UNIVERSITY OF SOUTHAMPTON

FACULTY OF LAW, ARTS AND SOCIAL SCIENCES

School of Education

How medical students learn to 'take histories' from patients

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ABSTRACT

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HOW MEDICAL STUDENTS LEARN TO 'TAKE HISTORIES' FROM PATIENTS

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'Taking a history', or talking to a patient to find out about their medical problems, is the first clinical skill learned by medical students. It is of major importance in making diagnoses, is often done badly, and influences the outcome for patients. However, there is little agreement about what constitutes a 'good history'. Students receive conflicting messages about how they should 'take a history', are rarely observed doing it and see doctors 'taking histories' using a method quite different from conventional teaching.

This study explored medical students' and teachers' views on the purposes and rationale for 'taking a history', the influences on these and students' approaches to learning this skill. A theoretical framework for the learning process was used to develop research questions and to inform the methodology, which comprised individual and group interviews with a sample of third and fifth year medical students and teachers. These were analysed using a constant comparative method, and this gave rise to an explanatory model for the task of learning to 'take a history', which conceptualises three perspectives on 'history taking'. The doctor-practitioner perspective sees the student's role when 'taking a history' as acting as a doctor to gather selective information in order to make a diagnosis and plan patient care. The student-clerk perspective sees the student's role as a clerk, collecting comprehensive information about a patient for the purpose of reference, and as part of the traditional culture of medical education. The patient-person perspective sees the student as a person talking with another person (the patient) about their medical problems, engaging with their individual context and concerns. This three perspective model, though specific to this one skill, is in line with the work of other writers on the overall culture of medical education.

Two key conclusions are reported. Firstly, the tensions between the perspectives, many of which were never made explicit, tended to encourage students to take a surface approach to learning in the early stages, and to 'play the game' in later stages. Secondly, the perspectives model offers a theoretical framework which could facilitate discussion of the current tensions and inform curriculum development, with the ultimate aim of improving health care for patients.

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Chapter one: Setting the scene

Relevance of the study to practice

The aim of this study is to explore how medical students learn to 'take a history' from a patient. 'Taking a history' is the term used in medical practice for the process of talking to a patient to find out about their medical problems. In nearly all medical curricula, this is the first skill that students learn when they come into contact with patients, perhaps because it appears to be a simple task, and precedes the physical examination within the medical consultation. It is generally seen by the medical profession as unproblematic in concept, if sometimes difficult in practice. Its crucial importance in making a diagnosis is recognised, but there is increasing research evidence that it is not done well, and that improvement in communication in this part of the consultation can improve outcomes for patients. Large sums of money are spent each year on developing new drugs and medical procedures which may have marginal benefits for patients, while there is little research into the process by which students learn how to 'take a history', or the effectiveness of current teaching of this vital skill.

With the current developments in undergraduate medical curricula, and increased numbers of students, it has become urgent to review the way in which students learn and are taught this skill. As a clinical teacher, my own observations have led me to question this learning process. I have found it difficult to justify the conventional textbook instructions for 'taking a history', which do not correlate with my own practice. I have also observed students who were discomfited when the conventional format made it difficult for them to show sensitivity to the patient's concerns and anxieties, while their teaching about communication skills encouraged them to do this. My concern led to the development of this study. I argue in this thesis that the concept of 'taking a history' is ambiguous, and fraught with tensions for both students and teachers, although this is rarely made explicit. I hope that a fuller understanding of these tensions and the influence they have on students' learning processes may enable better teaching, and ultimately, benefits for patients.

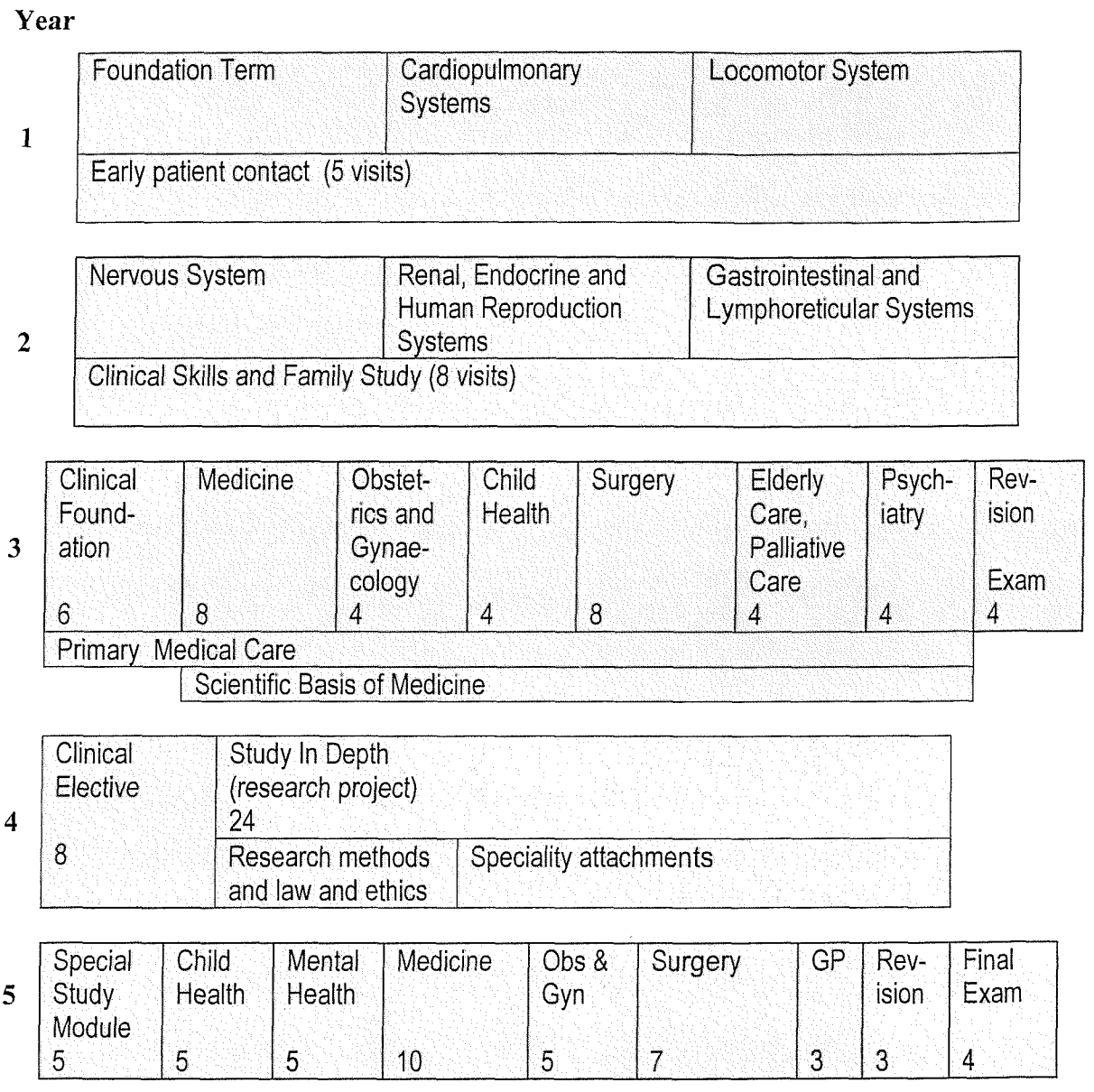
The context of the study

I am a general practitioner, and have been employed by the University of Southampton for over twenty years, currently as a Senior Lecturer in Primary Medical Care. During this time I have been working part-time in a general practice surgery and teaching medical students in a general practice setting. Over the last eight years I have also been responsible for planning and coordinating courses in which students have their earliest contact with patients, both in hospital and general practice sites.

The undergraduate medical curriculum in Southampton, which was the context for the current study, is shown in diagrammatic form in Figure 1.1 (page 11). As the curriculum is constantly changing, I have described it in relation to the two cohorts of students who participated in the research, that is, the cohorts who started their training in 1997 and 1999. There was little change between these two groups.

The first two years of the five year programme were mainly lecture based, covering relevant basic sciences with a little sociology, psychology and some opportunities to meet patients. These were mainly in the second year, and comprised eight half days, during which they visited a family with a new baby at home on several occasions, and also met patients in a general practitioner's surgery. They practised 'taking a history' from these patients, and one on occasion made a videotape of themselves doing this, and discussed it afterwards in a small group to gather feedback on their skills. The third year was mainly hospital based, with a small number of lecture sessions, and comprised attachments to 'firms' or consultant led groups in the major medical and surgical disciplines, with interspersed half days in general practice. At the end of this year they were expected to be competent at 'taking histories' and carrying out physical examinations. The fourth year included an elective period, during which most students travelled abroad, a 'study in depth' (small research project), and some short attachments to specialist disciplines, such as orthopaedics, neurology and ophthalmology. The final year was spent in full time attachments to medicine, surgery, child health, general practice, psychiatry and obstetrics and gynaecology in a variety of district general hospitals, during which students followed closely the work of junior hospital doctors. At the time of the final examination, at the end of this year, they were expected to be competent to take responsibility for patients as pre-registration house officers, including responsibility for initial diagnoses, giving treatment in emergencies and prescribing drugs.

Figure 1.1: Southampton undergraduate medical curriculum for cohorts entering 1997-1999



Outline of the study

This thesis describes a study carried out to explore how students learned to 'take histories' in the School of Medicine at Southampton between 1999 and 2001. Research questions were developed, based on a theoretical framework for the learning process, which was derived from the educational literature. These questions explored how medical students

and teachers perceive the purposes and rationale for 'taking a history', their approaches to learning this skill and the influences on these. Fourteen individual interviews and four group interviews were carried out with third and fifth year students, involving 25 students in total, six of whom were interviewed twice. In addition ten medical teachers, who were involved in teaching the skill of 'taking histories', were interviewed individually. Transcripts of the interviews were analysed using a constant comparative method and an explanatory model was developed from the analysis.

Plan of the thesis

In this introduction I have provided a brief account of the University of Southampton medical curriculum at the time of the study, and of my role in the School, to provide a context for the study. Chapter two offers a review of the published literature on 'history taking' and its importance, including conceptual models of the process from both medical and sociological perspectives. Chapter three reviews the basis of a theoretical framework for how students learn, followed by what is known about how they learn to 'take histories'. The research questions are informed by this theoretical framework and the existing literature, and are outlined at the end of chapter three.

Chapter four outlines the justification for the methodological approach and the data collection and analysis methods chosen, in relation to the research questions, and explores the potential shortcomings of these. This is followed by an account of how the methods worked out in practice. The findings of the study are provided in the form of an analysis of interviews with the participants, firstly with third year students in chapter five, then fifth year students in chapter six and medical teachers in chapter seven. Finally, chapter eight is a discussion of the findings of this study, how they relate to the work of other writers, their limitations and implications for policy and practice.

Chapter two: The significance of 'taking a history' in patient care: a review of the literature

This chapter reviews the literature on the role of 'history taking' within patient care, highlighting the evidence for its importance and providing both medical and sociological models of the process. This is followed by an account of work on the place of 'history taking' in medical education. Finally, this topic is put into context with a brief review of relevant current developments in health care and medical education.

Definition and significance

'Taking a history', in common medical parlance, describes the portion of a medical interview during which a doctor or student gathers verbal information about a person's medical problem. It is normally taken to include any greeting or introduction, and information volunteered by a patient, as well as further questions posed by the doctor and answered by the patient.

In medical writing on 'taking a history' there is an underlying assumption that this is a discrete activity, separable from other aspects of the health care process. For medical students and teachers there is an advantage in categorising the skills that it is necessary to learn, in order to distinguish mastery of different steps. In the conventional model of a medical consultation there is a chronological sequence of events, explained, for example, in *Macleod's Clinical Examination*, a commonly used textbook, as follows:

The phases of a clinical examination

	Title	*Purpose*
Phase 1	*History-taking*	*Information gathering*
Phase 2	*Examination: physical and mental*	*Objective findings*
Phase 3	*Explanation*	*Information giving, decision making*

(Masterton and Toft, 2000, p2)

As these authors point out, in practice, observation of the patient, which forms part of the physical examination, often precedes any discussion of the patient's problem, and influences the questions asked. Findings on examination may suggest further information

to be gathered, as may discussion of possible tests or treatments. This leads to a logical difficulty if the phases are to be considered independently, as they are in fact interdependent. However, much of the literature considers the 'history taking' phase of the consultation as a separate entity, and the knowledge and skills necessary for the different phases are taught sequentially, sometimes in successive years of the curriculum, as at Southampton (School of Medicine 2001). I will therefore consider it as an independent concept for the purposes of this review, while acknowledging that this is not always the case in practice.

Value in diagnosis and outcomes for patients

A number of studies have demonstrated that the 'history', or the verbal information gathered by doctors, contributes more to diagnosis than either physical examination or further tests on their own. Hampton et al (1975) showed that in a medical out-patient clinic the history alone was judged sufficient to make a diagnosis in 66 out of 80 patients. Sandler (1980) similarly showed that in a general medical clinic, a 'correct', or later confirmed diagnosis had been made in 56% of patients after the history had been taken, rising to 73% after a physical examination. To emphasise the point further, Sandler (1979 p22) pointed out in a second paper that: *'When the 180 patients with chest pain were considered separately, the history gave the diagnosis in 90%, and the examination was of no diagnostic value at all.'*

Although these studies make no comparison with the diagnostic power of a physical examination or tests alone, this would clearly be absurd, as the selection of appropriate examinations and tests is made on the basis of the findings of the history. In a primary care context, where patients' problems are relatively unsorted when compared with hospital clinics, one large survey suggested that around 40% of consultations were biomedical and around 50% were social or psychological or a combination of these (Howie et al 1999). In most of these latter the assessment of the situation must be based entirely on the history. Thus the clinical skill of gathering verbal information from a patient is crucial for diagnosis, both for pathological disease processes and for more holistic assessment of patients' problems.

There is substantial evidence that doctors and medical students do not always gather information effectively. For example, Starfield et al (1981) showed that in 50% of visits to a US physician the patient and the doctor did not agree on the nature of the main problem. Frankel and Beckman (1989) found that on average, physicians in the USA interrupted 18 seconds after patients started to describe their main problem. There is also evidence that doctors' methods of 'taking histories' in some cases become rigid and inflexible, bearing little relationship to patients' needs (Byrne and Long 1976, Ridsdale, 1992). In relation to medical students, Maguire and Rutter (1976) made videotapes of 50 senior medical students interviewing a new patient in a psychiatric clinic. Twenty-four per cent of students failed to identify the main problem and 62% of students failed to clarify marked gaps or inconsistencies in patients' stories, leading to confusion in their assessment of patients.

Stewart (1995) carried out a systematic review of studies which compared aspects of communication in the consultation with health outcomes. Seven out of eight studies investigating the 'history taking' element of communication showed significant associations with good outcomes, including reduction of psychological stress and symptom resolution. She summarised the elements of physician communication for which benefit had been demonstrated as: asking many questions about the patient's understanding of the problem, their feelings, concerns and expectations, their perception of the impact of the problem, and showing support and empathy. Improved communication in the 'history taking' part of the interview not only resulted in more satisfied patients, but also in better physical outcomes.

The language of 'history taking'

Asking a person about their illness has been a constant feature of the behaviour of all health care providers, from Hippocrates to twenty-first century physicians, and from parents to neurosurgeons. The eighth edition of *Macleod's Clinical Examination*, a text book widely used by medical students at the commencement of this study, described the traditional approach to this as follows:

> *The art of obtaining an accurate history expeditiously can be acquired and developed with practice. It has three main stages, the first of which must be a satisfactory approach to the patient. Secondly, adequate opportunity must be given to the patient to*

> *tell the story. Thirdly, a competent interrogation must be made by the doctor to clarify the patient's account and, as indicated, to extract further information regarding previous health, family, social and personal matters. The same sequence is followed with almost every patient, the emphasis changing in accordance with the current problem.*
>
> (Edwards, 1990, p1)

The words 'taking' a history, 'interrogation' of the patient, and 'extract' imply a passive or even reluctant role on the part of the patient. The description of the 'interrogation' in the extract included a list of screening questions which were to be asked of all patients. The fact that the same sequence was to be followed with almost every patient carried an implication that the doctor was expected to be in control.

A new edition of this textbook has now been published and the description above replaced with a section covering *'good interview technique'* (Munro and Campbell, 2000). This reflects a change in culture, but it is not clear to what extent the new culture is one of political correctness (as suggested by Armstrong, (1984)) or a real change in the relationship between doctor and patient. The terms 'taking a history', 'eliciting a history' and 'obtaining a history' are used interchangeably in this new edition, and 'history taking' is referred to in all the standard textbooks, and is the term used by doctors and students in clinical practice and in curriculum documents. To maintain a consciousness of the problematic nature of the term 'taking a history', I have placed it in adverted commas throughout the thesis.

Although terminology may be changing, the use of language to denote power imbalances has not disappeared. Sinclair (1997), in an ethnographic study carried out in the early 1990s, pointed out the way in which students learned a new language which conferred status and was exclusive. To the uninitiated, familiar words could take on unintended meanings. Sinclair described an example of a student who, when asked what the word 'clammy' implied, provided a conventional dictionary definition, and was brushed aside because he had not appreciated the medical identification of 'clammy' with poor cardiovascular function. Learning the language was seen as being at least as important as understanding the concept.

A further term of relevance to 'history taking' is the use of the word 'clerk' as a verb, as in 'to clerk a patient', which refers to the procedure of 'taking a history', carrying out a physical examination and recording the findings (Atkinson 1997, Sinclair 1997). This term originally referred to the relatively menial role of medical students as clerks, keeping medical records in teaching hospitals (Atkinson 1997). The term 'clerking a patient', still in everyday use among medical students and teachers, may similarly unintentionally emphasise the routine data collection aspect of 'history taking', as well as the passive role of the patient.

'History taking': the medical perspective

Literature from this perspective can be divided into two distinct categories. Textbooks on 'history taking', which are numerous, provide guidance for students, and offer a common conventional structure. This structure is rarely related to the purposes of 'history taking'. On the other hand, academic journal publications and research tend to focus on medical models of the 'history taking' process. These relate to the purposes of 'history taking', for example, the way in which the questioning strategy used leads to a diagnosis, and to plans for management of any problems. The models include both biomedical problem solving strategies and patient-centred medicine, and do not relate closely to the conventional textbook structure taught to students.

Textbook accounts of the 'history taking' process

Medical textbooks commonly recommend a standard structure for 'taking a history'. The elements of the history are consistent, although the order recommended varies. For example:

There is no correct way to obtain a history. One effective sequence comprises:
The introduction
The presenting complaint
-Patient's account
-Supplementary enquiry
Drugs and allergies
The systemic enquiry
Past history

Family history
Social and personal history

(Ford and Munro 2000, p3)

Students are given advice on each part of this process, including, for example, a series of supplementary questions which could be asked of any patient with a pain. These might include how long it has been present, its site, character, and severity, whether it is constant or variable, and whether anything makes it better or worse. Recommendations for questions to be asked under social and family history vary, and may be provided in list form.

The section that is not self-explanatory is the systemic enquiry, also known as the functional enquiry or general symptom enquiry. This is a series of screening questions, asked about all the major physiological systems, with the stated purpose either of establishing a database of information, or of ensuring that none of the patient's medical problems have been overlooked. Most textbooks contain a list of questions under headings such as 'cardiovascular system', 'respiratory system', etc. For example, in the most up to date version of *Macleod's Clinical Examination*, a list of questions is provided under the heading *'The general symptom inquiry: 'cardinal' symptoms'* which comprises 48 questions (excluding the gender specific ones). The instructions for the use of these may be difficult for students to apply:

> *'It is inconceivable that any patient will require to be asked all the questions that may be important on some occasion. ... It follows that the choice of questions selected to ensure that the history, as obtained, is sufficiently comprehensive is a matter of clinical judgement. ...During training experience can be obtained from undertaking a thorough general symptom inquiry, asking the patient the 'cardinal' symptoms relevant to each system.'*
>
> (Masterton and Toft 2000, p13)

Although this implies that students need not ask all the questions of every patient, they are left to make a judgement on which questions are appropriate, without criteria on which any measure of appropriateness might be based.

Textbook accounts of purposes of 'history taking'

Examination of a range of standard medical textbooks suggests that the authors see the purposes of 'history taking' or a fuller 'clinical examination' as obvious, and therefore do not make them explicit. For example, Epstein et al (1992) point out that over 80% of diagnoses in a medical clinic are made on the history, before describing the skills involved, implying, but not specifying, the aim of making a diagnosis. In an earlier introduction, however, they say with rather less focus:

> *By the end of the first interview you should have a good grasp of the patient's personality, social habits, and clinical problems. Additionally, you will have considered a differential diagnosis which might explain the patient's symptoms.*
>
> (Epstein et al 1992, p1.1).

Masterton and Toft (2000) do not make any general purposes explicit under the heading of the history, but in a section entitled *'Importance of good interview technique'* state: *'It is the history which provides the basis for priorities in the clinical examination and subsequent investigation, and management'* (Masterton and Toft 2000, p2).

In contrast, Turner and Blackwood (1997) provide a list of general and specific objectives for use when the student approaches a patient. The general objectives are to:

> *Obtain a professional rapport with the patient and gain his confidence.*
>
> *Obtain all relevant information which allows assessment of the illness, and provisional diagnoses.*
>
> *Obtain general information regarding the patient, his background, social situation and problems. In particular it is necessary to find out how the illness has affected him, his family, friends, colleagues and his life.*
>
> *Understand the patient's own ideas about his problems, his major concerns and what he expects from the hospital admission outpatient or general practice consultation.*

The specific objectives for 'taking a history' or making an examination are:

> *Obtain all possible information about a patient and his illness (a database).*
>
> *Solve the problem as to the diagnoses*
>
> (Turner and Blackwood 1997, p1-2)

Although this provides more explicit objectives, it is so comprehensive that it fails to give any guidelines for distinguishing information which should be included from information

which should be excluded. This is especially so when it suggests that a student should gather '*general information*' and *'all possible information'* about a patient.

In contrast with textbooks on clinical examination, textbooks focusing more specifically on communication skills are more likely to be explicit about objectives or purposes. For example, Pendleton et al (1984) define the tasks of the information gathering part of the consultation to be:

> *To define the reason for the patient's attendance:*
>
> *the nature and history of the problems*
>
> *their aetiology*
>
> *the patient's ideas, concerns and expectations*
>
> *the effects of the problems*

(Pendleton et al 1984, p41)

These tasks underline in addition the importance of establishing or maintaining a relationship with the patient.

Although these instructions may provide a more helpful boundary to the student's tasks, a textbook on communication skills is only likely to be referred to during a programme specifically relating to either communication skills or general practice, where Pendleton's work was based. A second textbook on communication recommends a method which takes the patient's feelings and opinions more into account, and is explicit about recommending students not to use the conventional method:

> *What follows is not the same as the traditional method of history taking. In some ways it amounts to the same thing, but it is a better method.*

(Tate 2001, p51)

The student consulting general medical textbooks, as opposed to those on communication or general practice, is therefore likely to see the history mainly as a method of helping them to reach a diagnosis, but with the additional aims of making a relationship with the patient, and gathering an undefined amount of information about a range of other topics, depending on the context. Literature referring to the conceptual models of general strategies used by doctors to make diagnoses is rarely discussed in textbooks of basic clinical skills, though some textbooks of general practice (for example Fraser, 1992) and communication skills (for example Kurtz et al 1998) identify these.

Biomedical problem-solving: identifying the disease

During the nineteenth century, a new approach to medicine developed which has since become known as the biomedical model. This stressed the accurate diagnosis of disease deep inside the body, rather than merely addressing the symptoms. McWhinney (1989) and many others argued that this was a product of the Enlightenment, after which Descartes' concept of the divide between the mind and the body made it possible to conceive of disease as separate from the individual. Laennec's invention of the stethoscope, followed by Pasteur and Koch's work with the microscope, enabled disease processes and symptoms to be linked with pathology, and the success of the treatments which were derived from this work reinforced the value of the biomedical model.

This model of illness dominated the twentieth century, when making a diagnosis was seen as a process of identifying a disease, or pathological process, which could then be treated in a standard manner. Making a diagnosis could also be seen as analogous to solving a crime, replacing 'who dunnit?' with 'what dunnit?' (Hunter 1991, Atkinson, 1997, Sinclair 1999). As Sinclair pointed out in relation to this analogy, Sherlock Holmes was based on Dr Joseph Bell, who was a forensic pathologist. Symptoms and signs were clues, and the diagnostic process a purely logical problem, with one correct answer.

Sackett et al (1991) described four strategies used by doctors for biomedical problem solving. Firstly, pattern recognition can be used when the appearance of a disease (or possibly feeling on palpation, or sound through a stethoscope) is so characteristic as to require no further enquiry or investigation. This may be the case with some skin rashes and deformities, requires experience, and is applicable only to some problems.

Secondly algorithms to deal with a specific complaint can be used to aid diagnosis and decision making, and are the basis for computerised decision support software. These provide rigid pathways of questions to ask, depending on replies to the previous question. Algorithms, either on paper or on a computer, are increasingly being used when medical care or triage is carried out by nurses, (Lattimer et al 1998), but are less commonly used by doctors.

A third strategy is the strategy of exhaustion (Sackett et al 1991), which approximates most closely to the method recommended in standard medical textbooks and described on page 17. These authors described the conflict for a student when asked to *'Go do a complete history and physical'*. One of the authors had faithfully followed this command as a student, and had presented a 35 page 'work-up' to a teacher, who had countered his explanation with the response: *'yes, but not that complete!'* (Sackett et al 1991, p10). Following this instruction literally would exhaust both student and patient, while, on the other hand, the teacher expected the student to know what to do. This was not explicit, but was to carry out their concept of an examination appropriate for a student. The authors pointed out that although teachers and textbooks recommend a 'complete' history, this *'strategy of exhaustion is the method of the novice, and is abandoned with experience'* (Sackett et al 1991, p13). A selection process, for example, of information to gather and elements of physical examination to include, is carried out at every level, but the rationale for selection is rarely explicit.

The fourth strategy is hypothesis testing, which Sackett et al (1991) and Elstein et al (1978) suggest is the strategy used by most doctors most of the time. Barrows et al (1982) videotaped doctors being consulted by programmed patients, who had been trained to act as people with a series of specific diseases. They showed that the physicians generated an average of 5.5 hypotheses for the cause of the patients' symptoms, and asked questions or carried out examinations to confirm or (less commonly) to refute these explanations. Neufeld et al (1981), using the same patients, showed that medical students used exactly the same strategy, regardless of their stage in their medical training. The only difference was that the students were less likely to generate the correct hypothesis, and less likely to ask pertinent questions to test out their ideas.

Although the explicit advice to medical students in the textbooks quoted most closely approximates to the strategy of exhaustion, Neufield et al's study (1981) suggests that they actually generate and test hypotheses without being so advised. However, having done this at a cognitive level, they are still expected to present an exhaustive history to their teachers.

Patient-centred medicine: understanding the patient's illness

Sackett et al (1991) suggested that biomedical problem solving, using the hypothesis testing approach, is the main method used to diagnose pathological processes, particularly in hospital settings, where patients more commonly have serious illnesses. However, limitations of this model have become apparent. McWhinney (1989) has described how, in spite of the success of modern medicine in treating disease, there has been a rising undercurrent of discontent among patients. He gave an example of a doctor, giving an account of his treatment by ophthalmologists for his deteriorating vision. He wrote: *'the purpose of this essay is ...courteously, but firmly to complain of what appears to be the ophthalmologist's attitude: 'We are interested in vision, but have little interest in blindness''* (Stetten 1981, p458). McWhinney argued that the success of biomedicine has led to the practice of ignoring the individual patient's feelings and life situation, and that patients are no longer finding this acceptable.

