They might just be going out all the time and thinking that you can too if you're a medic". Kate

Living with peers that prioritised socialising could also have a negative impact through their disruptive behaviour:

> "If you live with really loud people that go out all the time, it'd be difficult to study and go to bed when they're making a lot of noise". Sarah

A friendship group that was characterised by non-attendance could exert pressure towards absenteeism:

> "If none of your friends are turning up to anything, you're not going to want to go on your own". Sarah

Choosing peers as role models was important, but selecting the wrong comparators could lead to self-doubt, with adverse effects on motivation and mood, as demonstrated here:

> "The person in your group who is brilliant, you're gonna befriend them, work with them, make sure that you work as hard as them and know as much. But if you think you're not as smart, you do doubt yourself and doubt if you should be here, if you're good enough. That can have a cascade effect of you feeling really low and then affecting your performance and ability…
>
> There's always the students that you know that are just really brilliant in everything. It just seems like it comes really easily to them. That does make you question yourself, even though it shouldn't". Meria

There might be a greater danger of this when comparing oneself to graduate students:

> "If you were a graduate, you'd be feeling very confident in PBL. You're the one explaining to people and people are thanking you. Whereas if you were a very shy undergrad, you're gonna be thinking a lot less of yourself because there's just lots of people around you who know things that you don't…
>
> You can constantly spend your time thinking "Oh dear I'm awful", especially if you're talking with graduates". Alan

Using peers to gauge that one was working appropriately was important, but some students recognised that any comparisons had to be interpreted with caution. Not everyone did what they claimed, people worked differently and some people were more efficient. Being too sensitive to comparisons between one's own work ethic and someone else's could lead to increased anxiety and stress:

> "Not being too influenced by everybody else's work ethic is important, because sometimes you hear things about people seemingly working really hard and if you focus too much on what everybody else is doing you're gonna stress yourself out more". Anne

Students 2 and 7 suggested that these comparisons should be kept in perspective and peers' claims not always believed:

> "I wouldn't listen to anyone else with revision. I think that's quite negative because everyone does it differently. You can use it as a baseline. If someone's saying "I did sixteen hours of revision today" and you've done five, then don't upset yourself. That is foolish, because it's how it works for different people". Margaret
>
> "Not being put off by what other people are or aren't doing, because everyone learns and takes things in differently". Anne

Family support. Family could make significant commitments to facilitate a student's ambitions to study Medicine. These included employing private tutors, but also relocating the student or family to facilitate attendance at a different (private) school, e.g.:

> "The schools on the Isle of Wight are absolutely dreadful. My high school was appalling. I knew that I just wouldn't get into Medicine if I stayed there so I had to go to a private sixth form on the mainland. It was my only realistic hope". Kate

Family members could provide a source of direct academic support for some students. This was dependent on having suitably qualified family who were also willing to help. It was not clear how commonly this mechanism of support was used nor how useful it was. As an example:

> "Having medics in the family would help. If you don't understand anything, you have an expert just a phone call away". Tim

Other possible roles of the family in providing academic support are discussed below (see 'Ethnicity').

4. Knowing where you are.

I have discussed 'how students work'. To be successful students had to be able to identify what they needed to know. This was 'the right level', as explained here:

> "Finding the right level. Obviously lectures are at the right level. But in PBL not being too simple and not too complex, but pitching the revision and the work at the right level". Clare
>
> "Knowing what you need to know and making sure that you know it as well". Tim

This was the first year at university and students needed to make accurate judgements about how much work to do in order to pass end of year summative assessments:

> "Because it's the first year, they might not necessarily know how much work they need to put in to pass". Kate

There appeared to be uncertainty about where the right level lay and students reached different conclusions, e.g.:

> "Some students when they come into university, they're not sure exactly what they need to know and what level they need. Because Medicine's such a broad subject you can read into certain areas and keep going deeper and deeper. So there's a right level that you need to know for your first year". Kiran

Uncertainties revolved around key areas. Students needed to recognise that in the First Year the focus was on normal function and that each system would be revisited in greater depth in later years. They needed to make judgements over the correct depth of knowledge needed and the amount of studying required to assimilate that knowledge. They needed to be able to position themselves in relation to the academic requirements of the university and the abilities of their peers:

> "Everyone has their own perceptions of what you need to do and where you actually gauge that to be…it's just where you position yourself as to your ideas about what you need to do.

Cos I know in the first term last year my gauge was very, very out. It helps you to re-evaluate and see what it is you need to do". Alan

Mechanisms were available to help students make these decisions. Subject learning outcomes, learning opportunities and resources helped identify the correct level of knowledge. For example:

"The Medical School publishes overall learning objectives for the whole year. At exam time, I just went through all the learning objectives and checked that I knew all of them". Tim

"At the end of each block, we know what outcomes we need to go through and what we need to learn. That definitely helps". Kiran

"By talking to your tutors and your peers and actively engaging in the PBL process you're more likely to get a good idea of whether you're meeting the outcomes. And lectures tend to give you a good idea in terms of the content and what level you need". Kiran

PBL was a site were the level of knowledge required could be gauged against the curriculum and tutor expectations. Students could make comparisons between their own workload and attainment and that of their peers:

"In PBL, with the learning objectives and in the feedback from other people, you get a good understanding of what you actually need to know". Tim

Students could also use other sources of feedback to make judgements about their level of attainment and whether this was 'the right level'. Receiving and accepting feedback could help students to judge that they were not working hard enough. For example:

"Because there was that weekly feedback I realised that I had to be working a lot harder every week". Paul

"In PBL you get peer feedback. You get feedback from your tutors throughout the year. It's weekly when you do your eRoAs* or when you just have conversations with your PBL and your skills tutors. If you're getting positive feedback, or you're not getting any negative feedback, that's kind of "OK. Let's just continue doing this". There are different opportunities within the year where you do get feedback that can be a transition point – maybe I should re-evaluate what I'm doing and try to improve"". Meria

* An electronic portfolio that demonstrates participation in learning activities.

Identifying the correct level involved both self-reflection and comparison to others:

"It's a kind of self-awareness and realising I'm not keeping up. I'm not getting it as well as I should or as well as my peers". Paul

> "Continuing to challenge yourself and if you get into a group where you're working alongside other medical students, it's a lot easier to see where you're at. Am I doing well compared to other people?" Alan

Establishing a sense of position in relation to one's peers involved talking to friends and working in groups, e.g.:

> "Because we've got PBL every week, you're comparing your knowledge to other people. So it becomes apparent if you're not contributing as much to discussions that you're not doing so well". Paul

Students that preferred to work in isolation might not have these opportunities to locate themselves. This is shown here:

> "If you're an isolated student, you won't necessarily know what level other students are at…They think that they know what they need to know, whereas if they discussed it with friends, then they might get an idea of where they should actually be". Aroon

A difficulty that participants reported in the First Year was accepting that they were no longer the best student in the class, but that they had joined a group of very high achievers:

> "Another change, is that everyone is very, very able". Clare

This could have a negative impact on self-perception and required effort to overcome:

> "If you're getting into Medical School, you did really well in sixth form, you're used to being at the top of your class and being surrounded by people with different abilities. Then you come into Medical School and everyone's smart and it's just quite overwhelming. You start doubting yourself, because you're surrounded by people who are very high achieving. There's a lot of self-reflection and being able to be comfortable in yourself and your ability, to stop that feeling of being overwhelmed". Meria

This change might affect students' motivation:

> "You go from being top dog at your school and your college, to being around everyone who is very academically able. I think that might play into not doing work and trying to do it all at the end". Stuart

A recognition that everyone else was very able and that one would have to work hard to be successful was felt to be important. For example:

> "The faster you realise that actually you're trying to compete with people who have also been patted on the back their entire life. The idea that you're not going to be able to just waltz through. If you get that early on, it's nice". Alan

When trying to position oneself, it was important to select appropriate comparators. The 'idealised' peer was the student whose achievements could not be lived up to. Equally it was not useful to

develop the same study habits as a 'lazy' student:

> "Some people are going to be working very, very hard from the onset. They're gonna know everything, which is good, but then it makes it difficult for you to compare yourself to them, because they know everything. I'm not gonna be as good as that. And some people say they never study and they don't seem to know anything, and maybe it's not very helpful to compare yourself to them, because if they don't work that's probably not the best benchmark to set yourself to". Paul

Making comparisons to high achievers was potentially demoralising, for example:

> "There's always the students that are just like really brilliant in everything and they're quite outspoken and it just seems like it comes really easily to them. And that does make you question yourself". Meria

The Medical School did not emphasise competition between students. Collaborative learning and peer support were given priority. Some participants felt that this lack of emphasis on competition supported their learning activities and future professionalism:

> "When you're in Medical School competitiveness is very good, but it's also important to work in teams because when you're out there in medical practice, you're always going to be working in teams. So being competitive should never override your ability to work in a team". Kiran

The same participant felt that a degree of competition was important. Competitiveness was one of the characteristics that allowed students to obtain a place in Medical School in the first place:

> "Getting into Medical School is a very competitive process. So it does select for a lot of competitive students". Kiran

Competition within groups helped some students to judge that they were at the correct level of attainment:

> "Sometimes you tend to compete with others. You want to know the same amount or a bit more than them". Aroon

Competition could help motivate students to improve, as suggested here:

> "I hate to think of Medicine as a competition, but when you see other people doing better than you, you just start trying to make yourself acceptable again…
>
> Any sort of feeling of inferiority to somebody else, you just begin to try a bit harder". Alan

Competition within a year group might encourage students to work harder. In the first two years, participants are based on two separate campuses. Hong felt that there was a difference in competitiveness amongst students on the two campuses and that this affected work ethic:

> "In *A* everyone seemed to have the mind-set of coming in having done their work and revising with each other and staying really close while studying. In *B*, it's a bit more spread out and that doesn't really help with first year when they are still trying to adapt to Medical School…the students were pushing each other less. If your friends are not doing the work, you're not doing the work". Hong

While the above mechanisms were available to students to try and gauge their position, the responsibility for making these judgements was attributed to the individual. For example:

> "At the end of the day, only you as an individual know what you know and what you don't know and what areas you need to go and look up". Kiran

> "As long as you focus on what you're doing and you know how well you're doing and where you are in terms of progress, I think that's the main thing". Anne

Specific factors that prevented students from finding the correct level included their need for very explicit learning outcomes and a lack of personal insight over their current level of attainment:

> "Certain students find that they're not entirely sure unless it's completely written out for them. That can contribute to them not doing as well". Kiran

A lack of insight into the right level might lead some students to carry on without seeking support:

> "I think sometimes they feel as if they're on the right level" Aroon

Students had to be able to recognise that they were struggling:

> "They might not want to admit that they're like finding it hard, or might not even be aware really". Kate

Failing an assessment by a narrow margin might not be recognised as an indication that there was a problem. This was attributed to complacency and the expectation of future improvement without taking any specific action, as illustrated here:

> "If someone just scraped through the formative exams, or maybe borderline failed, they might just think it'll be fine. It was just a formative. I'm sure I'll be OK in the summative. And then not bother to go and actually get help". Kate

5. Personal attributes.

<u>Overconfidence</u>. Participants talked about reasons why very able students might struggle with the workload or assessments in the First Year. A common view was that some students had always found assessments and progression straightforward, through a combination of their natural intelligence, their ability to memorise information shortly before assessments, the nature of A-level assessments, and a supportive educational and social environment. Such a student might struggle at university, because they had never been in the position of having to 'work hard', had not developed

the learning or time management skills to support independent university study or because they had underestimated what was required at university. This is supported here:

> "In the first year of Medical School you do tend to have a bit of overconfidence in the fact that you've passed all your exams. You've got a place in Medical School…It's been said that getting into Medical School is the hardest *part.* From there onwards, you just do a minimum amount of work and you'll get through. Sometimes students don't realise that you actually do have to do a lot of work to get through the exams". Aroon
>
> "It's easy to be complacent, if you haven't had to work beforehand and you've not had to push yourself to really learn and work hard on new material". Paul
>
> "People who are quite smart and have kind of breezed through their A-levels. They might think that they can just sort of do the same thing with Medicine, which I don't think is the case". Kate
>
> "A lot of people at the Medical School are quite bright. They may be able to pass A-levels without too much work, but then they get to Medical School and they don't realise that they actually need to put in some hard studying". Tim
>
> "They realise they need to start working, *(but)* don't know how to revise". Paul

Overconfidence could include elements of arrogance or complacency:

> "Taking it for granted that they've always done well". Sarah
>
> "Certain medical students might have a certain arrogance after they get their place in Medical School and sort of believe that they came out on top because it was something they worked for, for a long time. They get into Medical School and then it's a big relief. They don't wanna do any work and they just wanna think I got in! I'll be able to do it all at the end of the year". Stuart

The majority of participants shared the belief that trying to concentrate all of one's study activity into a short time immediately before the exams was not a successful strategy. They referred to this as 'cramming' and acknowledged that it had been successful at A-level:

> "I think a lot of people who come to Medical School are bright enough that they can, not coast, but don't necessarily need to work hard until a few weeks before the exam. Obviously you need to do more than that". Clare
>
> "They get to Medical School and they forget that it's a big jump and you do have to keep up with the work and therefore don't really revise. Maybe they've never had to really revise properly for their A-levels or anything like that. I've never met a med student who's ever passed a year on nothing! The A-Levels maybe you could pass the year doing less, so then they apply that to med school and then I think it doesn't work out". Margaret

In contrast, students that had been used to 'working hard' in order to achieve the grades required to enter Medical School were familiar with the techniques and amount of work required, e.g.:

> "Other people always had to work hard, so that's already in them. If you can't understand it instinctively, but you've always had to work at it, I think you're in a better place than someone who's always understood things and not really had to work to understand it before being thrown in at the deep end". Clare

> "Someone who did have to work reasonably hard and had done well at GCSE and A-levels and so knew how they worked best, how they studied, what methods for revision or learning were best for them –someone who doesn't just kinda grasp it easily, but who knows how to work". Paul

Motivation. Motivation was an important determinant of success:

> "There's a few factors which contribute to a student's success. In terms of their education itself, one of the most important is their motivation and their drive to do well at Medical School". Kiran

All students that had obtained a place at Medical School had the requisite academic ability, but motivation was required to succeed in the First Year. Motivation might be more important than ability, at least in part because of the amount of learning and the volume of work required over a prolonged time. This is demonstrated here:

> "You can have ability, but if you're not interested in the actual content and there's no motivation or drive, it doesn't matter. It won't stick. You won't understand it. Motivation. It overrides ability in a lot of respects, because with Medicine a lot of the content isn't hard. It's just if you've got the motivation to put the time in and the effort to want to learn it. If you've got a real interest". Kiran

Losing this drive to succeed could contribute to failure:

> "If you stop enjoying what you do or stop feeling like you're doing well that must impact negatively". Sanjay

Sources of motivation to study and to pass assessments changed during the transition from A-level to university. At A-level external motivators were identified, including parents, teachers, cultural expectations and well-structured routines and timetables:

> "When you're at school you've got a teacher who stares over your shoulder at everything you do and then sets homework and then expects you to have that homework in for the next lesson". Anne

At university some of these external motivators were removed:

"You don't have nine to three in school and your parents telling you to work once you get home". Clare

"You have a new responsibility to actually do it yourself and not kept on track all the time by teachers". Hong

Motivation moved to an internal focus. Underpinning this was the desire to be a doctor. Kate distinguished between those students that were motivated to be a doctor and others who had been 'pushed' into Medical School:

"There's a few types of people on the course. There's people who just absolutely can't imagine ever doing anything else – I have to be a doctor. There's some people who are quite interested, but they're not really that bothered. They could do other things. The people who absolutely love Medicine, can't ever do anything else but be a doctor in their life, they'll do better than the ones who've just gone into it cos their dad's a doctor or cos they were smart enough and their school told them they should". Kate

Other people may have been at Medical School because of external expectations that 'clever people' would study Medicine, either as a result of direct pressure or less explicit expectations. This might affect their desire to succeed on a difficult course:

"(The grammar school) was fairly pushy. You got into sixth form and it was Medicine, dentistry, law, Oxbridge. Go for one of those". Clare

"I don't even think some people are told that they have to do it. They just think "I'm clever. I could get in. It'll probably be quite interesting". They don't necessarily feel very strongly driven to be a doctor. If it gets difficult for them they'll be less likely to push through". Kate

Failure could result from the realisation that Medicine was not the career that one wished to pursue. For example:

"They might have gotten here and realised the reality of what Medical School is like and maybe not felt that same drive, that same passion they did before". Meria

Internal motivation also came from whether or not someone was enjoying the course, which was associated with wanting to study Medicine, or an interest in specific elements of the course:

"Whether or not they enjoy the course and it's actually what they want to do". Sarah

"It's a part of enjoying your work, because there's only so much that you can force yourself to do before it's boring". Alan

"PBL interested me, so I could go away and do it because I found it interesting". Clare

An early clinical context to the curriculum helped maintain motivation for some students when studying academic content. For example:

> "When you know clinical placement is coming up, it gives a certain weight to what you're learning. I wanted to know the content well so I could get the most out of clinical placement". Stuart

> "Because you put your knowledge to a practical scenario, you put more emphasis on the information, cos you know that what you're learning is very relevant to a clinical case and you will require that in the future as a doctor. So that really does tend to drive your learning and you tend to be more focused, more engaged, when you're learning these things". Kiran

Students that were not enjoying the course were less likely to be motivated to make the required time commitment to their study:

> "I think some people just don't get on with the course… If you don't love it you're not gonna be inclined to put the work in". Kate

Motivation was required to establish and organise a daily routine and engage in academic activity. This included getting up in the morning and attendance:

> "You just need to be a lot more self-motivated, because you do need to get up, get on with your revision, do your PBL; and all of that will make things a lot easier when you come to the exam as well. But it is so self-directed". Clare

This activity required effort and a recognition that one had to be self-motivated, because nobody else was going to provide this, e.g.:

> "Just knowing that no-one else is gonna do it. You're not gonna get a revision guide at the end telling you everything you need to know for the exam". Clare

> "A lot of it can be willpower to be able to identify what you need to do, and then to set a routine and stick to it". Anne

At university, students had the freedom to do as much or as little work as they wanted to. This is shown here:

> "There'll be some people who will really look into it, especially if it's a block that they find interesting. But if it's something that they don't find interesting or they've got a busy week, they might slack off. As long as they can still be a strong group member, nobody's gonna know what work they have or haven't done. There is an option to slack off, if people chose to". Anne

Students that had been successful at A-level might struggle at university with this shift from a predominance of external to internal motivation to drive their study and learning. Some participants suggested that this might have a greater impact on students that had attended schools that placed a greater emphasis on high levels of achievement and provided additional academic support to achieve this. For example:

> "Some very good schools might be able to get a lot of their students to very high grades. If you're used to that sort of pushing, when that's taken away when you come to Medical School, certain people might struggle to persevere by themselves…
>
> We were told on a few occasions last year that if you didn't want to do the work, it's not their problem. The PBL tutors, they care, but they're not gonna make you do it. If you're not self-motivated, you're not going to perform well". Stuart

This internal drive to work was particularly important for revision prior to assessments:

> "There's got to be something in the back of your head saying "I want to go revise today". It doesn't matter what that is. It could be fear. It could just be interest in the subject. It could be anything. Something's just got to be there to make you desire to work and I think if that's missing, you struggle to actually get there and do the work". Alan

Some external motivators remained important. As previously discussed, working in groups and with peers could motivate students. This included working with peers studying the same course and sharing the same experiences, or sharing study time with students from other courses. For example:

> "You can spend several hours by yourself each week, doing the lectures and doing your PBL notes, but that's about as much as you can force yourself to do. When you come to PBL or are with friends and do some work, you can find a bit more motivation to work". Alan
>
> "If you're not feeling motivated enough, to have people around you that are going through the same thing…you can mutually benefit from each other". Meria

Part of sharing this time together was to regulate one's own behaviour:

> "They're just there so it stops you doing other things". Tim

Situating oneself in a particular physical space could also be motivational, even if work and play were undertaken on the same electronic device. For example, going to the library created a work environment:

> "Rather than being in my room, on my laptop, with Facebook, a game, something else open, I work from the library. I'm with other people. I don't have to know them. If I'm in that sort of area, I'm less likely to be distracted while I work". Tim

Role models could be as a source of motivation:

> "There's that one person in your PBL who's just like brilliant…I'm gonna make sure that I work as hard and I know as much". Meria

Students needed to have a realistic understanding of their level of achievement in order to maintain motivation. Students that believed that they were performing well would not be motivated to work harder, even if they were incorrect in their belief:

> "If you've benchmarked yourself as you're fine, you're expecting to do well, but you have set your own level wrong and gauged yourself wrong, then that's it. You're not gonna do well. You're going to struggle to find motivation". Alan

Experiences at home and in early education might have played a role in establishing a 'work ethic'. The support and expectations of family, teachers and private tutors will have formed part of these experiences, which may have differed according to the type of school attended. Examples include:

> "I initially struggled at GCSE, but I definitely wanted to do Medicine, so my parents got a tutor. Although my school was a state school, it was very good in an affluent part of the country. So, I definitely fall into that category of things being provided for you and that might result in you having a lower work ethic than other people". Stuart

> "I think when you're pushed that much as a child, potentially from a young age, you come into Medical School and you already have a very good work ethic. Whereas if you have been from a white British background you might not have been pushed. You might not have as good a work ethic, because things have been provided for you and you've been to a very good school. So it's been provided for you. So the work ethic might not be as good". Stuart

Social class, ethnicity and parental occupation were important from Aroon's perspective:

> "I think social class might have an impact. If you're in the higher social class then you're more likely to have parents who push you, whereas if you're lower down in the social classes you might be left to do your own thing. There was always that pressure from my Indian parents to get an education. To do well. I think it depends what your parents do as well. My dad's a GP and my mum's a chemist. And my granddad's a head teacher. So education was a big thing". Aroon

Encouragement from family could have both positive and negative effects on motivation. A supportive family was beneficial:

> "If they're being encouraged and pushed to work hard then they're more likely to do well". Paul

However, while the desire to please one's family could be positive, unrealistic or unachievable expectations could be unhelpful. Sarah reflected that their parents were pleased as long as she made progress and that they made comparisons to their own lower level of achievement:

> "My parents are just delighted with whatever I do, as long as I pass. I don't think my mum would care though. I remember when I got a B in one of my GCSEs, she said "I didn't get a GCSE in English, so anything's better than nothing"". Sarah

This contrasted to another student's experience:

> “My housemate is Asian. She said "My parents are really pushy cos they're Asian". When we got our results, she wouldn't tell her parents for ages. When she did, they said "Why didn't you get over eighty percent?" and she said "OK, well I got seventy percent, but fine"”. Sarah

Sarah went on to discuss how one needs supportive parents, rather than parents with expectations that are unrealistic:

> “Some people respond really well to being pushed, whereas I think I need them to be supportive. I'd just break if people thought “You're not good enough””. Sarah

This ‘fear’ of disappointing people could hold one back or contribute to stress and burn out. For example:

> “Your family might be very happy for you but also have really high expectations. Some people might take that as “OK, I’m gonna make my family proud. I’m gonna do this for myself and for them”. And that can be motivating. That can also, not hold you back, but that fear of I can’t be successful because there’s too much weight to be successful, to get through this”. Meria

> “The stereotypical person who’s being pushed by their parents is more likely to do well academically, at least they’ll be able to good marks in the exams, but I imagine would also have more stress and more likely to burn out”. Paul

Some participants felt that family pressure might be related to cultural background, with most, but not all, comments referring to the higher expectations of parents from the Indian subcontinent:

> “Culture, not so much the kind of ethnic background, but just home life. So someone whose parents want them to work hard and do well is more likely to (*do well)* than someone whose parents aren’t particularly bothered”. Paul

> “Students that come from Asian backgrounds might have been pushed a lot more in their past and pushed to do very well. I'm not saying that students from white British backgrounds aren't pushed as much, but I think that sort of extremes do still exist in those communities”. Stuart

Paul acknowledged these stereotypes, but felt that most students shared the same high level of expectations of *themselves*:

> “There’s a stereotypical kind of Asian doctor who always works really hard and has really high expectations at home. I don’t know how true that is. Most people here work very hard. Most people have high expectations of themselves, whatever their parents think”. Paul

Personal health problems could also help provide motivation to succeed. Sarah described how her personal battle with an eating disorder had increased her desire to succeed, at least in part to prove those that doubted her wrong:

> "The reason I got anorexia makes me quite a driven person. I suppose that could be a good thing in terms of being successful… I also felt like tutors and occupational health and my parents were almost expecting me to struggle and to relapse. So I was even more "I'm gonna prove them wrong"… That motivates you to do well". Sarah

Disability. Students with a disability, especially if undiagnosed or unacknowledged, could be disadvantaged in some learning situations. This disadvantage might be exacerbated by university practices. A graduate entrant, speaking about their first degree, described how students could be stigmatised, leading to either self-exclusion or institutional exclusion through regulation from learning opportunities:

> "I'm dyslexic, but I didn't know until I went to University *X*. At school, how they taught suited me and I could keep up. But University *X* was awful. They didn't record any lectures and you weren't allowed to record lectures unless you were dyslexic. You had to have a special sticker on your Dictaphone. Some lecturers wouldn't put slides up *(on the VLE),* cos it stopped people going to lectures, and they would only give them out to people who were dyslexic. I didn't have that until halfway through my first year. Other people might have similar difficulties and not have *(been diagnosed)* and not given support". Sarah

The failure to recognise and acknowledge this disability had led to a poor relationship with tutors. This contrasted to this student's First Year in Medicine, where tutors had taken account of these circumstances, changing the perception of the student-tutor relationship and experience of learning.

6. Work-life balance.

Participants mentioned work-life balance frequently. A 'good' work-life balance was important for success. Elements that contributed to achieving a good balance were identified. These included healthy eating, exercise and sleeping well. The correct amount of time had to be allocated to studying, taking breaks, hobbies and socialising. However some participants felt that Medicine must always take precedence over everything else:

> "Students who do well have a very good work-life balance, but they always put studies at the forefront. They won't let the extracurricular activities disrupt their work". Kiran

Prioritising study over social activities was a characteristic of successful students. For example:

> "They are able to prioritise work over anything else. Whether it's sport or a hobby or a social event, you say to yourself "No, I've got to do this. This is more important"". Sanjay

Others believed that maintaining a focus outside of Medicine was also important to maintain well-

being, personal happiness and motivation. They gave well-being and personal happiness the highest priority:

> "Being able to balance social life and work-life is quite important. She would be going out and doing things she enjoys, as well as working". Anne
>
> "Socialising with your friends is very important. I've seen many people being miserable at Medical School because they forget that it's not just about your grades…If you spend a year inside, just book learning, you're probably more likely to fail than someone's who's done less work, because you'll just be miserable. It's not worth it. I don't think five years is worth being completely miserable, even if you do pass at the end. If you come out of it shattered, there's no point doing it". Margaret
>
> "It's always important to have something outside of work. A sport or a hobby. Just to have something else alongside work that keeps you going, keeps you motivated". Sanjay

Achieving a balance could help with relaxation, create time and space for reflection and improve work performance, e.g.:

> "*(Exercise)* might not be something that's essential but it's good to have that variation and balance so that you're not just stuck in a room all day and trying to remember things and it not going in. If you're active and you get out it gives you a chance just to reflect on everything else other than work. To clear your head and come back refreshed, so that you can sit down again and carry on". Anne

Hobbies could be used as a reward. For example, a keen cricketer used his hobby as a reward for hard study:

> "They'll get certain amounts of work done, and once they've finished that, they'll treat themselves. It aids in the whole process, keeping you motivated, doing well". Kiran

Students had to learn to use their free time effectively. This might necessitate separating work and relaxation, both in time and physical space, as explained here:

> "I wasn't using my free time effectively…The biggest thing about being successful at university is when you're working, make sure you're doing work and when you're not working, make sure you're not doing work. If you're sat in front of your computer and you're supposed to be working, make sure you're gonna actually do three hours' work. If you've given yourself two hours off in the evening, go and play football or go to the pub or something. Enjoy yourself properly, not sit in your room and stress". Stuart
>
> "I really struggled with having my space where I was relaxing and my space where I was working in the same space. After I found a spot in the library that I liked, that helped with

getting settled and finding that rhythm with working, by literally separating where I was relaxing and where I was working". Stuart

Friends were important in maintaining work-life balance and some felt that non-medical friends helped maintain a wider perspective:

"It's quite healthy to have friends who don't do Medicine, so you can switch off". Margaret

A 'poor' work-life balance could result in worse outcomes. Spending the wrong amount of time on academic activities was the commonest feature of a 'poor' balance that participants discussed. This included working both too little or too much. Most participants focused on spending too little time on academic work and the reasons for this. The move to university was a time when it was easy to lose focus on academic work, with new freedoms represented through more flexible timetables, less direct supervision and increased financial resources. For example:

"It's easy to become quite distracted at university and not have Medicine at the forefront of your thoughts". Kiran

"You're thrown into a whole new environment and your ability to cope with that is quite difficult, cos you've been given all this money and all this freedom and like just released". Margaret

A student from a rural community discussed the temptations of moving to a more lively urban/university culture:

"I come from the countryside and suddenly there are all these clubs and events and things. You're not lazy and it's amazing you're still awake, cos you do so many things. It's trying to balance the fact that you're suddenly having to do the most work in your life with there's the most amenity and the most events going on around you and you can get that wrong". Alan

Most students lived in accommodation with other (non-medical) students during their First Year. Over-socialising could contribute directly to spending too little time on academic work, poor attendance and missed learning opportunities or have an indirect impact through the behaviour of other students within the living environment:

"They might go out a lot, not turn up to things, and then they'll miss things". Sarah

"There's lots of other things to do. You have to find a balance between enjoying uni life and doing Medicine. Especially in first year, because we all go into student houses or in halls. We're not just living with medics. Even if you don't go with them, then you're subject to all their noise of pre-drinks and coming home at four in the morning and stuff". Alan

Working too much could also lead to problems, including 'burn-out' and low mood:

"The thing I've seen people crash and burn with most is working too hard and forgetting that it's not the only thing". Margaret

"Someone who studies all the time is more likely to do well, up to a point. But someone who works all the time is going to burn out and is gonna get very stressed. Even if they do well, if they're not happy then it's not ideal". Paul

"It's difficult for first years to realise that you need breaks too. Cos the amount *of work* is a lot, you just feel that you have to do it all the time". Hong

Having interests outside of academic study and Medicine could protect against this:

"It is good to have a distraction to take your mind off work, because if you're only focusing on work you're probably overdoing it and that's bad in itself…

If you can't find a hobby or a sport or something to do outside of work that can make things difficult". Sanjay

Paul felt that enjoying Medical School through achieving a good work-life balance was more important than attaining a high level of academic success:

"If I had the choice I'd rather be a successful than a failing student. But if I could choose between a successful student that spends all their time working and has no social life and isn't that happy, to someone who scrapes by but can look back and say "Those were a great five years" and they've still passed, I think I'd rather be someone who's happy throughout. Successful isn't just academic". Paul

Prioritising between studying and socialising was a choice driven by internal and external motivations. Students needed to reflect on events to learn from experience. For example:

"I know in my first term the desire was there to just stay up and enjoy yourself every night, but as a result my blocks for that period were pretty awful". Alan

Once a student got the balance wrong, a vicious cycle developed as explained here:

"*(Unsuccessful students)* start to prioritise other things, like going out. That contributes to them not getting the work done. The knock-on effect is that they'll always be behind and they'll never catch up". Kiran

Work-life balance was a domain where participants suggested that gender and ethnic might be relevant. Male students might attach a greater priority to 'going out', going to the gym or team sports, which in turn were associated with drinking alcohol. Participants acknowledged the generalisations implicit in their statements:

"I think guys tend to spend more time at the gym, playing football, going out, drinking. Those all seem to be common things amongst guys, compared to girls who tend to be a bit more restrained, apart from the odd few". Aroon

An Asian participant thought that drinking culture was more prevalent amongst white males:

> "There's more of a drinking culture in Caucasian students, whereas the Indian students or students from other backgrounds don't tend to get involved in that as much. Caucasian students tend to go out more as well. The ethnic minorities don't tend to go out as much, and they tend to stay inside and they're usually doing work". Aroon

Hangovers were a cause for poor attendance, especially with morning activities:

> "Students who tend to go out every night tend to miss more sessions, possibly because they're hungover and the sessions are early in the morning". Aroon

The need to undertake paid employment was not widely discussed. A number of participants had part time or holiday jobs, but mainly because they wanted to earn additional income rather than from necessity. One view was that studying Medicine represented a full time commitment:

> "Not having a job helps. I know some people need to financially, but I couldn't imagine doing a job as well as doing all my studying last year". Tim

7. Examinations/Assessments.

End of First Year summative assessments included knowledge-based written papers and clinically orientated practical examinations. Written papers covered two academic domains of the Medical curriculum, Applied Life Sciences (ALS) and Health, Society and Professionalism. The knowledge content and question formats in these two domains were different, and neither had much similarity, in content or format, to A-levels. A-level examinations were similar regardless of the subject and students gained familiarity with content and question formats through past papers. This was not an option at Medical School. This is explained here:

> "We don't really know what it's in the exam itself, whereas with A-levels you can always look at past papers. So I think that you could revise for A-level by doing past paper, but you can't really do that in Medical School". Hong

> "Between my three A-levels there was quite a bit of crossover. Whereas at Medical School being very good at clinical skills is very different to knowing your anatomy and doing the anatomy spotter, which is very different again from doing the multiple choice questions in the ALS paper, which is quite different again from knowing the health and society content. The different formats of the exams makes it quite difficult compared to A-levels, where you're just sat in an exam hall and you just do the paper and all the papers look the same". Stuart

The format and content of the clinical assessments were a completely new experience for First Year students:

> "Even the exam formats are just completely new to us. For example, the OSCE". Hong

The skills required to do well in clinical examinations differed from written papers and included communication skills and demonstrating empathy. Clinical skills were acquired and enhanced through clinical practice, but were also related to previous experience and personal characteristics:

> "There's very much an underlying aptitude when it comes to consultation skills. Someone who's naturally good at showing empathy and curious and good at questioning and interviewing patients, obviously they'll do well in an OSCE-type examination". Paul

Formative assessments introduced students to this assessment format and helped students prepare for their first clinical examination:

> "There's assessments throughout the year, the formative assessments that you do… There was a formative OSCE. It's something that you've never done before, so regardless of how well prepared you are and how good you are at doing your consultations, that environment can affect how well you're going to do. The fact that it was a formative was good, because we came out of it thinking we walked into the unknown. We'd been told what'd happen, but until you experience it yourself you don't really know how it's gonna be". Meria

However, clinical assessments remained 'artificial' and this might distract students from following the procedures that they would adopt in 'real' situations, e.g.:

> "In the back of your head you can tell that it's an assessment, it's not real. You just end up missing out things that you would do without even thinking, like washing your hands before and after touching the patient. Even just introducing yourself. Sometimes, you just miss it out because you feel as if it isn't real or you don't know what to do". Aroon

Participants felt that nothing could actually reproduce the reality of their first summative clinical examination and only the experience of a summative clinical examination prepared them for future assessments:

> "For the OSCEs, you needed to have experienced it to know what it's gonna be like… Now that I've done one, I know what to expect the next time. My issues next time would be less being nervous, but more if I'm not prepared enough or if I don't know what I'm supposed to be doing". Meria

There was a common concern that the assessment environment and student anxiety adversely affected performance in clinical assessments. This meant that a student who had prepared well and had good knowledge could be adversely affected by the situation. This is expressed here:

> "Some people in first year won't pass OSCE purely due to nerves". Stuart

> "You could be well prepared, have mastered all of your examinations and everything, but you could walk in there in a very different, very nerve wracking environment and just completely lose focus". Meria

Alan acknowledged this, but also recognised that clinical assessments were part of Medicine and something that they would have to adapt to.

> "If your characteristic is a nervous one, then the five minutes and the doorbell of the OSCE are horrific*. But it's something that you have to get over. It's not anything about the examination, it's yourself. You can't make Mount Everest smaller for your client. You've got to get up to it". Alan
>
> *OSCE assessments are short (often 5 minute) encounters with patients. Each encounter begins and end with the ring of a bell.

Anxiety or nervousness could also apply to written assessments:

> "Some people just really struggle with the pressure of it all being in one paper. They do know all the knowledge, but they really struggle with the pressure of that two hour situation". Margaret

Confidence could be built through preparation, provided a student was organised and had the necessary skills:

> "If you're ahead of things and you have a chance to go through all the content and then practise, it helps during the exams because then you feel a lot more confident. There'd be less nerves associated with the exam, and you're likely to perform better". Kiran

Formative written assessments were available during the First Year in the same format as the end of year summative examinations. On-line assessments were available at the end of each four to eight week block and there were two larger formatives taken under exam conditions. Some participants felt that these could help with preparation and allow students to gauge how well they were doing:

> "Our mock exam was really helpful, because I didn't do well and actually I needed to be working quite a bit harder". Paul
>
> "It helps, even though exams are going to be different to questions which you haven't done before. The fact that you're applying knowledge in some of the ways in past papers or end of block questions helps, because there's a different skill set required when you're applying the knowledge". Kiran

Formative assessments acted as an early signal for some students, allowing them to identify the level of learning required or that they were not studying effectively. For example:

> "We were given formatives in November and March. At that point you get an idea of what sort of detail you need to go into and if you keep going through them over and over again you can tell what detail you need". Aroon
>
> "Methods that I used to learn haven't necessarily been effective here, which I found in the formatives in first year". Anne

However some participants felt that there were not enough formatives or that they were not representative of summative assessments. The lack of regular testing was contrasted to experiences at school, where some students had been subject to regular assessment regimes:

> "It's being able to just check mark yourself. Cos we only have two formative examinations a year, you need something else to tell you that you're doing well or doing badly, particularly if you're doing badly". Alan
>
> "It felt the formative writtens were good enough to introduce us to what the environment's gonna be like, but not necessarily what kind of exam we'll be taking". Meria
>
> "There's formative assessments throughout the year. They do help put into perspective where you are, but they were not as representative of the final assessment as I would have imagined". Meria
>
> "At school you get a test every few weeks or so. In university you have self-studying and an exam at the end of the year and that's about it. You have meetings with the tutors, but you don't have a really strict test to actually tell you that you need to do better or you're doing fine". Hong

While participants acknowledged that formative tests were available, students had to engage with them in an honest way and not undermine the process. For example, they could obtain answers from students in other years or on other rotations to improve their formative grades:

> "If they've done the formatives properly throughout the year. Not getting the answers from someone in the year above". Kate

Another factor that could influence a student's performance in an assessment was summarised as the play of chance. For example:

> "Unlucky on the day? The types of question? How you feel in the morning? Are you groggy? How are you feeling? Did you get a good night's sleep the night before, or did the music player down the hall decide it was good to have a four in the morning guitar practice?" Tim

Participants recognised that all Medical Students had been adept at passing assessments and had performed under academic pressure. However, there was disagreement over how well students' performance at A-level might predict success in Medical School assessments:

> “People who are very good at passing exams might have been able to slack off during A-levels. When you do Medicine, there's more to it than just like memorising answers to an exam. There's the OSCE and placements and PBL and things. You do have to get more involved throughout the year. If you slacked off through the year, with the intention of just cramming it all at the end or relying on the fact that you've not failed before, that could go wrong”. Kate
>
> “I would say performance at A-levels is probably not an indicator of passing your first year. Students that out-performed me at A-levels struggled a lot more with exams. I don't want to make any broad assumptions about the types of schools they went to, but I definitely don't think A-levels indicate performance at Medical School”. Stuart

Some participants believed that students’ achievement at A-level was dependent on the quality of the teaching that they received. This might relate to the type of school and the culture within the school, private schools possibly offering more support than state schools. The relationship between teacher-led learning and success at secondary school might change at university, where learning was dependent on the student them self. For example:

> “Student performance at A-level is very strongly indicative of the quality of teaching that you get. Good schools will motivate and push their students and provide all the resources they need to succeed. At Medical School, you might have all the resources, but the burden is on you to be motivated and seek out those resources…
>
> In my home town there is a private school. Some boys that went there performed very well and were very smart, but they were pushed a lot. The school that I went to, it was “We're not gonna push you if you don't show up to things. We'll give you all the help you want, but it's up to you to seek it out”. It was good, but they took that approach rather than “You have to be here, sit down, learn this, this is what's gonna be on the exam”. I think that's perhaps why A-levels might not be a predictor of performance at Medical School”. Stuart

Overall however, all participants agreed that success in assessments did reflect the amount of work done by the student:

> “When it comes to first year exams, it is definitely a case of what you put in is what you get out”. Stuart

8. Graduate entrants to Medical School.

Graduate entrants were discussed for a number of reasons. In comparison to school leavers, they were considered to have advantages during the First Year, having already gone through a transition process from school to university. These included developing skills for independent living and for

living within the social environment of the university:

> "Postgraduates who had lived away from home before definitely knew how to get settled in and how to get into a routine with simple things like cooking". Stuart

> "People who've done a gap year or are grads have quite a big advantage, not necessarily because they know more medical knowledge, but because they've already got the moving out and living by themselves and all of that stuff out the way, so they can just concentrate on Medicine". Kate

They had also matured academically, having a familiarity with independent study skills, discovered their preferred ways of working and, in some cases, having covered some of the learning outcomes of the First Year Medicine curriculum, e.g.:

> "Grads do have an advantage, not because they've learnt the actual medical knowledge in their past degree, but just because they're used to uni. They're used to the way things work". Kate

> "I've done a degree, so this year's been like a refresher of everything I've already done". Sarah

In contrast, Kate described how the first few months had been 'wasted' as they tried to understand how to manage their learning most effectively rather than master course content:

> "I probably spent the first three to six months of first year not really learning in the way that was best for me, whereas grads have already had three years of doing uni. They know what works for them already". Kate

Graduates were more likely to have experience of preparing particular styles of written reports required at Medical School, especially basic science papers or laboratory-style reports.