Stewart et al (1995) have described in detail a new approach in response to this situation, namely patient-centred medicine. This term was said to have been coined by Michael Balint shortly before his death to refer to the type of medicine that takes into account the patient's feelings and views, rather than treating patients as passive objects of medical treatment (Hopkins, 1972). This approach, as described by Stewart and her colleagues (1995), distinguishes between the concepts of *disease* and *illness*. In their description *disease* refers to a pathological process, which can be recognised and diagnosed by specific tests, or examination under a microscope. This is contrasted with an *illness*, which is an individual's experience of being unwell, including not only the symptoms of a disease, if one is present, but also the person's anxieties and effects on their life. *'A particular disease is what everyone with that disease has in common, but the illness experience of each person is unique'* (Belle Brown et al 1995, p32). Biomedical problem solving, which focuses on the diagnosis of disease, can therefore be contrasted with patient-centred medicine, which is concerned with making an overall assessment of the illness experience of an individual.

The same authors have described a model of the patient-centred diagnostic process which requires the doctor to make a parallel search of two models during the information gathering part of the consultation (Belle Brown et al 1995). At the same time as finding out about the disease, by the traditional process of the history and physical examination, the

doctor should be interweaving the discussion with finding out about the illness, including the patient's ideas, feelings and expectations about it, and its effects on their life. This should lead to an integration of the differential diagnosis of any disease with an understanding of the patient as a person (Belle Brown et al 1995, p37). The model incorporates biomedical problem solving, and, when patients have life threatening illnesses, the biomedical aspects are likely to take priority. However, the patient-centred approach would include finding out and dealing with the patient's immediate anxieties, as well as dealing with the disease, in any conscious patient.

Evidence for the widespread interest in this model comes in the draft benchmark statements for medicine, which are broad objectives, set up by the Quality Assurance Agency, which must be achieved in every medical school in the United Kingdom. These include a requirement that the graduate should be able to: *'take a history which is patient-centred, sensitive, structured and relevant'* (Quality Assurance Agency 2003).

While curriculum documentation and literature on teaching about communication skills may emphasise the value of this approach, it is not known whether practising clinicians, trained in the traditional model and constrained by time from changing their practice, have altered the way in which they teach students.

'History taking' to plan further investigation and management

Macleod's Clinical Examination (Munro and Campbell, 2000) points out that: *'It is the history which provides the basis for priorities in the clinical examination and subsequent investigation, and management.'* (Masterton and Toft 2000, p2). Although this is obvious to all practising professionals, as textbooks continue to recommend the 'strategy of exhaustion' (Sackett et al 1991), the aim of 'taking a history' in order to select appropriate components of the physical examination is rarely made explicit. Using the hypothesis testing model, it becomes clear that the rationale for selection of examinations and investigations is to rule in or out diagnostic possibilities.

In relation to management, choices about treatment options may be dependent on the patient's previous experiences with medications, or their social situation. At the stage when they first learn to take histories, medical students are often unaware of management

options, particularly if they are learning 'history taking' in isolation, rather than in the context of overall patient care. Questions to be asked for this purpose, therefore, are also likely to be dealt with under the exhaustion style rationale, on the grounds that 'if you ask everything, you won't leave anything out'.

'History taking': the sociological perspective

As seen above, medical models of the 'history-taking' process have tended to be task orientated, seeing the process purely as a means to an end. Armstrong (1977) has pointed out that there is an assumption underlying the conceptualisation of 'history taking' in the textbook model that there is only one history waiting to be 'taken', like the correct answer to a crossword clue:

> *That there may be many histories or versions or that the method of interview might affect the appropriate history are rarely considered. Failure to take the appropriate history is either a function of the student not asking the right questions or the patient's inability to 'correctly' verbalise his story.*
>
> (Armstrong 1977, p247)

The idea that the 'correct' history is a function of the perspective of the observer, rather than an absolute truth, underlies the sociological accounts of the process. Sociological models have tended to focus on the way in which the underlying doctor-patient relationship is acted out during the interview, and to address the question: *what is going on when doctors 'take a history'?* While doctors and medical students give overwhelming priority to the medical models during their clinical training, consideration of the sociological approach may illuminate some of their behaviour.

Armstrong (1994) also argued that accounts of 'what is going on' in the medical consultation have tended to be linked with alternative models of the doctor-patient relationship, which have themselves been related to the prevailing understanding of illness. He categorised models of the doctor-patient relationship into four groups, which have tended to follow each other chronologically in the published literature. These comprise those linked with the biomedical model of disease, consensual models, conflict models and negotiation models.

Biomedical models

The biomedical model of illness, which sees the patient as a passive container of pathological processes, as well as a passive recipient of medical care, has been described on page 21. Anspach (1988) identified a parallel verbal usage which exemplifies the way in which this model tends to devalue the experience and views of patients. The language of case presentation implies that the findings of technology are reliable, those of the physician intermediate, and those of the patient questionable. For example, *'Technology* [the results of tests] *"reveals" and "shows"; the physician "notes" and "observes"; the patient "reports" and "denies"* ' (Anspach 1988, p371). These features of medical discourse are rarely discussed in the medical literature.

Consensual and conflict models

Szasz and Hollender (1956) described a simple consensual model of the doctor patient relationship, which suggested that the ideal relationship was 'mutual participation', in which decision-making is shared between doctor and patient. However, observation studies have suggested that this is not the norm. Byrne and Long (1976) analysed over 2500 general practice consultations, and showed that doctors tended to develop individual consulting styles that were rigid, and independent of the nature of the patient or problem. They also identified a substantial number of dysfunctional consultations, in which the patient and doctor appeared to be in quite separate consultations, speaking alternately, but paying no attention to what the other had just said.

Mishler (1984) extended the analysis of the nature of dysfunctional consultations, by differentiating between the *'voice of medicine'* which is the discourse of biomedicine, and the *'voice of the lifeworld'*, which is everyday speech. He analysed 25 consultations in detail, and argued that the doctor maintained dominance in consultations by repeatedly using the *'voice of medicine'*, while the patient frequently used the *'voice of the lifeworld'* in response to questions, leading to a mismatch of ideas. This would correspond with Byrne and Long's (1976)dysfunctional consultations. In the one consultation where the doctor used the *'voice of the lifeworld'*, Mishler felt that a more humane type of medicine was being practised.

Stimson and Webb (1975) described a different type of conflict or mismatch. They interviewed patients before and after general practice consultations, and observed consultations as well. One finding was the discrepancy between patients' accounts of their consultations, and actual consultations observed. In the observations, the patients were relatively passive, and reluctant to ask questions. In discussion following consultations, however, patients tended to make dramatic presentations, each casting themself as hero, and the doctor as incompetent. Their interpretation of this was that the stories could be understood as a *'vehicle for making the patient appear rational and sensible and for redressing the imbalance between patient and doctor.'* (Stimson and Webb 1975, p97). This imbalance is in keeping with the evidence of the doctor-dominated consultations, identified by Mishler (1984).

Negotiation models

Concepts of negotiation models for the consultation have developed following recognition of these conflicts, and include the patient-centred medicine model described on page 23. (Tuckett et al 1985) described an ideal model of consultations as *'Meetings between experts'*. These were concerned with eliciting and respecting the patient's ideas, seeing the patient as an expert on their own illness, in an attempt to redress the imbalance of power and status, so that perspectives beyond the biomedical model could be addressed.

The idea of practising medicine using a patient centred model is attractive to many doctors, particularly in general practice, and to patients, as demonstrated in a survey of patients' preferences (Little et al 2001). However, patient centred models may be limited by the current structural arrangements of medical care. Barry et al (2001), in a study of general practice consultations, identified some of these: the allocation of limited time-slots for general practice appointments; the current policy focus on evidence-based medicine; and moves away from continuity of care. All of these are even more powerful disincentives to using patient-centred approaches within the hospital service, where patients are likely to have more serious disease, creating a pressure to maintain the biomedical model.

These various accounts of consultation models from the sociological perspective, unlike those from the medical perspective, draw attention to the tensions inherent in the 'history

taking' process, which warrant further exploration. The next section examines the place of teaching this skill within medical aducation.

'History taking' within medical education

There is little published literature on the methods by which students are taught to 'take histories' by practising clinicians in the context of everyday clinical care. Accounts that exist are mainly from the student's perspective, and will be considered in chapter three. There is an increasing literature on teaching communication skills in medicine (see page 29), and on courses for medical teachers on this topic (Bird et al 1993), but little published work on how this is linked in practice with the teaching of physicians and surgeons, who teach students to 'take histories'.

Increasingly, students are spending part of their time being taught how to 'take histories' and other clinical skills in general practice settings as well as hospital (Murray et al 1997, Thistlethwaite 1999), but, as Sinclair (1997) has pointed out in an observational study of medical students, general practice is seen by students as a low status discipline while medicine and surgery are high status disciplines. Thistlethwaite (1999) reported that students were aware that they were taught a patient centred approach in general practice, and that this was not valued in hospital, though they felt it should be. However, these findings were from interviews carried out by general practitioners, and interviews carried out by hospital teachers might have produced different findings.

An interesting aspect of teaching students to 'take histories' is that progress is traditionally assessed indirectly, on the basis of a 'presentation' of the history made by the student to the teacher. This may or may not be done in front of the patient. In the presentation the student is expected to summarise, in a structured form, the relevant aspects of the history. Typically the teacher, and perhaps other students, will ask questions to highlight areas that the student has omitted either to ask about or to present. As students are rarely observed with the patient, the presentation often represents the history in assessment of students' skills. Both Atkinson (1997) and Sinclair (1997) described the theatrical nature of these events, the latter suggesting that the emphasis may have been more on 'acting' skills than on the skill of gathering information effectively and sensitively from a patient.

A powerful influence on students may be their actual observations of experienced doctors talking to patients and 'taking histories'. Mountford (1989) observed that the full history described in medical textbooks was 'taken' only by students and junior house officers, and (Walton 1984) observed that this was common knowledge. Mountford (1989) added that the usual justification for this was either that it was necessary to learn to do it properly before you could learn to take shortcuts, or that it would be done if more time was available. This leaves students in the difficult situation of learning a skill which they cannot observe in practice or in context.

Although most medical undergraduate curricula in the United Kingdom now include some sociology, covering models of the doctor-patient relationship and the consultation, during the present study in Southampton this was taught during the first two years, at a time when students had little patient contact. When students carried out their own consultations in later stages of the course, their primary influence was teaching from practising doctors, the majority in hospital settings. During these attachments to hospital consultants, the students' main focus changed to learning about *disease*, with its characteristics, manifestations and treatment, using the standard textbooks quoted above. Although there is little published evidence for this, it seems likely that the biomedical approach was the norm for both students and teachers.

Current interest in communication skills

Since the time when Maguire and Rutter (1976) showed major deficiencies in the interviewing skills of medical students (see page 15), and described a programme to try and improve these (Rutter and Maguire 1976), there has been a progressive increase in attention paid to this aspect of medical education. The General Medical Council's recommendations for undergraduate medical education (1993) emphasised the importance of the issue, and Whitehouse (1991) reported that nearly all medical schools in the UK were offering programmes to improve students' communication skills. However, this teaching is rarely integrated within existing clinical teaching programmes in major clinical departments, but is most often either in a free standing course, or within attachments to specific clinical disciplines, particularly general practice and psychiatry, (Whitehouse 1991), both of which tend to be perceived as low status disciplines (Sinclair 1997).

When communication skills are assessed, the criteria are often different from those used by a clinician assessing the presentation of a student's history. In the former, the student is observed, and the interaction between the student and the patient is the focus, while the adequacy of the information gathered, though usually mentioned, takes a minor role (for example, van Thiel et al 1991). In the latter, the interactional component is rarely discussed, and the second level sorting and interpretation of the information gathered and demonstrated in the 'presentation' is the focus (Atkinson 1997).

While it is reasonable for doctors to have different priorities for communication in different clinical contexts (for example, a patient requiring emergency treatment has different needs from a patient requesting review of a chronic illness), doctors in most disciplines deal with both these situations. The current teaching programmes may lead medical students to believe that communication skills are separate from, or even an optional extra to clinical care.

Conflicts for students

The net result of this situation for students is that they are learning a skill which they recognise as important. However, they are rarely observed carrying out this task, receive feedback only indirectly on their presentation of it, and observe experienced clinicians practising in an entirely different way. They also learn in parallel about communication skills, and these may be assessed using different criteria from the measures used to assess the quality of a history on a mainstream clinical attachment. Students must learn while weaving their way through the web of these conflicting influences.

Developments in health care and medical education

In order to aid interpretation of this study, this section outlines the context in which medical students are currently learning, in terms of both health care and medical education.

Health care delivery and academia

There have been major changes in the delivery of health care in the UK over the last two decades. Hospital beds have been reduced in number, and hospital stays have become progressively shorter (Audit Commission 1992a), with patients discharged much earlier

after surgery. Investigations previously carried out in hospital have been modified to be less invasive, so that many more people are treated as day cases or out patients (Audit Commission 1992b). The result of this is that patients in hospital are more sick, and have less time available for talking to students A corresponding increase has occurred in teaching in out-patient clinics and general practice, but in spite of this, opportunities for students to have contact with patients during their training have been reduced (McManus et al 1993). McManus has also suggested that clinicians have an increased clinical workload, and reduced teaching resources, while academic medical staff are under pressure to deliver research for the Research Assessment Exercise (Williams 1998).

Developments in medical education

Alongside the changes in the delivery of care, there have been a number of trends in undergraduate medical curriculum development in the UK, as recommended by the General Medical Council (1993). Firstly, there is now a requirement for all medical schools to identify a core curriculum, which all students must cover by the time of graduation. This task has proved difficult, as there is a tension between leaving out details, which provokes claims from interested parties for inclusion, and preparing detailed lists, which require a perhaps over-inclusive teaching programme to support them.

Secondly, there has been a significant increase in teaching outside traditional hospital contexts, both in general practice (Society for Academic Primary Care, 2002) and in other settings, shortening time for hospital attachments such as medicine and surgery. This has been necessary to enable students to learn about chronic disease management, now largely carried out in general practice, and in some medical schools also because there have been too many students in the hospital relative to the number of patients.

Thirdly, the traditional two stage medical training, of two 'pre-clinical' years, spent mainly in lecture theatres, followed by three 'clinical' years spent largely in hospital wards, has been superseded in most UK medical schools by a more integrated curriculum, including patient contact from the first year, as recommended by the General Medical Council (1993). This is intended to provide a context in which students can make more sense of their basic science learning, and in some medical schools, including Southampton, students start learning to 'take histories' during this time. Correspondingly, in the later part of the

course, students may have lecture programmes and other courses in parallel with clinical attachments, where they would previously had full time attachments to a hospital consultant or 'firm'.

A further development has been a move by the UK government to support the NHS and improve the quality of medical care by funding places in medical schools for approximately one thousand additional students starting their training between 1998 and 2001, and a further thousand between 2003 and 2005. The annual intake to medical schools will rise from 3749 in October 1997 to 5894 in 2005 (Bligh, 2001). This has resulted in the creation of four new medical schools, and development of additional teaching sites in many existing schools. The method by which these changes have been funded has provided a powerful incentive for schools to bid for additional students, as not to do so would reduce funding per student. Bligh (2001) has suggested that the increase in numbers may also be aiming at more 'cost effective' medical education, which may prove difficult for a National Health Service already under stress with performance assessment measures and major contractual change in both hospitals and general practice.

The effect of these changes has been to change the focus of medical education from one based on an apprenticeship system to one based more on a training system. The traditional apprenticeship system provided opportunistic learning opportunities to a group of students attached to a firm of doctors delivering a clinical service. The students were involved in the work of the firm, often carrying out low level tasks such as taking blood, but benefited from involvement in service delivery and decision making within the team (Atkinson, 1997). With increasing student numbers and increasing demands on curriculum time following the General Medical Council recommendations (1993) this has become more difficult to deliver. In addition, in order to protect patients from students with limited competence, students are likely to learn some clinical skills first in an artificial setting, before carrying out the same tasks with patients (for example Wilson and Jennett (1997), Bradley and Bligh (1999)). McManus et al (1993) showed that students' clinical experience had been significantly reduced, even before the General Medical Council report (1993). The net result of these changes is that students, at least in the early stages of their clinical training, may have fewer opportunities to observe the everyday delivery of care, and in particular to follow patients through the process of admission, investigations, treatment and discharge. However, they may be more likely to have received formal

teaching, in a more fragmented way, on a designated list of skills, which together are necessary for patient care.

Summary

In summary, the published literature suggests that the process of 'taking a history' is of prime importance within the process of health care delivery, that it is not always well done, and that improvements would have beneficial effects on the health of patients. The terminology of 'taking a history' perpetuates the view of a patient as a passive recipient of care, although cultural change has resulted in this attitude becoming less acceptable. The purposes of 'history taking' are not often made explicit, and differ between textbooks and practice. The biomedical model of disease dominates discussion of the consultation, although a more patient centred model has been recommended by teachers of communication skills, and sociologists have drawn attention to inherent tensions within medical interviews. The result of this is that students learning to 'take histories' receive conflicting messages about what would be perceived as competence. Changes in health care and medical education have resulted in this skill being considered and, in some cases, taught, in isolation from the other constituents of the health care process. The next chapter explores what is known about how students learn, both in general and specifically when 'taking histories', in order to develop appropriate research questions on which to focus in this study.

Chapter three: How students learn, and how they learn to 'take histories': a theoretical approach

Introduction

This chapter reviews the published literature on how students learn in a range of higher education settings and proposes a theoretical framework for the learning process. This is used to structure a review of the existing literature on how medical students learn, and in particular, how they learn to 'take histories'. Finally, I indicate how the literature and the theoretical framework have informed the development of my research questions.

How students learn

Newble and Entwistle (1986) distinguished two strands in the study of how students learn. Firstly, mainly in the North American literature, there has been extensive published work originating in cognitive psychology, which has described a wide variety of learning styles. Some writers have considered these to be stable features of individuals, which may be related to personality traits, and many different analyses of styles have been reported (Curry 1999). Secondly, originating in Sweden, but followed up in the United Kingdom and Australia, there has been a strand of research which has investigated the way in which students approach a learning task, that is, how they intend to go about studying for a particular purpose. This work has demonstrated that the students' perception of their learning task has a major influence on its outcome. Influences on their perception may include characteristics of the individual, and I have chosen this broader perspective as having more relevance to the exploration of learning in this study.

How students learn: approaches to learning and learning outcomes

The concept of an 'approach to learning' was originally developed in Gothenburg by Marton and Säljö (1976a). They carried out a series of experiments to examine how university students 'approached' the reading of an academic text, and found that there was a qualitative difference in the way different students carried out the task. Having asked students how they carried out the task, they described different levels of processing of information, and distinguished between 'surface' level and 'deep' level processing, or

approaches to learning. Students who adopted a surface approach focused on the text itself, and concentrated on being able to reproduce this. Students who adopted a deep approach focused instead on the intended meaning of the text and concentrated on being able to understand and explain this. The researchers also found that the students' descriptions of their learning processes were associated with the outcome of their learning, in that the students, not surprisingly, were more likely to demonstrate understanding if they adopted a deep approach.

Although the original work was carried out with only 40 students, and in relation to one artificial task, others have reported similar findings in a number of different educational settings, most demonstrating a spectrum of student approaches, between one seeking to understand concepts and one seeking to memorise details. For example, Biggs (1979) developed a model which distinguished between a 'meaning orientation' in which students aim at personal development and have an intrinsic interest in learning, and a 'reproducing orientation' in which students aim at vocational preparation, and have an extrinsic motivation of gaining a qualification or fearing failure. These have marked similarities to the deep and surface approaches. Biggs (1979) also identified a third group of students who were described as having an achieving orientation. These students had the prime motivation of achieving high grades, and would use whatever learning process was most appropriate, demonstrating the powerful influence of assessment. Entwistle (1988) pointed out that his research team had identified a similar group who they had described as having a strategic approach.

Following up Marton and Säljö's work, a number of researchers have also shown that approaches to learning have a direct effect on learning outcomes in a variety of different contexts. Van Rossum and Schenk (1984) showed that deep approaches to learning were strongly associated with greater structural complexity of students' answers to questions on a text. Biggs (1988) showed a similar relationship in studies of students' essay writing. Ramsden (1992) also argued that approaches to learning are not characteristics of the student, but are responses to a specific task on a specific occasion. Laurillard (1984) demonstrated this with quotations from the same students using different approaches in different learning situations, illustrating the fact that the educational context did not always support the aim of achieving understanding, regardless of the student's personal characteristics and preferences.

There is then substantial support for the value of using the concept of an approach to learning, which has an influence on the outcome of learning. However, one difficulty in interpreting Marton and Säljö's work linking approaches to outcomes (1976a, 1976b), is that the sampling strategies and relatively small numbers of students involved were informed by a qualitative approach, but quantitative methods were used to demonstrate associations in the same studies. This leaves some of the findings subject to question. In addition, Webb (1997a) has criticised the research methods used on the grounds that they fall short of achieving understanding in qualitative terms, due to their quest for generalisability. In a second paper Webb (1997b) argued that the methods also fail to take into account the gender, social, historical, cultural or human understanding of learners. However, as Entwistle commented in a response to Webb, while he acknowledged that any over-simplicity of the deep/surface metaphor should be challenged, *'the value of the metaphor in revitalising educational development activities, and in providing a framework for the re-conceptualising of teaching, should surely not be decried'* (Entwistle 1997, p217).

Webb (1997a) makes a third point, which is that the deep/surface metaphor has now formed a research paradigm, which may suppress other views until another replaces it. I would argue that, while this point may be valid, the concept of differing approaches to learning has face validity for teachers, and provides a valuable conceptual basis for research which seeks further understanding of learning processes, rather than attempting to demonstrate cause and effect.

How students learn: perception of task and previous experience

As demonstrated by Laurillard (1984), many students are able to use both surface and deep approaches to learning in different contexts, so the crucial question for teachers is how the context may be influenced. Marton and Säljö (1976b) attempted to manipulate their students' learning strategies by giving them examples of the types of questions that they would be expected to answer, before asking them to read a text. Those given factual questions mainly used surface approaches, but those given questions that required understanding could be divided into two groups. One group appeared to calculate that what would be required of them would be to summarise the text in one or two sentences, while

the second group attempted to understand the text, and could demonstrate that they had done this. The authors concluded from their interviews that the former students perceived the task in a more limited way than the latter, perhaps influenced by their previous experiences of surface learning.

Attempts to advise students directly on how to adopt a deep approach have met with similar problems (Ramsden et al 1986), in that some took a surface approach to learning about learning. Fransson (1977) showed that deep approaches were associated with intrinsic motivation and absence of anxiety, while surface approaches were associated with a failure to perceive the relevance of the task. It seems from these findings that students' perception of the task is a key influence on their learning process, but that it is difficult to manipulate this or advise students about it directly: a simplistic view of the stated task is not enough.

Previous learning experiences have also been demonstrated to influence students' approaches to learning. Ramsden (1992) showed in interviews with students that deep approaches were associated with a well developed knowledge base in a subject area, while absence of such a base is a barrier to understanding. Another study (Ramsden and Entwistle 1981) showed that school environments which encouraged a deep approach were more likely to be associated with a deep approach in early university years, and the converse was also true. However this is a study in which many confounding factors which were also influencing the choice of school may have influenced the results. Entwistle (1988) building on previous work by Biggs (1979) and others, has described an inventory to investigate students' *general* approach to learning, which has been called the orientation to studying. This attempts to describe an orientation which is common to a variety of study areas, and may be influenced by students' previous learning experiences. As it is clear from Laurillard's work, cited above, that students can adopt different approaches in different learning contexts, and medicine includes a variety of very different study areas, I do not propose to investigate a general approach to studying. I will focus instead on the approach to the specific task of 'taking a history' with the related contextual issues.

As Webb (1997b) pointed out, the research on approaches to learning cited here has made little attempt to explore the way individual student characteristics or backgrounds influence approaches to learning. However, it seems likely that students' personal characteristics and

experience outside the educational system will have some influence on their perception of their task, their intrinsic motivation and the presence or absence of anxiety, all of which have been shown by the work described above to influence approaches to learning.

How students learn: the curriculum

The curriculum components of assessment, content and teaching are important issues to consider because they are more amenable to direct modification than students' perceptions of their task and previous educational experiences. This section briefly outlines the justification for their inclusion in the theoretical framework. Although assessment does not come first in curriculum planning, it may be the most important influence on student learning, so in this context I will consider it first.

There is a great deal of evidence for the powerful influence of assessment on learning. Laurillard (1984) described how students' approaches to problem solving tasks were related to their perceptions of marking criteria. Students tackled what she called the *'problem in context'* rather than the problem set. Not surprisingly, this included consideration of the marker and the marking criteria to be used, as well as the original problem. The features of the assessment had changed their perception of their task from the one posed by the examiners. Similarly, Newble and Jaeger (1983) investigated the effect of changing the assessment process in the final year of a medical curriculum. They found that this had a profound effect on the way the students studied, leading them to give increased priority to clinical work in their studying, due to a changed perception of their task. Becker et al (1968) showed that students are often clear about the damaging effect of assessment on their learning processes, for example:

> *There are a lot of courses where you can learn what's necessary to get the grade and when you come out of the class you don't know anything at all. You haven't learned a damn thing really. In fact, if you try to really learn something, it would handicap you as far as getting a grade goes.*
>
> (Becker et al 1968 p59, cited by Ramsden 1992)

From these studies there is more evidence that poor assessment procedures encourage surface approaches than that good assessment encourages deep approaches. This is in line with the finding described on page 37 that attempts to manipulate learning by asking

questions requiring understanding were not always successful, nor were attempts to teach deep approaches.

Formative assessment, meaning any feedback on performance which can enable students to identify how their performance could be improved, has also been demonstrated in a review of classroom teaching to be an extremely important influence on learning (Black and Wiliam 1998). These authors point out that, to be effective, this must be followed by self assessment, that is, the student must themselves identify the gap between their performance and an ideal performance. These processes can be seen as interlinked aspects of teaching activities, learning activities and assessment.

The influence of assessment is also closely related to the issue of the quantity of material to be learned. Ramsden (1992) found in interviews with students, not only that an overloaded curriculum forced the students to take surface approaches in order to succeed in assessments, but also that they were painfully aware of this, and regretted not being able to take a more effective approach. It seems self evident that a curriculum overloaded with factual content leads to poor learning.

Research on characteristics of individual teachers is largely based on students' views on how they are helped to learn, rather than on outcomes of learning. Students place high value on teachers who make good relationships with them, as well as using effective teaching methods. For example, Bliss and Ogborn (1977) reported that students understood lecture content better when the lecturer interacted with them in a way that encouraged involvement and human interaction between the teacher and student. Hodgson (1984) suggested that a possible explanation of this was that in behaving in this way, teachers were enabling students to believe in the relevance of the lecture material, through belief in the lecturer.

Ramsden (1992) described, from interviews with students, a number of characteristics of teaching which students believed to encourage a deep approach to learning:

> *Interest in undergraduate students, help with difficulties in understanding, using teaching devices that encourage students to make sense of the content, creating a climate of trust, a proper balance between structure and freedom, and conscientious*

> *frequent and extensive evaluative comments on assignments and other learning tasks – all these aspects of teaching are related, in students' experiences, to the use of deep approaches and the development of interest and commitment to the subject matter.*
>
> (Ramsden 1992, p76)

These findings are limited by the fact that the study was based on student opinions rather than learning outcomes and it would be surprising if the converse of any of these characteristics of teaching was helpful. A second limitation of Ramsden's conclusion from his work is that there is also a clear association between students' feelings of personal fulfilment and pleasure in learning and a deep approach (Svensson 1977). This may act as a confounder, in that students who are enjoying their learning are more likely to perceive the teaching as favourable.

How students learn: social and individual student factors

Individual student factors which have been suggested to have an influence on the learning process include cultural differences (Biggs 1999) psychological factors, gender and personality traits, as well as 'ability' (Entwistle 1988). Biggs (1999) described three levels of thinking about teaching:

Level one: learning is a function of individual differences between students, and focuses on *what the student is.*

Level two: learning is a function of teaching, and focuses on *what the teacher does*

Level three: learning is the result of students' learning focused-activities, which are a result of their own perceptions and inputs, as well as the teaching context, and focuses on *what the student does.*

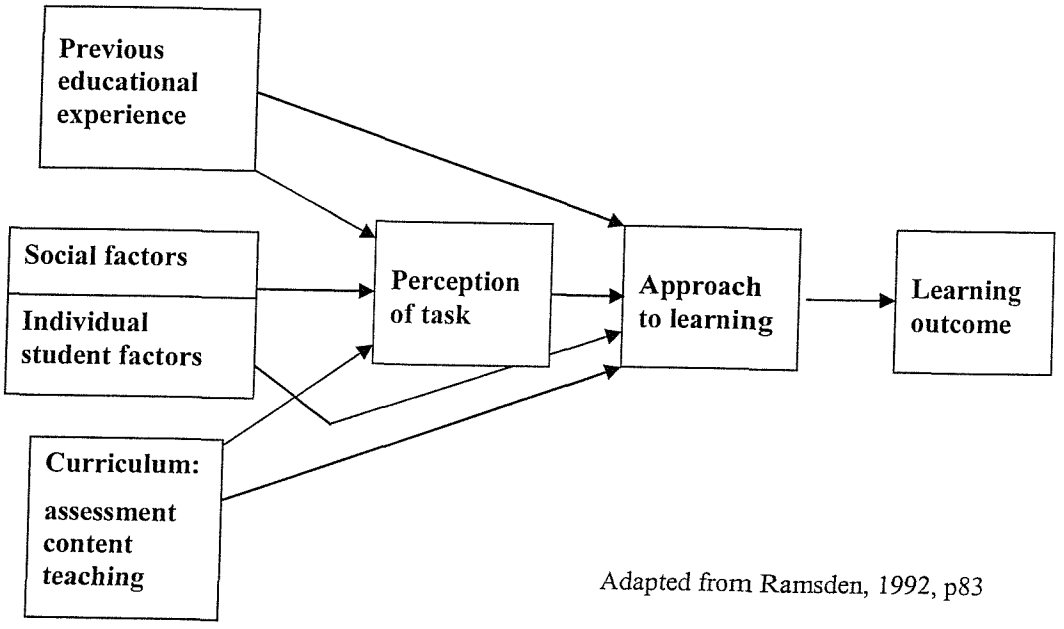
Biggs argued that, while there is some truth in all these premises, thinking at levels one and two might not have the desired effects of improving teaching. Focusing on *what the student is* encourages a '*blame-the- student'* theory of teaching. Focusing on *what the teacher does* tends to focus on the skill itself, rather than on whether its use has the desired effect. Only focusing on *what the student does* will support a concept of teaching that encompasses the whole teaching and learning process (Biggs 1999, p22). In this study I did not plan to focus on the effects of individual pre-existing student differences on learning,

though I acknowledge that they will have had an influence, but, on the basis of utility, I chose to focus on areas which might be more amenable to curriculum change.

How students learn: a theoretical framework

From the work described above, it is possible to derive a conceptual framework of the learning process which summarises the various influences. The value of such a framework in my research is to conceptualise the process so that it can be divided into constituent aspects in order to assist the analysis of the research findings.

Figure 3.1: Theoretical framework for student learning



Adapted from Ramsden, 1992, p83

Ramsden (1992) and Prosser and Trigwell (1999) both suggest very similar frameworks, incorporating the students' perception of their task (Ramsden) or context (Prosser et al), and how this influences their approach to learning and the learning outcomes. Prosser and Trigwell's framework includes among influences on this *'characteristics of the student, eg previous experiences, current understanding'* (Prosser and Trigwell 1999, p12), but make no mention of pre-existing personality, ability or social factors. Ramsden does not include student factors other than previous educational experience. The reason for this may be, as Biggs (1999) argued, that focusing on these does not lead to improvement in teaching and learning. However, I have elected to acknowledge their existence in a theoretical framework for research purposes. The framework shown in Figure 3.1 has been adapted,

by the addition of student factors, from that of Ramsden (1992). Like Ramsden's, it makes no claims to show direct linear cause and effect, or to exclude other influences, but provides a framework for conceptualising research findings, and how influences may relate to each other.

In this framework, the outcomes of student learning are influenced by students' approach to learning. This is influenced by students' perception of the learning task, which is itself influenced by the students' previous experience, the curriculum and social and individual student characteristics. It seems likely that all these may also have a direct influence on students' approaches to learning.

This framework modifies Ramsden's by leaving out the intermediate concept of 'orientation to studying' between 'previous educational experience' and 'perception of task'. This is because I am considering students' learning processes in relation to one particular task, and so a general orientation to studying would not be directly relevant unless it was independent, and had other external influences. As the influences appear to be in common with those on approaches to learning, I have not included 'orientation to studying' in the framework. I have also added pre-existing social factors, (for example class, gender, ethnicity), and individual student factors (for example personality traits) to the picture, as these, although less well investigated, may have relevance in my study. Following a review of the literature on how medical students learn, and, in particular, how they learn to talk to patients and 'take histories', I will then consider any modifications to the framework which may be helpful for this study.

How medical students learn, and how they learn to 'take histories'

In this section I review the literature on the outcomes of learning to 'take histories', and will argue that there is no consensus on what a desirable outcome would be. I then use the theoretical framework (Figure 3.1 page 41) to consider what is known about medical students' approaches to learning this skill, and the potential influences on these, and then to refine the framework for use in this study.

How medical students learn: learning outcomes for 'history taking'

Atkinson (1997) pointed out that there was remarkably little published work on how medical knowledge was reproduced in medical schools. During clinical attachments, students are rarely observed while 'taking a history' from a patient. In the traditional medical curriculum, students' skills in carrying out a physical examination of patients are taught directly under supervision and then assessed by observation, but skills in 'history taking' are commonly taught and assessed indirectly by means of a report from the student. As Sinclair (1997, p201) points out: '... *'taking the history' is usually done on the official backstage, it being generally assumed that simply asking patients questions is within the student's own competence'*. This is in spite of the fact that there is evidence that the majority of diagnoses are made on the basis of the history (Sandler 1980), as indicated in chapter two.

In keeping with this, students are rarely assessed on direct observation of their full 'history taking' skills. The conventional final examination also relies merely on a report or 'presentation' of this from the student, in what is commonly termed 'the long case' (Newble 1994). Wass and Jolly (2001) asked different examiners to mark students' skills when observing them 'taking a history' and then when presenting the same patient. They showed a poor correlation, though both correlated independently with a further assessment of clinical skills. This suggests that the skills are different parameters of clinical competence. A more recent form of assessment of clinical competence, the objective structured clinical examination (OSCE), does rely on direct observation of a student 'taking a history' (Harden and Gleeson 1979). However, the time available for this is commonly around five minutes, while students would normally expect to take at least twenty minutes to 'take a full history' by the method taught. So students are neither observed nor assessed while 'taking a history' in the conventional manner.

What students do has been observed more carefully in the context of teaching about communication skills. There is now evidence that these skills can be improved and persist with teaching (Maguire 1986) and can influence the outcome of illness (Stewart 1995). In a study of how students' skills develop during the early years of training, Scott et al (1975) found that students became more directive in style between the second and third year, and less supportive and empathic. Helfer (1970) reported similar findings for students learning paediatric interviewing skills. Both Wright et al (1980) and Bishop et al (1981), at the

same medical school, showed very little change in performance over the three years of clinical training, though there was a tendency for the second year students to perform worst, the final year best and the first intermediate. Preven et al (1986) showed that, as they acquired more medical knowledge, students tended to pay more attention to symptoms and the systemic enquiry (the systematic use of pre-ordained questions about each of the physiological systems, described in chapter one, page 18), and less to the patients' needs and psychosocial issues. These findings led to a view that medical education at best had little effect and at worst a negative effect on students' ability to communicate effectively with patients.

More recent studies may have been influenced either by curriculum change, with more focus on communication, or a cultural change in medical schools, as some are more reassuring. Davis and Nicholaou (1992) showed that final year students elicited more information than junior students, related to the patient in a more caring, empathic and facilitative manner, and did not show some of the failings demonstrated in earlier studies. Klamen and Williams (1997) similarly showed a significant improvement in the ratings given by simulated patients during two years of the course, but Pfeiffer et al (1998) showed that students' questions relating to the patient's social history declined over the four year course, while students used closure strategies more often. They suggested that the cause of this might have been a gradual reduction in emphasis on communication skills during the clinical course, alongside the increasing effect of the medical culture. These somewhat contradictory findings suggest that there is room for further exploration of how students may develop communication skills, and how the learning environment within medical schools could best facilitate the process.

In many medical schools teaching about communication skills has been treated as an entirely separate activity from the teaching about 'history taking', with little explicit linking of communication objectives with clinical logic and decision making (Whitehouse 1991). In addition, the majority of the teaching has been carried out by departments of general practice and psychiatry (Whitehouse 1991), which are, as Sinclair (1997, p220) has observed: *'both among the very-lowest-Status segments of medicine as seen by the teaching hospital.'* Sinclair observed little effect of these courses on hospital practice. One major difficulty in all the studies of communication skills in relation to the present work is that the observations and judgements have been made by individuals who are

focusing mainly on communication skills, in settings divorced from the context of clinical care. During the studies the students knew that this was the focus. It is not clear whether students would have performed in the same way had they been under observation by a 'high-status' clinician in a clinical setting, or whether the desired outcomes would have been the same. Information about teaching about 'history taking' and its outcomes in the 'high-status' disciplines is therefore lacking.

As students are rarely observed or assessed while 'taking a history' in the manner taught, and as the main sources of systematic observations of students (studies of communication skills teaching) have a different setting from the everyday practice of medicine, it is not clear that there is a consensus on the desired outcome of this training. In this study, therefore, I made no assumptions about what the outcome should be. I assumed, however, that it was desirable that teachers and students had a clear idea of what they were aiming at, and a rationale for the method that they used to reach this goal.

How medical students learn: approaches to learning

Following the work on learning processes in higher education initiated by Marton and Säljö's experiments (1976a and b), Newble and Entwistle (1986) discussed the implications of this work for medical education. They expressed concern that the curriculum structures, teaching methods, and in particular the assessment techniques might, on the basis of work in other areas of higher education, be hindering the students' development:

> *The way students perceive such a course* [the conventional undergraduate curriculum] *may encourage surface or highly strategic approaches to learning, neither of which is likely to produce a graduate with a well-developed capacity for critical thinking, problem solving or self-directed learning.*
>
> Newble and Entwistle 1986, p174

One major and repeated criticism of medical education, dating back to the mid-nineteenth century, has been its overload of factual information (General Medical Council 1993). A number of studies have investigated how medical students deal with this. Becker et al (1961) reported a strategic approach to learning in their observational study of medical

students in Kansas, *Boys in White*. They followed a group of medical students through medical school, and observed a series of 'perspectives'. They defined these as: *'a co-ordinated set of ideas and actions a person uses in dealing with some problematic situation, to refer to a person's ordinary way of thinking and feeling about and acting in such a situation.'* (Becker et al 1961, p34). The perspectives described a consensus view of the majority of students, and guided how the students thought or behaved when there was a choice to be made. They described a change of the majority perspective during the students' first year from *'An Effort to Learn it All'* through *'You Can't Do It All'* to learning *'What they Want us to Know'* (Becker et al 1961, chapter headings, p ix). These perspectives followed the students through a belief that they must work hard and learn everything, even if there was a great deal to learn, through a realisation that this was impossible, and uncertainty about how to deal with the problem, to a final view that the most successful strategy was to find out what was most likely to be needed in assessments, and learn only that.

Sinclair (1997), in an ethnographic study of medical education as a (medically qualified) participant observer, similarly described how students dealt with the huge amount of factual knowledge required by a variety of methods, including what he described as the dispositions of *Co-operation* and *Economy* (Sinclair's capitals). *Co-operation* included working together in groups to consider what questions may be asked in the examination, and sharing the task of memorising questions in previous tests which are often used again. *Economy* included the calculation of the minimum amount of work or marks necessary to pass an assessment, which bears a direct relationship to surface learning. This would appear to be describing strategic approaches similar to those described by Becker et al.

Newble et al (1988) adapted Entwistle's inventory (1988), which attempted to categorise orientations to studying, for use with medical students. This was intended for use as a tool to identify students with learning problems. They showed that students who had reproducing orientations to studying, as defined by the inventory, were unsuccessful in medical school assessments, but students who appeared to have better approaches to studying did not necessarily perform better in examinations. They pointed out that the examinations might not have been a good way of measuring understanding, but the inventory also suffered from the difficulty of defining a general approach to studying,

when it is clear that a single student's approaches to learning can be different in different learning contexts (Laurillard 1984). It is therefore not being used in the current study.

Coles (1985) also used an inventory, and showed that medical students' approaches to learning deteriorated (in that they changed from deeper to more surface) after the first few months of the course, which he interpreted as being related to an overloaded curriculum. On the basis of an interview study of medical students in Southampton (Coles 1998), he also proposed an addition to the framework of the learning process above. He pointed out that while surface approaches correlate with poor examination grades in medicine, deep approaches do not always correlate with good results, and suggested an additional aspect of a deep approach to learning, which he termed the 'elaborated approach'. To explain this, he distinguished between approaches to learning, which are conscious intentions of the student, and the learning process, which may follow the intention or may not. As he described it:

> *Students adopting deep approaches to studying attempt to understand the meaning of what they are learning. Elaboration on the other hand occurs when students discover how the things they are learning relate to other topics, and especially how theory links with practice. It is perfectly possible for students to learn deeply without elaborating their knowledge.*
>
> (Coles 1998, p65)

He argued that elaboration might be a more specific determinant of academic success than a deep approach to learning.

Coles' work related to medical students when they were studying for written examinations, rather than developing clinical skills, and my study is concerned with this latter process. In research closer to the context of this study, Whelan (1988) carried out an interview study of how medical students solved clinical diagnostic problems. He divided the students into those who adopted an 'ordering approach' to the problem, and those who adopted a 'structured approach'. The 'ordering approach' was identified when students considered parts of the problem without linking them to the whole, when they ignored parts that did not fit with their explanation, and when they failed to make an overall explanation. The 'structuring approach' was characterised by students who maintained the overall structure

of the problem, who provided evidence for their ideas, and who related their ideas to their basic science knowledge. Although only small numbers of students were involved, he felt that structuring was associated with better understanding.

There is another area of research into learning processes, which may have a particular relevance to clinical skills including history taking. Dreyfus and Dreyfus (1980) described a model for the development of expertise, based on studies of a variety of sophisticated skills, including chess playing and flying an aeroplane. Contrary to what those in awe of chess players might imagine, experts do not work out the consequences of every possible move, but recognise familiar patterns, in which they remember the best move. Dreyfus and Dreyfus (1980) suggested that novices in many contexts start with a formal understanding of the rules, but as they gain more experience, they build up a series of patterns, and intuitively compare present with past experiences to provide a plan for handling the current situation. Reflection on experience is thus a key part of the learning process. This model of development could fit with Kolb's (1982) model of the learning cycle, which suggests that learning can be seen as repeated cycles of concrete experience, reflection, abstract conceptualisation and active experimentation leading to further concrete experience.

There is some evidence that the development of clinical skills in medicine may follow a similar pattern. Schmidt et al (1990) reviewed the relevance of the novice/expert model to research on medical expertise and pointed out some interesting findings. Problem solving ability in medicine has been shown to be highly case-specific, and closely related to knowledge relevant to the problem. On some assessment tests of clinical performance, experts perform worse than novices. They collect less information, and appear not to carry out formal clinical reasoning when attempts are made to assess this.

Schmidt et al (1990), on the basis of a variety of research studies, suggested that these findings could be explained by applying the novice/expert model, with a staged development of clinical skills,. Medical students start by developing an understanding of the pathophysiological explanation of disease. However, as they develop more experience they work, like the chess players and airline pilots, on a sophisticated form of pattern recognition of what the authors called 'illness scripts', based on recollection of patients. Experienced clinicians cited tend to use pathophysiological knowledge and explanations

much less frequently, though they may return to this if the problem is unfamiliar or complex.

Van der Vleuten and Newble (1995) summarised this thus:

> *Professional expertise* [in clinical medicine] *thus develops as a transition from a conceptually high and rational knowledge base (acquired from educational experience) to a non-analytical ability to recognise and handle familiar clinical situations (acquired from extensive clinical experience).*
>
> *(van der Vleuten and Newble 1995, p1033)*

This analysis of the learning process underlines the important of both practical experience and knowledge in learning professional skills, but does not further unpick how these may most effectively be used to recognise patterns accurately.

There are therefore a series of different ways in which 'effective' approaches to learning may be characterised in the context of clinical medicine. Both knowledge and experience of clinical situations may be pre-requisites for learning. It seems that, although many students attempt to learn for understanding, using a deep approach, those who elaborate, or make more links with previous learning, may be more successful. Similarly, those who structure both their knowledge and their conceptualisation of diagnostic problems effectively may be better at understanding them. This work in total could be seen as an attempt to unpack different aspects of the concept of a deep approach, or 'learning for understanding', which may be too broad a concept to determine success in a narrow field such as clinical medicine.

How medical students learn: perception of their task when 'taking a history'

At the most simplistic level, students are usually advised that their task when 'taking a history' from a patient is to make a presentation of their findings (usually orally) to a teacher. This will include a differential diagnosis, which is a list of possible diagnoses, ideally in order of likelihood. However, this is not always straightforward. Patients interviewed by students in hospital have commonly been assigned a diagnosis already. Depending on the context, other possible perceptions of the student's task might include developing confidence when talking with patients, practising for examinations or trying to guess what their teacher requires on this occasion.

In addition, the account of a patient's symptoms expected by a general practitioner from a student will not be the same as that expected by a hospital physician from the same patient, because these doctors perceive their task differently. The former is likely to expect an account of recent symptoms in the context of the social and psychological features of the patient's life, whereas the latter may (or may not) see their role as focused only on physical symptoms or even on symptoms related only to one organ or physiological system. Although this is obvious to most practising professionals, a typical textbook for medical students commences with a section on what it describes as:

Phase 1 *Title: History taking* *Purpose: information gathering*

(Masterton and Toft 2000, p2)

The variety of purposes of 'history taking' and the relationship of the process to the task in hand is rarely made explicit, either by textbooks or by teachers.

Similarly, the rationale for the 'history taking' process is not usually made explicit to students. By this I mean the logical process whereby the way in which the history is 'taken' (and the patient examined) is or should be designed as an effective method of achieving its purpose. This commonly includes finding out about the cause of the patient's symptoms and deciding how best to investigate or alleviate them. As mentioned above, studies of the diagnostic process used by practising doctors and students have shown consistently that they tend to form hypotheses very early in the interview, and then use the rest of the interview to confirm or refute these (Barrows et al 1982, Neufeld et al 1981). This method does not correlate with the list of routine questions which students are conventionally taught to memorise, although some teachers may add an explanation about choosing questions to test hypotheses. The conventional way in which 'history taking' is taught is based on a historical precedent, and its rationale is rarely questioned. How students can organise their conceptualisation of the task without this rationale is not clear.

Atkinson (1997, first edition 1981) described the theatrical nature of teaching in medicine, and this theme was further elaborated by Sinclair (1997). The common teaching process in a hospital ward is that a student talks to a patient and examines them alone. The teacher then assembles a group of students in a circle round a patient's bed, with the group looking down on the patient, similar to tiers of students looking down on a teacher in a lecture theatre. The student 'presents' the patient to the teacher, who then questions students

around the circle in a formalised manner. The student who is 'presenting' is 'on show' and must develop the necessary dramatic skills to earn approval. Both learning the language and the theatrical presenting skills are tasks of the student that are not explicit.

Fleming (1986) pointed out the way in which the students' perceptions of their task may make this a dysfunctional learning context. When students present a case at the bedside in the manner described, they are likely to see their task as one of impressing the teacher. Their strategy for doing this is unlikely to include expressing uncertainty or posing questions, while these are the strategies which might best enable them and other students to learn.

The work of Becker et al, who observed medical students in Kansas, and identified perspectives, or sets of ideas which influenced students' thoughts and behaviour has already been cited on page 45. They also described four perspectives guiding the students' behaviour during the clinical years, which were directly related to the students' perception of their task (Becker et al 1961). *'Medical Responsibility'* was seen as direct responsibility for the patient's well being, and linked with *'Clinical Experience'* , which was direct contact with patients, whose clinical symptoms, signs and disease processes could add to the student's fund of experience. They observed how these perspectives directed which patient contacts were valued by students, and which not.

A third perspective running in parallel with these, and observed by Becker, was the *'Academic'* perspective. The faculty, or senior clinical teachers, were seen as both powerful and capricious, and it was deemed necessary for students to attempt to please them, even when their demands appeared foolish, complicating the students' task even further. Lastly, *'Student Cooperation'* referred to the way in which students shared out opportunities to gain clinical experience and responsibility.

Sinclair (1997) built on Becker's work, and described a series of 'dispositions', in medical education, a term based on the work of Bourdieu (1977). He saw the dispositions as systems of internal cognitive structuring, which could lead to action, and which, when added together, comprised the medical habitus or collective identity and value system. These also relate to the students' perception of their task. The dispositions of *Co-operation* (similar to Becker's) and *Economy* were previously mentioned in relation to students'

approaches to learning (page 46). Sinclair's dispositions of *Idealism, Status, Knowledge, Experience* and *Responsibility* (the last two closely related to Becker's work) each related to the students' aims to remain idealistic, and to gain status, knowledge and clinical experience. The additional point made by Sinclair was in his final *Economic* disposition, which described the way in which students traded their dispositions against each other, as for example, when they gained *Responsibility* at some cost to their *Idealism* when learning procedures which cause discomfort for patients.

From this work it follows that the range of tasks for students learning to 'take a history' may include gathering appropriate information, making a diagnosis and management plan, learning appropriate language, developing presentation skills, gaining clinical responsibility and experience and pleasing capricious teachers. . This list does not include preparation for examinations, which I have considered under assessment. Students may also have to trade these aims against each other, where there are conflicts or tensions. Coles (1985) showed that students who performed poorly on assessment were also those who did not know why they were there (on the hospital wards). Given the wide range of possibilities, it would seem important to explore what students see as their task while 'taking a history'. While it is almost certainly impossible to determine students' perception of their task by giving explicit instructions about this, some understanding of students' perceptions may enable more sensitive curriculum planning.

How medical students learn: the influence of previous experience

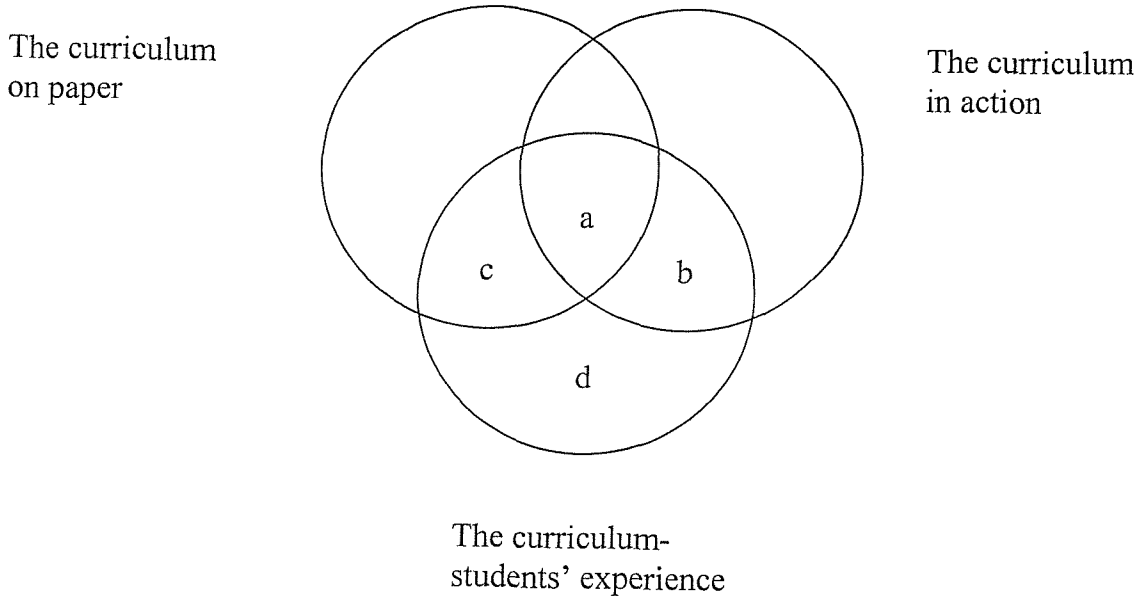
The factual overload, especially in the first two years of the curriculum, might be expected to encourage surface processing, as has been shown in other contexts (Ramsden and Entwistle 1981). The theatrical experience of teaching sessions on hospital wards may influence students' perceptions of their task. Sinclair (1997) also observed teaching by humiliation, in which students were led to a situation of feeling that the failure to answer a question correctly was a personal moral failing. He suggested that this might have the effect of encouraging 'bullshitting' in which confidence was more importance than competence. Ramsden (1992) cites a number of research studies demonstrating an association between the quality of the teacher-student relationship and successful learning, which would suggest that experience of teaching by humiliation may not encourage effective learning in the future.

As well as previous experiences of being taught, students also have experience of observing doctors in practice, and may in addition have experience of being patients. There is a powerful belief in the influence of role models in medicine, even if the specific influence of these is not clear (Bligh 2001). Since almost no senior doctors 'take histories' using the method taught to students, it is not clear how students make sense of this. It is likely also that experiences as a patient or as a relative of a patient may have a potent effect on future learning, but published evidence is lacking.

How medical students learn: the curriculum

Coles (1998) has described a conceptual model of the curriculum which takes into account the context, including the teachers and the students, as well as the ideas of the curriculum planners (Figure 2). In his model there are three interlinked aspects of the curriculum. The 'curriculum on paper' comprises the aims and intentions of the planners, whether or not these are made explicit. The 'curriculum in action' comprises the lectures, seminars, ward rounds etc that actually occur as part of the teaching programme, some of which may not have been intended. The third aspect is 'the curriculum: students' experience', which can differ significantly from both the first two aspects.