> "They have more experience in things like SSIPs*, lab reports and things like that". Clare
>
> *academic assignments associated with basic science work

Being a graduate entrant therefore positioned students differently, providing them with key study skills lacked by school leavers. This created different levels of difficulty for school leavers and graduate entrants during the First Year, as shown here:

> "A lot depends on how they did and where they were before they came into first year. One of my friends was a postgraduate. He found first year very easy, because he already did a lot of self-directed learning, knew what they were looking for. He knew a lot of the basics already. But a lot of my other friends who came in from Year 13 found it fairly difficult". Clare

Graduates were regarded as a valuable resource and source of support, especially in PBL or workgroups:

> "I've got a couple of friends who have already done degrees; so they sort of have a head start in being able to explain things". Clare
>
> "Someone might be a graduate who's done it before and that shared knowledge I think works quite well". Margaret

A gap year could help students prepare for university by enhancing skills for independent living, but could have an adverse impact on study skills:

> "After I took the gap year I'd almost forgotten how to revise". Margaret

9. Ethnicity.

In general, there were no perceived differences in how peers, faculty or the university treated students based on their ethnicity. The Medical School was felt to be inclusive of students from many ethnic backgrounds and nationalities and ethnicity was not felt to impact on success or failure:

> "It's very multicultural. I don't think there's any sort of particular trends or groups who are disadvantaged in terms of learning". Clare

Medicine as a profession was acknowledged to have a diverse cultural background, e.g.:

> "There's a lot more ethnic minorities in Medicine, even in the first year, than there are in other areas". Meria

However, a good command of English was essential to ensure an equal chance of success:

> "As long as you've got a good understanding of English, as the course is in English, then I think then everybody's on even ground". Anne

An international participant reported a positive experience of their welcome into the school environment and felt that this contributed to academic success:

> "I personally find that it's nice for people from different places to come together. Obviously, it will be quite strange for me as an international student to come into somewhere that everyone knows each other or the place. It can help with being friends with each other and supporting each other. Everyone understands that you're new here and you really need help and no-one actually knows what they're doing. I'm sure that helps the student with studying and passing exams". Hong

Others felt that trying to 'fit in' might have a detrimental effect on their international peers:

> "Unless you're finding it harder to fit in. I've got lots of friends who are international students and they said that they've struggled at the beginning, not only being in a new school, but being in a new country. So I can see how that would be an extra difficulty on top of everyone else". Margaret

Hong felt that ethnic background had little effect once in the school, but identified that a student had to gain entry to the school in the first place:

> "Medical School does have a lot more minority ethnics in it compared to other courses. But as long as everyone has got into Medical School I don't think there are differences". Hong

Some student behaviours or cultural influences based on ethnicity were discussed. These acknowledged as stereotypes by the speakers, but were expressed by participants from different backgrounds. Students with parents from the Indian subcontinent may be under greater parental pressure to do well, both before coming to and once at Medical School. For example:

> "My housemate is Asian and she says her parents are really pushy cos they're Asian". Sarah

Students 3 and 13 suggested that these influences would have an impact from an early age:

> "Even when I go to India to visit my family, it's always been about education from the beginning. From the age of five they're always asking about exam results. What exams they've got coming up. How much homework they're doing. How long they're spending doing homework. I don't think there seems to be the same amount of that in England or in the white background, although I think it does depend on your social class as well". Aroon
>
> "If you have been from a white British background, you might not have been pushed, you might not have as good a work ethic, because things have been provided for you and you've been to a very good school already". Stuart

A UK-born participant from an Indian background felt that cultural pressures were present, but that they were not always beneficial:

> "There is always that idea that Asians are pushed further culturally, but I think that's less so in the UK than it is in other countries. It depends on whether that pressure from family or peers works in the correct way. If it works to spur them on then perhaps they will be successful, but if it's too much pressure then it could send them right the other way". Sanjay

Others rejected these stereotypes on the basis that all entrants to Medical School had high personal expectations of themselves. For example:

> "There's definitely a stereotype that some people work harder and there's a stereotypical kind of Asian doctor who always works really hard and has really high expectations at home. I don't know how true that is. From experience, most people here work very hard. I think most people have high expectations of themselves whatever their parents think". Paul

Only one participant expressed the view that while the Medical School was welcoming of students from diverse ethnic backgrounds, these students also had to work in clinical placements with patients, who as members of the public, might be less accepting of cultural diversity. In addition, the local dialect could sometimes create communication barriers:

> “Sometimes, especially when you’re working with patients and you’re trying to form that relationship and talking to people a lot, it does become a barrier in not being able to understand certain things….sometimes it’s small things like the lingo of the area, like not being able to like get some of the words or like the cultural aspects of how people do things”. Meria

10. Gender.

Gender was not felt to influence success in assessments during the First Year, although some differences in the way that males and females approached their studies and balanced work and social activities were suggested. Males were categorised as being more likely to work alone and to concentrate their work into pre-assessment periods (cramming), whereas females were suggested to be more organised, working consistently throughout the year and more likely to work together in groups. These perceptions are illustrated below:

> “The boys in my friendship group, they're very good at cramming and working individually, whereas my friends who are girls sort of prefer group learning and PBL works very well for them”. Clare

> “Boys are better at cramming at the end and girls are slightly more likely to shut themselves in their room and revise all year”. Margaret

> “Some people think that boys are more relaxed and unorganised compared to girls”. Hong

> “Girls generally have very neat, well-organised files for each block and then, when it comes to revision it's very easy for them to review. Whereas I would take my notes in lectures and I just had a big pile of notebooks and it wasn't very well-organised”. Stuart

Males and females might be subject to different social pressures in relation to their approach to work. Males might feel that they needed to appear able to succeed despite relatively little effort, whereas females were expected to spend many hours on academic work. Males might also commit more time to extracurricular activities, especially team sports and drinking:

> “With the guys, a lot of the time it's “I've done no work but I'm still doing really well” and “You've done no work and you're still doing really well. That's great”. Whereas with the girls it's “You know, you've worked really hard for this. You've done really well. Good for you. You've done all this work and that's great”. I think that divide does sort of follow the trend of the gender difference between the two……the pressure on the guys, from a social point of view, is who can do the least work and still pass. Whereas with the girls it's “You've done loads of work. You've worked really hard for this and done well”. Generally that would predict that the girls do better than the boys”. Stuart

> "Males tend to have more distractions. They tend to have friends who go out a lot. It's just the nature of guys, wanting to be hands-on and getting out doing things, playing football. Girls sort of do the same, but they don't do it to the same extent". Aroon

Meria was the only participant who felt they had been treated differently because they were female. They felt that this was 'subconscious' and the exhibited behaviours were subtle:

> "There's a very small disadvantage to being female in Medicine….There's still those like cues of just feeling undermined in a way. I would attribute some of that to being a woman rather than being a black woman or a black person…
>
> It can come across as small things, like you've been in placement and you're talking to someone, have them look at the other student in front of you and next to you instead of you. Or if someone asks what you study? "I'm a medical student". "Oh, so a nurse?" "No, a medical student". It's small things like that, that you can overlook, but they're still there and you pick up on them". Meria

11. Exceptional circumstances.

The occurrence of life events that would impact upon a student's ability to study successfully was acknowledged. These could be personal, such as physical or mental health problems, or external, often related to illness among family members:

> "So bad things happening…with families, boyfriends or friends. A family death, something like that. Or being ill themselves". Clare

Problems could also relate to living arrangements:

> "Situations with house problems". Hong

These factors could impact on exam preparation or performance. For example:

> "Things like that distract people from revising. It makes it really difficult for them to actually take the exam". Hong
>
> "Mitigating circumstances make it harder to pass your first year exams". Stuart

However there was a perception that these circumstances were accounted for by the Medical School, as shown here:

> "Mitigating circumstances would affect people's performance massively, except the Medical School has got policies in place for that. So they aren't disadvantaged and don't fail because of mitigating circumstances". Tim

Summary of factors associated with success and failure

Factors that were associated with success and failure are summarised in this section. These factors can be grouped into three domains - academic, support and personal.

Success

Academic. Successful students demonstrated good attendance, either in person or in the virtual learning environment, and worked consistently over the course of the academic year. They were organised and had a structured approach to timetabling and study, using their time efficiently. They knew where they were with their learning, were able to identify the right amount of work required and the correct depth of knowledge and understanding needed. They had developed appropriate learning and revision strategies that worked for themselves, were willing to change, trying different strategies if needed and adopting successful practices from other people.

They were adept at accessing resources and recognised that not all of the information that they needed was located in one place. They accepted that information was not 'handed to you', but that one had to be able to interpret the correct learning outcomes and then use the available resources to meet those learning outcomes through a combination of learning methods, including self-directed/independent learning. They were able to collate diverse resources to create their own resources for revision purposes. The majority of participants thought that working in groups, sharing and exchanging knowledge, was associated with more effective learning. Successful students were able to apply their knowledge, linking information between topics and building bridges between the applied sciences and clinical placements. They were able to make accurate and realistic judgements of how well they were progressing and used formative assessments and comparisons to their peers to inform their judgements.

Support. Successful students developed effective support networks, often based around friends, family and peer groups. They knew how to access and utilise support from tutors, although did not always use this support. They were accepting of the facilitator role of tutors and the teaching role of peers and friends. The relationship with tutors was a two-way process. They wanted approachable tutors who had time and were willing to offer support, but equally a successful student had to approach their tutors to ask questions and seek help when needed. Successful students were able to form good relationships with their peers and work effectively in groups and teams. They engaged in group learning, preparing for and participating in group discussion.

Personal. Successful students adjusted to university life and found a 'good' work-life balance, which included eating and sleeping well, and socialising and engaging in extracurricular activities to the correct degree. In achieving this balance, they were 'happy' in themselves and enjoyed their course. However, they prioritised study and were strongly motivated by their desire to be a doctor.

Successful students coped under pressure, especially exam pressure, and responded positively to feedback, including to feedback when they had not done so well:

> "People who are successful are the ones who don't let one bad grade bring them down. They're able to pick themselves up really quickly… it doesn't mean that they were successful the whole way through. They could have had a few bumps along the way, but they were able to overcome it". Meria

They required an awareness of themselves and needed to be self-reflective and to maintain perspective:

> "I suppose they understand themselves and their learning style and what works for them". Sarah

> "There's a lot of self-reflection and just being able to be comfortable in yourself and your ability to stop that feeling of being overwhelmed". Meria

Failure

Academic. Unsuccessful students struggled to adapt to their new learning environment and the different approaches required in the university setting. They wanted discrete learning outcomes, delivered within a regimented curriculum and accompanied by easily accessible learning resources. They did not adapt to independent learning and failed to understand that the delivered content only formed the basis of their required learning, not the entirety of the curriculum. They were less able to identify and use resources, including electronic resources. They were not as adept at judging the right amount of work and depth of knowledge and understanding required and had a lack of self-awareness of 'where they were'. They might avoid or dismiss feedback and not use formative assessments effectively. Failure was attributed to not working hard enough, being disorganised and not working consistently throughout the year. In general, unsuccessful students might be less likely to contribute to, or enjoy working in, groups. They might be academically able and have been successful at A-level, leading to poorly adapted learning and revision strategies that were not aligned to university learning.

Support. Unsuccessful students might have tutors that were, or at least were perceived to be, difficult to approach or too busy to offer support. Student-related factors were also discussed. At university, the need for support was largely student identified and student-led. This required a self-awareness of how one was working and performing, realistic comparisons to peers, receptiveness to feedback and a willingness to approach tutors for support. Overworking could be as detrimental as working too little. Students might not follow up on areas of uncertainty and avoid areas which they found too difficult. When faced with difficult situations, they might rely on friends and peers rather than using more formal support networks.

Personal. Unsuccessful students might struggle with the transition to university life and independent living, together with finding an appropriate balance between work and extra-curricular activities, including socialising. Peers could exert a negative influence on study behaviour. A wide range of influences might impact on enjoyment of the course. Anxiety, unhappiness and a sense of being overwhelmed could all contribute to failure. External pressure to attend Medical School, rather than internal motivation to be a doctor, might be associated with a greater risk of failure.

Issues related to mitigation, including health problems, particularly mental health problems, were not widely discussed. When they were discussed they appeared to be regarded as 'outside' of the student's control and therefore not a factor contributing to success or failure in the context of this conversation.

In summary, the questionnaire and template analysis of the interviews identified a wide range of issues that participants associated with both success and failure. In the next chapter, I will consider how these findings relate to, and extend, the existing literature around early failure at Medical School, as well as in Health Care Professions' Education and Undergraduate Education in general.

Chapter 5. How do these findings relate to and extend existing knowledge?

In the previous chapter, I have identified and summarised factors that my participants associate with success and failure. In this chapter, I present these findings in the context of existing literature on this subject. There is a large literature base on the First Year at university, success and withdrawal. I have therefore had to be selective in my discussion. The discussion is presented in sections.

1. Transition
2. Support at university
3. Learning at school and learning at university
4. Success
5. Failure
6. Stress

1. <u>Transition</u>

Participants in the current study referred to transition and how this might affect success in the First Year. Pancer, Pratt, Hunsgerger et al (2004) describe the move from school to university as a major event, with fundamental changes in almost every aspect of an individual's life. When change is encountered, normal structures are 'ruptured' and a period of adaptation is required which aims to achieve 'a new sustainable fit between the person and her current environment' and this is referred to as transition (Hviid and Zittoun 2008, p123). Hussey and Smith (2010, p156) identify that transitions happen 'throughout student's educational experience', occurring whenever learners encounter new academic and social environments, institutions, knowledge, approaches to learning, and degrees of personal autonomy. Parker, Summerfeldt, Hogan et al (2004) claim that the transition from school to university is a stressful time for students and Compas, Wagner, Slavin, et al (1986, p242) that all transitions are a 'periods of vulnerability to stressful life events'. This stress is attributable to the disruption of the normal structures of life (Compas et al 1986), with changes in living environment and academic expectations occurring simultaneously with the loss of usual support networks (Gall, Evans and Bellerose 2000). Pancer et al (2004) propose a conceptual framework to explain an individual's response to transition in terms of the balance between the stressors encountered and the resources available to overcome them. Four categories of stressors and resources are proposed: personal, academic, social and institutional. Maunder, Cunliffe, Galvin, et al (2012) emphasise that the interaction between an individual's prior expectations of university and how resources are used to manage the process of transition can only be understood at the level of the individual.

Personal. Pancer et al (2004) include the individual's personality, attitudes and values as personal resources. Lowe and Cook (2003, p55) state that a student's experience of transition will depend on their expectations of coming to university, which in turn are founded upon assumptions developed through prior educational experience and information provided by family and friends (Brooks 2003). Brooks (2003) reports that family and friends may have different influences, with family having a greater influence on how prospective students develop their attitudes towards university (p287), whereas friends have a greater influence on how they decide 'what constitutes a *feasible* choice' of institution or course, based in part on how an individual positions themselves in relation to their friends (p290). Briggs, Clark and Hall (2012) suggest that school leavers have difficulty envisaging life at university, resulting in a mismatch between expectations and the reality of the first year experience. In a self-reported questionnaire survey, Pancer, Hunsberger, Pratt et al (2000) found that most students had positive expectations, anticipating new freedoms, activities, and friendships and looking forward to the academic challenge. However for many students their actual experience is 'harsher and more stressful than…anticipated' (Pancer et al 2000, p39). A mismatch between expectations and actual experience is likely to result in difficulties in the first year (Pancer et al 2000). Maunder et al (2012) support these claims, reporting that students held internalised images and beliefs about 'university life' and what represented a 'normal student', shaped through their cultural expectations. These images create expectations against which actual experiences are interpreted, leading to potential conflict. The range of expectations of university and how these influenced transition are apparent in the discussions of the participants in the current study.

Academic. The move to university is a time of academic change. The school environment is characterised by support from parents and teachers, guiding learners about what to study, how to study and providing external motivation to work hard (Cook and Leckey 1999). This view of secondary education is strongly expressed by my participants. Students come to university with diverse academic skills, determined by their backgrounds and prior educational experiences (Briggs et al 2012), which differ according to their family upbringing, parental expectations, type of school attended and previous higher educational activity. At university they are required to develop a new set of skills in order to succeed in their new academic environment (Parker et al 2004). Pancer et al (2004) identify increased class size, a reduction in direct supervision by, and support from, teachers, and more challenging academic work as key changes in the university experience of students. At the same time there is an increased workload, both in terms of difficulty and volume (Levitz & Noel, 1989). Students must accept these fundamental changes in pedagogy because, as argued by Bourdieu and Passeron, the institution determines which skills and methods of learning are considered as legitimate (1977, p63).

Lowe and Cook (2003, p63) report that many students do anticipate that they will have difficulties coping with academic work at university. They worry about the academic level, volume and pace of work, availability of support, their lack of study skills, independent study, exam anxiety, and whether they have chosen the right course or even made the right decision to come to university. In practice, most students' are less affected by these concerns than anticipated, but about twenty percent do struggle with the academic demands of university life. My participants' perspectives on these changes in their academic environment are discussed in detail elsewhere.