Figure 3.2: the curriculum



(Coles 1998 p66)

The three circles represent the three aspects, and it can be seen that there is overlap but not complete consistency between the three. (The diagram makes no attempt to represent the relative size or importance of the various portions.) The area 'a' represents that portion of the curriculum which is planned, takes place in practice and is experienced by the students. An example of this would be the aim for all students to be competent in cardio-pulmonary resuscitation, which is well taught, valued by students and assessed. Other areas are more problematic. Area 'b' shows part of the curriculum that happens but which was never intended, though students take it seriously, for example, the advice by some teachers or previous students that the numerous branches of a certain nerve are irrelevant, and must just be learned by rote to please examiners. Area 'c' might include, for example, the need for students to adopt certain professional attitudes, which are included in curriculum planning, seldom made explicit by teachers, but still adopted by students as part of the medical culture. Area 'd' has been called the 'hidden curriculum' and includes all that students learn that was never either intended or formally taught, for example the importance of presenting patients with considerably more confidence than is actually felt.

In this model, *the curriculum- students' experience* is the aspect which will influence their perception of their task and learning approach. This will be influenced by both *the curriculum on paper*, and *the curriculum in action*, as well as by the student culture and other social and individual factors, and will include the hidden curriculum. This section reviews assessment, curriculum content and teaching in relation to 'taking histories', particularly focusing on the students' experience.

Assessment has been shown to be a powerful influence on learning in medicine, as well as in other contexts. Newble and Jaeger (1983) showed how, in one medical school, an attempt to improve the curriculum backfired. The final year was altered to encourage students to focus primarily on clinical medicine, and the final examination after this was reduced to a multiple choice examination, with clinical assessment at the end of each attachment. However, students soon realised that the pass rate for clinical attachments was very high, and spent more time than expected in the library, as the multiple choice paper was their main challenge. The addition of a structured examination of clinical skills resulted in students perceiving this as an increasing influence on their study habits, and valuing clinical teaching more. Coles (1985) showed how an assessment of basic science

learning, timed to require students to link this with clinical medicine, might have encouraged a deeper approach to learning.

As mentioned above, in the conventional final examination for medicine, the student's edited report of the patient's history (the 'presentation') is assessed in the 'long case'. This may lead to assessment of the student's 'theatrical' skills instead of their clinical skills, as the examination normally takes the same form as the question and answer sessions which form the students' experience of learning in hospital wards, as described by Sinclair (1997). This examination is now commonly associated with some direct observation of the student with a patient.

With the rise of communication skills teaching, attempts have now been made to assess medical interviewing skills in a reliable manner. This includes both communication skills and the achievement of the specific medical task posed in the interview. This has proved difficult, as it has been shown that students who communicate well in one context do not always communicate well in another (van der Vleuten and Swanson 1990). In other words, these are not transferable skills, but are case or context specific. Van Thiel et al (1991) have shown that assessing qualified doctors over eight to ten cases in two to two and a half hours of testing time will give a reasonable degree of reproducibility for use in a summative assessment. Although a number of medical schools have now introduced the assessment of 'history taking' in an examination of a series of clinical skills (the objective structured clinical examination or OSCE), usually in addition to the 'long case' already described, none are, on the basis of this work, assessing these skills reliably. The incorporation of these skills in the examination seems likely to influence the students' perception of their task, but little is known about whether this actually does influence learning.

The problem of content overload in the medical curriculum has been discussed above in relation to its effect on the approach to learning. In the context of 'history taking' it is difficult to distinguish between the content and the process of teaching, as both are influenced by the ambiguity of the task involved, as described in chapter two. Two studies shed some light on approaches to teaching students to take histories.

Atkinson (1997, first edition 1981) carried out an ethnographic study of students at Edinburgh in the early 1970s, and convincingly argued that much medical clinical teaching was based on a carefully constructed version of medical reality. One example of this was the focus on what he termed 'cold medicine', which applied when students 'took histories' from patients who had already had their immediate symptoms controlled, and a diagnosis made. This was contrasted with 'hot medicine' which was also 'real', when students saw patients whose problems had not yet been categorised and treated. In the former situation the teacher was in possession of more information than the student, for example, results of tests and X rays, and could teach from a position of certainty. In the 'hot' situation, on the other hand, both teacher and student were in a position of uncertainty, and discussion of the possible diagnostic and management possibilities had less of a power imbalance. *'The bedside teaching session (cold medicine) is a social encounter which is constructed in such a way as to simulate a supposed reality of normal medical work (hot medicine)'* (Atkinson 1997, p147). As, for more junior students, most of their experience of 'taking histories' is 'cold', students may be presented with a version of medical reality subtly altered by subsequent findings.

Mountford (1989) observed students in Southampton who experienced two different approaches to teaching, which could be linked with the 'hot and cold medicine' concept. The students were attached to two medical 'firms' or consultant led groups of doctors in their third year. One firm used what she called a 'training approach' in which 'history taking' and examination were a linear process, leading to a presentation which was an end in itself, as in 'cold medicine'. The other used a 'working approach' where students' 'history taking' and examination formed part of patient care, and the focus was on the patient. This resulted in an interest in diagnosis, management and prognosis, as it was clear that this was what the patient was expecting, and was more like 'hot medicine'. Students on the former firm were reluctant to admit uncertainty and ask questions, and focused on 'being doctors', rather than caring for patients. They also obtained higher grades in the clinical assessment. Mountford felt that the 'training approach' narrowed the students' perception of their task, so that they could succeed within the limited objectives. The 'working approach', however, broadened the students' aims beyond the immediate case presentation, and she felt that it was more likely to foster intellectual honesty and rigour.

Although it is not clear from these studies how the students perceived the differing teaching approaches, it seems likely that they influenced the students' perception of the task, and that this influenced their learning, and in Mountford's (1989) work, their grades. These reports illustrate the way that the medical culture, both generally and at a local level, may have a significant influence on both how and what students learn, and this is further considered in the next section.

How medical students learn: the medical culture

Medical education is situated in a context and culture which is familiar to many through popular literature and the media, particularly *'Doctor in the House'* by Richard Gordon (1952), which was based on personal experience. The very familiarity of this, in the lay world as well as the medical setting, may make it more difficult to be aware of the potential influences of this culture. These influences may be particularly pervasive around the time when students are immersed for the first time in clinical teaching settings. Atkinson (1997) suggested that memories of early clinical experience commonly form a turning point in a doctor's personal biography, which *'serves to establish a collective, shared 'mythological charter'* (Atkinson 1997, p3).

As described on page 56, Atkinson (1997) argued that clinical teaching in many cases was an artfully contrived reconstruction of medical reality, in that it usually took place quite separately from clinical care, so that, for example, patients might in some cases be asked to conceal information, so as to simulate a previous occasion when their diagnosis was not 'established'. He also pointed out the tension for students, who were taught to use a set of rules for their interactions with patients, but who also, when watching clinicians in actual practice, observed that *'experienced following of the rules implies an apparent breaking of the rules'* (Atkinson 1997, p180). Atkinson's work suggested that this contrived version of medical reality actually became the culture of medical education, which formed part of the overall culture of medicine, with initiates so familiar with both that they did not question the tensions. This work underlines a potentially powerful influence on medical students' learning which is not obvious to the participants, and I propose to consider this in the interpretation of the data.

Other social and individual student factors are likely to have a significant influence also on students' learning, but, as discussed on page 40, these are less amenable to change, and I am not proposing to focus on these in the context of this study.

Development of the research questions

In summary, the published literature suggests that when students learn to 'take a history' from a patient, they are learning a complex skill, which has prime importance in medicine. Using the biomedical model of illness, doctors 'take a history' in order to decide on a strategy for a physical examination and investigation, to make a diagnosis and to decide on management. Using a more patient centred approach, the history is a method of finding out what the patient would like from the doctor, and about their illness, that is, their individual experiences and concerns, as well as the symptoms of any disease. This whole process may be a reflection of the current concepts of illness and of the doctor-patient relationship.

Research in other higher education contexts suggests that the outcomes of student learning are influenced by their approach to that learning, which is itself influenced by students' perception of their task, their previous educational experiences and the curriculum. Although there is agreement that 'taking a history' is a crucial clinical skill, students are rarely observed doing it, and there is little consensus on what a good outcome would be. This would certainly differ in different medical contexts. In addition, there is evidence that students have a wide variety of perceptions of their task during their clinical training, and that the rationale for the process of 'taking a history' is not clear. Teaching this skill is often far removed from the actual practice of the skill. Assessment focuses only on this skill in a truncated form (in an objective structured clinical examination) or indirectly (in presentation). Approaches to learning are complex in clinical medical education, and not easily assessed by simple inventories, although there is agreement that the medical curriculum as a whole is overloaded, and this has a deleterious effect on learning.

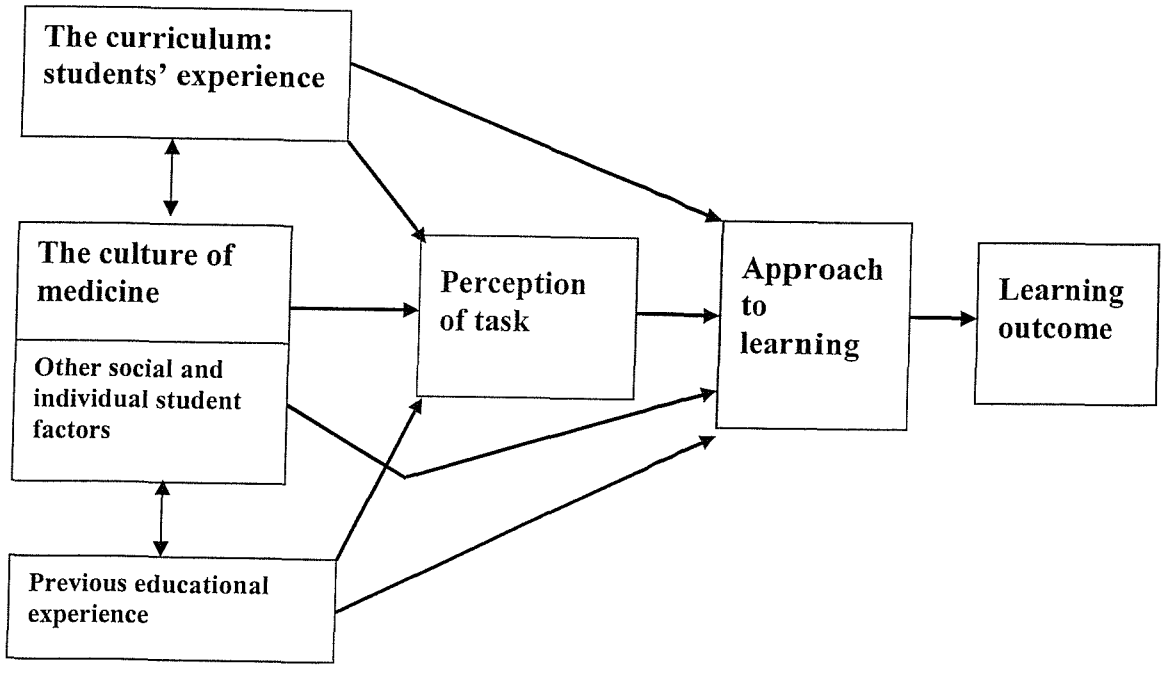
In relation to the framework proposed in Figure 3.1 (page 41), three areas have arisen where the published literature might suggest its refinement when applied to 'taking histories'. Firstly, approaches to learning clinical skills are almost certainly more complex than those illustrated by the deep/surface dimension alone, although this does not diminish

the value of the outline framework. Secondly, the curriculum which influences the students' perception of their task might more accurately be defined as 'the curriculum: students' experience' (Coles 1998), which may be more complex than the categorisation into assessment, content and teaching. Thirdly, the culture of medicine may form an important aspect of the social factors, and could be identified separately.

In order to develop appropriate research questions with which to explore the way in which students learn to take histories, the framework proposed in Figure 3.1 (page 41), was modified, and is shown in Figure 3.3. This emphasises that it is the students' experience of the curriculum that influences their perception of their task, and identifies the culture of medicine alongside other social factors. Although within the scale of this qualitative study I have not attempted to explore associations between other social factors, individual factors, or previous educational experience and students' learning, these are retained in the framework to avoid the inappropriate assumption that they are unimportant. I have also added arrows to acknowledge that all these influences are interrelated.

Figure 3.3: Theoretical framework for learning to 'take a history'

Issues not under consideration in this study are shown in smaller font, but are not necessarily less important



Within this framework, the research questions focused on areas where exploration might have the potential to improve medical education in 'taking a history'. As the students' perception of their task appeared to be central to their approach to learning, and heavily influenced by their experience of the curriculum, as well as being amenable to change, I proposed primarily to explore this area. The published literature had suggested that the rationale for 'taking a history' might not be clear, so I proposed specifically to distinguish the students' purposes when 'taking a history' from their rationale for this process. In exploring the influences on students' perception of their task, I included their teachers' views on the purposes and rationale for student 'history taking', as I felt this might shed additional light on the students' perceptions.

I also explored some of the influences on students' perceptions of their task and approaches to learning which might be amenable to change. This included students' experience of the curriculum, including assessment. The culture of medicine is not easily amenable to change, and would have been difficult to explore directly with the participants, who, like me, were deeply immersed in it. However, I felt that it was important to maintain sensitivity to issues related to this within the study, while not posing a direct research question. Similarly, I proposed to identify social and individual student issues among the other influences, where they appeared to be important, rather than posing a further question, as these might be less amenable to change.

As there is so little consensus on the desirable outcomes of learning to 'take histories', I did not attempt to measure these. However, I proposed to explore the students' approach to learning to 'take a history', as the research on which the theoretical framework is based indicates that this would be subject to the same influences as the students' perception of their task, and might have a significant association with the outcomes.

In summary, my research questions were as follows:

What do medical students perceive as the purposes and rationale of 'taking a history'?

What do medical teachers perceive as the purposes and rationale of 'taking a history'?

What do students perceive as the influences on how they 'take a history'?

What type of approach to learning to 'take a history' do students adopt?

The next chapter describes the methodological approach and methods used to explore these questions.

Chapter four: Methodology and methods in theory and practice

This research was carried out using a qualitative methodology, with individual and group interviews to gather data from medical students and teachers, and a constant comparative method to analyse the data. Methodological approaches to research are based on underlying philosophical assumptions about the nature of reality, and of the nature of knowledge about that reality. In this chapter I firstly describe the arguments for different viewpoints, and rehearse my own philosophical stance. Secondly I discuss how I selected methods for generating and analysing data and provide an account of the use of these procedures in practice. Thirdly I consider how my presence as the researcher may have influenced the findings, and finally I discuss the level of claims that I can make on the basis of this research.

Philosophical perspective

Murphy et al (1998), in reviewing the literature on qualitative research in relation to health technology assessment, described a number of ontological positions underlying different strands of research. These can loosely be divided into those under the banners of realism and idealism. Realism, according to Williams and May (1996, p81, cited by Murphy 1998) is the belief that *'the world has an existence independent of our perception of it'*. It follows from this, according to Murphy et al, that the object of science is to establish how the world operates, and theories about this are either true or false. Idealism, on the other hand, is *'the view that the external world consists merely of representations and is a creation of the mind'* (Murphy et al 1998, p64). From the extreme version of this position, there are multiple equally valid versions of reality for a researcher to explore.

Subdivisions or modifications of both these positions have been described, as the extremes of both have difficulties, when the nature of what can be considered as truth is considered. A difficulty for the realist was described by Hammersley (1992) as the problem of the criterion. This criterion is the reason for believing that a claim for truth is valid, when truth is correspondence with an independent reality. Since there is no way that reality can be known directly, all possible criteria can have their claims to 'truth' questioned, and can only be justified by another claim to 'truth' based on a similar problematic criterion. Some

researchers might consider that results of empirical research are based on the direct perception of our senses, and therefore approach fulfilment of the criterion, but Hammersley argued that direct observation may mislead us. This is because all our perceptions of reality are mediated by fallible human senses.

For the idealist who takes the extreme position that all perceptions of reality are equally valid, and therefore that there are multiple versions of the truth, there are also difficulties. From this perspective, research can have no commitment to uncovering an ultimate truth, as this does not exist, and can only be relative. This radical relativist position poses major difficulties for researchers whose aim is to influence policy, as there is no justification for arguing for one interpretation of the findings over another.
Hammersley (1992) has described a modified stance, which he has named 'subtle realism'. Subtle realism accepts that an independent reality exists, and that claims about its nature may be more or less true. Subtle realists see the aim of social research as representing reality rather than reproducing it, so that a range of differing perspectives can illuminate the nature of reality. They also accept that the researcher must remain part of the social world while investigating it. While this compromise position retains some uncertainty in the nature of its claims for truth, it has advantages in being applicable both to quantitative and qualitative research.

My own position, similarly, is one of modified realism. This research project aims ultimately to inform the development of teaching programmes. In order to make the findings of value to others beyond my friends and colleagues, the research findings need to shed light on a reality which exists independently of myself and the research participants. However, like Hammersley, I accept that there may be a number of perspectives on reality, and that my research can only examine some of these. In addition, I do not believe that as a researcher I can stand outside the social world. Research findings are mediated by myself as the researcher, and cannot escape the influence of the prevailing social and political norms.

Methodological approach

The approach taken in this work has been guided by the nature of the research questions to be addressed and the analysis and interpretation of the findings by the philosophical

position held. Murphy et al (1998) have summarised published views on how the researcher's commitment to the realist or idealist paradigms may relate to their choice of research method. These viewpoints can be divided into those that are based on the argument that quantitative and qualitative research methods are derived from fundamentally different philosophical positions, and those based on an argument for a more pragmatic approach to choice of methods. Lincoln (1990) supported the former viewpoint when she argued that inquirers should commit themselves to one or other paradigm, including choice of methods, and that *'to do otherwise is not only to commit paradigmatic perjury, it is to invite psychological disaster'* (Lincoln, 1990, p81).

On the other hand, Walker (1985), writing about research which is designed to inform policy, argued that in this situation the differing philosophical viewpoints should be set aside, and choice of methods should be made on pragmatic grounds. He suggested that, whichever philosophical position is held, there are a number of situations in which quantitative methods are inadequate, and that *'qualitative research reaches parts that other techniques don't'* (Walker 1985, p18). Murphy et al (1998), in examining methods appropriate for health technology assessment, came to the same conclusion, that the choice of methods should be made on instrumental rather than philosophical grounds. They supported this argument with evidence from existing studies that both quantitative and qualitative research can use inductive and deductive reasoning, both can generate and test hypotheses, and both can be used in naturalistic and artificial settings.

The choice of a qualitative methodology for this study has been determined on a pragmatic basis, as being the most appropriate to address the research questions posed. However, my philosophical perspective of a modified realism has dictated how the methods are used (as opposed to the choice of methodology and methods) and how the findings are interpreted. Murphy et al (1998) listed situations, including several applicable to the current study, in which qualitative research has particular strengths. Qualitative methods are useful in exploratory studies, where they avoid the need to impose pre-existing models and to define important variables in advance. They permit the researcher to identify unanticipated factors. They are particularly valuable when the context in which an intervention (such as a programme for learning) takes place may have a major influence on its effect, as they can explore a phenomenon and its interaction with that context. This thesis explores an area where there is little existing knowledge, and in which the context for learning and students'

interaction with it are likely to be influential, and a qualitative approach should have significant advantages.

Murphy et al (1998) also point out that claims that qualitative research can discover why people behave as they do, using self reports, must be treated with caution. This issue is discussed below in the section on interviews as a research method.

Methods for data collection

Interviews were used as the primary method of data collection in this study. The theoretical framework suggested that students' perceptions of their task may be an important influence on approaches to learning, and information about these could only be generated by direct inquiry. Interviews were the most appropriate method of gaining an insight into the complexity of students' experiences, while learning to 'take histories', including their intentions, when learning, and their reflections on the process. Although Riessman (1993) pointed out that the original experience of a research participant is repeatedly mediated, first when giving attention to the original experience, then when telling a researcher about it, then when this conversation is transcribed and analysed, interviews might still be considered to be the most direct method of addressing questions which relate to students' and teachers' perceptions of the learning situation.

Other methods which could have been used for data collection in this study include observation (participant or otherwise) or a questionnaire survey. Direct observation of students in learning situations could also have offered insight into the students' learning processes, without the intervening interpretation of events as retold in a subsequent interview. However, my role as a member of staff would have hampered participant observation, as my presence would have changed the situation such as to reduce any claim to validity. It could also only have covered a small proportion of the students' learning opportunities, if it had been carried out in the available time. Learning may take place when students are taught, but often occurs over coffee, in the bath and at other times less amenable to observation. Observation alone would also have provided little insight into the students' reflections on the learning process, and on their intentions when learning.

Approaches to learning have been investigated in interview studies (for example Ramsden 1992), in open questions in questionnaires (for example Entwistle and Ramsden 1983) and in questionnaire inventories (Biggs 1979, Entwistle 1988), although these latter relate to 'orientations to studying' in a general form, rather than in relation to a specific learning task. This study was designed to capture the complexities of students' approaches, and so inventories were not considered. While a questionnaire survey of a larger number of students collecting qualitative data could have explored approaches to learning, it would not have provided opportunities to probe issues arising, and so would have been less likely to identify unexpected issues. On balance, interviewing students and teachers provided the best opportunity to address the research questions.

Characteristics and limitations of Interviews

This study used semistructured interviews (Britten 1995), which had a loose structure, consisting of open questions which defined the areas to be explored, but allowing flexibility to respond to the issues arising. Britten contrasted these with structured interviews and depth or unstructured interviews. Structured or standardised interviews commonly employ a structured questionnaire, in which all respondents are asked the same questions in the same manner and order, and are used mainly to elicit quantitative data, or reducing qualitative data to pre-determined categories which can be analysed quantitatively. This was not appropriate in this study. In depth or unstructured interviews the interviewer may determine one or two general topic areas alone, further questions merely probing or clarifying the issues, and these would not have provided opportunities for focusing on the specific research questions.

Becker and Geer (1960) listed some of the limitations of interview data. These include the assumption that the interviewer understands what the respondent means by various words, the reluctance of respondents to voice certain views, and problems related to the variable interpretation of situations by respondents, when the interviewer, unlike an observer, cannot compare with actual events. Dingwall (1997) has made a more fundamental criticism, arguing that interviews are essentially social interactions in a specific context, rather than a means of collecting data about an external reality. These social interactions may be best understood as *'opportunities for impression management'* (Murphy et al 1998 p120 citing Goffman, 1959) in which all parties attempt to demonstrate social competence.

Silverman (1993) has suggested, however, that it is possible to consider both the content of the interview and the *'artful practices'* (Silverman 1993, p114) that respondents use to present themselves in a certain light, and to take both into account in interpretation.

Group interviews

In addition to individual interviews, this study used group interviews of third and fifth year medical students. One of the earliest examples of the use of group interviews in qualitative research was the work of Merton and Kendall (1946) in an investigation of the effectiveness of wartime propaganda. Since Merton and Kendall's work group interviews have also been gathering attention as a method of data collection that *'capitalises on the interaction within a group to elicit rich experiential data'* (Asbury 1995, p414). They rely on the dynamic of the group interactions to stimulate the thinking of the participants, and thus their verbal contributions (Krueger 1994).

I have chosen to use group interviews in addition to individual interviews for three reasons. Firstly, in early individual interviews I was struck by the fact that some students may have been inhibited by the fact that they were being interviewed by a member of staff, and that our difference in status could be a problem. I felt that this difference might be lessened if they were in the majority. Secondly, some students appeared to be actively thinking through a number of issues that I wished to discuss during the interview, with little time to do this. Thirdly, I carried out a single group interview at the outset to identify issues to include in my interview guide. This was rich in data, perhaps because the students stimulated each other's ideas, had time to think during others' contributions and were not inhibited by my presence. (This may also have been in part because they were fifth year students, as opposed to the third year students with whom I carried out my early individual interviews.) In addition, the students in the groups had their medical education and future career as common interests, were likely to be comfortable with each other, and the topics I was discussing were not likely to be personal or sensitive. These latter are all requirements identified by Morgan (1992) for successful group research interviews.

Group interviews are of course limited by the same difficulties as individual interviews. Either individuals or subgroups may be using the opportunities for 'impression management' mentioned above, and while this may be tempered somewhat by the

reactions of other members of the group, all interpretations must either explore or acknowledge this influence on the findings.

Approach to data analysis

Strauss and Corbin (1990) described three levels of interpretation of qualitative data, dependent on the philosophical standpoint of the researcher. The first level is pure description, where the aim is to let the informants, as far as possible, speak for themselves, with the researcher attempting to avoid intrusion and interpretation. The second level is what they call *'accurate description'* (p21) where the aim of the researchers is to order and reduce the data, which requires some selection and an interpretative commentary. The third level is *'building theory'* (p22), which requires the conceptualisation of data, in order to form 'a theoretical rendition of reality *(a reality which cannot actually be known but is always interpreted)'* (Strauss and Corbin 1990, p22). In order to inform future research and policy in relation to teaching 'history taking' skills, I have chosen to build a theoretical model of the process, and have considered approaches designed for this purpose.

Murphy et al (1998) described two main methods of generating theory from data: analytic induction and grounded theory. They argued that few examples exist of either in a completely pure form, but that many researchers use the general strategies derived from these methods. In analytic induction, a researcher makes an initial rough definition of a problem, collects some data, and then forms a tentative explanation. Further cases are examined to establish how well the data fit the hypothesis, and this is followed by an iterative process of further data collection and hypothesis revision until no further cases appear which do not fit the hypothesis (Bryman and Burgess 1994).

Grounded theory also uses a linked system of data collection and theorising, and was developed in order to focus on *'the discovery of theory from data'* (Glaser and Strauss 1967, p1). The principal difference from analytic induction is that the theory should arise from and be grounded in the data, and the method has two major features. The constant comparative method is a means of suggesting, but not testing, hypotheses about the area of concern, by defining categories and themes, and comparing across categories, and recording 'memos' identifying key conceptual similarities and differences (Murphy et al 1998). These are used to build a theoretical explanation of the findings, which is

strengthened by theoretical sampling, which is *'sampling on the basis of concepts that have proven theoretical relevance to the evolving theory'* (Strauss and Corbin 1990, p176). Theoretical sampling should ideally be continued until no new concepts are arising, and the data is 'saturated'.

I have chosen to use a modification of the constant comparative method, with the aim of building an explanatory theoretical model of the influences on the learning process. The research questions and the analysis process were informed by a theoretical framework for the learning process, as described in chapter three, but, as far as possible, I have tried to ground the developing model of the specific issues affecting learning to 'take histories' in the data from the interviews. It was not possible to carry out further theoretical sampling within the constraints of the current study, and for this reason the claims I can make for the generalisability of the data are limited. It would have been valuable to feed back a summary of the analysis to groups of teachers and students, in order to add their responses to the data, but this too was not possible. Neither this nor parallel coding of the transcripts by colleagues would have added to the reliability of the analysis, as differing valid interpretations may coexist, but could have contributed to the analysis by virtue of adding further nuances to the interpretation.

Data collection and analysis in practice

This study used a qualitative approach and semistructured interviews, in order to address the four research questions. In Figure 4.1 (page 71) the questions are listed, and the sources of data and research methods are described in relation to them, with their justification, as recommended by Mason (1996).