Social. Transition is a time of social disruption for many students, especially those leaving home for the first time. Students are moving away from their normal support mechanisms and entering a completely new social landscape, encompassing both relationships and environment (Pancer et al 2004). They must develop a new set of friendships, at the same time as existing relationships with parents, family and usual friends are modified (Parker et al 2004). Families have a strong influence on the behaviour and academic performance of children in the context of school (Adams, Ryan and Keating 2000). Adams et al (2000) claim that the literature on transition has underemphasised the system of family relations, concentrating instead on the influence of faculty and peers, diversity of experience, personal motivations and academic ability. Adams et al (2000) argue that students' experience of university is interpreted in the context of a range of normative pressures developed through family socialisation. These pressures may both facilitate and inhibit student development within their new environment. Family support can act as a buffering mechanism during transition (Wintre and Yaffe 2000). In their study of the relationship between perceived parenting style, parental relationships, psychological well-being and adjustment to university, Wintre and Yaffe (2000) found that an authoritative parenting style, characterised by mutuality, greater social support from parents, more discussion between children and parents, and the granting of greater autonomy, were each associated with students' self-perceived adjustment. The family and immediate social circle have often played a pivotal role in normalising the expectation that an individual will go to university, in supporting them to gain admission, and in developing their expectations of what university will be like (Maunder et al (2012). The loss of parental control, both as a source of external motivation and as a regulator of behaviour, may be important for some students (Pancer et al 2004). Wilcox, Winn and Fyvie-Gauld (2005) claim that 'good' friends at university replace family and friends from home as the principal source of social support and are essential to persistence. These friendships are centred on accommodation, both in terms of whom students do, or do not, live with. This means that students who did not live with other students risk becoming marginalised. Living on campus is associated with a reduced likelihood of withdrawal during the first year of Medicine in UK Medical Schools (Arulampalam et al 2004).There are however

negative aspects to living with other students. Respondents to Briggs et al's survey recognised the need to achieve a balance between their social and academic lives (2012), students living with peers who socialised excessively being adversely affected either by adopting similar patterns of behaviour themselves or through the disturbance created by their peers (Wilcox et al 2005).

Briggs et al (2012) argue that creating a new identity is a fundamental part of transition as students move from schoolchild to adult learner. Maunder et al (2012, p145) add that social relationships are crucial to a successful transition, describing university as 'a hub of social relationships' and claiming that new students are anxious about making friends and afraid of being isolated. Positive relationships with other students and staff are important in developing this new identity (Briggs et al 2012). Terenzini, Rendon, Upcraft, et al (1994) suggest that peers are the most important people in students' lives, viewing transition as a shared endeavour, overcome through cooperative working. Esprit de corps, demonstrated by banding together, is an important mechanism by which Medical Students support each other (Miller 1994). Cooperation includes both social and academic components. Cooperation requires students to form groups and Maunder et al (2012) claim that the formation of groups facilitates students' adjustment to their new environment, relieving anxiety and establishing a sense of belonging. Students identify group membership by engaging in social comparisons in order to identify those who they could group themselves with or would separate themselves from. A particular characteristic of group formation involves how students identify themselves as 'normal' or traditional students, typically school leavers moving away from home, or 'other' (Maunder et al 2012). Group membership depends on identifying commonality, with 'others' excluded. For example, selection occurs between students who work hard and students who do not take their work seriously when forming study groups (Maunder et al 2012, p145). Brouwer, Jansen, Flache et al (2016) identify that high achieving students are adept at developing relationships and forming networks with other high achieving students and faculty, while less successful students are less adept at developing networks and when they do, form networks with students of equal ability to themselves. This has a direct impact on how social capital is developed during the First Year at university (Brouwer et al 2016).

The social aspects of transition also involve a shift from dependency to independent living, including responsibility for financial arrangements (Parker et al 2004). In a survey of staff and students in the North East of England, respondents identified the challenges of living independently, managing finances and developing new relationships as a greater challenge than learning to study independently (Briggs et al 2012). In keeping with Tinto's model of social integration (1975), students' negative perceptions of their living environment have been associated with poorer adjustment, whereas the experience of strong social support networks are associated with a better

adjustment to university (Gall et al 2000, p546). Each of these themes has been included, because it was clearly identified and discussed as relevant to success by participants in the current study.

Institutional. Maunder et al (2012, p140) state that higher education has 'particular practices and academic expectations' and that students are expected to become accustomed to these. From an institutional perspective, these practices are unrecognised and Lowe and Cook (2003, p54) confirm that for faculty 'these cultural aspects of higher education are taken for granted'. These statements can be recognised in the work of Bourdieu and Passeron (1977) and interpreted as the institutional habitus.

Sears (2004) suggests that students are faced with a large change in academic standards on entering university, but that their tutors have little recognition of the gap in standards between school and university education. This is attributed to the 'fundamental structures and dominant cultures of the institutions we inhabit' (Sears 2004, p166). University faculty develop their academic and teaching skills in postgraduate education and have forgotten that new undergraduates are ill-equipped to meet their expectations. This is compounded by the lack of understanding of university teachers about the realities of secondary school teaching, learning and assessment (Sears 2004). In other words, university teachers have developed a habitus encultured through their long exposure to university practices. Lowe and Cook (2003) also suggest that the sheer volume of course content at university dominates over the development of the learning skills and independent learning required by undergraduates. Terenzini et al (1994) highlight that the teaching practices, academic regulations and policies and workload expectations of institutions do not recognise differences among students. Briggs et al (2012) argue that students from non-traditional backgrounds may feel isolated or experience university differently, because there is a mismatch between their cultural origins and the expectations of university. I suggest that this situation is further exacerbated for students who are not prepared for university learning, or who are firmly wedded to practices that they have developed, and perhaps used successfully, in secondary education, but which are not suited to higher education. This is supported by the discussions of my participants, who identify the inability to correctly assess workload, difficulty adapting to university teaching practices and a dependence on learning strategies that have been successful at A-level as predictors of a poor outcome.

Transition summary. Terenzini et al (1994) describe transition as complex. It will be experienced differently according to a student's social, family and educational background, their personality, their educational experiences and expectations, their career aspirations and commitment, the nature of the institution, and the interactions between the student, their peers and the institutions' faculty. Adams et al (2000) argue that each of these elements creates a focal environment that may influence

a student's development through transition. These can be readily reinterpreted in Bourdieusian terms (see Chapter 7).

2. Support at university

Support can be considered in a number of domains, including emotional, instrumental, informational and appraising (House 1981). Participants in the current study made frequent reference to the importance of support and the types of support that they discuss can be recognised within this structure. Wilcox et al (2005) differentiate between direct support and buffering, the latter defined as support that attenuates or prevents the negative response to a stressful stimulus. Pancer et al (2004) make a distinction between the support that is actually available and the support which students perceive is available. Additionally, Ozga and Sukhnandan (1998) report that while students may be aware of the support services available to them, they may have little understanding of the roles and responsibilities of individual services. Consequently, they may access inappropriate services or levels of support. This was clearly articulated by my participants, especially in relation to less successful students.

Wilcox et al (2005) interviewed 34 first year students to explore the roles of friends, course peers and tutors in providing social support. Friends are more important in providing direct emotional support and buffering in stressful situations. Peers provide instrumental and informational support, including academic support and assistance with academic problems. Tutors predominantly provide informational and appraising support. In Wilcox et al's report (2005), students' perceptions of support are largely positive, but there are concerns about tutors' availability and approachability, and their failure to listen. This contrasts to the continuity of the teacher-student relationship within secondary education. Cook and Leckey (1999) also identify that university staff are less available, largely because they have a range of non-teaching functions to fulfil, most of which are given higher status and/or priority by the institution than undergraduate teaching. I offer the following possible explanations for these findings. Approachability may be a function of hierarchy and status, as well as students' personality and is likely to vary considerably between students. A failure to listen may reflect the gulf between tutors' expectations of students and the reality of students' ability at completion of A-levels. Differences may exist in academic tutor-student and doctor tutor-student relationships, because normative expectations and the rules of the game are different. Such differences are likely to be more pronounced for students of diverse backgrounds encountering a faculty of more homogeneous backgrounds, but in Medicine, these are at least two distinct cultures, one located academically and the other clinically. Reid Lyon, Vaasen and Toomey (1989) suggest that teachers' inability to adjust their instructional practices to accommodate diverse students is a major impediment to achieving teaching excellence. The more diverse the student population, in

terms of their ability levels, cultural backgrounds and educational experiences, the greater the demands on the teacher, both as a content expert and in their understanding of pedagogic principles (Reid Lyon et al 1989). A teacher needs to be able to deliver content according to the needs of the individual learner, both in terms of their preferred way of learning and motivational drives.

3. Learning at School and Learning at University

Sears (2004) states that secondary education is characterised by teacher-directed learning and goal setting, closely monitored through assignments and direct parental support. Marland (2003) claims that secondary education curricula are poor preparation for university study, potentially contributing to academic failure. Marland's focus was on English as a subject, but identifies problems related to the 'huge' gap in difficulty between A-level and university, a reduced contact time with tutors, and the failure of A-level courses to provide students with the study skills needed for reading, taking notes in lectures and using textbooks at university (2003). Lowe and Cook (2003) identify similar issues, in addition to students' lack of preparation for managing their time, inability to ask questions of their tutors and poor IT competencies. Lowe and Cook (2003) suggest that A-level curricula are too narrow and have too little emphasis on teamwork and independent learning. Lizzio, Wilson and Simons (2002) also criticise the lack of opportunity to develop collaborative skills, because of an emphasis on traditional classroom learning. Lowe and Cook (2003, p54) comment that students are 'carefully and intensively guided through A-level courses' creating a 'set of study skills and learning strategies that are not entirely relevant to the more independent style of university'. Cook and Leckey (1999) suggest that secondary school students are dependent on small class sizes and frequent teacher contact, and that these study habits persist in the first year at university. This is in spite of university faculty expectations that students should work independently and the limited availability of staff support. While these observations come from a range of different subject areas, they were all discussed by my participants in the current study. This suggests a degree of consistency for these findings.

A number of studies suggest that students appear to recognise their own lack of preparation for university study. Smith (2004) found that 22% of students felt well prepared to study English. Cook and Leckey (1999) evaluated study habits prior to university and how these changed in response to university study. Pre-university, students focused on annotating notes from books, drawing diagrams, discussion with teachers, and reading around the subject. All of these techniques were used less frequently at university, with the decrease in interactions with staff showing the greatest change. This included a reduction in direct teaching time and discussion of academic difficulties and support-seeking. Students reported being less confident at working independently than they had expected. While students started university with many good intentions, they did not plan their work

in advance nor work as consistently as they had intended. Students' expectations of studying at university are based on experiences at school, and may be unrealistic when students expect the nature of their learning to be very similar (Lowe and Cook, 2003) or when workload turns out to be very different (Cook and Leckey 1999). My participants found both of these to be the case.

Smith (2004) characterises the reading required for A-level English as limited and intensive. In other words, reading is limited to a narrow range of texts, but requires a comprehensive knowledge of each text. In contrast, university requires 'wide-ranging, extensive, contextualised reading', which students are not prepared for (Smith 2004, p91). Participants in the current study often referred to learning the standard textbook as a means of succeeding at A-level, recognising that everything required to succeed was contained within a single text. In contrast, university reading required the ability to access and link information from multiple sources.

The literature does not discuss students' focus on past papers as a mechanism of examination success. Participants in the current study frequently discussed using past papers as their principal method of mastering the A-level curriculum. They considered that past papers allowed one to 'know where you where' and to know that one 'could answer every possible question'. This model of learning does not fit with the broader university curriculum, where past papers do not exist and the number of possible questions is arguably 'endless'.

Smith (2004) focuses on competition and school league tables as a potential cause for students' lack of preparation for university. The need for students to achieve the required (high) grades and for schools to excel in league tables creates a culture in which:

> 'Some schools have been understandably tempted to teach to the syllabus and the assessment criteria, and to reduce even the section of the course meant to encourage wider reading to a 'How-to-do-it' approach, rather than to think about how students are best prepared for the next stage of their education' (Smith 2004, p90).

I would argue that this may be particularly problematic when coaching students wishing to study Medicine, where grade expectations are very high and students from private schools have been overrepresented (HM Government 2012).

When students arrive at university they encounter a new learning environment. Tinto (1975) claims that they engage in university learning and interpret these new encounters in the context of their prior experience. This is also consistent with Biggs's 3P model of learning (Biggs 1989). The presage represents the characteristics of the student, determined by their previous educational experiences, abilities, motivations, expectations and concept of university life, and the characteristics of the teaching context, including curriculum structure and content, teaching pedagogy and assessment strategy. The interaction between the student and teaching context results

in the activity of 'metalearning' (Biggs 1989, p12) which results in the process of learning in pursuit of the desired outcomes, the product of their learning. The processes adopted by the student will be directly influenced by the teaching that they receive. Chickering and Gamson (1991) identify Seven Principles for good practice in undergraduate education that may impact on student success. These are illustrated below, because they have resonance with the narratives of my participants:

i. Encourages student-faculty contact. Participants in the current study identified the importance of contact with different types of tutor. A number of difficulties were identified, including tutors' approachability or availability or students' reluctance to contact staff or discuss issues with them. Lowis and Castley (2008) report that students perceive that they have too little contact time with tutors and that engaging in conversations with tutors is difficult because tutors are unavailable or abrupt in manner, or students are too shy to approach them. Roberts (2011) claims that non-traditional students' experience of university tutors is very different from their expectations. They expect greater contact time and that tutors will be more flexible over availability. Non-traditional students want to spend time with content experts rather than non-expert tutors, which may have relevance to my participants' perceptions of PBL facilitators in contrast to lecturers and clinicians.

ii. Encourage cooperation among students. Working together may have a range of benefits for students. Todres, Tsimtsiou, Sidhu, et al (2012) claim that medical education is a social process, citing several studies of Medical Students which report that higher achieving students engage more with other students. High achieving students report that collaborating with one another allows them to discuss difficult topics and motivates them to work the long hours required in Medicine (Abdulghani, Al-Drees, Khakil, et al 2014). Lowis and Castley (2008) report that students that arrange their own informal study groups perceive benefit from them, while students who withdraw from university tend to be those who have not collaborated with other students. Students who work in isolation miss out on the potential benefits associated with working together. My participants emphasised the importance of working together and, in general, felt that working independently was associated with an increased risk of failure.

iii. Encourage active learning. Richardson (2005) reviewed an extensive literature supporting the concept that students can adopt three broad approaches to learning (Entwistle and Ramsden 1983). The deep approach is characterised by an intrinsic motivation to learn and seeks to develop personal understanding, through strategies such as critical evaluation, comparison with previous learning and the use of organising principles to integrate information (Lizzio et al 2002). The surface approach is characterised by external motivation, often driven by a need to pass assessments, and uses passive approaches, including strategies such as repetition, memorisation, reproduction and recall, with

little attempt to understand underpinning principles, to integrate previous learning or to reflect on the intended purpose of the learning (Lizzio et al 2002). Kember & Leung (1998) hypothesise, and present evidence to support their claim, that the perception of a heavy workload encourages a surface approach to learning regardless of the actual workload. The strategic approach is adopted by students trying to achieve the highest possible grades, and involves strategies that include identifying resources and learning outcomes, matching work effort against assessment criteria and managing time efficiently (University of Oxford 2018).

Participants in the current study discussed a range of issues that suggest that they associated a deep approach to learning with success. They emphasised the importance of understanding concepts rather than memorising facts and of integrating knowledge between different topics and across sites of learning. Organisation, exemplified by taking well-structured and accessible notes, was identified as a characteristic of successful students. Elaboration, exemplified by being able to explain or summarise knowledge, was demonstrated by those participants who discussed the importance of being able to explain concepts to their peers. Critical thinking, especially the ability to identify, question and interconnect information from multiple resources, was discussed frequently. Stegers-Jager, Cohen-Schotanus and Themmen (2012) highlight the importance of metacognitive self-regulatory activities, including the ability to plan activities and self-monitor progress. In the current study, the latter was identified as 'knowing where you are'. Stegers-Jager et al (2012) argue that self-regulated learners tend to be self-efficient, to view learning tasks as interesting and worthwhile in their own right, to monitor their own progress towards self-set goals and to persist in their learning behaviours. They are able to reflect on the effectiveness of their approach to learning. My participants also emphasised the importance of using time effectively and working together (Goldfinch and Hughes 2007) and managing their study environment, for example by using specific spaces to locate their learning.

<u>iv. Give prompt feedback</u>. Chickering and Gamson (1991, p66) claim that 'knowing what you know and what you don't know focuses learning'. My participants expressed an almost desperate need to 'know where they were' and to position themselves. This appeared to arise because they had moved from secondary education, where excellent performance was considered their normal, they had been top of their class and they had been successful, to a Medical School environment where everyone was a high achiever and the criteria for success had shifted to a system where team working and achieving the competencies required to progress are assigned value. Lowis and Castley (2008) report that students perceive that they receive little or no feedback and have insufficient assessment during the early part of their courses. The consequences of this may be that institutional expectations are unclear and students cannot judge their progress. Lizzio et al (2002) suggest that a

deep approach to learning is encouraged by reciprocal transactions between students and tutors and that reciprocation is underpinned by feedback on performance.

v. Emphasise time on task. Students need know how much work they need to do in order to be successful. My participants emphasised that there was a large amount of work to do in the First Year and that success depended on working hard, working consistently and on starting revision early. If one fell behind, there was no chance to catch up. These themes are common to other studies of successful Medical Students (see Success).

vi. Communicate high expectations. Students in higher education are likely to be more successful when their tutors have high expectations of them. Roberts (2011) and Glogowska, Young and Lockyer (2007) report this finding in non-traditional and nursing students respectively. Thomas (2002) also reports that students become more self-confident and motivated when they feel that faculty believe in them and care about their success. They are more likely to discuss their difficulties with a faculty that show respect towards them (Thomas 2000).

vii. Respect diverse talents and ways of learning. Sears (2004) claims that universities expect students to be self-directed and to:

> 'Accommodate themselves to diverse teaching and learning styles, develop a wide range of research and communication skills, and figure out the relevance of what they are learning to the rest of their lives' (p167).

He highlights that this level of self-direction is a new experience for school leavers, these skills are not taught and that students must acquire them early in the first year in order to succeed. At the same time, institutions actively prevent students from developing these skills by prioritising volume of content through an assessment regime that rewards information recall. Lowis and Castley (2008) observe that students feel that their experience in secondary education has not prepared them for university study and that study skills take time to develop. Lowis and Castley (2008) also note that students want a variety of learning opportunities and that the lecture is not their preferred format. Roberts (2011) reports that non-traditional students want more direct teaching and structured direction, because they find independent learning isolating and unrewarding and that the difficulties that they experience in learning situations correspond to a lack of convertible cultural and social capital. This group 'felt they were alone in learning to play the game' (Roberts 2011, p193). Forcing students to change and adapt to the practices of the institution, may make students feel different or 'othered' (Archer, Hutchings, and Ross 2003). My participants discussed the range of learning opportunities available to them and the potential benefits of having different options open to individuals. There were mixed opinions on the value of these opportunities and how individuals

engaged with specific activities. The ability to integrate activities was perceived as crucial. I will consider two activities in greater depth, lectures and problem-based learning (PBL).

Lectures remain a central mechanism through which institutions deliver curriculum content to undergraduates. They are efficient for the institution, allowing a single faculty member to address a large number of students, possibly in more than one physical space, simultaneously. While my institution identifies itself as a PBL-school, lectures remain an important resource, framing the learning outcomes for each week's activities and covering the core curriculum. Lectures can be attended in person, watched on the VLE or both. Participants in the current study recognised the importance of lecture content, although there was no agreement on the importance of attending lectures.

Smith (2004) suggests that secondary education does not prepare students for lectures and consequently the lecture is the most unfamiliar aspect of their new experience of university teaching. A-level students do not acquire the note-taking skills required during lectures and new students struggle to develop these skills (Marland 2003). My participants agreed with this. Lectures are even more challenging for students who lack the cultural capital to follow the arguments presented or for international students who do not have English as their first language. Smith (2004) criticises the persistence of lectures as a primary means of university teaching, on the grounds that they promote a passive approach to learning and allow student to 'switch off'. Lowis and Castley (2008) agree, stating that large theatres are impersonal and boring. The availability of lectures on the VLE has altered students' interaction with lectures and lecturers. Martin, Way, Verbeck, et al (2013) explored Medical Students' attitudes towards lecturers, depending on whether they had attended the lecture in person or watched on-line. The study focuses on the implications for faculty, finding that students who attend in person rate lecturers more highly, independent of other lecturer and learner characteristics. A more important implication of this finding may be that students are more engaged in learning when the lecturer is physically present. Gupta and Saks (2013) report that 75% of first year Medical Students attend lectures, but this falls to 50% for second year students. About half watch recorded lectures. Gupta and Saks (2013) suggest that students make active choices on whether or not to attend, basing their decisions primarily on their previous experience of the quality of the lecturer and the possibilities for active engagement. Other reasons to attend include whether the lecturer is a subject expert, the clinical relevance of the topic, anticipation that their questions will be answered, and if lectures contain many images. These findings suggest an active approach to learning. However, other students may attend lectures because they have insufficient motivation to watch recordings independently, indicating that while recorded lectures represent an important resource for independent learners, students still require the self-direction to

engage with the material (Gupta and Saks 2013). Students that do watch recorded lectures tend to focus on segments of recordings to supplement their learning rather than watching the whole recording (Gupta and Saks 2013). Medical Students may prefer to use recorded lectures because they feel that they can acquire knowledge more quickly, pause the lecture to access additional information, maintain their focus, concentrate on sections that they find difficult, and learn more overall (Cardall, Krupat and Ulrich 2008). Some participants in the current study did believe that attending lectures was associated with success. Regular attendance has been identified as important for success (Gupta & Saks 2013; Martin et al. 2013; Abdulghani et al 2014) and in a meta-analysis, Credé and Philips (2011) report that attending classes, including lectures, is a better predictor of academic performance than pre-admission academic ability and this appears to be independent of other factors, including conscientiousness and motivation.

The participants in the current study were enrolled in a programme that placed PBL at the centre of its pedagogy during the first two years. White (2007) compares the experiences of Canadian Medical Students enrolled in either a PBL or traditional training programme. PBL students report a more difficult early transition, at least in part because their established learning strategies, including attending lectures and revising from past exams, are less successful in the PBL setting. Instead, PBL students need to set personal learning goals and priorities and to continuously self-monitor their progress. Over time, PBL students report learning because they want to learn, not to pass an assessment or to compete for grades. Students perceive this as a shift from reading/memorising to problem solving and a change in their role from passive/dependent to active/independent learning. In contrast, traditional course students report an easier transition to Medical School, their experience being similar to previous undergraduate programmes, except there is more to learn and no free time (White 2007). They rely on faculty to direct their learning and express frustration that they do not know what they need to learn. They struggle when moving from the classroom to clinical placements. They focus their learning on memorising facts and 'cramming' for assessments and need regular assessments to externally monitor their progress. Competition for grades is a strong motivating factor. Their dependence on tutors leads to conflict especially with clinicians, because students want to be told how to get the highest grade, whereas tutors want students to focus on how to be a good doctor.

White's (2007) description of these two groups of students has many parallels with both the theoretical discussion of how students learn and of the perceptions of the participants in the current study. The PBL students have a difficult transition, but become independent learners, working collaboratively and describe internal motivation and characteristics of deep learning, including the ability to use information across multiple contexts. The traditional students remain dependent,

relying on superficial learning strategies and external motivation to achieve high grades, without contextualising their learning. My participants were participating in a PBL course and the characteristics that they associate with success appear to describe those students who were able to embrace this approach. The characteristics associated with failure are more in keeping with students who are not comfortable studying in this paradigm. However, White's (2007) description is not universal. Students on a PBL course in a UK Medical School reported increasing stress over their first year, predominantly in relation to academic rather than personal issues (Moffat, McConnachie, Ross, Morrison, 2004). In common with my participants, personal progress and the availability of learning materials were particular sources of anxiety, although assessment was an additional concern. It should be noted that this was a new curriculum and this may have altered these students' perceptions (Moffat et al 2004).

4. Success

Ferguson, James and Madeley (2002) undertook a systematic review and meta-analysis of factors that might predict the undergraduate academic performance of Medical Students. Their approach focuses on published studies that relate data about student characteristics to academic outcomes. They identify eight metrics recorded when students are selected for entry into Medical School. These are grouped into cognitive, non-cognitive and demographic domains. Demographic data are limited to gender and self-declared ethnicity. Cognitive factors are based on previous academic performance. Non-cognitive factors include personality, learning styles, interview performance, references and personal statements. A main finding of this review is that there is little consistency in the ways in which the data are collected which means that systematic analysis of most factors is not possible. Academic ability is the most easily quantifiable metric, but accounts for only 23% of the observed variance in undergraduate performance, even after adjustment for other characteristics. Richardson et al (2012) highlight that university selection procedures reduce variation in intelligence scores, through the selection process. I suggest that this is likely to be more extreme in Medicine, where only candidates who believe that they have a chance of selection will be encouraged to apply and choose to apply. This is supported my participants perspectives on how families and schools encourage application to Medicine and Meria's discussion of doubting their right to a place in Medicine. It is also consistent with Bourdieu and Passeron's description of the subjective expectation of the applicant determining the objective probability of their candidature (Bourdieu and Passeron 1977, p156). Upon application, only those that have demonstrated exceptional academic achievement will be selected. They are therefore highly selected. Bourdieu and Passeron are critical of cross-sectional analyses, claiming that they will not account for the effects of the series of selection processes that have occurred over time (Bourdieu and Passeron

1977, pp160-161). Each step has progressively selected out a group of students to progress to the next level of education and there is unequal selectedness according to background and personal characteristics (Bourdieu and Passeron 1977, pp160-161).

Richardson et al (2012) recognise that factors other than intelligence must account for poor performance and dropout from university. They report a systematic review of factors associated with academic success in higher education and identify 42 non-intelligence constructs that might relate to academic success (Richardson et al 2012). Again, these were identified from studies that explored predictors of quantitative metrics of examination success before entry to university and at completion of university. These constructs are divided into five groups, including personality traits, motivational factors, self-regulatory learning strategies, students' approach to learning, and psychosocial contextual influences.

Personality traits associated with success include conscientiousness (Richardson et al 2012). Conscientiousness encompasses how dependable (or organised) and achievement orientated (or ambitious) an individual is and is expected to result in greater motivation to succeed (Mount and Barrick 1995) and increased persistence when encountering challenging work (Richardson 2012). The converse, procrastination, a trait associated with disorganisation at a cognitive level (Lay 1986), is associated with less good outcomes (Richardson et al 2012). Ferguson et al (2002) report evidence of a relationship between conscientiousness and success in the preclinical phase of Medical School.

Motivational factors associated with success included locus of control, academic intrinsic motivation, and learning goal orientation (Richardson et al 2012). An avoidance goal orientation is associated with worse outcomes. White (2007) notes that Medical Students describe themselves as highly motivated to succeed. Before entering Medicine, this motivation is largely extrinsic and driven by the need to achieve high entry grades. Once at Medical School, students are faced with the reality of being in a class of very able peers and are subject to a university assessment regime that no longer prioritises ranking. As one of White's interviewees states 'a pass makes most people in Medical School feel like they got a fail' (2007, p291). Todres et al (2012) identify that not all students have a strong motivation to study Medicine and some have little understanding of the level of commitment required to develop the skills and attributes to join the medical profession. Other students enter Medicine as part of a natural academic progression or in response to family or institutional pressures. The change in motivation between secondary education and Medical School and the importance of career commitment to Medicine were described by participants in the current study. Amini, Dehghani, Kojuri, et al (2008) report that students are motivated by their own academic success, but that being unsuccessful is demotivating. Hussey and Smith (2010, p160)

explain that a student who has always been at the top of their class in secondary school may ‘feel their confidence ebbing away as they become immersed in a bright cohort at university’. These factors were discussed by my participants and, I would suggest, may be especially powerful in a group of students that have previously never experienced academic difficulty and are surrounded by others who are perceived as successful.

Self-regulatory learning strategies associated with better outcomes include organisation in taking notes and structuring them meaningfully, effort regulation, peer learning, elaboration, critical thinking, use of metacognition, help seeking, and time/study management (Richardson et al 2012). Test anxiety and rehearsal are associated with worse outcomes. All of these issues were discussed by my participants. Richardson et al (2012) found that the learning styles discussed previously have inconsistent associations with success. The strongest association has been between strategic learning and higher marks in assessments, with a weaker positive association between deep learning and examination success and a weak negative association between surface learning and examination success.

Richardson et al (2012) also report other factors that are associated with better outcomes. These include social and academic integration into the institution, social support and goal commitment, as proposed by Tinto (1975). Experiencing general stress or academic stress and depression may be associated with worse outcomes (see Stress).

Many of these studies, and the methodologies they have used, can be criticised for adopting a predictive approach towards identifying factors that determine outcome through association in cross-sectional analyses. Kuh, Cruce, Shoup, et al (2008) identify five sets of variables that are included in most models of student success and explore them in an explanatory approach. These variables are student background characteristics, including demographics and pre-college academic and other experiences, the structural characteristics of institutions such as mission, size, and selectivity, the student’s interactions with faculty and staff members and peers, student perceptions of the learning environment and the quality of the student’s effort devoted towards educationally purposeful activities. The additional variable given emphasis by Kuh et al (2008) is the degree of engagement shown by the student. This manifests itself through the relationships between the energy expended on social engagement and the resulting degree of social integration and energy expended on academic engagement and successful academic outcomes and persistence during the first and through into the second year. Kuh et al 2008 claim that engagement accounts for an important part of the variability in achieved grades, independent of students’ prior academic ability. My participant’s ‘overall’ conclusion was that success was dependent on the amount of effort made!

Other studies have focused more specifically on Medical Students' perceptions of the factors that contribute to their academic success. These studies are relevant because they relate to Medicine specifically and resonate with the discussions of my participants. Lizzio et al (2002) report that Medical Students identify three components of the academic environment that contribute towards their academic achievement. They want clear goals (learning outcomes), good teaching, and appropriate assessment. Abdulghani et al (2014) asked high achieving pre-clinical students from the Middle East to identify factors that contribute to their success. Key academic skills are prioritising their learning needs over other commitments, the ability to access resources, attending lectures, starting revision early as opposed to cramming before exams, deep learning rather than memorisation, learning in small groups, using mind maps, using clinical cases as structuring/organising elements, learning with patients, and reflecting on mistakes. Other factors include time management, sleeping well, command of language, coping with stress and homesickness and family support. Abdulghani et al (2014) conclude that self-regulated learning and participation in scheduled learning activities make the greatest contribution to examination performance. Different sources of motivation are present among these high performing students, with internal motivation to be successful doctors, but external motivation to achieve high grades. These successful students also report that it is essential to keep up, as it is not possible to go back in an overly-burdened curriculum (Abdulghani et al 2014). This is strongly supported by the comments of participants in the current study.

Amini et al (2008) explore the perceptions of thirty successful 5th year Iranian Medical Students. They associate personal ability with success, but believe that perseverance is more important than intelligence. A positive commitment towards the Medical Profession and support from family, friends and the institution are also important. Again, these views were all expressed by participants in the current study.

Todres et al (2012) contrasts the attitudes and approaches to learning of eight resitting and ten high achieving Medical Students interviewed at end of year 4/beginning of year 5. Three key themes associated with success are discussed. The first is engagement with learning. High achieving students are more engaged in their learning, taking an active approach, and working more with other students. They are able to reflect on how they learn, recognise what works well and apply their experience to future practice. Poorly performing students demonstrate a passive approach to learning, are poor at reflecting on how they study and cannot apply their experience to future practice. The second is students' awareness of their own performance. High performing students have a sense of their progress, whereas poorly performing students have little awareness of their ability until it is made manifest through formal assessment. The third relates to how students cope

with personal and academic difficulties. High achieving students have proactive strategies for coping with difficulty. An additional finding that resonates with the current study is that high achieving students report working effectively and efficiently in groups (Todres et al 2012). Maudsley, Williams and Taylor (2007) explore the views held by candidates selected for interview to medical school and junior students from a UK Medical School. Important themes for success in year 1 are coping well and enjoying one's studies, making friends or gaining social acceptance, and enjoying oneself, including leisure and social life. All of the findings discussed here reflect the perspectives of my participants. They also fit with the dual necessity of both social and academic integration required for success.

5. Failure, withdrawal or dropping out.

Students may fail, withdraw or drop out for a variety of reasons. Both academic (Ozga and Sukhnandan 1998) and non-academic (Rickinson and Rutherford 1995) withdrawal occur most often in the first year. Tinto identifies that voluntary and involuntary withdrawal may have different underlying mechanisms and explanations, with most involuntary withdrawal attributed to academic failure (1975). However, studies that look for differences between those that pass or fail an examination exclude those who were never included in the assessment (Bourdieu and Passeron 1977). This is crucial for Bourdieu and Passeron, who identify that most of those excluded from studying at all levels of education eliminate themselves before being examined (1977, p153). Academic failure is thereby disguised through the probability of candidature for the examination which is mediated by self-exclusion and is a more effective means for preventing progression than exclusion through assessment. This may have relevance within Tinto's model and the other studies that I discuss, where voluntary withdrawal due to lack of social or academic integration may not be accounted for when academic failure is the only consideration.

Ozga and Sukhnandan (1998) highlight that research on non-completion has focused on identifying the characteristics of students and institutions which predict withdrawal. Harrison (2006) distinguishes two approaches to these investigations. Predictive models seek to identify which students are predisposed to withdraw, whereas explanatory models seek to identify the reasons why students have withdrawn. Harrison (2006) claims that the predictive approach has been largely unsuccessful, the only consistent finding being that prior academic achievement is associated with success. Harrison (2006) goes on to claim that the explanatory approach has been more useful, reporting that poor decision making around the choice of institution and/or course, problems with social integration and academic difficulty are consistently identified as the main reasons for withdrawal. This is consistent with Ozga and Sukhnandan's earlier findings that the predominant reasons for withdrawal are a lack of preparedness for higher education and incompatibility between

the student and their course/institution (1998). However, Thomas (2002) criticises the focus of research on withdrawal for attributing university failure to the student, either for being poorly prepared for university learning or for their lack of academic ability. Glogowska et al (2007) share this criticism of directing the focus of research only on to those students who have actually withdrawn and for attributing withdrawal to the individual's characteristics or academic abilities. Glogowska et al (2007) suggest that to understand withdrawal, there also needs to be an understanding of the reasons why people stay, including how characteristics such as persistence and resilience allow students to overcome difficulties. This approach is consistent with identifying the factors that mediate integration into the institution as a requirement for success within Tinto's model (Glogowska et al 2007). Ozga and Sukhnandan (1998) also criticise the relevance of Tinto's model when applied to non-completion in UK higher education because of its lack of specificity about integration and the focus on the student as the problem, which has led researchers to direct their focus on statistical modelling of multiple variables to demonstrate causality, while losing sight of the complexity of the interactions being investigated. They state that non-completion 'cannot be understood solely by investigating particular student attributes or institutional practices', but has to be interpreted as part of a complex social process of interaction between the student and the institution (Ozga and Sukhnandan 1998, p320).

Glogowska et al (2007) report their analysis of why nursing students either did withdraw or considered withdrawing, but chose to remain on their training programme. I will discuss their findings in some detail, because they are relevant to the discussion and to my participants in particular. Glogowska et al (2007) conclude that this decision was rarely based on a single factor, but depended on a range of interacting factors which they categorise as 'push' factors, driving students to leave, and 'pull' factors, encouraging students to persist. The timing of exposure to these factors is important. Negative experiences early in the course are common and may be overwhelming if they occur before students have developed the resources to deal with them. Push factors include the challenges of academic work, which are greater for non-traditional students. However, even those with A-levels feel unprepared for university study. Students struggled with university learning because of large class sizes, lack of familiarity with lectures and an inability to ask questions. They perceive a mismatch between their theoretical learning and clinical practice.and encounter difficulties on clinical placements. While some students are satisfied with the support that they receive from the teaching faculty and institution, a majority report inadequate academic support. Despite having a personal tutor, students feel that lecturers do not know them and that there is no one person to whom they can relate. Students highlight problems with their tutors' accessibility and availability. They have additional non-academic demands, including the need for

paid employment while studying, caring commitments, personal physical or mental health problems and financial difficulties. Formal and informal support networks are important and centre on family, friends and other students, either on the same course or in shared accommodation. These support networks have the greatest impact for those who choose to remain. Living off campus increases social isolation and reduces opportunities for integration. Pull factors include a personal attribute that students describe as 'determination', 'stubbornness' or 'inner strength', which encompasses a determination not to be defeated by 'unhelpful or obstructive' members of clinical placement or academic staff. Career commitment is also important among these nursing students. A goal-focused approach and informal support mechanisms maintain perspective on difficulties encountered. Glogowska et al's work (2007) shows good alignment with Tinto's model of academic and social integration (1975), with decisions to remain being strongly influenced by support networks and career commitment. These students were on a nursing programme, which has many characteristics shared with Medicine, specifically the mixture of theoretical and clinical learning and clinical placements. All of the push and pull factors identified can be aligned with themes discussed by my participants. Glogowska et al (2007) conclude that their findings demonstrate that academic underachievement on its own is rarely the cause of students deciding to withdraw. A complex interaction of personal, financial, social and institutional difficulties are experienced by students who withdraw and remain, with similar factors operating in both groups. The difference in the ultimate outcome related to students' ability to resolve the difficulties that they encounter. Harrison (2006) reports a survey of undergraduates who withdrew during their first year of study, focusing on their negative experiences. He identifies four patterns of early withdrawal. Group 1 are 'academic strugglers and career path reviewers', who are usually motivated and have been academically successful prior to university (Harrison 2006, p386). Most have chosen a specific career path when applying to university, but their early experiences leads them to review their decisions. Some in this group struggle with independent learning or with practical placements. Students who discover that Medicine does not meet their expectations or who are overwhelmed by the academic demands of the course may fit in this group. Group 2 are overwhelmed by their new environment, struggle to make friends and are unable to integrate. Group 3 are categorised as 'middle class drifters' (Harrison 2006, p387). This group have not made proactive choices about university attendance. They are often from affluent backgrounds, and attend university based on the expectations of family and peers. My participants described a group of students who choose Medicine as an academic progression or through pressure from parents or their school, who may fit into this group. Group 4 withdraw involuntarily due to personal illness, relationship problems or family circumstances (Harrison 2006). My participants referred to this group under mitigating

circumstances, with the perhaps mistaken perception that these circumstances did not impact on academic success. However they may lead to non-academic withdrawal.