As the research questions relating to the students were about learning, implying a potential change in perception and understanding of the concept of 'taking a history', I focused on two different stages in the students' programme. As shown in Figure 1.1 (page 11), the participants in this project had their main experiences of clinical medicine during their third and fifth years, and I therefore chose to interview students during these years.

My original plan was to interview ten students in their third year, and to carry out two further interviews with each student during the subsequent years. In practice (as described

below) only seven students were interviewed in their third year and the second interview was not carried out until their fifth year. As described above (page 67), after the experience of the initial individual interviews, I chose to carry out group interviews to generate further data and carried out two group interviews with both third and final year students.

Table 4.1: Research questions, methods of generating data and justification

Research questions	Data sources and methods	Justification
What do medical students perceive as the purposes and rationale of 'taking a history'?	Medical students, individual interviews in the 3rd year, repeated in the 5th year Group interviews, 3rd and 5th year students	Individuals can give accounts of their own perceptions of their task and rationale without peer pressure. The second interview can enable them to give an account of how their perceptions have changed over two years Groups may enable students to think through their perceptions of the task and rationale, and may make the presence of a staff member less threatening
What do medical teachers perceive as the purposes and rationale of 'taking a history'?	Hospital doctor teachers, individual interviews	Medical teachers can give accounts of their perceptions of the students' task and the rationale they provide, and can reflect on the relationship with their own student experience
What do students perceive as the influences on how they 'take a history'?	Medical students, individual interviews, repeated Group interviews, 3rd and 5th year students	Sensitive and personal influences, inside or outside medical education, may be described, which may not be identified in a group interview Groups may enable students to think through possible influences and may be more likely to identify influences from within medical education than individual interviews
What type of approach to learning to 'take a history' do students take?	Medical students, individual interviews, repeated Group interviews, 3rd and 5th year students	Approach to learning is an individual issue, and students can base on personal experience, without peer pressure Approach to learning, while individual, is not obviously sensitive, and personal accounts within a group may encourage critical thought

In addition I carried out ten interviews with teachers, who were all practising doctors with current responsibility for teaching medical students to take histories, in order to explore their perceptions of the purposes and rationale of 'taking a history'.

In the course of this research, circumstances and practicalities influenced my decisions as much as theoretical considerations, and the findings must be interpreted in the light of this. I have therefore recounted the process of the data collection chronologically under a series of headings, with the theoretical and pragmatic issues in parallel.

Selection of student participants for individual interviews

When I started this research in 1999, I had little idea about which issues and ideas would be of importance to students, or what might have influenced their learning. The first interview I carried out was a group interview with final year students, with the aim of identifying key issues to inquire about in my individual interviews. I hoped that students in their final year would be able to look back at their learning, and to see how they had progressed, with different influences at different stages. I made a pragmatic decision to choose a pre-existing student group, which was meeting for a general practice seminar, because students in their final year rarely meet in groups, and their individual timetables and wide distribution around district hospitals make it difficult to get them together otherwise. Student groups are, on the whole, selected randomly; there is some element of student choice about the site of their attachments, but this would not be expected to influence how they are grouped together in general practice seminars, when they are based in different practices.

I chose next to carry out a series of individual interviews with third year students. The third year is the first time when students are learning mainly in a clinical setting, observing some of the process of clinical care, and learning clinical skills including 'taking histories' is their main focus, rather than a subsidiary one, as in their first and second years. I attempted to select third year students for individual interviews to provide a maximum variation sample, on the grounds that gender, age, a previous degree and being an overseas student might have influenced their views and experiences, and I wanted to identify as wide a range of these as possible. I therefore prepared a matrix in the hope of ensuring that all these groups were represented. I wrote to the whole year group of 155 students, with brief

details, asking them if they would like to participate, but I received only ten replies. (I received one further reply two years late, the letter having presumably been lost in an office in the interim, and subsequently interviewed this student in a fifth year group.)

I provided all these students with an information sheet (appendix A) and all gave written consent to participate, but one dropped out, and two others were unable to make the initial interview times, and I was unable to interview them later on, as described below. At this time the group included only one male school leaver. In addition, two of the group, including the male school leaver, subsequently decided to undertake an extra year doing an intercalated BSc degree. This meant that when I was proposing to interview them again, in their fifth year, these two students would not yet be undertaking their final clinical attachments.

Development of original plans and selection for group interviews

I must add at this point a brief account of how my plans changed between 1999 and 2001. When I commenced the research in 1999, there were two major differences from the eventual plan. Firstly, I planned to use a case study approach, with at least three successive individual interviews of around ten students during the course of their clinical training. Secondly, I originally hoped that on each of these occasions I would arrange, before my interview, for the student to 'take a history' from an actor in the role of a patient, so that I could use this to stimulate discussion with the student, and so that I could relate the interview to actual behaviour. There were a number of difficulties with these plans. Firstly, towards the end of 1999, for reasons outside my control, my work situation became particularly onerous, and I made the decision to suspend my research activities during this time. I kept the students informed, and all agreed to the change of plans to carry out a second interview two years later.

Secondly, I dropped the plan to use the interview with the actor, for several reasons. The interviews, which were taperecorded, were very stereotyped, and led mainly to discussion of how they conformed with text book descriptions, and I felt that discussing them made the students feel vulnerable to criticism, and emphasised the teacher/student nature of our relationship. I did not think that the data I was generating from them was contributing to my initial analysis. In addition, it was extremely difficult to arrange times when the

students and the actor could be available simultaneously, and when I arranged several interviews in one afternoon with the actor, to reduce costs, I did not have time to interview the students immediately afterwards, when it was fresh in their memory. Finally, as I have explained, I became convinced that group interviews might serve my purposes better, and might lead to better reflection on the traditional interview process, whereas actually 'taking a history' in the traditional mode might have the reverse effect.

So when I recommenced the research in 2001, I altered the original plans. Several main themes had arisen from an initial analysis of the seven interviews I had carried out in 1999. The students did not have a clear rationale for the method of 'taking histories' that they had been taught, they found it difficult to see 'history taking' as an integral part of health care, and there was a tension between teaching about communication skills and 'taking histories'. I particularly wanted to generate further data on these themes, and to establish to what extent these issues were resolved by the students' final year. I therefore carried out a series of group interviews with third and fifth year students.

From the analysis of the first interviews, I had no particular reason to believe that the factors I had considered in my original sampling matrix (gender, previous degree/age, overseas students) had a major influence on the themes in which I was interested. The themes already identified did not suggest any theoretical sampling process, for example, by which I could search for students whose views did not conform with the ideas already expressed, as 'deviant cases'. In view of the difficulties of assembling student groups alongside busy timetables, I therefore felt happy to recruit pre-existing student groups, which had been selected randomly for the most part, with the intention of carrying out further interviews if it seemed that a particular perspective might not have been represented. In the third year, I identified two occasions when seminar sessions were cancelled, and emailed all the students involved, giving brief details of the study, asking if they would be willing to attend a group interview to help me, with the reward of coffee and cakes. On one of these occasions only one student attended, so I carried out an individual interview.

In the final year I joined a student seminar briefly at the beginning, explained my study and asked the students whether any of them would be willing to attend a group interview, then arranged a convenient time with those who volunteered. In this way I gathered a total

sample of students who included some from all sections of the sampling matrix originally constructed, as shown in Table 4.2 below. The student sample was not intended to provide any proportional representation of the differing student groups, but was designed to provide a sample with maximum variation. However, to put the students interviewed in context, the three cohorts of students which provided all the participants ranged in total number from 155 to 176, and included between 52% and 56% females, between 7% and 9% overseas students and between 10% and 11% graduates.

Table 4.2: Characteristics of students interviewed

	Third year		**Fifth year**		**Total**
	Male	**Female**	**Male**	**Female**	
Students in individual interviews	3 (2 previous degree)	5 (3 overseas)	3 (2 previous degree)	3 (1 overseas)	14 (8 students, 6 interviewed twice)
Students in group interviews	0	4	5 (2 mature, 1 overseas)	8 (3 previous degree)	17
Total students in interviews	12		19		31 (25 students, 6 interviewed twice)

Selection of teachers

I included a research question about the perceptions of teachers because I was concerned that the rationale for the method in which students are taught to 'take a history' was poor, and this was confirmed by the first few student interviews. This might potentially make teaching difficult. I wished to generate data on as wide a range of teachers' views as possible, given that the teachers were actually involved in teaching this skill. I invited all the hospital teachers who had been recruited to teach on a new clinical skills course, which included 'taking histories' to take part. There was a second group of teachers on this course, comprising general practitioner teachers, whom I did not invite. This was because I had been the leader of this group for two years, while we designed a programme for students learning to 'take histories', and they were all familiar with my views, and I with

some of theirs. I was also in the position of being able to drop them from the teaching programme, with a consequent loss of income for them, so I felt that the validity of data from interviews with them would have been uncertain.

Somewhat to my surprise, 21 out of 30 teachers responded to my invitation, which had been accompanied by an information sheet about the project (appendix C). As I wanted to generate as wide a range of views as possible, I again used a strategy to recruit a sample with maximum variation. I had information about their gender, year of registration and medical speciality, and chose a sample of ten with as much variation as possible. Ten was an arbitrary number, which was to be reviewed after initial analysis if further data was needed. Unfortunately, after arranging dates, with most of them, I realised that, for political reasons, the original group of teachers had included almost no teachers with university contracts, while these were the people who had most contact, and probably most influence, with students. So I invited in addition the third year university co-ordinators for medicine, surgery and child health, the first two of these being the highest profile specialities and child health being otherwise unrepresented. Subsequently interviews with two people were cancelled, one interview was marred by drilling next door and one person took a long time to make arrangements, but a reasonable range of gender, experience and disciplines was achieved (Figure 4.3).

Table 4.3: Characteristics of teachers interviewed

Year of registration	Male	Female	Total
1961-72	3		3
1973-84	2	1	3
1985-96	2	2	4
Total	7	3	10

The teachers comprised one each from cardiac surgery, child health, anaesthetics, chest medicine, palliative care, renal medicine and gastro-intestinal medicine, and three from elderly care. Two had academic posts; they all had medical qualifications from the UK,

and included a mix of ethnic groups. The smaller numbers and younger age of female teachers reflect the situation in hospital consultant posts.

Procedures for interviews

The interviews were conducted in a variety of places, with the priorities being privacy and little extraneous noise. Nearly all the interviews of teachers were carried out in their offices, as this was normally more convenient for them, but one who shared an office elected to meet me in a room in the postgraduate centre. The student interviews took place in my office, in colleagues' offices, and in rooms in postgraduate centres when the students were based in district hospitals. Although my office might be perceived as my territory, it was more comfortable and informal than seminar rooms, and I felt that the advantages outweighed the disadvantages.

In order to recruit busy doctors and students, I felt that it was necessary to agree beforehand approximately how long the interview would last. In the case of teachers, I asked for 30 minutes, although I would have preferred longer. I thought that asking for more than 30 minutes would have reduced recruitment considerably, and on several occasions when I strayed over the half hour I noticed furtive looks at watches and clocks, so this was probably a reasonable compromise. I asked the students for 45 minutes for the individual interviews, and 60 minutes for the groups, and, although it would have been helpful to attempt to gain more depth in a longer interview, in view of the recruitment problems which I experienced, it would not have been feasible to ask for longer.

I prepared an interview guide for each interview, which was originally based on the theoretical framework and research questions, and modified in response to the issues arising at the first group interview in August 1999. The guides for both teachers and students changed slightly with experience and with increased focus on the themes of interest. The final versions of the guides are provided in appendices B and D. These always commenced with an introduction if necessary, an explanation or reiteration of the aims of the project, why I wished to interview them in particular, and reassurance about confidentiality and anonymity. I asked for permission to tape record on each occasion, and this was never declined. On some occasions the respondent started talking about the topic straight away, before I could ask any questions, and I asked permission to record this

before returning to the interview guide. In the majority of cases I asked the first question from the guide, but depending on how the discussion progressed and covered other topics, I asked further questions in a variable order. One difficulty arose when the respondent sought affirmation from me for their views. When students did this I found it impossible not to be supportive, although this may have influenced their answers to subsequent questions. I felt that the alternative strategy of trying to remain neutral would have been interpreted as negative, and would have had a deleterious effect on subsequent discussion. I am not aware of any occasion on which I felt support was being sought for a point of view which I could not have supported. When a teacher asked me for my views, I hoped that they would find it acceptable to defer this till the end of the interview, and declined to respond at the time.

I used identical procedures for the group interviews, except that I also asked participants to respect the confidentiality of each other's views, pointing out that this was not entirely under my control.

Recording and transcription

I recorded every interview with a small portable tape recorder with an integral microphone. On two occasions I failed to notice when the tape came to an end, and I recorded immediate field notes by hand afterwards. As I was concerned mainly with the content of the discussion rather than with the manner of the respondent during the interview, I chose not to transcribe pauses and hesitations. Where issues relating to the respondent's (or my) non-verbal behaviour seemed to be an issue, I listened to the tape again, and noted this. I referred to all teachers and students by number and not by name on the tapes and transcripts, to maintain confidentiality, and their names and details were kept in a separate place. The transcriptions were saved in rich text format, and entered into NUD*IST, which is a computer software package designed for qualitative analysis, which enables the allocation of descriptive codes to selected text, and the ability to re-allocate coded text to its original context. Both the tapes and the transcriptions were kept in a secure place at my home, and the computer was used only by me.

Data analysis procedures in practice

As qualitative researchers use a wide range of differing procedures within the general headings of grounded theory, constant comparative method, etc, the name of a method cannot be used as shorthand. In order to provide an audit trail, so that readers can make informed judgements about the validity of the analysis, and so that the process could be repeated by a second researcher, I have described my analysis procedures in some detail, and have provided indices of coding as appendices E, F and G. The method used is derived from the constant comparative method as described by Maykut and Morehouse (1994), adapted for use with NUD*IST software.

The first step in the analysis was the coding of the transcripts into 'units of meaning' (Maykut and Morehouse 1994). This comprised the division of the transcripts into sections in which the respondent was, in my judgement, conveying one message. When possible, I used the words of the respondent to describe these, for example, [the] 'list is universal' or 'try to work it out'. Initially, these units were loosely grouped in large categories related to the research questions, including 'rationale' 'purposes' and 'learning processes', and some were coded into more than one of these. As the coding proceeded, and as each new unit of meaning was compared with those already identified, these were grouped into smaller categories of similar content or meaning, which had not been pre-determined. These tended to change and become re-ordered as the coding progressed, and the software automatically keeps a record of these changes. These smaller categories reflected my interpretation of the data. For example, fairly early in the analysis, categories under the major heading of purposes of 'taking a history' included those entitled *'purposes of a doctor'* and *'patient-centred purposes'*, each including a range of differing units of meaning. Using this method, a series of categories and sub-categories was developed, forming a branching index tree, while at the same time I was trying to make sense of the data, and identifying common themes across categories.

This process was carried out initially for the transcripts of the third year interviews, until all the sections of the transcripts relevant to the research questions had been divided into units of meaning, and included in categories in the index tree. I then re-examined all the categories, and read all the units of meaning within each, returning to the source transcript (which is simple with the software used) to put it in context where appropriate. At this point the requirements for inclusion in each category were clarified, and a good deal of re-

organisation of categories occurred. While doing this, I wrote an account of the analysis of the data so far, and the process of reflection necessary for writing resulted in further changes.

When I commenced the analysis of the fifth year interviews, I was uncertain about whether to use the index tree already derived from the third year interviews, and I started off adding new units of meaning to the existing categories and sub-categories. I very soon found that this was constraining my thinking, as the focus of the interviews was quite different, and I decided to recommence, developing an entirely new coding system, using only the major categories linked to the research questions as before. This did not prevent later comparison across the year groups, and I believe made it easier to ground new categories for the fifth year students in the data. In the final year interviews, the two major contrasting themes were *'the focused history'* and *'asking everything'*. I then analysed the teacher interviews, again, entirely separately, in an attempt to sensitise myself to the new issues arising. Again, two major contrasting themes arose, which I initially termed '*doctor-centred'* and '*data-gathering'* perspectives, alongside a third *'patient-centred'* perspective.

At this point I recognised that the themes across all three groups of interviews were similar, and I developed the theoretical model of the three perspectives, which is described in chapter five. I returned to the coding of the units of meaning within each of the groups of interviews, constantly comparing these with the groupings within the newly defined perspectives, in order to develop the final analysis.

The final versions of each of the index trees are provided as appendices E, F and G as part of an audit trail, so that it is possible for the reader to judge for themselves the validity of at least part of the interpretation and analysis.

Influence of the interviewer on the findings

In an interview study, '*the research report is the interviewer's story of the interviewee's story'* (Powney and Watts 1984, p193) and is therefore influenced by the perspective of the interviewer, and also by the respondent's perception of that perspective. In order to enable the reader to interpret the findings in the light of this, I considered in advance what this perspective and its influences might be.

I am a senior lecturer in the medical school, and therefore have a degree of influence on parts of the curriculum. I also have a role in organisation of the final examination, though no direct influence on grading. However, my status creates a power differential within the interview, which may have constrained what students said to me. It is not clear in what way this may have influenced students in relation to the issue of taking histories, except that, as I am a general practitioner, students might have perceived me as favouring a patient-centred approach.

Medical teachers, on the other hand may have perceived me as having relatively low status, as general practice is seen as a low status discipline, and an interest in education as lower status than expertise in medical research. They may also have expected me to favour a more patient-centred approach, and perhaps to undervalue biomedical aspects of the history.

A second way in which I may have influenced the findings is in my cultural identity as a middle aged white woman. In this light I might be perceived as having little insight into the views of the young, males and other ethnic groups. I do not discount this influence, but suspect that as the issue under discussion was one relating to the practice of medicine, a culture which I had in common with all the respondents, the influence of this may have been less than if issues outside medicine had been discussed.

A third influence on the findings may have been my inexperience as a research interviewer, associated with a great deal of experience in the clinical interview, which has different aims and constraints. During the interviews and during the analysis I identified several shortcomings in my technique. I noticed that I had a tendency to make judgemental encouragements, for example, if a student expressed some concern over an aspect of their interviewing technique. At the time I felt that not doing this would have been interpreted as disapproval. I am not aware of ever expressing disapproval, but my approval may have influenced the subsequent portions of those interviews. I also had a tendency to become anxious when the discussion appeared to be making no progress, and to hurry the subject on to the next topic, rather than either leaving longer silences or asking further probing questions. This may have reduced the richness of the data.

Finally, I am conscious that my personal involvement in the study, and wish to develop the way in which students are taught to take histories, may also have inadvertently conveyed some messages to participants about what I wanted them to say.

Ethical issues

It is probable that when the issues discussed in a research study are neither personal nor obviously sensitive, there is more risk that ethical issues may be overlooked. The School of Education publishes ethical guidelines for research, and those which relate to research methods cover responsibilities to the research profession, responsibilities to the participants, responsibility to other stakeholders and the public. In relation to this study, I have considered the issues for students, for teachers and for other stakeholders including patients, in keeping with these guidelines.

For students

Medical students were the main group involved in the interviews, and the procedures used were based on the principles that they should give informed consent, the project should do them no harm, and that the interview data generated should be both confidential and anonymous. For the individual interviews, I wanted to ensure that the students were genuine volunteers, so I sent an invitation to the whole year group, and asked volunteers to return a reply slip. I then met all those who replied, and provided all of them with an information sheet about the research (appendix A). This explained the purpose of the research, the type of questions I proposed to ask, the fact that I wished to tape record the interview and an explanation of how the tapes and transcripts would be handled to maintain confidentiality and anonymity. I obtained written consent from them at this stage. Because my plans changed over time, I sent cards to the students at intervals between their two interviews to make sure that they knew when I would be asking them for another interview.

I considered whether there was any risk that being involved in the study might harm students in any way. Although there was a theoretical risk that considering an aspect of learning and teaching in depth might have encouraged them to become more critical, and incite disapproval from a traditional medical culture, I was not aware of any suggestion

that this was the case. Critical thinking is also an explicit aim of the Southampton undergraduate medical curriculum (School of Medicine, 2001).

For the group interviews, students were recruited either by email invitation or during a meal provided for them before or after a seminar. As time was short, I described the project and the procedures as described above very briefly, and obtained verbal consent. I then provided an information sheet at the end of the interview or subsequently by post, and requested written consent at that time, pointing out that they were free to withdraw this at any time.

Smith (1995) has pointed out that a particular ethical difficulty of group interviews is that, while the researcher can promise confidentiality on his or her own part, this is less easy to promise for the other participants. My policy has been to point out this difficulty at the beginning of the session, and to ask all the participants to keep the discussion confidential. Although any disclosures which might have ethical consequences, such as HIV positivity, or admitting cheating in exams, might also be more difficult to deal with in a group session, as far as I am aware, this has not happened in any of the groups which I have facilitated. My plan, if this had happened, was to discuss how to take the matter forward (or not) within the group there and then, having first turned off the tape recorder. We would then, hopefully, have reached a consensus on this, making a judgement where ethical principles were in conflict, using a framework such as that recommended by Beauchamp and Childress, (1994).

For teachers

The procedures used to ensure ethical practice for teachers were similar to those for students, although the fact that there was closer equality in status between the participants and myself might have made it easier for them to decline the invitation to contribute, or express concerns. In practice, I received proportionately more offers to help from teachers than students, perhaps because it was a topic that they were interested in discussing. I sent the teachers an information sheet about the study with the invitation (appendix C), and received written consent to an interview at that stage. I explained the procedures for ensuring confidentiality and anonymity at the start of the interview, and requested verbal

consent to tape record at the same time. I was not aware of any possibility of causing harm in the process.

For patients and other stakeholders

The National Health Service Research Ethics Committee for Southampton recommends that their approval should be sought for all research that involves employees of the NHS because of their professional role in this organisation. As this research did not involve patients, and as teachers were involved in their role as teachers of students, rather than doctors caring for patients, I did not seek their approval. However, I did consider whether there might have been any ethical issues in interviewing doctors and students about their discussions with patients. In keeping with their own principles of confidentiality, no doctor or student discussed an interview which they had undertaken with a patient in a way which might allow me to identify that patient. If this had happened, I would have erased any identifying details from the transcript. A more common problem was participants making critical remarks about a range of other individuals who had influenced their learning. Given an assurance of confidentiality, the ethical problem here is my own behaviour, if I am called to make judgements on these people in the future in another setting. In principle, I believe that, as I would be unable to back my judgement with evidence, due to maintaining confidentiality, I should avoid using information gathered in research interviews in other contexts, although it would be naïve to assume that I might not be somewhat influenced.

In my account of the procedures for the research, I hope to have demonstrated that I have used systematic methods to ensure that I have not invented or misrepresented the data, and that the interpretation is careful and honest.

Potential strengths and weaknesses of the methods used

Mason (1996) recommends addressing a series of questions to address in order to ensure that the findings from qualitative data analysis are convincing, both to the researcher, and to others. These are:

How can I demonstrate that my methods are reliable and accurate?

How can I demonstrate that my analysis is valid?

> *What kinds of generalisations or wider claims can I make on the basis of my analysis and explanation?*
>
> (Mason 1996, p145-152)

I will address these issues in turn.

Reliability and accuracy

Mason (1996) has suggested that reliability, meaning the consistency with which the same research methods in the same setting would achieve the same results, is of limited value in qualitative research, but that questions of reliability and accuracy should be addressed in a different way. She suggested that this comprises:

> *ensuring – and demonstrating to others – that your data generation and analysis have been not only appropriate to the research questions, but also thorough, careful, honest and accurate (as distinct from true or correct – terms which many qualitative researchers would, of course , wish to reject.)*
>
> (Mason 1996, p146)

In my account of the research procedures, I have used systematic methods in an attempt to ensure that I have not invented or misrepresented the data, and that the interpretation is careful, accurate and honest. It should be possible for a second researcher to follow an audit trail, and examine the data collection and analysis methods used.

Mays and Pope (1996) have argued that reliability of qualitative data analysis can be improved by asking a second researcher to independently analyse the data, and to assess the level of agreement. However, indicating that such agreement is desirable suggests that there is only one interpretation of the data to be found, although adding additional interpretations may of course add to the comprehensiveness of the analysis. I acknowledge that there may be different interpretations of the data, which may have significance in different contexts and for different purposes. I have argued for the value of my interpretation of the data on the grounds of validity and utility. Murphy et al (1998 p178) made a similar point when they suggested that *'The criteria by which all research, whether qualitative or quantitative, should be assessed are those of validity and relevance.'*

Validity

The validity of the findings is based both on the validity of the data collection methods and on the validity of the interpretation of the data. The data collection methods and processes have already been fully described. Mason (1996) has suggested that the validity of the interpretation must be assessed on the basis of an explanation of exactly how the findings were reached during the analysis, along with a consideration of how the findings may have been influenced by the interviewer/researcher, and why other possible explanations of the findings are less compelling. These processes are explicit in my accounts of the analysis. Murphy et al (1998) in addition have suggested that validity will be increased where researchers attempt to *'increase understanding of all members in a setting, and do not present one-sided accounts'* (Murphy et al 1998, iv-v). The interviews with teachers in this study added the insights of an additional stakeholder group, and contributed to the validity of the findings.

Individual respondent validation procedures were not used in this study. The students were progressing rapidly through their course, and as well as being unavailable in distant hospitals, may well have changed their perspective by the time they read my account. Their views would have added further data for analysis, so improving the comprehensiveness of the study, but would not have added to the validity of the original data.

In addition to these measures, face validity of the interpretation of the data, and of the development of theory, can be assessed directly by the reader who is familiar with the medical education process. Measures of both face and construct validity may also be gained by comparison of the findings with those of other writers in the field, and this is considered in chapter eight.

The generalisation issue: knowledge claims to be made and limitations

Within the constraints of this research, I have used the analysis and a general theoretical framework for the learning process to build a model specific to the process of learning to 'take a history'. I have not attempted to test the validity of the model with further theoretical sampling. The value of the work therefore stands on the relevance and utility of the model as an aid to conceptual thinking about the 'history taking' process, and as a stimulus to further research and discussion of educational practice. I have attempted in this

chapter and in my account of the findings in the next three chapters to demonstrate the trustworthiness of the analysis by providing a transparent description of the procedures followed, so that readers may judge for themselves the quality of the interpretation.

Chapter five: The third year medical student

This chapter provides an analysis of interviews with students in their third year. The findings are presented by year group, as the interviews were coded and analysed independently by year group, as described in chapter four. This was because the issues arising clustered better within year groups than within interviews with the same student. I have pointed out where accounts from the same student at different stages may illuminate the findings.

As described in chapter four, the analysis identified three perspectives on the process of 'history taking'. These perspectives were demonstrated in the students' perception of their task, and in their rationale for 'taking a history' and were in tension with each other; although all were held by most of the students, for part of the time. Two significant influences on their 'history taking' identified by the students were their observations of experienced clinicians 'taking histories' and their limited personal involvement in patient care. The links between these and the perspectives are explored, and this is followed by an account of the students' approach to learning. The chapter ends with a model of how these findings could be linked with the theoretical framework for the learning process, described in chapter three (Figure 3.3, page 59).

The interviews

Table 5.1 shows the characteristics of the third year students who were interviewed.

Table 5.1: Characteristics of third year students interviewed

	Female		Male		Total
	Individual	Group	Individual	Group	
School leaver	5 (3 overseas)	4	1		10
Previous degree			2		2
Total	5 (3 overseas)	4	3		12 (3 overseas)

The sample did not include any female students with higher degrees, or any male overseas students, but as both these groups were included within the fifth year students interviewed,

and as no issues were identified which linked with these characteristics, no attempts were made to recruit further students.