Ozga and Sukhnandan (1998) identify that a lack of preparedness for student life is related to inadequate knowledge about higher education in general and the institution in particular. Students who complete their courses are more likely to have made considered choices to enter university, with specific goals and career in mind. They are also more likely to have obtained a place at their preferred institution to study their first choice course. The institution and course will, in turn, meet their expectations. In contrast, students who did not complete their course are more likely to go to university for reactive reasons, including to satisfy parental, teacher or school expectations or because their academic ability aligned to course requirements. They are more likely to go to institutions which are not their preference or to study courses which are not their first choice. It could be argued that all students who apply to, and compete to enter, Medical School wish to study Medicine. However, different Medical Schools offer different curricula and have different approaches to teaching and exposure to early clinical placements. Campuses vary greatly in their facilities and degree of integration with other parts of the University. Many students must accept a place at the Medical School which makes an offer, regardless of whether that would be their first choice or meet their expectations. My participants discussed students who studied Medicine to meet the expectation of their parents, of their schools, or because grades aligned with the expectations for Medicine. They also discussed institutional pedagogy. Acceptance of institutional practices appeared to influence success.

Hendren (1988) reports a single institution's experience of dealing with Medical Students who faced difficulties on their programme. This report is limited by its narrative format and focus on a single US institution. However, the many years of experience and detailed analysis is helpful. Hendren (1998) identifies four groups of students who encounter failure. Group 1 have academic problems, lacking the basic academic skills required in a demanding medical course. Issues include poor knowledge, difficulty with clinical skills and poor organisation of knowledge. Group 2 have intrapersonal problems, resulting in personal conflicts, excessive anxiety and inconsistent motivation. Group 3 have interpersonal problems, manifesting as difficulties in their relationships with academic and non-academic faculty, clinicians and/or patients. Specific characteristics included maladaptive coping mechanisms such as denial, projecting their problems on to other people, lack of appropriate anxiety and inflexibility. Group 4 demonstrate a combination of academic and intrapersonal difficulties. Importantly, students in all groups begin to experience difficulties during their first year.

Mcloughlin (2009) gives a more anecdotal account of his experiences of interviewing, tutoring and counselling Medical Students in academic difficulty. He describes the learning habits, and social and psychological dispositions of students who fail. Again, this account is limited by its personal nature and is limited to a single US institution. Mcloughlin (2009) claims that the reasons for failure are usually clear. Academic failure could occur despite a strong desire (internal motivation) to continue in Medicine, described as being 'no longer welcome due to academic shortcomings' (p1). Mcloughlin (2009) describes a constellation of difficulties related to these students' ability to manage academic and clinical tasks. Firstly, they struggle to organise the mass of complex information encountered, seeing things in a linear manner and failing to create bridges between different contexts. They struggle to relate learning across domains and are unable to identify which information is most important. This results in piecemeal memorisation of knowledge, making efficient retrieval difficult. Secondly, they do not plan effectively, resulting in difficulties with organising and completing tasks and the organisation and structuring of their notes. Information from different learning resources is not linked and problem solving strategies are ineffective. Thirdly, unsuccessful students lack examination preparation skills. They want clear signposting between learning outcomes and assessments, struggle to transpose learning from one domain to another, view information in isolation and are not test-wise. These difficulties with organisation, identifying learning outcomes and integration of knowledge between domains were all discussed by my participants. Mcloughlin (2009) reports that students in difficulty could only remediate if they were able to recognise their problems and adopt new study habits. Students from vulnerable situations and non-traditional backgrounds are overrepresented in failing groups and Mcloughlin (2009) suggests that inadequate social support networks and a lack of a 'family legacy' in Medicine contribute to their difficulties. The latter is consistent with a UK study, which found that students with a parent employed as a doctor were less likely to drop out of Medical School (Arulampalam et al 2004). Other factors include their rejection by the established medical community because of 'lifestyle, use of restricted substances, personality characteristics, or interpersonal idiosyncrasies' (Mcloughlin (2009, p1). Another group of failing students have the necessary academic skills, but are not committed to a career in Medicine.

Mcloughlin (2009) identifies a number of other characteristics of students who experience failure that may be important. Many students in academic difficulty state that they had never previously been stretched by academic work. These students continue to rely on earlier learning strategies, typically memorisation and repetition. This theme was frequently raised by my participants. Failing students are more likely to be 'loners', meaning that they may have limited social support networks, and are rarely members of organised study groups. They adapt poorly to independent learning,

remaining dependent on faculty to direct their learning. Despite this dependence they struggle to engage with faculty, either because they do not ask for help or because they feel that faculty refuse to help them or actively exclude them. Mcloughlin (2009) also identifies that academic failure is a new experience for Medical Students and, when experienced, results in distress and shame with the consequence that the student concerned actively avoids contact with their peers and faculty, further compounding their difficulties. Nearly all of the themes and issues identified by Hendren (1989) and McLoughlin (2009) are discussed by my participants. They relate to transition, social and academic integration, adopting new ways of learning, metacognition, working in teams, engagement with faculty and seeking and responding to feedback.

In a UK study, students on a social science course identify academic, social and material factors which influence their decisions to either consider withdrawal or actually withdraw from university (Wilcox et al 2005). Social support factors include reduced family support, personal issues, difficulty making friends, friends leaving the course, and difficulty engaging with tutors. Academic factors include difficulty engaging in independent study, dissatisfaction with the institution or course and poor attendance. Material factors relate to accommodation, difficulty managing finances, and the social opportunities offered by the campus. Lowis and Castley (2008) identify that students who withdraw tend to be those who have difficulty with independent learning, who do not work collaboratively with their peers and who engage in a narrow range of learning activities. These findings show good alignment with the theoretical models, findings among Medical Students and perceptions of my participants, despite the different subject area.

In common with Glogowska et al's finding in relation to the decision to persist or withdraw (2006), Todres et al (2012) report that non-academic difficulties, including health, financial or other social problems, are not unique to low achieving students and that these factors do not predict academic performance on their own. More important to determining outcome is the way in which an individual copes with the stressor(s) encountered.

6. Stress.

Participants in the current study discussed anxiety, stress, burnout and 'being overwhelmed' as important concerns in their perceptions about the First Year at Medical School. They also talked about anxiety in relation to assessment and personal or life event leading to mitigating circumstances. Stress and depression are prevalent in student populations (Stecker 2004). At the start of Medicine, Medical Students may not have greater levels of emotional distress than the general population, but distress becomes more common over the first two years and tends to be persistent rather than intermittent (Rosal, Ockene, Ockene, et al 1997). Drybye, Power, Massie et al (2010) review findings from a range of studies and report that up to 50% of Medical Students

experience burnout, 25% depression and many others have long term anxiety. Niemi and Vainiomäki (2006) also report high levels of fatigue and sleep disturbance. Alsaggaf, Wali, and Merdad (2016) found that sleep disturbance is common and is related to stress, although its relationship with performance in assessments is inconsistent. However they did report that insomnia, stress and poor academic poor performance were interrelated. Despite the prevalence of problems, students with psychological problems (Tyssen, Vaglum, Grovold et al 2001) or at high risk of withdrawal (Rickinson and Rutherford 1995) may not seek help. Psychological well-being can influence students' perceptions of their adjustment to university and is associated with objective measures of academic success (Wintre and Yaffe 2000).

The perception of stress can be interpreted as a balance between the demands placed on an individual and the resources available to meet those demands, while coping with stress can be interpreted as the ability to manage any discrepancy that exists between the demands encountered and the available resources (Niemi and Vainiomäki 1999). Wintre and Yaffe (2000) suggest that negative emotions, depression and an inability to cope result if a student's resources are insufficient to meet a perceived increase in stress at university. Citing Chickering's vector of managing emotions (1969), Wintre and Yaffe (2000) also claim that these negative emotions are more likely to emerge when an individual's inculcated values, in other words their habitus, are challenged. Niemi and Vainiomäki (1999) identify a number of different coping mechanisms exhibited by Medical Students. Socially coping students discuss their problems with other people and engage in sports or hobbies. Others only use sports and hobbies as a coping mechanism. A third group try to cope by studying harder. A further group use a range of strategies and are able to reflect on their priorities, adjusting their strategy accordingly. This group are the best able to adapt to difficult situations. A further group have no identifiable means of coping. This last group and those who cope socially, often by complaining to friends or focusing on non-academic activities, are the most vulnerable to stress. This suggests that social support and extracurricular activities have the potential to buffer against stress, but they may also be used to avoid difficult situations or even become a source of stress in themselves (Niemi and Vainiomäki 1999). For example, the need to support other family members or to pursue goals to satisfy parents rather than oneself may be counterproductive. These findings may be relevant to my participants, who emphasised the importance of social support mechanisms and hobbies and sports, but also reported increased anxiety in relation to time for leisure at university. They recognised that overworking was a detrimental method of trying to deal with the academic demands of the curriculum.

Drybye et al (2010) suggest that a conceptual framework in which the work environment and personal characteristics contribute to distress, while job satisfaction and social support have

buffering effects, can be applied to Medical Students' experience of their training programmes. This is consistent with a Bourdieusian framework, in which the habitus of the individual will determine how well they fit with the institutional habitus and form relationships with faculty and peers. Their social and cultural capital will determine the resources that they have available to meet academic demands and form support networks. Congruence with institutional habitus will determine course satisfaction and career commitment, or illusio, will modulate the experience of the demands of training in Medicine.

Radcliffe and Lester (2003) divide the main sources of stress reported by Medical Students into four themes: transition points, the pressure of work, the pressure of professional socialisation, and lack of guidance. These themes are consistent with the described framework.

Transition points. Medical Students report that the transition from school to Medical School, with its associated lifestyle changes and disruption to living arrangements and existing relationships and friendships, is stressful, and that the preclinical/clinical interface is particularly stressful (Radcliffe and Lester 2003). This disruption occurs at the same as encountering a new range of less didactic teaching methods and interacting with peers of the same or greater academic ability. The balance between the stressors of transition and the resources available to overcome them is crucial to a successful transition. Distress can overwhelm normal coping mechanisms (Compas, Wagner, Slavin et al 1986) and Rickinson and Rutherford (1995) report common consequences. They claim that affected students lack confidence in their ability to manage new personal and academic demands, feel unable to engage in their new environment, perceive the institution as threatening, contemplate withdrawal, and avoid seeking support (Rickinson and Rutherford 1995). These features can be recognised in the interviews with my participants.

The pressure of work. Academic pressure is a predominant stressor identified by Medical Students (Drybye, Thomas, Harper et al 2009), characterised by the huge volume of information that has to be mastered at the beginning of the medical programme (Niemi and Vainiomäki 1999 and Miller 1994). This is clearly apparent in the current study. Stress is greater when there is grade competition (Niemi and Vainiomäki 1999). Other sources of academic stress relate to teaching and assessment. Course structure and poor teaching, with an overemphasis on memorisation are noted by Miller (1994). Pancer et al (2004) emphasise the challenge of encountering difficult course material. Radcliffe and Lester (2003) refer to a relentless assessment regime, characterised by the number, intensity and nature of examinations. Miller (1994) reports that for some students, the sheer volume of work overwhelms their ability to cope.

The pressure of professional socialisation. Medical Students must develop a professional persona and the professional context of the medical curriculum is a further source of stress. Students are

concerned about their ability to acquire professional skills, knowledge and attitudes (Radcliffe and Lester 2003). Career commitment may buffer against this (Niemi and Vainiomäki 1999). However experiences of patient care can be distressing, as discussed by Glogowska et al (2007) in relation to nursing students. Moss and McManus (1992) report that students are anxious about their interactions with senior clinicians and Drybye et al (2009) that student abuse is prevalent in US institutions. Abuse can take many forms, but deliberate humiliation of students by senior clinicians may underlie this anxiety (Moss and McManus 1992). This did not appear to be a prevalent problem in the current study.

Lack of guidance. Students perceive that they receive a lack of guidance from the Medical School and from individual tutors on both academic and personal welfare issues (Radcliffe and Lester 2003). Learning objectives and the expected depth of knowledge are unclear, which increases stress, especially in relation to assessments. My participants recognised these issues, but believed that successful students could judge these issues for themselves, in contrast to unsuccessful students who could not.

All Medical Students are exposed to stressful stimuli, but some are more resilient to these and other major life events and those that do suffer from an episode of stress vary in their ability to recover (Drybye et al 2010). Drybye et al (2010) report that more resilient students are less likely to experience depression, perceive a higher quality of life and have fewer stressful life events than more vulnerable students. They are also less likely to be in paid employment while studying, report higher levels of support from friends, family and faculty, and have more positive perceptions of their learning environment. A perception of collaborative learning increases resilience and the feeling that faculty regard student education as a priority is associated with increased resilience and recovery from stressful events. In contrast, demographic characteristics, including gender, age, relationship status, parental status, ethnicity, race, year in school, and student debt are not associated with resilience. Radcliffe and Lester (2003) also report that 'team spirit' and engaging in discussion with peers helps to reduce stress among Medical Students. Informal support networks allow students to check on one another and provide a stimulus to seek more formal support when needed. Medical Students do however report becoming isolated from their non-medical peers, because of the hours they work and the nature of their work, stating that other students 'did not understand' (Radcliffe and Lester 2003, p35). My participants emphasised the importance of peer support and the shared endeavour of managing the transition into university and coping with the academic demands of Medicine. They recognised that being a medical student separated them from other students, both in terms of academic and professional expectations and the opportunities for socialisation.

While students perceive most stress as negative, some effects can be positive, especially if they increase motivation or focus (Radcliffe and Lester 2003). Hendren (1988) suggests that some degree of anxiety promotes academic achievement and Ferguson et al (2002) found that the personality trait ‘anxiety’ is related to success. A certain degree of anxiety contributes to success, while very low or high levels reduce success. Medical Students also believe that learning to cope with stress is an important part of their development as a doctor (Radcliffe and Lester 2003). One of my participants reported that learning to deal with the anxiety of clinical assessments was part of learning to be a doctor.

In this chapter, I have considered a wide range of factors that relate to success and failure and related these to the existing literature. In the next chapter I will further develop these factors within the theoretical framework described by Bourdieu.

Chapter 6. **Interpreting the results in the context of the theoretical framework.**

In this chapter the data from the questionnaires and interviews in the current study are interpreted within a relational analysis following the methodological principles of Bourdieu's theory of practice as described in Chapter 3. As the research object, the students are sited within their primary field of operation, the First Year of Medical School, while seeking to identify other fields of influence. The positions of the various agents within the field, including the First Year students themselves and those they interact with, their relations and sources of authority are explored. The dispositions, or habitus, of these agents are considered. Finally, my own position as the researcher and observer is considered.

Fields. Grenfell (2008, p222) describes the first level of a relational analysis as defining the field of interest and positioning it in relation to other fields, including the acknowledged field of power. In the current study, a number of different fields are apparent within the participants' descriptions. Their immediate field of interest is the First Year of Medical School, which may also be their First Year of undergraduate university education. This lies within a wider educational field that encompasses their entire educational history. All have experienced a prior field of secondary education, culminating in success at A-level or equivalent. This was not the field preceding Medical School for all participants. There was an interceding university field for graduate entrants and time away from education for students taking a gap year. This may be important, as graduate entrants have had an opportunity to go through a transition to university and acquire some of the academic and social capital associated with success. Students that have taken time away from education may have lost some of their study skills, but acquired additional social and cultural capital, depending on how they used this time.

Within First Year, a number of fields are operating. The 'University' can be considered the field of power, given that it grants the Medical School the authority to allow progression or termination of studies. Drawing on the work of Bourdieu and Passeron (1977) and Robbins (1993), Thomas (2002) restates that educational systems are socially and culturally biased. This bias is mediated through the institutional habitus. Reay, David and Ball (2001), citing McDonough (1996), describe institutional habitus as `the impact of a cultural group…on an individual's behaviour as it is mediated through an organisation' (Reay et al. 2001, para. 1.3). A student's experience of university is determined by their relations with faculty and other students, who may or may not share a similar habitus. The experiences and standards expected of Medical Students are different from most university students. In addition to the academic field encountered by all undergraduates, Medical Students must develop a professional persona, meet the standards of professional conduct defined by the GMC and are subject to Fitness to Practice regulations throughout their training. The

institutional pedagogy, assessment regime and progression requirements are different from many other undergraduate courses, as described by my participants. Hussey and Smith (2010, p159) state that successful transition:

> 'Involves far more than turning up…it involves identifying, understanding and assimilating a complex range of assumptions, behaviours ad practices often tacitly represented by the range of disciplines…they are studying'.

In other words it involves understanding the rules of the game. Other fields within fields are also in operation, including formal and informal work groups and friendship groups. Problem–based learning and Clinical Skills groups operate within the University setting and Clinical Placement groups operate within the wider NHS, both in Primary and Secondary Care. Each of these settings has unique features, with their own rules and practices which create multiple intersecting fields that students must negotiate.

Agents. The second level of analysis explores 'the structural topography of the field itself' and the 'objective structure of relations between the agents who compete for the legitimate forms of specific authority' within the field (Grenfell 2008, p222). This analysis seeks to identify the differential distribution of capitals that allows individuals to occupy and maintain their relative positions (Grenfell 2008, p222). In the current study, the agents of interest, or research objects, are First Year Medical Students. They are surrounded by other students, including Medical Students in the same year (immediate peers), Medical Students in higher years, non-Medical Students in shared accommodation and non-Medical Students with shared social interests.

Academic entry criteria for Medical School are high. Most students will have achieved a minimum of three 'A' grades at A-level or equivalent, implying that all entrants have been academically successful, and many will have been the most successful in their personally experienced field of secondary education. My institution has a widening participation programme, through which a lowered entry tariff may be applied for students from a disadvantaged background. The academic grades and acquired social and cultural capital of students entering through this programme are likely to be different from their immediate peers.

The clearest relation characterised by a legitimate form of authority within all educational fields exists between pupil/student and teacher/tutor. Within the field of secondary education, the primary hierarchical relations are with parents and schoolteachers. On transition to the Medical School field, these relations change, with a reduction in parental support for most students and an expansion in the number of agents that occupy teacher/tutor/lecturer roles, as described by my participants. The parental role is replaced through a combination of increasing independence and the creation of a new social network, where friendships are more important than institutional roles (Wilcox et al

2005). ‘Good’ friends are the primary source of support and are predominantly made through living arrangements or among peers studying on the same course. Teaching roles encountered at Medical School include University employed academics, Health Service employees, peers within the same year who may be school leavers or graduates, students in higher years and members of the public, most frequently simulated or real patients.

In secondary education, the teacher has control of the students’ learning process, an interaction characterised by obligation, the student obliged to fulfil the tasks required of them by the teacher. In exchange, the roles of the teacher include delivery of information and explication. From an assessment perspective, my participants identified the teacher’s purpose as being to achieve the best possible grades for each student. Achieving high grades serves the interests of the institution and the teacher serves the institution. The teacher’s direct motivation might not be the success of each individual student, but to guarantee the status of the institution through their students’ success and consequently to validate their own status within the institution.

University tutors fulfil different roles and perform different functions within different groups and with varying levels of authority. Lecturers are perceived as content experts, their lectures defining the required learning outcomes. They could be approached, but this required specific and intentional action on the part of a student. Students made decisions about whether or not they wanted to attend lectures in person, to watch them on the VLE, to do both or to do neither. PBL tutors were recognised as facilitators, who were not content experts, by the majority of students. Their role was to guide students in their discussions. However, having a medically qualified tutor, who was invested with the professional persona of ‘doctor’, enhanced the tutor’s credibility and enabled additional context and anecdote, which validated learning. Clinical placement tutors were acknowledged as ‘bona fide’ health care professionals and were valued for the clinical context that they brought to weekly learning outcomes. Faculty are encultured with the habitus of the fields within which they operate. Their degree of investment within the field of power, the university, will vary according to their individual role.

At First Year, assessments are internal to the institution and are intended to allow students to demonstrate that they have achieved the standards required by the University to progress to the next stage of the programme. The Medical School’s interest is in identifying those students that have met this criterion. They are not intended to rank students. Competition is not a School priority, a fact which was recognised and acknowledged by most participants. Content for assessments is created by the tutors who are delivering the teaching. This ownership of assessments, together with the purpose of assessment as confirmation of ability to progress, changes the relationship between student, tutor and assessment in comparison to secondary school. Rather than tutors having a

primary interest in the success of the student and the students' success reflecting the success of the School, the primary interest is in ensuring that students have reached the required standard. If students have not, then they should not progress as this would harm the reputation of the School and ultimately harm the public and the reputation of the profession. Thomas (2002, p431) reiterates that 'educational institutions are able to determine what values, language and knowledge are regarded as legitimate, and therefore ascribe success and award qualifications on this basis'. For Medicine, this is subject to additional validation by external agencies, most specifically the GMC. Leese (2010) identifies students' concerns about having access to the language that is required to succeed at university. For Medicine, this might include competent use of the English language, of academic language and of the vocabulary of Medicine.

Student agents interact within academic and social fields. Academic interactions develop predominantly with other students studying Medicine, although this was not always the case. Some used the shared endeavour of working in the same social space, the library, at the same time as students on other courses. Student relationships within the academic field could be formal or informal. The mechanism of formation of formal groups was clear and dictated by and facilitated through the institution. The mechanism of formation of informal academic groups was less clear, but appeared to be predominantly based around friendships and shared space, although friendship dominated. Accessibility of groups to new members was seen differently by those inside and outside of them. Social groups developed through sharing the same undergraduate course and through shared living accommodation.

Not all students were regarded as holding the same relative positions within the Medical School field. Graduate entrants were perceived to hold additional social and cultural (academic) capital that was accounted as valuable to both themselves and to other students. This difference in hierarchy created opportunities for those of higher (graduate entrants) and lower status (school leavers). Graduates additional capital created academic and social advantage and allowed them to gain additional status within groups. Schools leavers were able to use graduates as an additional support mechanism and as a pathway into group membership.

Patients represent a further group of agents encountered in simulation or clinical placements. Clinical placements occur in Primary and Secondary care, which are overlapping, but distinct fields. Placements are supervised by tutors, but patients are highly variable, coming from a wide range of socioeconomic and cultural backgrounds. They are operating as agents within their own right. They have a habitus formed by their own past, which may have been additionally shaped by their experiences of healthcare. Several participants discussed the difficulties of understanding local accents or use of dialect. One student discussed their experiences of being a Black female meeting

patients that were often white males and from a different social class. Such interactions could bring misunderstanding, including over the student's status as 'student doctor'.

Habitus. At the third level of analysis, the habitus of individual agents is considered, including their background, trajectory and positioning (Grenfell 2008, p222). My participants discussed a range of characteristics that constitute elements of the individual habitus, developed through family upbringing and earlier educational experiences. Some of these can be considered as dichotomous variables, for example undergraduate/graduate. Others might exist across a continuum, for example academic ability, anxiety, conscientiousness or motivation. Many might overlap and interact. These are considered here.

Academic ability was considered important for success, but it was acknowledged that everybody who gained entry to Medical School had academic ability. A number of participants differentiated between students that had always had to 'try hard' to succeed and those who had found success 'easy'. 'Trying hard' resulted in a well-developed work ethic and learning skills, which could be transferred from one field to another. In contrast, students that had 'had it easy', because they were naturally talented, had abundant resources, or because assessments were not challenging, had not developed these skills. They might struggle when faced with a more challenging curriculum and workload.

Participants identified themselves as school leavers, studying for their first degree (*undergraduates*), or as graduate entrants studying for a further degree (*graduates*). Undergraduates had an approach to studying and preparation for assessment that was grounded upon their experience of secondary education. They were accustomed to external control of their personal and academic lives, with rigidly constructed timetables, set workloads and high levels of support from family and teachers. They expected clear learning outcomes, a well-defined curriculum and easily accessible information located in a limited number of spaces. Information had been delivered to them and difficult concepts explained until they had achieved mastery. Preparation for assessments focused around concentrated periods of revision and a dependence on previous examination papers.

Participants described a period of adaptation to the new social and academic environment of the university that was referred to as transition. This academic and social transition challenged the existing habitus and required time and 'work' from the individual. Adapting to the approach to teaching and learning, or pedagogy, espoused by the institution is central to academic integration and allows students to gain acceptance and status by conforming to the practices of the institution. Academic success is dependent on this conformity. Students that have been prepared to enter the university system or who have the necessary social and cultural capital to integrate and adapt rapidly are likely to succeed. Students that are not prepared, or non-traditional students who lack the

requisite capital, are more likely to encounter conflict and fail. Bourdieu identifies that an immediate fit between habitus and field is only one possible outcome, stating that when there is incongruence 'times of crises…occur in which the routine adjustment of subjective and objective structures is brutally disrupted' (Bourdieu and Wacquant 1992, p131). My participants reported that the speed and efficacy of transition varied, such that some experienced a more successful transition than others.

Graduates had already gone through a transition into university life. They had developed skills for living away from home and acquired academic skills with which to manage learning in higher education, including the ability to regulate independent learning. In other words their habitus had evolved in response to their experiences of higher education and they had been inculcated with a new institutional habitus. Graduates therefore start the first year of Medicine with greater knowledge and better adapted strategies for managing their learning and revision. Arulampalam et al (2004) report that graduate entrants are less likely to drop out during the first year at Medical School. Students taking a year away from education may not have developed their academic skills, but they may have experienced living away from home and developed new social skills, again leading to evolution of habitus. The potential negative is a loss of cultural capital from a period of time away from academic work.

State school/private school. Participants identified themselves in terms of where they had studied for secondary education. No-one discussed gaining admission through Widening Participation. State school attendees appeared more critical of their secondary education and were the only discussants that were very critical of their institutions. Some had moved from state education to private education between GCSE and A-level in order to improve their chances of achieving high enough grades to enter Medicine. A number of private and state educated participants had also used private tuition. These findings suggest that participants recognised that they had to conform to 'be acceptable' and that acceptability was expressed by A-level grades. By moving school or using private tuition, participants and their families were taking action and expending capital to achieve their desired outcome. Two relocated from UK islands and an International student moved to the UK, representing both personal compromise and financial investment.

State educated participants perceived that their education was different and did not offer the same opportunities as private education. However, a number of participants referred to pupils in private education having an 'easier' time, by virtue of the extra support available. This did not necessarily confer advantage once students were studying at university. High levels of external motivation combined with low levels of academic challenge might mean that resources for independent learning were not developed, resulting in academic difficulty within the university field. In contrast,

students that had always had to ‘work hard’, struggle for resources and be independent in their learning during secondary education were better adapted to the realities of university. Another possible issue relates to (over)confidence. Goldfinch and Hughes (2007) report that students who arrive at university feeling very confident in all of their study skills do not do as well as those who recognise that they need to improve in some areas. Early assessment and good feedback may allow these students to gain a more realistic understanding of their actual level of ability. Despite these potential differences, Arulampalam et al (2004) found no difference in attrition rates from Medical School based on type of secondary education.

UK / international. Students who grew up and studied is another country may have different cultural values and expectation, as well as different experiences of teaching, learning and assessment. All of my participants reported that the Medical School was receptive to students from different cultures and no participants expressed an opinion that international students were more likely to fail. International participants reported being welcomed by faculty and peers. They acknowledged the ‘strangeness’ of their new location, but felt that support and friendships allowed them to manage the difficulties associated with their move to a new location and new academic field. However, international students participating in a research study are self-selected and their views may not be representative. One UK participant reported that their international acquaintances had struggled to integrate into a new culture at the same time as managing their academic workload. Arulampalam et al (2004) found that overseas fee paying students were less likely to drop out of Medical School. However in this cross sectional, quantitative analysis, it is not possible to differentiate the impact of overseas status and the motivational drivers associated with studying abroad and of paying substantial fees.

A perception that was expressed was that there were cultural differences in the external pressure to succeed, particularly from family members. The only respondent to the questionnaire that expressed any preference for who they worked with in a group setting was an international female Asian student, who preferred working with students from the same ethnic background. It is not possible to know the reason for this preference, but possibilities include shared study behaviours, learning methods or language preferences.

Working in groups / working alone. Participants discussed working in groups a great deal. These groups were formal, assigned by the institution, and informal, organised by students themselves. Choosing to work alone or in groups is therefore not dichotomous, as formal group work is obligated. However, the commitment to and preference for group working appeared to differ among participants. The majority of discussants associated working in groups with success in assessments. However, some expressed a preference for working independently. Advantages of working in

groups were clearly articulated. Participants that preferred to work independently were less clear about the reasons for this preference. Even those that preferred to work alone might still undertake their work in a shared space, where the presence of others engaged in the endeavour of studying provided motivation.

As already stated, the mechanism of informal group formation and determination of rights to group membership were unclear. Friendship and shared space appeared to be important, with groups forming around students that lived or socialised together. Brouwer et al (2016) identify friendship as important in the formation of networks, but also emphasise that networks tend to develop among individuals with equivalent levels of academic ability. Vaughan et al (2015) explore the effect of homophily, the tendency to for individuals to interact with others with the same background characteristics, from the perspective of social capital theory. While Vaughan et al (2015) observed religious and ethnic homophily among UK Medical Students, they have no impact on success. In contrast, developing a wider support network with more senior colleagues and the quality of interactions between peers within study groups are associated with higher levels of achievement. Vaughan et al (2015) suggest that having the capital to form these networks allows students to access additional capital and that high achieving students were able to form relationships with other high achieving students, consistent with the findings of Brouwer et al (2016).

In my study, groups met in shared learning spaces where resources were available. Members of groups reported that they were open and that others were not excluded. Those outside groups were less sure of this and felt that membership was available to those within a circle of friends, but not available to all comers. Medical Students are engaged in a shared endeavor, giving common purpose. However, group formation is likely to be dependent on commonalities that extend beyond studying the same course. Individual habitus is likely to be important in determining group membership, both through social and academic mechanisms. If groups are largely reliant on friendship, the same mechanisms that allow friendships to form will operate. Those with shared backgrounds and similar social and cultural capital are more likely to form social networks, both through their living arrangements and within academic circles. Those that do not share the same habitus are more likely to be excluded. Similarly, those with a similar academic habitus are likely to work well together, whereas those with different learning strategies or values are likely to be excluded. Maunder et al (2012) found that how hard people worked was important to the formation of study groups, with those that did not work hard excluded by those that did. This reliance on commonalities may be detrimental, as Burdick (2015) suggests that forming broad social networks with a wide variety of agents from different background is beneficial in broadening students' horizons.

Tutors themselves were not the research objects and were not interviewed. While it is reasonable to assume that tutors fulfilling different roles would have different backgrounds, this was not specifically discussed by the participants. Academics within the university and clinicians within healthcare settings might have different expectations of students, in terms of their behaviours, standards and professionalism. Many of the academics are scientists with no healthcare training. These academics will have adopted the culture and practices of university teaching and assessment through their own undergraduate and postgraduate training. They are likely to have high expectations of academic achievement, but are used to undergraduate degrees where the first year is less important than later years and the standards are aligned to usual university practices. This might mean that a pass is awarded at 40-45%. Clinicians are likely to have trained in traditional medical courses, many with a split between two years preclinical followed by three years clinical training. Their expectations in the clinical setting may be aligned to this traditional model, where clinical students have already completed two years basic science training and the standards expected are aligned to third year students. Clinicians occupy a position in the field of Medicine, where they have developed a habitus based on their Medical School training and professional development. The doxa and praxis of Medicine are their normal world, but will be entirely new to the majority of their students. Students are encountering clinicians in both primary and secondary care and these are two separate fields, which may overlap but have different rules and practices. Students encountering university academics, primary care clinicians and secondary care clinicians are therefore encountering groups with different habituses operating within different fields. It is possible that this will result in conflicting messages and confusion for students.

Motivation was perceived to relate to each agent, but sources of motivation were different within the secondary school and university fields. The secondary education field was characterised by external motivators, including parents and wider family, cultural expectations, teachers and the institution itself. Motivation could arise through structural factors such as timetabling, classroom work and homework and the transactional expectation that work would be completed, marked and returned. High grades created an expectation of progression to University and applying for Medicine was associated with high achievement. Parents with greater educational achievement and a professional background might have higher expectations. A number of participants described being provided with additional resources, predominantly in the form of personal tutors, to enable them to achieve the A-level grades required to enter Medical School. Some had undertaken an undergraduate degree, often in biomedical sciences, to enable them to gain entry. Once at Medical School, internal motivation appeared to be more dominant. Factors included a desire to succeed and a strong career orientation towards being a doctor. These internal factors were required in order to

overcome barriers to success, which included the removal of many of the previously experienced external motivations.

Ethnicity is reported to have a significant impact on success in both under- and postgraduate medical education (Woolf, Rich, Viney et al 2016). In a medical context, Woolf et al (2016) find some evidence that the experience of trainees from ethnic minority backgrounds could be adversely impacted by relationships with senior doctors, cultural differences, lack of trust, relationships with peers, misunderstandings arising from the hidden curriculum, unfairness in assessment and recruitment, and fear of living up to negative expectations. These factors appeared to have a greater impact on postgraduate trainees who had qualified overseas, rather than ethnic minority student trained in UK medical schools. Despite this background, my participants did not believe that ethnicity had any effect on success or failure. Ethnicity was identified as potentially contributing to student behaviour and motivation. These descriptions were acknowledged as 'stereotypes'. Students from both white and Indian backgrounds discussed family expectations within Indian families, both within the UK and India. Education and work were thought to be given a greater priority in Indian households and there was an expectation of high achievement. Parental expectations could exceed the realities of the University assessment system, where good results were perceived as 'not good enough'. Academic success was thought to be given less importance among UK white students in the Secondary Education field.

Participants thought that *females* were more organised, keeping better notes and studying more consistently over the course of the year. In contrast, *males* were more likely to spend time socialising, engaging in team sports and focused their learning into revision periods (cramming). There was a male-related kudos to being able to succeed on a minimal amount of work, which was not attached to females. Jackson and Dempster (2009) identify two gendered discourses prevalent in education that are consistent with these findings. Firstly, academic work and individual commitment to 'working hard' is regarded as 'uncool'. Secondly, 'effortless achievement' acknowledges that success is highly desirable, but that 'to be acceptable…must appear to be effortless' (p342), thereby signaling a natural ability which in turn is attributed to the superiority of the male gender. Jackson and Dempster (2009) report that the 'uncool to work' discourse is more prevalent in secondary school, but persists into higher education. The 'effortless achievement' discourse is prevalent in secondary and university education. Both are strongly associated with masculinity, boys being required to demonstrate a 'laid back approach to work', while effortful achievement is associated with femininity (Jackson and Dempster 2009, p344). These traits are characterised by a disorganised approach with work left until the last minute in contrast to a clear

focus on academic work and organised approach (Jackson and Dempster 2009, p345), descriptions in common with those of my participants.

The importance of independent learning was recognised by my participants, but Leathwood (2006) argues that dominant constructions of independent learning are 'gendered and culturally specific' (p614), focusing on able-bodied, white, middle-class males (p615). Leathwood (2006) argues that the wish to be independent rather than dependent, perhaps better stated as in need for support, may be interpreted and experienced differently according to both educational and cultural background and gender. Independence in study skills and working alone are not synonymous and may also be approached differently according to gender (Leathwood 2006). One of my participants felt that patients and some non-medical staff treated women differently in the wider NHS environment, but that this affected the experience of the workplace rather than success or failure in assessments.

Participants who had moved from a more *rural environment* to university described the impact of this change. Rural/urban could be considered two further fields of operation; their previous experience focused in a rural field with relatively few opportunities for 'going out' and their new university experience centered in an urban field, with a greater range of opportunity. Socialising functioned as a distraction from the academic field. Achieving a balance between new opportunities and studying was challenging and students could get this wrong, contributing to failure. Participants from more urban backgrounds did not comment on this and it is possible that they were already accustomed to plentiful access to social opportunities, representing another element of the student habitus.

The questionnaire sought to identify potential sources of *anxiety* both in secondary education and at university. Respondents reported higher levels of anxiety at university in relation to time pressure, volume of work, familiarity with coursework, their relationship with tutors, the fear of failure, loneliness, time for recreation and sport and their finances. There was no difference in anxiety in relation to memorising facts, assessment or competitiveness. The data suggested that competition was of more concern at school than university, which would be in keeping with the need to compete for A-level grades, as compared to an emphasis on working collaboratively at Medical School. Within the university field, the academic sources of anxiety, including familiarity with the course, volume of work and time available, were corroborated in the interviews. The change from a teacher-student to tutor-student relationship was also a common theme of discussion, which may account for the reported increase in anxiety around the relationship with tutors. University tutors were more distant and deliberate action was required by students to engage with tutors beyond the immediacy of lectures or formal groups. All of these concerns suggest an incongruence between the existing student habitus and the institutional habitus encountered. An increase in anxiety related to

loneliness was not explained by the interviews. Participants discussed the importance of living and socialising together and working in groups. All participants engaged in formal groups. Informal groups were 'self-determined', with those participating in them reporting that they were open and welcoming. However, they appeared to form around friendship groups and some participants felt that they were not open, although the rules of access were not clear. It is likely that the habitus of individuals will affect how well they integrate into formal groups, but more importantly will determine their membership of these informal groups. Some respondents stated a preference for working on their own in the interviews and this was the majority view in the questionnaire. Loneliness may have both social and academic components, with students moving away from home experiencing dislocation from family and friends, whereas students living at home may be isolated from their peers and from academic integration.

Time spent on sport and recreation was important in maintaining a good work-life balance. Sport was health promoting, provided time away from academic activities and could be a reward for working hard. However, most participants emphasised that academic work had to take priority over leisure activities and that students had to be able to make good judgements about these priorities. Lack of time for leisure and sport was a source of anxiety and in the current study and this has been reported previously (Miller 1994). Poor judgements, especially around the social activities associated with team sports, could be detrimental to the academic field. Alcohol appeared to be associated with male team sports.

Finances became a source of anxiety at university in the current study. This reflected the move from living with family to independence. Thomas (2002) found that the majority of students had financial worries at some point during their studies. Employment commitments are highly variable, but are more likely in those with less access to other means of support. Within my interviews, financial concerns were not discussed frequently. None of the participants depended on paid employment to support their studies. Some did have paid employment, but through choice. This may reflect the fact that participation was voluntary and students in employment were too busy to take part. A number of participants actually discussed how the move from home to university had provided them with a new level of financial independence, which came with the potential risk of too much freedom to socialise.

Fear of failure was a prevalent source of anxiety, both at school and at university. Anxiety around failure increased at university. The reasons for this change were not apparent from the interviews. It did not appear to relate to increased competition between students, the questionnaires suggesting that there was less anxiety about competition at university. During the interviews, participants emphasised the importance of working in groups, of supporting peers and of learning from peers

within the university field. The absence of competition was a positive feature of the learning environment. Fear of failure did not relate to greater anxiety in relation to assessment, which was unchanged between school and university. Participants expressed the view that all students had the ability to pass. A possible explanation was the perception that within the school field, teachers were independent of the assessment process and their interests were best served by achieving the highest possible A-level grades for their students. In contrast, within the university field, tutors were invested within the assessment and their interests were best served by preserving the academic standards of the university. This represents a fundamental change in the institutional habitus. However, the source of this fear needs further exploration.