Identification and presentation of quotations

The first seven individual third year interviews were carried out in autumn 1999 and early 2000. Students interviewed at that time are identified as S1 to S7, and as six of these students were interviewed again in their fifth year, the third year interviews are referred to as S1 III etc, and the fifth year ones as S1 V etc. Two group interviews were arranged with third year students in the autumn of 2001, and the first of these is identified as G1 III. Only one student attended the second of these, and that became the individual interview S8 III. In the group interviews it was not possible to distinguish students reliably from the recordings, so I have not attempted to identify them individually, except where doing this had particular relevance to the findings. Quotations are identified by the numbers of the text units allocated by the NUD*IST software, so that they can easily be relocated in the original transcript. For example, (S7 III 15-18) would identify a quotation from text units 15 to 18 in the individual interview of the third year student S7.

Table 5.2 shows the conventions used within the quotations from the transcripts.

Table 5.2: Quotation conventions

/?/	a word or words were inaudible
... ...	text not relevant to the issue under consideration has been omitted
[not italic]	explanatory text not present in the transcript has been inserted
[Int: Yes]	brief interjection from interviewer inserted in text

The interview guides for each of the types of interview are attached in appendix B. An index of the 'units of meaning' coded for all the third year interviews, sorted into themes and categories, is provided in appendix E, in order to aid interpretation of the selection of data quoted, and to provide an audit trail.

The analysis: the three perspectives

As described in chapter four, initial analysis of the three sets of interviews produced different sets of contrasting themes. From the process of comparing these themes across the interview sets, a theoretical model of three perspectives on the process of learning to 'take a history' was developed. These perspectives were in a degree of tension with each other, but were not mutually exclusive, and most students and teachers expressed aspects of all three of them. However, the tensions between them, which were rarely made explicit, posed difficulties for the students. I have presented the analysis in relation to these perspectives, which are described in outline here, but illustrated in more depth below and in later chapters by the comments of individual students and teachers on aspects of the history-taking process.

The doctor-practitioner perspective

This perspective was the student's perception of what they would be doing in the future as an experienced physician in practice, responsible for a patient's health care. In this perspective, 'taking a history' was part of the overall process of health care, usually with the specific aim of making a diagnosis, and sometimes also the aims of planning a physical examination, tests and choosing treatments. The history would be different in different circumstances, and would not be an end in itself, but would be part of a problem solving exercise. I have added the term 'practitioner' to emphasise the fact that it is the aspects of a doctor's role directly linked to the care of individual patients that are the focus.

The student-clerk perspective

When using this perspective, the student was aiming not to behave like a doctor, but to perform as a good student. This included taking a 'full' history, as recommended in textbooks, and often expected by teachers, especially in examinations. 'Taking the history' was seen as a data-gathering exercise, which would be the same in all circumstances.

I have included the term 'clerk' in this perspective, as this term was used in the past for a medical student whose task it was to collect routine information about patients, in the same way as an office clerk might do, thus emphasising the focus on gathering and recording data, rather than solving problems. The term 'clerking a patient' is still in routine use

(Atkinson 1997, Sinclair 1997, see page 17), referring to the process of 'taking a history', carrying out an examination and recording the findings when carried out by a student or junior doctor. The term would not be used for an experienced clinician.

The patient-person perspective

Students illustrated this perspective when they were focusing on finding out about or addressing the patient's concerns, discomforts, needs and feelings, based on concern for the patient as a person. I tried to distinguish this from a stated aim to make a relationship with the patient purely in order to gather information more effectively, when it was identified as a doctor-practitioner perspective. However, the distinction was often difficult, as this was based on motivation that was not always expressed, or even conscious, and if there was doubt, the text was included under both headings. As the term 'patient' can suggest a number of different aspects of the patient role, I have added 'person' to emphasise the focus on the autonomous individual, rather than the passive recipient of health care.

Students' purposes when 'taking a history'

The doctor-practitioner perspective

Most students mentioned purposes when 'taking a history' that would also be those of an experienced clinician, in particular, making a diagnosis. However, this was rarely a direct purpose of the student, but more a hypothetical aim identified by teachers, for example:

> *Int: Yes, yes, what do you see as the main purposes from your point of view?*
> *S7: Well I think it's to get to know the patient, to get to know what the patient wants and why they've come to hospital or what the actual complaint is.* [Int: Right] *And ...they kept like drumming it into us that the only way you get a diagnosis is by taking a history.*
>
> (S7 III 15-18)

Although the possibility of making a diagnosis was mentioned or implied by nearly every student, two particular problems with this aim were identified. Firstly, students often already knew the diagnosis, when they took a history, (and the patient may indeed have

already been treated or operated on), as for example this student who had only once seen an emergency patient with an unconfirmed diagnosis:

> *S: but every other time you'd see a patient on the ward and you know what they've got, and I was on a respiratory ward so* [I already knew].
>
> (G1 III 104)

Secondly, they were aware that they might not have enough knowledge to make a diagnosis in many cases:

> *S8: We try to, I mean when you do a patient with crushing chest pain, you think of angina, because its radiating to the arms and you think of angina, yes, then you ask questions you know that have symptoms of angina. You tend to do that because you have the prior knowledge of what angina is like so if you don't know about that particular disease then you wouldn't know what questions to ask.*
>
> (S8 III 12)

In one case it was suggested that students should not try to make a diagnosis. However, this compounded the problem and led to further confusion:

> *S2: No that's the other thing, because*[in] *the first two years..., in our general practice teaching just constantly being told you're not supposed to make a diagnosis, don't think about what it might be. I find that quite difficult now...*
>
> *S2: And* [we are] *constantly told we don't need to, we don't need to do that, it's just a case of practising to take histories.*
>
> (S2 III 776 and 810)

It seemed that the students could not devise a diagnostic strategy when they did not have enough knowledge about possible diagnoses, but not attempting to make a diagnosis left them with no strategy or rationale at all. A compromise strategy would have been to narrow the diagnosis down to a physiological system, or broad area of diagnoses, rather than making a specific disease diagnosis, but no student mentioned this. It appeared that the aim of making an exact diagnosis, which might be assumed to guide the rationale of 'history-taking' for practising doctors, for these students may have been hypothetical, and therefore unhelpful.

Other examples of doctor-practitioner perspectives included one student who mentioned the purpose of thinking about a plan to help the patient, and several who mentioned the aim of making a good relationship with the patient specifically in order to take a better history.

The student-clerk perspective

For students in the third year, the main method of gaining approval as a good student was presenting a patient to a teacher. Unlike students in their final year, almost all said that they did not consider preparation for examinations an issue when they were taking histories, perhaps because clinical assessments at this stage count little towards major examinations. Students at all stages identified 'presenting a patient' (see page 28) as a major focus of student experience, and these presentations may have influenced learning in the same way as examinations might in other contexts. The following student saw preparation for a presentation by gathering as much 'relevant' information as possible as one of the aims of 'taking a history':

> *S1: Part of the aim is going to be to get all the information from the patient that I know I'm going to be asked by the person that I'm presenting to and that shouldn't be the reason why I take a history, the reason why I take a history should be so that I can get a clear* [picture], *pick up the cue points that can lead to a diagnosis. But at the moment, because I'm not into making a diagnosis, my idea is to get as much information that is relevant from the patient.*
>
> (S1 III 44)

This account begs the question of the meaning of 'relevant', and this is a recurring issue which I will return to in the section about the students' rationale for 'taking a history'.

'Taking a history' was also seen by some students as a direct method of learning in itself, either by gathering experience of illness so as to recognise it in future, or by making symptoms of illness more memorable by their association with patients, for example:

> *S7: Like, OK if you take something like say, colorectal cancer...they asked us to go and see a patient that had that. And he did and like you always remember it now,... what*

symptoms they had and how they differed in according to where the lesion is. ... Because if you remember the patient then you can place them and you remember the different symptoms. And like I remember reading about it, oh they taught it to all of us in the second year but...it didn't make the same sort of sense.

(S7 III 62-70, interviewer's assents omitted)

This comment links with the student aspect rather than the clerk aspect of this perspective.

The patient-person perspective

Several students identified an aim to find out about the patients needs and concerns, as in the example previously quoted: *'Well I think it's to get to know the patient, to get to know what the patient wants and why they've come to hospital or what the actual complaint is'* (S7 III 16). One also aimed to be the patient's advocate:

S4: I very much feel that I'm an advocate of the patient and that my job is not to please my superiors, it's to present all the information that I can gather and to really work for the patient as much as possible.

(S4 III 125)

Some students saw themselves as having a direct aim to help the patient, by virtue of their role as a student and having extra time, for example.

S3: Yes, but sometimes when you're talking to them in hospital, you do feel that you're finding out things that they haven't told the doctors, from just by being a student. [Int: Yes.] *You know, you'll spend a bit more time saying how do you feel about it, are you worried and things like that, and you know occasionally I've gone into theatre and said oh, did you realise this about the patient, you know, things like that which makes me feel useful as well.*

(S3 III 44)

This aim could be seen as reflecting either a patient-person or a doctor-practitioner perspective, or both, depending on the student's ultimate goal.

Students' rationale for the process of 'taking a history'

The students interviewed found it difficult to explain or justify the methods they were using to take histories. This may have been made more difficult by the multiplicity of purposes, and the difficulty, for third year students, of 'taking histories' when they were often not in the position of being able to make either a diagnosis or a management plan. Two themes arising from the interviews which allowed some insight into students' explanations of 'history taking' methods were their concepts of a good history and 'relevant information' and the ways they explained their choice of questions. This section illustrates the range of their views, and how these represented the tension between the different perspectives.

Concept of a good history and relevant information

It might be assumed that in order to have a rationale for how a history should be 'taken', and to learn this skill effectively, it would be desirable to have a concept of what a good or ideal history might be like. It became apparent during the initial interviews that many students did not have a clear concept of what a good history would be like, and I introduced a question about this into the later interview guides. The following student described his uncertainty:

> *S2: My aim is to be able to just have this really good way of taking a history, so that you know, people say oh yes, he's really good, he's really sort of slick at taking a history.*
> *Int: What do you think a really good history would be like?*
> *S2: I don't know. Because I haven't really seen one...you know, you know when they're wrong because if you're presenting it you're picked up on points that are wrong, so I guess I would just like to see a good one being taken*
>
> (S2 III 319-322)

The word commonly used by students to refer to the content of a good history was 'relevant', that is, a good history should include all the 'relevant' information. Even when students appeared to be clear what this meant, it was difficult for them to explain, for example:

S1: But at the moment, because I'm not into making a diagnosis, my idea is to get as much information that is relevant from the patient.
Int: Yes.
S1: As possible, without what their mother did for twenty years and what their, you know, neighbour's dog does in the weekend and all that sort of thing.
Int: And how do you decide what's relevant?
S1: I have a skeleton outline in my head that I've sort of picked up from just doing so many of them. But I find the hardest bit is trying to keep track of [what's relevant] *when you're asking the social questions.*

(S1 III 44-47)

Some students commented that they did not yet have enough knowledge to distinguish 'relevant' information, for example:

S: At the moment every time you ask a question I am thinking in the back of my head what's the next question I've got to ask and not so much to the answer, and I don't try and think what's relevant, as you say, at the moment I don't have enough knowledge, clinical knowledge to know what is relevant

(G1 III 92)

Others were clear that there was often disagreement between teachers as to what was or was not relevant:

S: Our consultant now wants just the relevant, just brief ...
S: But then, in a way you are not going to learn if you have missed something out then they won't know will they? They'll just assume that there wasn't any...
S: A registrar said if there was nothing to detect on the respiratory system, don't bother saying it, yes, we don't want to know that the trachea was central and there was no this, there was no that...
S: Then another person might say: did you bother checking to see if the trachea was central?

(G1 III 168-171)

One significant exception to the difficulty in defining relevance was a student who had been attached to an Accident and Emergency department. This student was confident about

knowing what was relevant in the patient care situation (using a doctor-practitioner perspective), and about the purposes of the questions, but now felt that the experience had been unhelpful, because the more conventional *'proper long history'* (using the student-clerk perspective) was quite different.

> *S: ...when I do ask histories I leave out quite a lot, I just subconsciously just think it's not relevant, so I don't bother asking it, especially in examination and I am quite bad with that because I think that's not really relevant, whereas I should really be doing everything at this stage and sorting it out later.*
> *Int: Right, but you have an idea in your head what is relevant?*
> *S: I do because of what I am doing but that was quite bad because I didn't get to do proper long histories and the first time I did it was when I did my medical attachment, proper long histories, staying in there for an hour and a half, /?/'cause I was 10 minutes maximum with each patient in A & E and then I'd be out.*
> *Int: When you were in that 10 minutes, what were you sort of focusing on then?*
> *S: I was trying to see which systems were concerned and then kind of sieving out from there where the pain was, the duration, just the relevant information.*
> *Int: Aiming at what?*
> *S: Aiming at diagnosis and whether they needed an x-ray and what I would do, the prognosis, that's what I was thinking at the time, which was quite useful for me at the time because it was much more fun, rather than now.*
>
> (G1 III 94-100)

This illustrates the tension between the doctor-practitioner perspective, which valued a brief focused history, and which this student had become comfortable with when it was receiving approval from doctors, and the student-clerk perspective, which valued *'proper, long histories'*. At the same time, it is a clear example of the difference between 'hot' (Accident and Emergency) and 'cold' (in-patient) medicine, as described by Atkinson (1997) and referred to on page 56. It is of note that this student could make sense of the term 'relevant' using the doctor-practitioner perspective. It may be that this term is confusing for students because it can only rationally be used in relation to this perspective, where the aims are clear. However, students in their third year are being advised to take 'proper long histories', using the student-clerk perspective, but still to gather all the 'relevant' information, with no rationale for determining how this is defined. The

ambiguity of 'relevant' and the problems this poses for medical students has been described previously by Lingard and Haber (1999), when it arose as a significant theme within an analysis of case presentations.

The above was the only clear description of a history for a specific purpose determining which questions were relevant from a third year student. The fact that this student felt that this was 'bad' suggests that the tension between perspectives was problematic for students.

Ways of explaining the choice of questions

Some students felt they had little choice in this matter, for example:

> *S2: I make a list but that list has come from books and lectures and basically most people use that format and this is what you're expected to use. So there's no real, there's no possibility of variation really, you have to do it that way. It's what people want you to do. ... It's quite a structured thing isn't it? ... It's quite universal as well.*
>
> (S2 III 202-206, interviewer's assents omitted)

This was a clear example of a student-clerk perspective, but the same student also felt some tension with a doctor-practitioner perspective when thinking about making a diagnosis in a later comment:

> *S2: You should probably think about why you're asking them shouldn't you because then presumably you're thinking about the diagnosis as well. I probably don't, I just ask them as a list of questions I need to answer.*
>
> (S2 III 764)

A number of students recognised a tension between the structured questioning method they had been taught and some aims of 'history taking'. One student perceived that her aim to find out about the patient's concerns did not fit comfortably with the taught method:

> *S3: And the difference and how people, well maybe, it doesn't really fit into my structure, but how people are feeling, and what they are worried about and if there is*

anything else they want to say, that doesn't fit into that structure, I always try and give them the chance to say, you know.

(S3 III 116)

This could be seen as a tension between patient-person and student-clerk perspectives.

Another student expressed discomfort relating to the tension between all three perspectives. He described talking to a patient in an out patient clinic, who was complaining about a benign tumour in his nose. The student implied that he had taken a full history, and had found that the patient had also had abdominal pain and had lost weight, and he felt he could have had a malignancy:

S4: I started presenting and he [the doctor] *said well, what has he come in for? I said well there is this thing in his nose which was why he was in originally in, so I talked about him then and did the examination - it's no problem we'll chop it off, and I said oh this gentleman has also been experiencing the things that I said, abdominal pain and I said weight loss and /?/ and he said oh well, we will have to send him to see a doctor, and sent him out. And there's always that sense of well did I do right by that patient, did I push that hard enough - something going on here.*

(S4 III 137)

This student had adopted a student-clerk perspective when taking a full history, in contrast to the (possibly rather narrow) doctor-practitioner perspective adopted by the consultant, and the student then felt a personal concern for whether he had 'done right' by that patient (patient-person perspective).

There were a number of other examples of students' difficulty in explaining their choice of questions. These included an observation that the type of history 'taken' by a doctor in a clinic bore little relationship to the history recommended for students, where the student was not clear about the explanation for this. This issue is addressed below on page 101 under the heading of 'watching clinicians'.

The only example of a confident explanation of the choice of questions for a specific purpose was the one quoted above on page 97, (G1 III 94-100), where the student

described this practice as 'bad', because it led her to leave out parts of the conventional student history. Another student gave a limited explanation, though following, perhaps, some leading questions from the interviewer:

> *Int: And how do you decide what's relevant? That's the rather crucial question isn't it?*
> *S7: Yes. Um, I don't know it's just according to the patient, what they, I don't really know how I decide, it's just intuitively.*
> *Int: You probably do it very well, you see I think students normally do extremely well, but I'm really interested in how you make that judgement.*
> *S7: I think you can just tell sort of like, someone comes in with a history of pain like she did, I might think about asking about more sort of normal stresses and how her work is going and if she is on any sort of anti-inflammatory drugs.*
> *Int: So those are possible causes are they is that what...*
> *S7: I think what I do is like, if I have, like, a working diagnosis in my mind I think of all the risk factors for that.*
>
> (S7 III 119-124)

However, there were a number of examples where students expressed understanding of limited aspects of a rationale. One student pointed out that different types of approach were appropriate in psychiatry and surgery. Another explained that she would take a history more focused on the presenting complaint if the student had been admitted as an emergency, but a more detailed history if she was expected to subsequently present the patient. A further student explained the difficulty she found herself in when she jumped to a diagnosis too soon, and described the strategy that she could have used to find out about problems in other systems. All of these focused on the doctor-practitioner perspective, and suggested that a rationale may have been easier to reach when this perspective was adopted.

In spite of these examples of partial explanation, the uncertainty expressed by students about how to explain an ideal history, relevant information and their choice of questions led me to ask what medical teachers believed and said to students on this topic. This is the subject of chapter seven.

Watching clinicians 'taking histories'

When asked about what had influenced their development of skills in 'history-taking', third year students most often mentioned two themes: watching doctors, and the process of presenting patients and receiving feedback on this already mentioned above on page 93. The occasional formal teaching sessions provided at the start of the course were rarely mentioned. In the theoretical framework of learning shown in chapter three (Figure 3.3, page 59) this could be seen as 'the curriculum: students' experience', although it would have been quite different from both the curriculum on paper and the curriculum in action (Figure 3.2, page 53). The three perspectives and the tensions between them are again reflected in the students' observations.

In view of the fact that students were uncertain about the characteristics of a 'good' or 'proper' history, and that they did not have a clear rationale for the process, it is not surprising that they hoped to learn and gain a better understanding from watching experienced clinicians. Students also mentioned observing specific behaviours that they wished to emulate, for example:

> *S: I'd say my consultant - I kind of think that I want to be like that one day because he is brilliant with the patients, and you think wow I really want to be like that one day and they trust him and he writes down the relevant -relevant again- information that is required.*
>
> (G1 III 188)

or not:

> *S1: To be very polite, the consultant that I had in the Clinical Foundation Course taught me an awful lot how not to take a history, ... asking questions and not listening to the answers.*
>
> (S1 III 192)

Both these examples illustrate that these students valued the patient-person perspective, and in the former, the ability to link this with the doctor-practitioner perspective. Although there were a number of other examples of this type of observation, I have focused in this account mainly on students' reflections on their observations, rather than the observations alone, as I felt these provided more insight into the learning process.

In my analysis I tried to identify every occasion where students explained how observing clinicians helped their understanding. On careful examination of these, on every occasion

the understanding was qualified. For example, one student felt that she could understand the process as demonstrated by an SHO, but contrasted this with the experience of watching a consultant:

> *S: Sometimes when I have sat in with a consultant it's extremely to the point and it's very different because beforehand I'd been with the SHO and she'd been doing everything from scratch and it was really lovely to watch because I could relate to what she'd done, and I knew what she was looking for and what she was writing down and it was all relevant to me but then the consultant - where did that question come from - and he was only writing the relevant details down it was literally a couple of lines at the end of the history but it is very different with consultants.*
> *Int: Why do you think there is that difference?*
> *S: Because they have much much more experience and they recognise a symptom and know that they don't need to ask all these questions they just follow a straight path, but without having experience of the different symptoms...and they haven't got as much time...they've only got ten minutes in the clinic.*
>
> (G1 III 59-61)

This was one of a number of observations indicating that consultants tend to take much briefer histories, and explanations of this included the time constraint, 'experience' and 'intuition'. This may be seen as reflecting the tension, never made explicit, between the doctor-practitioner and the student-clerk perspectives.

One student felt that this might imply a limitation of the usefulness of the 'history-taking' method taught:

> *S7: Whereas in a clinic like the registrar or the consultant they will just get sort of presenting complaint and that's it and they might just say oh is everything else going OK then and don't ask any more questions. But they send us out and we're supposed to get the full history as well.*
> *Int: Why do you think that is?*
> *S7: I think it's because they don't have the time and they can't, they don't have the time really.*
> *Int: Do you think they would take the rest if they did have the time?*

S7: No.

Int: That's interesting then isn't it?

S7: I don't think they would, because I mean I'm not sure how much more useful it could be. You know when you're at the GP they just ask you why you've come in they don't usually ask them the whole thing. I think it's a requirement because it's going on the student record really.

(S7 III 159-165)

A second student was less confident, but, when asked what he had observed that was unhelpful, felt that perhaps the method taught to students was over-inclusive:

S2: Um, well I guess when they tell you this isn't the way to do it. I mean, 'what I'm going to do now is not the way you should learn'.

Int: Yes. What does that make you think?

S2: I think well, I suppose in a way I think well, that's probably what I'm going to be doing, because they're doing it because of pressures of work or, that's what they need to do. Maybe the way we're taught is just over the top and we don't need to do, don't need to go into that much detail or in that manner, because if the house officer is doing it in a completely different way. To get it done or is doing all that is required, maybe we're being, maybe what we're doing is not right, it's too much. I don't know - the textbook way of doing it isn't actually in practice the right way. I don't know.

(S2 III 360-366 interviewer's assents omitted)

Both these students recognised the difference between the doctor-practitioner and student-clerk perspectives, and, while the first appeared comfortable with this recognition, the second was left feeling uncertain about 'the right way' to take a history.

This same student distinguished 'taking a history' from the more holistic activities of patient care:

S2: Yes. Yes but I haven't actually thought that it's, in general practice I haven't actually looked at it in that way, as a history.

Int: Mm, that's interesting

S2: All I really see, this patient comes in and tells you what the problem is and the doctor tells them what they're going to do or what they think it is.

(S2 III 310-312)

It seems that this student equated the notion of 'taking a history' with the student-clerk perspective alone. He saw 'history taking' not as the process of talking to a patient to find out about their problem and help them, (a doctor-practitioner perspective) but as the process of asking a large number of questions in a structured format, with the purpose of gaining approval for a presentation (a student-clerk perspective). From this latter perspective, consultants and general practitioners do not 'take histories', (just as they rarely 'clerk patients') and junior medical staff do so only in some circumstances. The fact that students at this stage were involved very little in patient care makes this a more likely perception.

The students' involvement in patient care

The third year students had few opportunities to contribute to the process of patient care, and often felt in the way, when they would like to have been more useful. They celebrated minor opportunities to help, as for example:

S: Yes, I think so, I think you do take histories for the sake, you know you've got to take a history to present to your consultant that day and you go and find someone to take a history from, you are not going to find someone because they are ill and you have got to think about what is wrong with them and what you are going to do, you are just doing it for the sake of something to present.
S: Then again it's really nice when you get one bit of encouragement it really does make the day and then you feel a lot better next time you do take a history. Once a registrar used our notes, you feel like 'Yes!' it was so good.

(G1 III 140-141)

One exception to this was the student previously mentioned on an attachment to an Accident and Emergency department, who had been able to contribute, and had enjoyed this, but felt that this might not have helped on a later attachment:

> *S: On majors and minors* [serious and less serious cases] *you kind of had to ask the relevant questions because the doctor would be outside waiting and they had been bleeding all over the place, or whatever and there was no way you could spend 45 minutes to an hour. My other friend on another rotation was saying ' oh an hour and a half for this person', oh God I spent 10 minutes with that other person and the doctor would say 'that's fine, brilliant, you have given me what I need'*
>
> (G1 III 94)

The other students in the group saw this as an exceptional experience, and expressed some envy. This experience may have given this student a better understanding of the doctor-practitioner perspective, which was more difficult for the other students, but made it more difficult for her to adopt the student-clerk perspective expected in other attachments.

The aim of these students, when their history or records were used by a doctor in patient care, appeared to be to gain clinical responsibility, and was similar to that described by Becker et al (1977), in his *'Responsibility Perspective'*. At this stage in their course the students only very rarely felt that the histories they 'took' were contributing to the patients' care, and they sometimes felt that they were, metaphorically, 'taking' something from the patient. This issue is highlighted here because it is in contrast with the students' experience in their fifth year, when their greater involvement in patient care may have enabled better understanding of the differing perspectives and how to manage the tension between them.

Social and individual student factors

A number of students mentioned personal characteristics or values that they felt influenced their behaviour. These included not liking to upset people, enjoying talking to people, respecting all people, not making assumptions, and trying to put themselves in patients' shoes. There were also comments that having confidence and being a mature student were helpful when making relationships. One student recognised a tendency in himself not to listen to others, and was trying to correct this. These influences seem likely to have had an effect on the students' willingness to adopt a patient-person perspective, but as I felt they shed little light on the research questions, I have not discussed them further. However, they highlight the complexity and individuality of the 'history taking' process. The index of codes in appendix E illustrates the range of these.

Students' approaches to learning

Unlike Marton and Säljö's (1976) students (see page 34), the medical students were not seated in front of a text when learning, and their approaches to the learning task were much more variable and less easily categorised. It was often difficult to distinguish between a description of a learning activity and an explanation in more depth of an approach to learning. The students whose experiences of watching clinicians were described above were discussing how they learned from one specific experience, which was highly influential. The students interviewed also learned from a whole variety of other activities. Where they gave some indication of how they approached learning to take a history, I have grouped their comments into surface, strategic and deeper approaches, with the majority being of the surface variety, though many students described different approaches to the same task.

Surface approaches

The use of a list which needs to be memorised suggests a surface approach, and this was mentioned by many students. A typical student response to being asked what they were doing when 'taking a history' was:

> *S2: Just trying to go through a list in my head, points and questions I need to fill in*
> [Int: Right] *That's my main aim.*
>
> (S2 III 38-40)

This reflected the student-clerk perspective, and, as this method is recommended in all textbooks, with lists provided, it may not have been the students who choose to adopt a surface approach, more that they were advised to use one. They also had few alternatives, due to their lack of experience and understanding of how the history fitted in to the medical care process. A more thoughtful comment on the check list, also reflecting a student-clerk perspective, for example, was:

> *S8: Sometimes its just like because you know about the symptoms that prompt you but sometimes it's the check list again and you are given this sheet - for psychiatry you've got this sort of paper - a few pages of things you should ask your patient, so if you look through it you get to know what sort of things you should ask about and then like what*

sort of things to ask about, so sometimes that prompts you, you know, by referring to what you've been given, even if you don't know what to ask you just look through it and you can ask from that.

(S8 III 16)

It seems that students, rather than choosing to use a surface approach, may have felt they had no alternative, and the student-clerk perspective, valuing data gathering for its own sake, gave little encouragement to students to analyse what they were doing. As in the preceding example, students who mentioned using lists very frequently also mentioned other ways of selecting questions in areas where they had more clinical experience (and could therefore use a doctor-practitioner perspective), suggesting that they would adopt a deeper approach if it were possible to do so.

Strategic approaches

A repeated theme in students' accounts of how they learned to 'take histories' was learning by trial and error, the errors being pointed out by doctors, when the students presented the patient. This would seem very reasonable, if the identification of errors was accompanied by explanation and understanding, but it was not always clear that this was the case. For example:

Int: How do you decide when it's complete?
S8: Oh gosh, when I've done all my agenda and I think it's complete, but I am not sure until I sort of present it, and they give me feedback - maybe you should have asked more about this one, then I'll be like yeh next time I'll try to do that or go back to the same patient and ask about what I am supposed to ask.

(S8 III 20)

This appeared to be an example of a strategic approach, where the student was using any approach which would achieve the desired end.

Deeper approaches to learning

I searched for examples of students setting out to learn how to 'take histories' with the aim of increasing their understanding in any area, including 'history taking' strategies, diagnostic strategies, disease processes, or social or psychological issues, and using any perspective. One student mentioned a textbook, which explained why some questions should be asked:

> *S4: I very much like it because it's, a) it says you need to ask about this because, because, because. There's always a physiology underneath what's going on and I really like it because a lot of the books like the /?/ and it's just rote learning, and that's no good for memory. But yes, I really like having that kind of understanding of what's going on underneath it.*
>
> (S4 III 165)

This could be seen as an attempt either to gain understanding of physiology for its own sake (a student-clerk perspective) or as an attempt to understand the physiology justifying the choice of questions when 'taking a history' (an aspect of the doctor-practitioner perspective, and in either case was the clearest description of a specific aim or attempt to gain understanding.

A number of remarks initially coded as demonstrating a deeper approach, on further examination showed little serious attempt at understanding. The following student appeared to be describing an algorithmic technique for reaching a diagnosis, but was possibly using it by rote rather than with understanding of its structure:

> *S5: Like you have a flow chart equivalent, oh, if they say no - for example someone came in with like abdominal pain and they say oh is it worse particularly after eating, if yes, you think oh gall bladder, whatever, you have a flowchart, you bounce the questions back and forth just to get what you want and then in a way you're keeping your mind open and then trying to hold on to something at the same time.*
> *Int: And do you use that technique?*
> *S5: I try to but sometimes I don't because I don't know what I'm talking about and you're thinking 'what exactly is going on?'*
>
> (S5 III 74-76)

A further student mentioned his intention to acquire understanding: '*medicine should be about discovering things, not about fulfilling criteria'* (S5 III 303) and *'forcing yourself to think about things logically'* (S5 III 86) but there were few other declared intentions of gaining understanding. This may have been because students felt this aim was too obvious to mention, (though this is unlikely, as the fifth year students mentioned it much more frequently) but students may also have been limited in their approaches to learning by the tension between the perspectives, which led to a confused rationale for 'taking a history'.

A further approach which was difficult to categorise was one which involved learning from patients. A variety of ways of doing this were described, for example, by putting themselves in the patient's shoes:

> *S1: I've put myself in their shoes or tried to as best I can. I don't know what it's like to be a seventy year old man with liver cirrhosis and I'm bright yellow, but you know put them in their shoes and sometimes you have the nagging wife, and as long as you-*
> *Int: So you're thinking about how they're feeling*
> *S1: Yes, yes and you if you can do that then I find that you get better on their wavelength and they're prepared to tell you more. Rather than if you're this arrogant medical student who has a list of questions and they've got to answer them right then and there and they're just going to go well actually I don't want to talk to you and they're really intimidated.*
>
> (S1 III 494-496)

Other examples of learning from patients included checking out a summary of the situation with a patient, clarifying the student role with patients, and learning from working with disabled children how to build up a rapport. All of these could be seen as deeper approaches to learning about relationships with patients, as the students appeared to be aiming to gain understanding of how to relate to future patients from their experiences with the current one, using the patient-person perspective. These examples suggested that these third year students were concerned about the patient's opinion, and maintained a focus on this in their learning, more than the final year students discussed in the next chapter.

Although, from this evidence, the students were able and willing to learn using a variety of different approaches, the common use of lists, which linked closely with the student-clerk

perspective of gathering information rather than solving problems, suggested that circumstances may have encouraged a surface approach. Lack of involvement in patient care, and conflict between perspectives may, on the other hand, have made it difficult for students at this stage to gain understanding of a doctor-practitioner perspective. Some students, however, appear to have taken a deeper approach using a patient-person perspective.

The culture of medicine

I, and all the students quoted here, were immersed during our working hours in the professional medical culture. The third year students interviewed appeared to be satisfied with learning the skill of 'taking a history', with only a limited understanding of the relationship of the skill to patient care. This is not surprising, given that the student-clerk perspective is deeply rooted in medical history and culture. Two students in the third year (quoted on page 102) questioned the rationality of this situation, while the rest did not. One possible explanation for this is that the medical culture, and the socialisation of students within this culture, made it difficult for them to look at the issue from outside, as they were focused on trying to achieve acceptance within the culture. Very few comments from third year students focused directly on this issue, and I have discussed it in more depth at the end of chapter five, in the section headed 'The culture of medicine' (page 135).

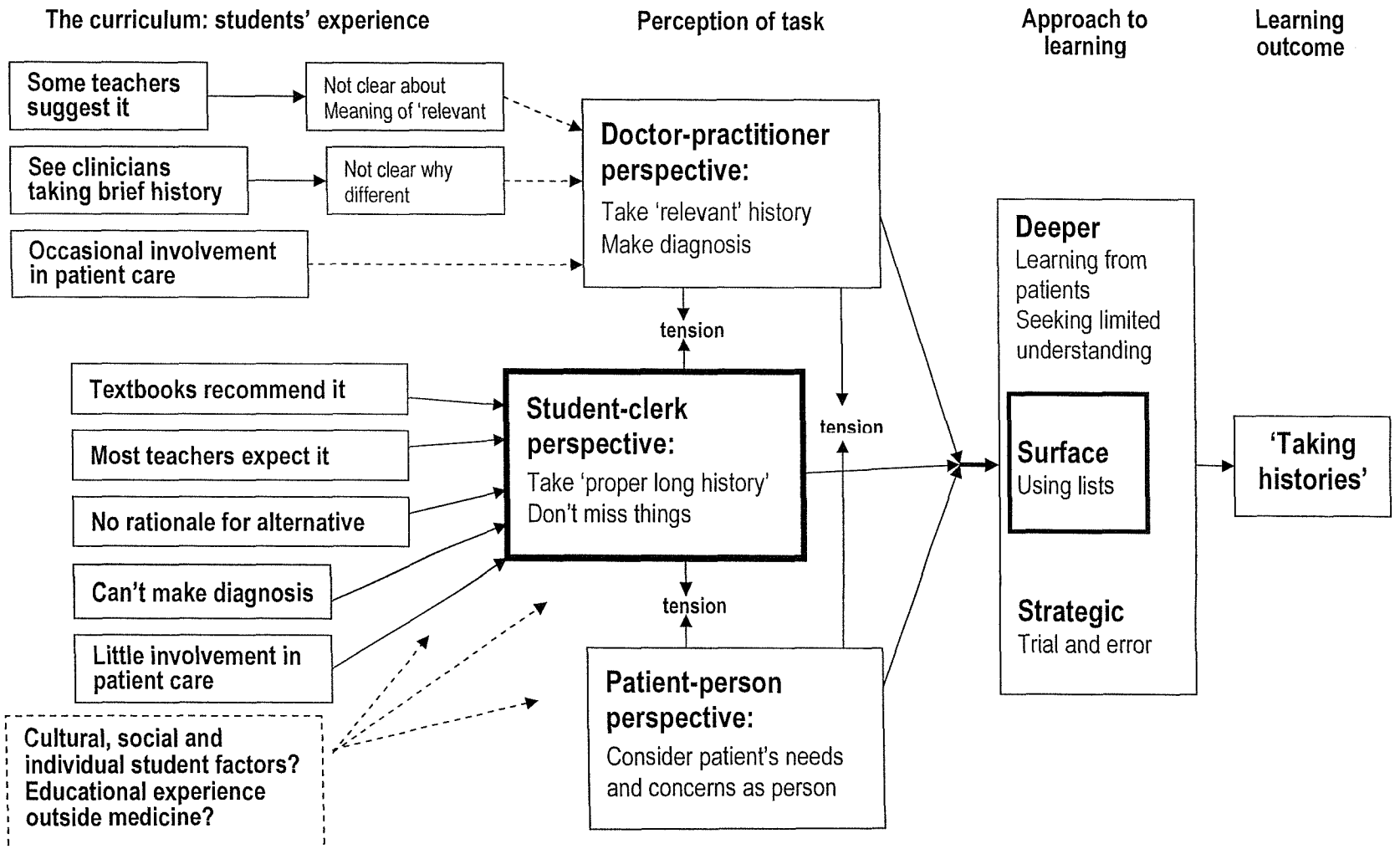
Summary: learning to 'take histories' in the third year

Figure 5.1 (page 112) shows the theoretical framework of the learning process, as previously shown in Figure 3.3 (page 59), illustrated with the specific issues identified in the third year student interviews to provide a possible explanatory model of the learning process. As the issues identified by the students nearly all came under the heading of 'the curriculum: students' experience', these issues are shown in the left hand column. Although issues relating to individual student factors, including previous educational experience, and social factors are likely to have been influential, this study did not attempt to shed light on them, so they are retained in the model at lower left in a dotted box to show that these are without data to support them.

The three perspectives, which were used by these third year students when considering their 'history taking' task, are shown in the column headed 'perception of task'. Influences from the students' experience which tended to prioritise the doctor-practitioner perspective included being advised by teachers to gather 'relevant' information, watching clinicians and one student's involvement in patient care in an emergency department. However, the first two of these were reduced in influence by confusion about the term 'relevant' and difficulty in understanding why clinicians' histories were different from students'. Textbooks, many teachers and lack of any rationale for an alternative tended to prioritise the student-clerk perspective, especially when students were unable to make diagnoses or be involved in patient care. Influences on the patient-person perspective were less clear, and may have been personal. A number of extracts from the transcripts suggested that the students experienced considerable tension between these three perspectives.

The prioritised student-clerk perspective was linked with the use of lists and surface or strategic approaches to learning, and there were few examples of deeper approaches to learning. The question this poses is how students could be enabled to make better use of learning opportunities in order to develop a deeper approach and gain more understanding at an earlier stage. Analysis of interviews with students later in their student experience might help to elucidate this question, and this is the topic of chapter six.

Figure 5.1: Learning to 'take histories' in the third year: an explanatory model



Chapter six: The fifth year medical student

This chapter presents an analysis of the interviews with fifth year medical students. One major change since the third year was that the students' perception of their role in the clinical setting had changed, and they felt more confident. As this may have influenced some of the other changes, I have presented it first. The purposes and rationale of the students when 'taking a history' were again grouped around the three perspectives of doctor-practitioner, student-clerk and patient-person, but the balance had changed, with a much greater emphasis on the doctor-practitioner perspective.

Watching clinicians was again a major influence, but with students expressing greater understanding of the process. The students' approaches to learning had also changed, with a move towards attempting to work things out, including how to deal with the tensions between the doctor-practitioner and student-clerk perspectives. Overall, less attention was given to the patient-person perspective. These findings must be interpreted within a pervading medical culture, and some limited findings about this from the data are presented. Finally, I have considered how the analysis may aid the understanding of how students have learned to 'take histories' over the two years, in relation to the theoretical framework.

The interviews

The first final year interview (G1 V) was a group interview carried out in August 1999, as a pilot for the interview guide. As the interview guide (appendix B) changed relatively little over the two intervening years, I have included it in the analysis. The other two group interviews and six individual interviews were carried out between September 2001 and January 2002. The individuals were all students who had previously been interviewed in the third year, and none of the students in the groups had been interviewed previously.

The six individual students previously interviewed were identified as before as S1 to S6. S7 agreed to be interviewed again, but later became too pressed for time. The fifth year interviews were identified using the same convention as previously, so that, for example, S1 V denoted a fifth year interview of student S1, and the group interviews as G1 V etc.

Quotations are again identified by the numbers of the text units allocated by the NUD*IST software, as described in chapter four, and the conventions used in representing quotations from the transcripts are as shown in Table 5.2 on page 89.

Table 6.1: Characteristics of fifth year students interviewed

	Female		Male		Total
	Individual	**Group**	**Individual**	**Group**	
School leaver	3 (1 overseas)	5	1 (intercalated BSc)	3	12 (1 overseas) (1 intercalated BSc)
Previous degree		3	2		5
Mature				2 (1 overseas)	2 (1 overseas)
Total	3 (1 overseas)	8	3	5 (1 overseas)	19 (2 overseas) (1 intercalated BSc)

Table 6.1 shows that the 19 students interviewed included mature, graduate and overseas students. All the five students with previous degrees were undertaking an 'accelerated' course, which omitted the 'study in depth' (see Figure 1.1, page 11), and they took final examinations six months earlier than the others. I have not identified the two individual students to whom this applied, as this might compromise their anonymity, and in the group interviews it was not always possible to distinguish students' voices. One student had taken an intercalated BSc, and so, when in the fifth year, was actually one year behind the other fifth year students in terms of clinical experience, and had not yet commenced the final year clinical attachments. On the one occasion where I felt this was relevant, I have provided a quotation, but have not identified the student to protect anonymity.

There was a substantial amount of data in the interviews that did not relate directly to the research questions, and some that did that has not been discussed in detail, as it did not relate to the main themes. In order to provide an audit trail and support my selection of the data quoted, I have provided an index of the 'units of meaning' coded for all the fifth year interviews, sorted into themes and categories, in appendix F.

Students' perception of their role in the clinical setting

One significant change since the third year was the students' perception of their role, and they noted how this had influenced how they 'took histories'. They felt more accepted on the ward:

> *S: Yes and it's almost credibility as well, you know, people, you know you walk along the ward and it's accepted that you're going to go and see patients whereas sometimes it wasn't in the third year.*
>
> (G1 V 224)

For some of the time they were part of the clinical team, and felt they could contribute:

> *S2: Just, like I said earlier because the reason you are seeing them, when you're seeing them first, is you're going to try and work out what's going on because at that time nobody might know what is going on, and you feel quite useful and you get to present this patient who has come in for the first time and then you are involved in decision making and you do get asked what do you think and what should we do next. Where on the ward if you see a patient you are doing it just for yourself and people really don't want to listen to what you have got to say and it is all a bit short, you present your case and they ask a few questions and that's it and that's just another case.*
>
> (S2 V 83)

This was a further example of the contrast between 'hot' and 'cold' medicine (Atkinson 1997, see page 56) and contrasted with their memory of the third year, for example:

> *S: ...But it's impossible as a 3rd year you are not even a supernumary you're just there.*
> *S: ... everyone has lots of work to do, and people are ill and then you haven't got much to give but then as a 5th year you've got a bit to give back.*
>
> (G2 V 120, 127)

There was only one example of a student who described anxiety about not having a clinical role. This was the student who had undertaken an intercalated BSc, and thus was not yet

undertaking final year clinical attachments. The increased confidence expressed by the other students was underlined by this student's considerable anxiety about his future clinical role:

> *S: I think it is going to be so frightening as a 5th year to suddenly then become a doctor and not really knowing your way around, sure they don't know their way around the wards properly, I mean I haven't asked enough 5th years about this but I am sure they don't really know how the whole system works, because you don't and that's why you get a lot of resentment between doctors and nurses, or certainly medical students and nurses because the nursing students are actually really involved, they are on the wards ... they really are involved and they've got a purpose and maybe they are used slightly to make up numbers or whatever but medical students do not have much of a role and I can understand why its difficult...what use am I to any of the patients, not much.*
>
> (S V 81-85)

Apart from this, for the students in their final year, their role in clinical settings was no longer an issue, other than when they looked back to the third year.

Students' purposes when 'taking a history'

In their third year, the students' purposes linked loosely with the three perspectives, with the doctor-practitioner perspective focusing mainly on diagnosis, though the students saw difficulties with this in their role at the time, as either they already knew the diagnosis, or did not have enough knowledge to make one. The student-clerk perspective focused mainly on making presentations with the aim of gaining approval, and the patient-person perspective focused on the students' aim to help patients directly in their role as students.

In the final year, the doctor-practitioner perspective was, not surprisingly, dominant, and within this the overriding theme was making a diagnosis. The student-clerk perspective now included preparation for examinations as well as presentations, and the patient-person perspective figured much less frequently. There had been an overall change of focus in the process of 'taking a history' since the third year, which one student described here:

S: It's true now but when you first started, stuff in the third year when I started taking histories then, the whole point of it was to take a history and see if you could remember to ask all the questions and get out within like an hour and a half.

Int: Can you remember that feeling?

S: Yes, whereas, now it's a tool that you do and then you go through that and you get into the presentation management and the investigation.

(G1 V 23-26)

The doctor-practitioner perspective: diagnosis and contribution to the health care process

Every student interviewed alone and all the groups agreed that making a diagnosis was a key aim of 'taking a history'. Most also saw this as a significant change since their third year, for example:

S: I think I think more about the diagnosis now than I did in the 3rd year, the 3rd year was just trying to actually get good at doing it and now as you are going through the history of presenting complaint you are thinking - what other information do I need here to make up the rest of the picture and picking things more, in a more directed way.

(G2 V 5)

The students also described a variety of methods they used to help make diagnoses, and these are covered in more detail in the section on 'rationale' below.

Some students also added that they were thinking about the contribution of the history to the rest of the process of patient care.

S2: ...I think my history is different from the way I used to - whereas it just used to come out of my head and it was just bullet points that I needed to cover, I think now the aim is to focus on what the presenting complaint was, and try and try and tailor the rest of the history to that and think more about why I am taking a history and you know, what use is it going to be for this patient for the future.

(S2 V 14)

Other doctor-practitioner purposes of 'history taking' mentioned included deciding on management, and identifying causes of the patient's problem. One student, when asked about purposes of 'taking a history' mentioned:

> *S2: Just getting as much information as possible because it is like the first document to be filed and that is the one they refer back to when they need to find information.*
>
> (S2 V 55)

This is interesting, because it appears to be a way of resolving the tension between the comprehensive, rather than focused, history expected from the student-clerk perspective, and the need to contribute to patient care, from the doctor-practitioner perspective. The tension between the focused and comprehensive history was one of the major themes throughout the fifth year interviews.

The student-clerk perspective: presentation and assessment

Presenting the findings of a history and examination was so much part of the everyday process that students did not volunteer it as a direct purpose of 'taking a history', but saw it as a very important skill, for example:

> *S5: ...you've got to present lots and lots, be comfortable with it and be good and slick, because the final year examinations for example, so what, you can get information, at the end of the day, it's don't bore the examiner, just give them what they want, you know you've got the information, you've just got to present it, presenting skill is a very - people underestimate how important it is.*
>
> *(S5 V 55)*

This type of focused presentation could equally well be seen as part of the doctor-practitioner perspective, and was similar to the presentation of patients by junior doctors to more senior ones, but is included here because students saw it as a skill in its own right, dependent on the 'history taking' that preceded it.

A frequently mentioned purpose of 'history taking', as in the previous quote, was preparation for examinations, which was seen as somewhat different from 'history taking' for patient care. The fifth year students in Southampton were assessed at the end of each

attachment on a 'long case' in which they were left alone with a patient to 'take a history' and carry out a physical examination. They then presented the case to a pair of examiners and were questioned on it. Some students saw examinations as requiring a very inclusive history, with detailed screening questions unrelated to the patient's main complaint, for example:

> *S1: ... how often do you get an hour to sit and do a history, so I think that's the difference. You've got - I always think that the examination is a gold standard that you've been able to completely exhaust the social history and you've managed to completely exhaust the systemic enquiry rather than sort of ...really go into it - like systemic enquiry, instead of perhaps general screening questions, actually asking about really much more specific things, ... sort of like perhaps the locomotive system* – [not just] *do you have difficulty getting dressed, can you manage stairs - you know - it would perhaps be more like - do you ever have any pains in your hands, wrists, elbows, shoulders, back, neck?*
>
> (S1 V 21-24)

This definition of a 'gold standard' suggests that this student saw a tension between the requirement to 'exhaust' the history for the examination (student-clerk perspective), and the usual need to focus on the immediate problem (doctor-practitioner perspective).

The patient-person perspective

This perspective was expressed much less frequently in the fifth year. In relation to purposes of 'history taking', only two comments were noted. One student mentioned that a diagnosis was not everything:

> *S5: you've got a diagnosis but your patient is not feeling happy you can still not become a good doctor, that's the whole thing.*
>
> (S5 V 51)

A second student expressed his regret about the lack of focus on social interaction with patients:

S4: I think I would have to say that medical education is not focused upon - you're an individual would you like to develop your own style of interacting with a patient, what's your personality, its not at all focused on good social interaction, it's totally focused on getting a diagnosis

(S4 V 112)

This perception is reinforced by the predominance of the doctor-practitioner perspective in the interview data.

Students' rationale for the process of 'taking a history'

In the third year interviews, the students perceived a tension between a constant pressure from teachers to gather the 'relevant' information from patients (and uncertainty about the meaning of 'relevant' in this context), and the textbook requirement to 'take a history' covering everything (the student-clerk perspective). They observed clinicians 'taking' brief focused histories (the doctor-practitioner perspective) and saw little relationship to what they were being asked to do.

In the fifth year, the doctor-practitioner perspective was dominant, and within this, a major theme was a developing rationale for taking a limited, focused history. However, as seen already in the quotations above, there was a second theme, in tension with the first and using the student-clerk perspective, of the full history, asking everything to avoid missing anything. I will discuss these two themes in turn.

The rationale from the doctor-practitioner perspective: the focused history

Many students said that in their fifth year they were now expected to take a 'focused' or 'directed' history, instead of, as in the third year, 'asking everything', for example:

S: In the 3rd year you can't really lose if you ask everything and [take] *a thorough history, you've bored the patient silly, what the heck you know, you've got the information, but in the 5th year you can't do that, you've got to be focused.*

(G2 V 22)

Although, as in the third year, eliciting and presenting 'relevant' information was frequently mentioned as a key aim, this was now accompanied by confidence about the ability to focus, and therefore to know what was relevant:

> *S*: [in the third year] *you are worried about forgetting anything that's important so you just sort of ask everything and by the 5th year you know what's relevant so you are more worried about grouping things, do they appear logical to the person that you're presenting to.*
>
> (G2 V 95)

A number of different methods of narrowing down a questioning process with the aim of making a diagnosis were mentioned. One student described learning from discussion with the clinical team about the particular importance of ruling out serious and urgent possibilities:

> *S5: I think it's just discussion...saying, oh we saw this patient today what do you think, or what are the differentials, make sure you rule this out, this is an emergency, you got to rule it out, you know, that is what is going to cause death, you know, it's that.*
>
> (S5 V 37)

Several students mentioned methods of systematic questioning which were not directly designed to rule hypotheses in or out. Instead they identified a list of questions which were categorised in a systematic manner, for example:

> *S: Well, if they've got pain then I'll ask them all my questions about pain which I always have to say, but then for surgery I always do it from their mouth to their bum, questions then on the way, try and ask questions to make a diagnosis, you know like, their tummy pain, then associated symptoms to go with their tummy pain, you can ask them, appetite, weight loss, trouble swallowing, blah blah.*
>
> (G3 V 19)

This questioning strategy can be described as an 'anatomical sieve' that is, a systematic method for considering all the possible anatomical sites in which a disease process could be located, and then using this to choose questions to include or exclude the various

possibilities. One student described a similar method of narrowing possibilities down at two levels, using first a 'physiological sieve', to identify the physiological system involved, and then a 'pathological sieve' to narrow down the disease process:

> *Int: that's the basis on which you are selecting* [questions] *is it?*
> *S1: Yes, usually systems - that would be my first, going through the flow diagram that would be my first thing to determine which system I am really talking about and then when getting to the system, perhaps trying to work out what sort of disease I am sort of dealing with, is this a chronic thing, an acute thing, is it likely to be an inflammatory thing or an infective type thing, so various sorts of questions again sort of limiting it down, but I think my first thing would be to really establish which system I am really dealing with. Obviously a bit further on you get to more particular things, but that's probably what I am subconsciously doing to start with.*
>
> (S1 V 9-10)

However, this same student still felt that a really good history would cover everything, and had difficulty in linking this with the logical process of limiting the diagnostic possibilities:

> *S1: I think a good history is the one you see in the textbooks where every subject area is covered including genitourinary, obstetrics, gynae history, bits that everyone skims over, psychiatric history is very rarely taken.*
> *Int: So how do you decide where to stop then?*
> *S1: That just goes back to my sort of framework of which system and coming up with ideas and proving them wrong and when I've finished coming up with ideas I sort of slow down and by then I've sort of yes its coming up with a diagnosis, I am coming up with a differential and that's where I'm limiting.*
>
> (S1 V 34-36)

This illustrates the continuing tension for students between their developing rationale for using the history to help make a diagnosis (the doctor-practitioner perspective) and the concept of a good history as one in which 'every subject area is covered' (the student-clerk perspective).