Assessment. Bourdieu and Passeron (1977, p142) claim that 'examinations dominate university life…not only the representations and practices of the agents but also the organisation and functioning of the institution'. In other words, assessments determine how the institution organises and structures itself, its faculty and teaching in order to meet the requirements of the assessment. This is necessary because the 'examination is the clearest expression of academic values and of the educational system's implicit choices' through which 'a social definition of knowledge and the way to show it' is imposed (Bourdieu and Passeron 1977, p142). Assessment is therefore 'one of the most efficacious tools for the enterprise of inculcating the dominant culture and the value of that culture' (Bourdieu and Passeron 1977, p142) and summative assessment is a central instrument through which the University exercises its authority. Tutors and students alike participate in the assessment regime, accepting its right to determine a student's future. Within the field of secondary education, A-levels demonstrate academic worth. High grades must be achieved to gain entry to Medical School and the desire to study Medicine is a central motivating factor towards achieving these grades, even if the underlying reasons to be a doctor are different. The system that grants entry to Medical School therefore guarantees that all First Year students have been successful by this criteria.

A-levels are external to the school and to the teachers, who are agents of the school. My participants believed that teachers were interested in achieving the best possible results at A-level, not just to benefit students, but to serve the interests of the institution and guarantee their own status within the institution. As an instrument of assessment, the A-level examines a well-defined curriculum, with textbooks specifically written to encompass that curriculum. There appear to be a finite number of questions and these are available through past papers. Engagement with past papers was viewed as a legitimate mechanism for identifying gaps in knowledge or understanding and confirming mastery of the curriculum. Any deficits identified through taking past papers could be remediated by referring back to standard textbooks.

The instruments of assessment in the First Year are different. They include written papers. These may have a similar format to A-level papers, but they assess knowledge and understanding encountered in diverse learning environments and across the multiple subdivisions of Medical science and clinical Medicine. The curriculum is not contained within a single space and textbooks have to be integrated with one another and with many other sources of information. Learning in one situation and context has to be interpreted and transferred into other contexts. The institution provides formative written papers and there are many free or commercial sources of practice questions. However, each UK Medical School sets their own first year assessments and there are no standardised past papers.

Clinical examinations are a new experience for students. They involve an interaction between the student, a member of the public, representing a patient, and an examiner, who is a professional occupying a dominant position. This three-way interaction creates possibilities for difficulty. The student needs to communicate effectively with the patient, a trained surrogate, who should be skilled at responding appropriately and treating all students equally and fairly. This interaction is observed by an examiner, who should be able to interpret the interaction between the student and patient in an unbiased way following a standardised marking scheme. My participants discussed their anxieties about taking clinical examinations. Assessment is one of the most stressful aspects of students' experience (Gall et al 2000). Any method of assessment may cause anxiety, but OSCEs have been reported to be particularly stressful by Medical Students (Nicholson and Forest 2009), postgraduate doctors (Marshall and Jones 2003), dental students (Puryer 2016) and nursing students (Stunden, Halcomb and Jeffries 2015). The reasons for this heightened level of anxiety are unclear. In a small study of postgraduate doctors Marshall and Jones (2003) suggest that the new assessment format, direct observation by senior professionals, and the unfamiliar assessment environment may all contribute. Examiners are healthcare professionals, who have been encultured into a particular way of thinking and behaving. Historically, the medical profession has been overrepresented by UK-born white males from the higher social classes and a private education background (HM Government 2012). This may skew the mix of examiners available for clinical assessments. Bourdieu and Passeron (1977, p162) identify the potential consequences when an examiner's inculcated habitus encounters a student from a different background.

> 'When one knows how much examiners' judgements owe to implicit norms which retranslate and specify the values of the dominant classes in terms of the logic proper of the examination system, it is clear that candidates are hampered in proportion to the distance between these values and those in their class of origin'.

They go on to claim that unconscious bias will have its greatest effect when assessments have unclear marking criteria or traditional grading systems and during face-to-face assessments, where the candidate has to speak in front of the examiner. The latter creates the potential for a candidate to be penalised for using the language of their home, exposing them as different, and their failure to master the academic language of the institution (Bourdieu and Passeron (1977, p157). This may be particularly relevant in OSCE-type examinations, where students perform in front of senior clinicians, exposing both their cultural heritage and their (potential lack of) mastery of the language of Medicine. Assessments may be the moment when differences in language are most explicitly judged, in terms of spoken English and the language of the field. Bourdieu identifies that 'access to legitimate language is quite unequal…certain categories of interlocutors are deprived of the capacity to speak in certain situations' (Bourdieu and Wacquant 1992, p146). This denial of the opportunity to speak may be imposed by others or self-imposed, through embarrassment or lack of self-worth, and may operate at all levels of teaching and learning, especially in groups, by virtue of language skills, vocabulary or hierarchy. More explicit marking schemes, or written assessments, may be equally biased if all the judges agree with the implicit criteria laid down by the institution (Bourdieu and Passeron (1977, p163).

Patients are drawn from the local population. My institution is situated in a region with a largely white population, the predominant ethnic groups being Eastern Europe. The proportion having a background that could be identified with the Indian subcontinent or Afro-Caribbean is much smaller than the student demographic. Simulated patients tend to be even less representative of the general population in terms of age distribution and educational background and less representative of the student population in terms of ethnicity.

My institution actively seeks to recruit international students and entrants from local schools that are in areas of social disadvantage. Non-traditional candidates are encouraged through a scheme that would conform to a description of widening participation. These policies mean that the student population may not share the same cultural origins and values as the university faculty, clinical tutors and the patients that they encounter. These differences may be most extreme when considering these two student groups and the older generation of tutors and simulated patients. Educational experiences before entering university, expectations of university and experiences of university may also be significantly different for these groups. Because the combination of early cultural and educational experiences will have interacted to generate the habitus of the learner, the tutor and the patient, there is the potential for misunderstandings and conflict.

The assessment regime may also result in incongruence between the habitus of the student and the institutional habitus. At secondary level, students have been motivated to achieve the highest

possible grade in a competitive process, where only the highest grade is regarded as success. My participants appear to crave past papers as a means of learning, to verify their knowledge against the curriculum and to identify 'where they are'. At Medical School, the assessment regime is designed to reassure internal Boards and external agencies that all students are meeting the minimum expected competency levels to practise Medicine. Cooperation through problem based learning and team working are valued above competition, but are not rewarded through the assessment regime. Cook and Leckey (1999, p163) reported that university students favour teaching styles which are clearly focused on assessment:

> 'Students have come to value a simple approach in which staff present classes with precise information which can be easily translated into examination answers and assignments'.

This wish does not necessarily translate into the practices of being a doctor. High achieving students, who adopt deep learning strategies, may be better able to understand the purpose of assessments in the context of their future practice, in contrast to less well achieving students who see the assessments as an end in themselves (Todres et al 2012). Mcloughlin (2009, p 2) also identifies that unsuccessful students tended to have a narrow focus, concentrating on being an 'acceptable medical student' rather than a 'medical provider'.

Participant Objectification. As a medical practitioner and an academic responsible for Assessment, I hold several positions in overlapping fields, shared with the research object. I have come from a particular social and educational background, trained through under- and postgraduate medical education and then gained progressively greater positions of responsibility and authority within my profession and the Medical School. I have done this through a trajectory that began in a medical family, moved through a particular secondary education experience, characterised by the need for independent learning, and transitioned through a traditional preclinical/clinical undergraduate curriculum. I have had the capital to take advantage of positions in clinical practice, clinical research and postgraduate education, but had never been involved within the structures of a university. This creates a mixed position, of having status as a senior clinician and clinical researcher, but not the hierarchy or capital expected of a university academic. My role as a doctor creates credibility among students. My role as Dean for Assessment grants me hierarchical power within the Medical School. In conducting this research, I have had to try and put aside my preconceptions of secondary education and what it is to be a medical student and to hear the voice of my participants. However, my understanding of their language and experiences may allow me to interrogate and understand their responses more fully than a non-medical researcher. My concern that participants would not provide information or answer questions because of my status does not appear to have materialised, with all participants engaging in the interviews and answering

questions freely. The outstanding concern is the silent voices of those that chose to not participate, and whether any of them made that choice because of the perceived imbalance in power between themselves and myself as the researcher.

Conclusions and implications for my future practice and for future research.

This study has allowed me to explore issues around failure in First Year assessments at Medical School. Like many researchers, my preconceptions may have focused on failure as a student-centred problem. Thomas (2002) criticises the focus on blaming the student for academic failure. Lawrence (2005) suggests that faculty may dissociate themselves from any responsibility for student failure by attributing blame to students. Tinto's model of institutional integration, identifies student withdrawal as occurring within the context of academic and social integration within the institution, which is in turn related to career and institutional commitment (1975). The transition from secondary to higher education is crucial in influencing this process of integration. A more detailed analysis of the relations between students and those with whom they interact within the academic field of Medicine, following the methodology of Bourdieu, allows a greater understanding of the factors that determine the nature and outcomes of these interactions. Firstly, in constructing the research object, I have shown that 'medical student' is not an adequate description of the widening range of individuals entering Medical School. Within their particular secondary education fields, students have been inculcated with specific sets of skills designed to achieve their objective of high grades at A-level. This occurs within the background of their family and the institutional habitus of their school. Having achieved this success, they move to a new institution, with a different set of rules and practices, set within a different field. Their personal habitus, cultural, social and, to a lesser extent financial, capital will determine how well they succeed in this new environment. Illusio, their commitment to the field, will modify their response to the rewards and challenges of the field.

While first year Medical Students were the focus of my study, I have identified factors that might be common to any university course. However, there were also many features that were related to the clinical components of the students' learning and assessment experience. It is possible that these findings would be relevant to undergraduate programmes for other Healthcare professionals. This is supported by my discussion of the commonalities between my results and the existing literature about the experiences of trainee nurses. Dental students also experience high levels of stress, are concerned about the amount of information that they have to memorise and struggle with problem solving (Al-Ansari and El Tantawi, 2015), further strengthening my claim that these findings may have relevance to other professional trainees.

This study has a number of limitations. The researcher is in a position of power in relation to the researched. The sample size is small and self-selected. The researcher, who is encultured within the medical profession and the assessment regime of the medical school, conducted the interviews, the coding and data analysis. However, the qualitative approach allows students to have their voice.

Tight (2003) criticises the research on university failure, because the voices of students are often silent, and emphasises the need to understand students' experiences in order to understand attrition. An interview-based approach allows students to express their opinions (Wolgemuth, Erdil-Moody, Opsal, et al 2015) and vignette-based interviews allow students to share their general views, their own experiences or the experiences of other students (Catterall and Ibbotson, 2000). The researcher's medical background has equipped them with higher order interview skills. The small sample did achieve a mix of gender, ethnicity, school-leaver/graduate entrants and secondary education experiences. The issues discussed by the participants are relevant to themselves in their particular circumstances, course of study and institution. Moreover, as I have shown in the discussion, the majority of the issues that were discussed are relevant to the literature on transition and success/failure in general, and the experiences of healthcare and Medical Students in particular. This implies that the findings have internal and external consistency and are transferrable from one setting to another.

The findings from this study have helped to inform my understanding of academic failure. This in turn offers opportunities to consider how to reduce failure in the future. A rapid and successful social and academic transition from secondary to higher education is important. This can only be achieved by reducing the differences between secondary and tertiary institutional habitus and a greater acceptance by university staff of the differences in backgrounds, needs and expectations of students from diverse origins (Cook and Leckey 1999). The constellation of skills required for students to successfully engage in University study can be encapsulated within the term 'academic literacy' (Marinkovich, Velásquez, Córdova and Cid 2016). There is an extensive pedagogy based upon increasing students' academic literacy through the actions of tutors and institutions (Wolfe, Olson and Wilder 2014). Palmer, Levett-Jones and Smith (2018) identify the importance of academic literacy for a successful early undergraduate experience, specifically focusing on early health professions' education. However they also claim that there is no single definition of academic literacy, which may by represented in different ways. Lea and Street (1998) distinguish three approaches. The study skills approach focuses on a set of atomised skills which students must learn, in the belief that correcting any deficits will 'fix' the student's problem. The academic socialisation perspective focuses on inducting students into the new culture of the academy. Lea and Street's preferred approach, referred to as the academic literacies approach, regards literacy as a social practice, viewing 'the literacy demands of the curriculum as involving a variety of communicative practices, including genes, fields and disciplines' (Lea and Street 1998, p159). This broader focus also considers the social context of learning and an exploration of disciplinary discourses (Coffin and Donohue 2012). The construction of identity is an important component of

academic socialisation (Lea and Street 2006), which I would argue is particularly relevant to the education of healthcare professionals. This broader focus described by Lea and Street (1998), wherein skills deficits are located within institutional practices, students' activities are determined by their interactions with tutors and the students' and tutors' assumptions and understanding of academic tasks are interpreted within the context of institutional rules and practices is also in keeping with the theoretical models that I have developed during my discussion.

Wood et al (2017) consider interventions to reduce attrition from US secondary education in a model based on ecological theory. This has many similarities to the models that I have discussed, recognising the influential developmental factors that act upon an individual, how they interact in different environments (e.g. home and school), and how these are influenced by the normalised expectations of educational systems and wider society. Within this model, Wood et al (2017) suggest that interventions can be Tier 1: universal, 'delivering best practice instruction and universal prevention strategies for all students' (p45). Secondly, interventions can be Tier 2: pre-emptively targeted at those identified as at high risk of attrition, based on identified risk factors. Finally, interventions can be Tier 3: targeted at students who have experienced academic difficulties. In the context I describe, this should occur at an early point in the academic year, based on the outcome of low stakes formative assessments. This three tiered approach could be used to consider how an institution can approach the issue of failure in the first year. However Tier 3 can only be applied following an episode of failure and Tier 2 still requires the identification of risk factors, which I would argue are not sensitive or specific enough at an individual student level. Tier 1 would be the preferred approach. Thomas (2002) suggests that students are more likely to persist when an institution accepts difference and does not try and force students to deviate too far from their academic or social habitus. Thomas (2002) proposes a number of approaches to achieve this, including fostering staff attitudes that minimise the distance between academics and students, allowing inclusive learning and teaching opportunities that do not assume that the dominant pedagogy of the institution will be appropriate for all students, encouraging collaborative learning which builds social relations, developing assessment regimes that create opportunities for success, developing appropriate living and social spaces and acceptance of diversity.

At present, the assessment regime in secondary education encourages a particular kind of behaviour in order to achieve the highest possible A-level grades. This is reinforced by university selection and admissions criteria. The means to achieve this goal appear to promote dependence on faculty, surface learning and the use of limited resources. The assessment regime at the end of the First Year of Medical School continues to promote the summative assessment of large volumes of curriculum content, which appears to be in conflict with the institutional pedagogy which focuses on problem-

based learning and working in groups. These behaviours are not rewarded by the assessment regime. This does not resonate with Bourdieu and Passeron's statements that 'examination is the clearest expression of academic values and of the educational system's implicit choices' through which 'a social definition of knowledge and the way to show it' is imposed (Bourdieu and Passeron 1977, p142). Such dissonance is likely to cause confusion for students and faculty alike and calls for a fundamental rethink of how student performance is assessed and rewarded.

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Appendix 1: The questionnaire.

Section 1 - Demographics

Indicate the ethnic group that best describes yourself

White

Asian:

- Indian
- Pakistani
- Bangladeshi
- Other

Black:

- African
- Caribbean
- Other

Chinese

Mixed:

Other ethnic background

Unknown or prefer not to say

Were you born in the UK? Yes / No

Section 2 - Socio-economic background

Have you been in paid employment since leaving school? Yes / No

If yes please use a sentence to describe your main job.

_____

_____

Are you in paid employment while at medical school? Yes / No

If yes please use a sentence to describe your main job.

_____

_____

If yes, how many hours do you work each week? _____ hours/week

Section 3 - Schooling

What type of school did you go to before attending university?

State school (no fees paid) and no selection for entry
State school (no fees paid) with selection for entry
Private school (fees paid)
Other (describe) _____

Did you receive additional tuition, above and beyond usual school hours?

Yes / No

Was your entry offer for medical school through a widening participation scheme?

Yes / No

Section 4 - Approach to study

For each of the statements below please select the response that is most strongly representative of your opinion. These statements apply to what has happened since you started at medical school.

I attend lectures in person

Almost always	Frequently	Occasionally	Rarely	Almost never

I watch lectures on the visual learning environment (Blackboard)

Almost always	Frequently	Occasionally	Rarely	Almost never

I manage to keep up to date with my studies

Almost always	Usually	Occasionally	Usually not	Almost never

I tend to be behind with my studies

Almost always	Usually	Occasionally	Usually not	Almost never

I rely on the material provided in lectures and workbooks to cover my learning needs

Almost always	Usually	Occasionally	Usually not	Almost never

I draw on additional resources to cover my learning needs

Almost always	Frequently	Occasionally	Rarely	Almost never

I study most effectively on my own

Strongly agree	Agree	Disagree	Strongly disagree

I study most effectively in a study group

Strongly agree	Agree	Disagree	Strongly disagree

If I am studying in a group, I prefer to work with peers of the same gender

Strongly agree	Agree	Disagree	Strongly disagree

If I am studying in a group, I prefer to work with peers from same ethnic background as myself

Strongly agree	Agree	Disagree	Strongly disagree

I enjoy problem based learning

Strongly agree	Agree	Disagree	Strongly disagree

I feel confident about identifying my own goals in self-directed learning

Strongly agree	Agree	Disagree	Strongly disagree

How many hours do you regularly study outside of the Medical School day (notionally 9am-5pm)

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Hours study							

Do you have your own independent study group? Yes / No

If yes, what characteristics do you prefer in other members of your study groups (include your own ideas as well as any items from this questionnaire)

_____

_____

_____

_____

__

Section 5 - University life

On average how many nights do you socialise with friends during the working week?

1	2	3	4	5

Do you play sports on a regular basis?

Yes / No

If yes – which sports _____

What kind of accommodation do you live in?

University accommodation

Private accommodation with family

Private accommodation with friends

Other _____

Section 6 – sources of anxiety or distress

The list below contains potential sources of stress or anxiety. Rate each item for whether or not it has been a source of stress for yourself. Complete one row for your final year at school and the other column for your first year at university.

		I never feel anxious about this	I feel anxious about this, but not very often	I often feel anxious about this	I very often feel anxious about this
Time pressure	At school				
	At university				
Volume of learning / work	At school				
	At university				
Emphasis on memorizing facts	At school				
	At university				
Institution's emphasis on examinations	At school				
	At university				
Competition with other students	At school				
	At university				
Lack of familiarity with how the course works	At school				
	At university				
Relationship with tutors	At school				
	At university				
Fear of failure	At school				
	At university				

Loneliness	At school				
	At university				
Limited time for sports and recreation	At school				
	At university				
Finances	At school				
	At university				

Please use this space to add any additional comments that you think would be useful:

_____

_____

_____

_____

Appendix 2: The Final Node Structure – derived from the template analysis.

1. How you learn
    - Accessing information
    - Clinical context of learning
    - Independent learning
    - Learning style
    - Rote learning
    - Spoon feeding
2. How you work
    - Consistent
    - Inconsistent
    - Being organised
    - Persistence
    - Volume of work
3. Groups
    - Friendship groups
    - Problem based learning
    - Work groups
4. Self
    - Anxiety
    - Confidence
    - Disability
    - Earning income
    - Happiness
    - Intelligence
    - Looking after oneself
    - Mitigating circumstances
    - Motivation
        - External influences
        - Family
        - Feedback
    - Overconfidence
    - Personal circumstances
    - Personality

- Positioning oneself
  - Competition
  - The idealised student
  - The right level

5. Support
   - Teaching
   - Tutors/Teachers
   - Peers
     - Negative
     - Positive
6. Success
7. Failure
8. A-level or school
9. University
10. Transition
11. Work-life balance
    - Overdoing it
12. Exams
    - Clinical exams
    - Pressure
    - Technique
    - Formative
    - Revision
13. Graduates
14. Ethnicity
15. Gender