This student also, from the doctor-practitioner perspective, gave the account closest to a description of 'hypothesis testing'. This is the process shown by Elstein et al (1978) and others to be the method in common use by doctors for narrowing down possibilities by ruling them in or out. The only mention of this term in the interviews was by two students in one group interview, and it was not explained. Similarly, no student referred to the 'sieve system' at a conceptual level. The students' methods of narrowing down the possible diagnoses and focusing their 'history taking' appeared to be based, not on any teaching or discussion about this process, but on their own responses to gradually increasing clinical experience, confidence and knowledge, as this exchange in a group interview illustrates:

> *S: Yeh but I know, you get to a stage where you start on zilch and you get up to a stage where you ask absolutely everything, until your confidence grows and you start to choose and focus your questions defining your questioning skills.*
> [less relevant remarks omitted]
> *S: I think that is true you start off not really knowing much to ask because you haven't gone through the books and been taught what to ask, then you are taught everything to ask, so you get this huge long list of stuff to ask and then as you go on -*
> *S: - then you know about conditions –*
>
> (G3 V 51, 58-59)

The rationale from the student-clerk perspective: asking everything and not missing things

In spite of the much clearer perception by students of how they have learned to take a focused history, there was an undercurrent of anxiety from their student-clerk perspective about 'missing things' and a corresponding need to continue to ask everything. For example, when asked to describe a really good history:

> *S5: Not missing things out. You have a structure, you start off with presenting complaint, history presenting complaint, you've got a framework that you know, your drugs, your allergies, past medical, past surgical history, you go back through them making sure you're not missing anything.*
>
> (S5 V 61)

A quotation above has already illustrated this in relation to the requirement to ask everything in examinations (S1 V 21-24, page 119). Some students expressed the tension directly, for example:

> *S:...but then I always ask the rest of my questions anyway just to check I haven't missed anything else, you know like, I wouldn't stop there, I even still just ask them - go through everything as I worry that I'll miss something otherwise.*
>
> (G3 V 17)

Another student felt that the only route to not missing things was taking a very full history, and identified the tension between this and the need to focus to avoid over-medicalisation:

> *S3: I suppose I think an ideal history would be totally comprehensive, but that's only ideal in that it doesn't miss anything, and I suppose my fear when taking a history is that I'll miss something that later proves to be important and that somebody else might have found out from taking that history, but in the constraints of working as a doctor I don't think that's an ideal history, just like its not ideal to investigate every patient for everything, so there's got to be a compromise I suppose.*
>
> (S3 V 66)

One aspect of the textbook history, previously discussed in chapter one, page 18, which is closely linked with the student-clerk perspective and the concept of 'asking everything' is the systemic enquiry. In this part of the history students are expected to ask a series of pre-ordained questions, covering each of the main physiological systems, which are intended to screen for medical problems not previously identified. As mentioned in chapter one, a number of textbooks sit on the fence on this issue, for example, one stating on the one hand: '*It is inconceivable that any patient will require to be asked all the questions that may be important on some occasion.*' but also on the other hand: *'During training experience can be obtained from undertaking a thorough general symptom inquiry, asking the patient the 'cardinal' symptoms relevant to each system.'*

(Masterton and Toft 2000 p13)

In their final year, many students expressed doubts about the value of this part of the history. This exchange between several students in a group interview illustrates some of their uncertainties:

Int: What do you see other people doing in relation to the systems review?
S: Only students do it. [laughter]
S: I was just going to say that
S: That's very true
Int: Well, that's interesting, so why do students do it, you might ask then?
S: I don't like the placing of it, you've come through all this and then you go - oh she's fainted three weeks ago or something, you know or has joint pain in a 90 year old lady or man or whatever you know -
S: Especially if they're the talkative type..., it's a kind of licence to detail every minor ailment.
S: I also saw it as a student, not so much in the 5th year, more in 3rd year, just as a wide net to check there is nothing blatantly obvious that you haven't picked up.
S: so true
Int: So why is it less necessary in the 5th year?
S: Because you know more about what you are looking for.
S: I feel compelled, I have to do it
S: I sometimes get worried that I won't do that bit but then I've thought, but what if I've missed something?

(G2 V 191- 204)

These students still appear to be torn between a gradual realisation that the systemic enquiry is not useful to them, and a feeling of being 'compelled' to do it, to avoid missing something. The following student seemed to have come to a reluctant conclusion that it would not be appropriate to ask all the questions of every patient:

S3: I think doctors are particularly bad at it [the systemic enquiry] *as well, when you see consultants in clinic and when you see people clerking patients on the wards, things get missed.*
Int: What do you see, what do they do?

S3: Em, they often rely on the past medical history to pick up anything relevant and will ask about associated systems within the history of the presenting complaint, like you know, it could be relevant because if there was a person with abdominal pain, sometimes they turn out to have a chest infection and then your systems enquiry might throw up other symptoms of that which will save you a lot of time and make you think a bit quicker, but I don't know a way around that, it is difficult. I think I am moving towards a more problem orientated clerking which cannot be comprehensive, you cannot sit there with a 20 page proforma and go through it and just tick boxes can you?

(S3 V 34-40)

There was no suggestion that this change in the students' understanding of the 'history taking' process was influenced by any teaching or formal guidance. It appeared that they were gradually rejecting the formally taught system of 'history taking' (the student-clerk perspective), because they did not find it useful, in favour of the focused history of the doctor-practitioner perspective. But as this was not acknowledged by students or teachers, they experienced a continuing discomfort, expressed in their anxiety not to miss things.

The rationale from the patient-person perspective: tension with other perspectives

There were very few reflections from this perspective on the rationale, and several of these related to the tension with other perspectives. For example, one student found a tension between 'being natural' which I have interpreted as a patient-person perspective, and not missing things (student-clerk):

S6: I could have had a lovely conversation, I've probably got about 50% of what I needed, you know, and I find that difficult because you know it's not totally natural if you do try and get everything in and on the other hand it is better than missing something out and having to go back.

(S6 V 20)

However, one student described having some valuable teaching in a general practice setting, and had read a booklet about the examination for Membership of the Royal College of General Practitioners, which advises a patient-centred consultation method:

S4: I did read the MRCGP booklet and there was one particular style of consultation which was to interleave factual questions with emotional questions and that was the most satisfying consultation I had all year was – she had a miscarriage and...

(S4 V 114)

This approach may have been a way of resolving the tension between what was probably a doctor-practitioner perspective with a patient-person one. However, this student also said in relation to this same method: *'within* [the] *general practice setting that certainly was taught us, but in hospital, not interested and that's the way it is.'* (S4 V 114), so it seems likely that he may not have continued the use of this form of questioning.

Watching clinicians

In the third year interviews, students commented frequently on how doctors rarely took 'full histories', and tended to equate 'taking a history' with the data gathering exercise of the student-clerk perspective. A number of explanations were provided for this, including a lack of time and experience, but two students also expressed some uncertainty about the rationale for taking a 'full history' in the light of this.

In the interviews with final year students, again a major theme was the observation that doctors do not take 'full histories', but some of the explanations were different. Time constraints and experience were again mentioned:

S3: Em, the consultants take short cuts because of the experience they have, their time limitations perhaps, and the SHOs ask perhaps more questions but they are also limited by time and take short cuts because of the nature of emergency admissions I suppose.

(S3 V 50)

However, a number of the explanations provided related to the fact that the doctors were 'taking histories' for a specific purpose, for example:

Int: Have you watched many consultants taking histories?
S: Yeh but to be honest they are so specialised they will ask the specialised information relevant to how they would clinically manage them which is kind of more their role because - well mostly by the time that they get them its not like their - I mean it's

different with pain, different with back pain and stuff, but if they've got the most likely diagnosis you know they've already got that bit, and they are looking a bit further, whereas we are still looking at a step back from them if you see what I mean.

(G2 V 165)

In this case the student recognised a specialised doctor-practitioner perspective as being different from a student-clerk one. Other comments suggested a view that the histories were fit for their purpose, for example:

S5: ...the only time you see the consultant or registrar taking history or examination would be in clinic.
Int: And when they see a patient for the first time do they take a full history?
S5: Brief, I mean not brief but I think it's enough for what they're dealing with.

(S5 V 89)

However, no student asked whether the long histories expected from the student-clerk perspective were fit for their purpose, and, unlike in the third year, no student in the fifth year interviews questioned the rationale for either the consultants' or the students' methods of 'taking histories'. An exchange in a group interview illustrated their acceptance of the situation:

Int: Do you watch many other people taking histories?
S: Not usually to the length that we do in that it's not usually a full history
S: In out-patients it's never a full history, I've never watched someone do a full history actually and examination and know all their social history, blah blah, but in out-patients you'd know the important questions they asked about that because you could watch them and learn about the history of presenting complaint and stuff like that and in casualty I used to go with the registrar to hear what questions he asked. But never a full history.
Int: So why do you think they don't take full histories?
S: If we'd seen them already and maybe they think we've already done it, so they don't need to ask so much.
S: Could be the joy of having housemen.

(G3 V 137-142)

I have referred later to this lack of questioning of a confusing situation in the section on 'the culture of medicine', on page 135.

Students also described a variety of behaviours that they had observed that they could learn from, either by copying or by avoiding them. All three negative comments were about doctors' attitudes, including *'they come along and ask rude questions, write it in the notes and carry on' (S4 V 90),* cynicism about patients and an apparent insensitivity to patients' feelings. These comments suggest that, in spite of much less focus on the patient-person perspective in the interviews, some students did continue to value it.

Anticipation of becoming a house officer

The students interviewed in their fifth year expected to pass their final examinations and start work as a pre-registration house officer either within three to four months, for the students who were taking the accelerated course, or in around nine months, except for the one student who was only in the penultimate year after taking an intercalated degree. The following comment illustrated their anticipation of the change in priorities:

> *S: It's also learning to take a step back as well, does this patient, do they look well? You are too stressed and busy thinking have they got these minute kind of things in the 3rd year you don't actually think - I guess it's the fact that we are going to be doctors, well hopefully, and you know we are thinking - certainly in the last few months I have been thinking beyond way beyond practising and how it 's been useful to me, you know who cares if we've got minor things but at the end of the day as a house officer would I be worried about this patient or not?*
>
> (G2 V 99)

The crucial advantages of taking a focused history as a house officer were well described by a second student:

> *S: It's like phoning up your reg* [registrar] *at 4 o'clock in the morning, someone with a groin lump you've got to know this, this and this if you're going to get them out of bed, that's what.*
>
> (G2 V 106)

These comments suggest that the students had little doubt that the student-clerk perspective would often be abandoned when they were carrying responsibility as house officers.

Other influences on how students learned to 'take histories'

Individual students also mentioned a range of personal experiences and issues which influenced their learning. These included time spent abroad during an elective period in an underdeveloped country, personal illness and an awareness of personality traits. As it was difficult to include specific individual issues in an explanatory model, I have not discussed these in detail, but they highlight the complexity of the learning process. Students also mentioned several teaching methods that had been helpful, including the use of video and feedback on this. Where I had no information about how this had influenced students' learning or their approaches to it, but merely that they had found it helpful, I have not discussed these further. All these comments are listed in the index of codes in Appendix F

Students' approaches to learning to 'take histories'

The fifth year students appeared to be experiencing a tension between the perspectives, as did the third year students, but with the balance favouring the doctor-practitioner perspective in favour of the other two, resulting in a clearer rationale for the 'history taking' process. It was of importance, therefore, to ascertain whether this was associated with a change in the students' approach to learning.

As in the third year interviews, in my analysis I attempted to identify all statements made by students which suggested a particular approach to their learning task, and to distinguish those aiming to gain understanding (deeper approaches) from those aiming to reproduce either behaviour or knowledge (surface approaches). In the third year, students described taking a deeper approach only in limited areas, and described using lists and a surface approach in others, with some suggestion that they would like to have adopted a deeper approach, but were discouraged from seeking understanding by the lack of a rationale for the 'history taking' process.

In these final year interviews, the great majority of the statements about approaches to learning suggested an intention to gain understanding. On the other hand, there were very few comments suggesting a surface approach and I have attempted to identify and discuss all of these.

Seeking understanding

A number of comments indicating that students were attempting to understand what they were doing concerned 'working things out', for example:

> *S2: I just want to practise tailoring my histories to that problem and working out what is relevant.*
>
> (S2 V 85)

Some students recounted how this had changed since their third year:

> *S: ...when you come into the third year you just say, you don't really know anything at all and you need to be sort of just led through this by the hand...like now you ask this, now you ask this, because you just haven't really got a clue and it's not until you've done all the other sort of attachments, you've learnt that the obs and gynae history is like this, the orthopaedic history is like this, that you can actually then see /?/ in your patient then and you will be able to work out something at least.*
> *S: It all has such a beautiful logic to it anyway - when you've got it all, you know, because it's obvious the most important thing to the patient is why they're there and then what builds up to them getting there, what they've had in the past...*
>
> (G1 V 256-259)

As well as the intention to 'work things out', there were observations about the value of asking teachers to explain why they should do things differently, for example:

> *S: The main thing's just presenting to someone and finding out that you've either done something wrong and should learn from it, or you should do something some other way. The experience of actually doing that helps a lot that's the main thing that changes how you do things, you sort of always remember after that.*

Int: And do you usually know the reason why you've been asked to do it differently?
S: Yes, depends on context, but most of the time they will [explain] *if it's not something really pedantic they will, and if it's someone more junior, you are much more likely to ask them why much more often.*

(G2 V 145)

The intention to work things out, and to ask questions when things are not understood, are both key aspects of a deeper approach to learning. In addition, related comments included a description of reading books in a different way in the final year in order to understand, and a comment that consultants were good teachers because they always made sure that students understood. A student quoted earlier also made it clear that being clear about the purpose of 'taking the history' made it easier to decide how to 'tailor' it:

S2: ... I think now the aim is to focus on what the presenting complaint was, and try and try and tailor the rest of the history to that and think more about why I am taking a history and you know, what use is it going to be for this patient for the future.

(S2 V 14)

In contrast to the trial and error approach described in use by the students in the third year, when students learned whether their histories were satisfactory or not, but not why, final year students expected to understand the reasons. The following student, discussing the value of feedback on 'history taking', pointed out that feedback was more constructive when accompanied by a reason:

S1: And definitely when I've done something - not wrong - but done something differently to somebody else, you know, when the criticism is more –[not] *'I wouldn't have done it like this, I would have done it like that'* – [but] *'I think it would be much better if you did this or did it my way because', rather than 'like that'. For me this is more constructive.*

(S1 V 64)

Unsurprisingly, all these comments were associated with a degree of confidence missing from the third year students' discussion.

Surface and strategic approaches

There were very few occasions when final year students described memorising facts or using lists rather than 'working things out'. The one exception was when they were carrying out the systemic enquiry, their discomfort with which I have described on page 124. One student in this group interview used a standard list for this part of the history, and suggested that this was not related in any way to the patient's problem:

> *S: I'm still doing that* [asking a list of questions] *now in surgery.*
> *S: You still, you develop your screening questions don't you, you don't just ask everything.*
> *S: Well yes, but I have a criteria of questions that I ask everybody...whether they've come in for obs and gynae or surgery. And that's the systemic and I don't really have any extra ones that I would ask any differently because I suppose my specific ones I would ask in presenting or history of presenting complaint I would ask my specific ones then, so my ones I've kept for the systemic are ones that I'd ask absolutely everybody.*
>
> (G1 V 102-106)

The following exchange, which was more typical of the final year, illustrates how students could use a list but also work out what might be useful questions to ask, although this may have been in response to a somewhat leading question:

> *S3: ...you do tend to work to a list.*
> *S3: And for each symptom, you need to make sure you've got you know, onset, when did it start, did one start before the other - how long its been going on for, how severe they think it is. All those things you'd ask for pain you can ask for any symptom can't you.*
> *Int: Is that a list that you've memorised or does it have some specific function - you can work out each question from the one before?*
> *S3: I think it's a bit of both because there is a list that I always ask about pain, which you could relate to like swallowing or stuff like that which would relate to all of them but then to work it out in your mind what is going on you might change the question or ask something different.*
>
> (S3 V 28-31)

Directly following on from that, this student acknowledged that, while she could work out what was relevant and focus on it, she did not always try to understand why she was asking a specific question, and that she did not *'yet'* leave out parts of the history that she thought were not relevant. This appears to represent a continuing tension between a deeper approach associated with the doctor-practitioner perspective, and a surface or strategic approach associated with the student-clerk perspective.

> *S3: I think you work from a framework that is probably like a list and you just memorise from- is it Macleod or something- but as you work with the patient you know what is relevant and what is not so you pick up particular details and maybe ask details that aren't in the book - you just have to define it... but I don't always ask myself why am I asking this question. Like why is it important to - I don't always ask that - think that and then decide to ask it, I sometimes just ask.*
> *Int: If you, I mean do you think that if you were to ask yourself that question you could easily have answered it?*
> *S3: Probably, in most circumstances but then maybe things that you've found in the history you maybe not bother asking about a certain system if you didn't think it was relevant, or whatever and I don't do that yet, I still ask about everything, just to make sure that there isn't anything else going on.*
>
> (S3 V 33-36)

These were all the statements which represented a surface approach to learning to take a history, and each had some qualification. On several other occasions students mentioned using lists, but on each occasion this was again qualified, suggesting that this process was not entirely desirable. One student described having to use a list in an examination, implying that it was to satisfy the whims of a particular consultant:

> *S4: ... and in that exam you've got 20 minutes history and examination, so for that one you've just got a list of questions you have to ask in the 20 minutes otherwise* [a consultant] *will fail you.*
>
> (S4 V 20)

This same student mentioned using a list sometimes when the diagnosis was not in doubt, and added *'which is bad'* (S4 V 31). Another student was describing the practice of

abbreviating the list of questions asked about neurological problems in the records, and the temptation to do this in a written assessment:

> *S6: hang on this is a neuro write up I can't do this, you know, so I did list everything and it's very tedious and I am sure for the marker, but it has to be done, so.*
>
> (S6 V 28)

These last two comments appear to be a strategic approach to manage the tension between the doctor-practitioner and student-clerk approaches. Whereas several third year students had mentioned an approach to learning which mentioned the patient, I identified only one example of this in the final year:

> *S: I think I've learnt more from my own trial and error, presenting to people and finding what they've done, and how the questions have gone with the patient than I have by watching other people.*
>
> (G1 V 188)

This underlines the move in the focus of the students away from the patient-person perspective since the third year.

The culture of medicine

I did not ask the students directly about their views on the medical culture, and the students did not volunteer views on it very often. There are at least two possible explanations for this. Atkinson (1997) commented that medicine has become such an intrusive element in contemporary culture, by virtue of its representation in the media, that it is almost too familiar to observe. He cited Geer (1964) who described the difficulty for untrained observers of observing in a hospital: *'It was a hospital, they say; everyone knows what hospitals are like.'* Secondly, during the process of socialisation within a culture, it is uncomfortable and difficult to view that culture critically from the outside, or to question its rituals. However, the findings of this study must be interpreted with an awareness of the culture in which both interviewer and interviewees were immersed.

The issues that did arise were the medical language, 'playing the game' for consultants and in exams, and some descriptions of the professional role. The following students explained how lay terminology may be perceived as *'wiffly-waffly'*, whereas translating fluently into *'medicalese'* gains credit:

> *S: I have difficulty with medicalese or whatever you call medical language. I do feel sometimes it's a bit like learning a new language and I am not fluent in it, so that's why I feel less confident in presenting.*
> *Int: That's interesting*
> *S: I think it's a combination of whether your brain is in gear at the time, whether the patient is giving it to you in an easier form to try and translate as it were.*
> *S: Yeh, you do have to translate don't you?*
> *S: And so if you know they are saying - I itch all over and you are sort of not quite with it - you just write 'itch' and it sounds wiffly-waffly, but if you are with it you write pruritis.*
>
> (G2 V 46-50)

The use of the term *'play the game'* by the following student related to the examination situation, but the game played was clearly the medical one:

> *S1:...- that is very much an example of what you do everyday, very very different from what you do in the exam- I suppose you play the game, a bit like the driving test...*
>
> (S1 V 98)

Understanding the 'rules of the game' in the final year, as compared with the third year, especially when different consultants had different views, appeared to result in a gain in confidence:

> *S: I feel the worst thing for me in the 3rd year was the fact that I was learning how to take a history and then what questions to ask and every consultant wanted it in a different order or different questions or just completely different. Now I'm a 5th year I know that it really does not matter as long as I have the important clinical findings in a structured format, being specific in all the nitty gritty - I know that doesn't matter now, but in the 3rd year we used to have - I'd be going through it talking amongst my friends*

and they'd go 'no you do it like this' or 'no, you missed the so and so' was just a nightmare. It's all different from the books.

(G2 V 51)

In comments on their developing professional identity, one student described the histories he 'took' in the final year as *'slicker, more professional'* (S2 V 20) in an interesting association of 'professional' with 'slick' which may sometimes have negative and non-professional connotations. Another student expressed some continuing surprise at the privileges of the doctor role:

S3: When you are a 5th year you have to, like, go into doctor role and it follows on when you do the examination as well, I have to get over the kind of thing that you are allowed to touch people and you are allowed to examine them, so yes, part of that is having a doctor role and feeling that I have knowledge and that I am doing a worthwhile job taking their history.

(S3 V 112)

These issues cover the range of views expressed by all the students except one, who had a different and more critical perception of the medical culture. This student had recently failed an assessment, and reflected on this experience:

S4 ...as the year's gone on and I've heard all the different exam stories I've got more and more cynical about the exams and I've realised that there again there are hoops that you have to jump through to join the elite band of doctors and they are absolutely nothing to do with true medical practice, but they are things you have to do.

(S4 V 84)

The same student described negatively the pressure to conform, which other students had been more accepting of, in their description of 'playing the game'.

S4: ...if you don't do it the way your seniors expect you to do it and if you don't learn it the way they do it you will not survive, and the pressure to pass exams and to know the questions and do it and be competent is do or die.

(S4 V 112)

Although these views may have been in part a response to the situation, the same student was similarly alone in expressing critical views of the hierarchical aspects of the medical culture in the third year:

> *S4: They're the ones* [junior doctors] *that play games as well, on the wards. You know you want some help, have you got any patients? And SHOs they really like you to sort of bow down, say I know you're so busy, but do you have any patients you think I could talk to, oh you're so kind, thank you so much.*
>
> (S4 III 181)

This student appears to have felt some discomfort about at least some aspects of joining the culture. The other students appeared to have gained enough confidence by the fifth year to 'play the game' in many situations, and to recognise that they were doing this. However, no student in the fifth year made any suggestion that the 'full history' associated with the student-clerk perspective might have any association with the culture of medicine, while two students had appeared to be questioning this in their third year. In their fifth year these students appeared to have more confidence to ask questions of their teachers, but found it more difficult to question the culture and practice of medicine and medical education, perhaps because they were more embedded in it.

Summary: learning to 'take histories' in the fifth year

Figure 6.1 on page 140 illustrates a possible explanatory model of how the students interviewed were learning to 'take histories' in their fifth year, and how this has changed since the third year. The three perspectives and their main focus in the fifth year are shown under 'perception of task'. In the fifth year the doctor-practitioner perspective was prioritised, the influences on this in the students' experience of the curriculum being teachers' expectations, improved understanding of observations of clinicians, students' clearer role in clinical settings and the ability to make diagnoses, and the need to consider their future role as a pre-registration house officer.

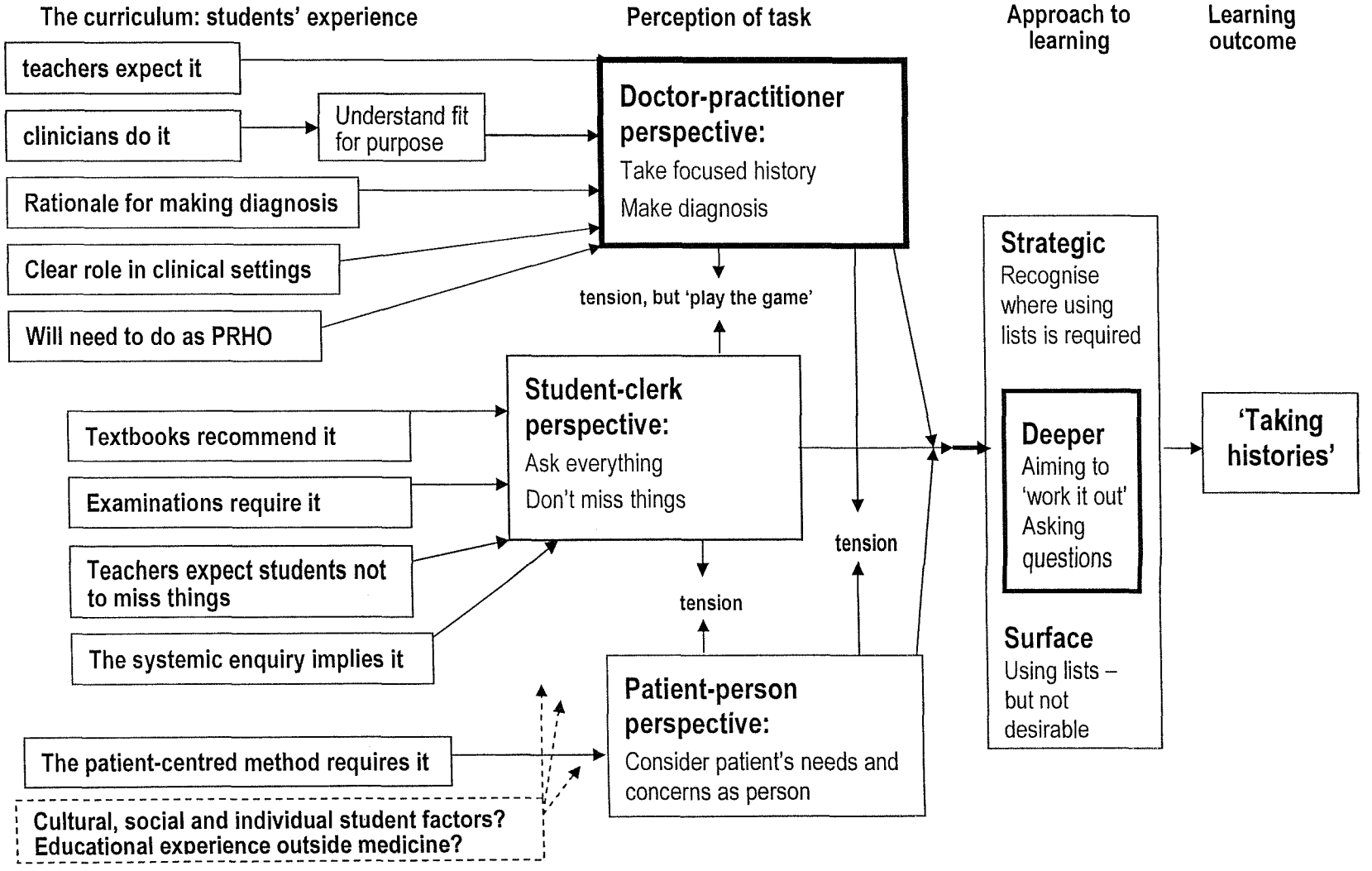
However, there were still pressures to take a student-clerk perspective, from textbooks, examination requirements, and a fear of 'missing things', particularly emphasised in the

use of the systemic enquiry. These two perspectives were in tension with each other, but the students appeared to have learned to 'play the game' to resolve these. The students focused less on the patient-person perspective in the fifth year interviews, but one student identified the advantages of the patient-centred method in resolving the tensions between the patient-person perspective and the others.

The students' use of the doctor-practitioner perspective facilitated the use of a deeper approach to learning, trying to 'work out' what was going on, when 'taking a history', although students still occasionally used memorised lists reluctantly.

While the student interviews shed light on their own perspectives in relation to the purpose and rationale for taking histories, I did not ask them directly about their views on their teachers' perspectives, and they volunteered little about this. Instead I interviewed teachers about their own perceptions of the 'history taking' task, and how this influenced their behaviour with students. This is the topic of the next chapter.

Figure 6.1 Learning to 'take histories' in the fifth year: an explanatory model



Chapter seven: The teachers

In order to examine the extent to which students' perceptions of the tasks and rationale for 'taking a history' were influenced by the perceptions of their teachers, this chapter describes the analysis of interviews with ten doctors who were involved in teaching the students this skill. This chapter must be interpreted in light of the fact that, although students have the majority of their experience of 'taking histories' in year five, the only formal teaching about it takes place in the earlier stages, in year two and year three. The teachers' perceptions of the purposes and rationale for students are therefore focused on these two years. I did not specifically ask them if they would have had a different view for fifth year students, but some did mention that this would change.

The main finding arising from the interviews was that teachers tended to hold one of two contrasting perceptions of the students' task, and hence the rationale for the 'history taking' process. Some teachers perceived the task as being one of collecting information about a patient for present and future reference, so that the 'history taking' process was not much influenced by the task of making a diagnosis. This was in line with the students' student-clerk perspective. Others felt that the task of the student was to work out a diagnosis or how to help the patient, and that 'taking the history' was part of this process, similar to the students' doctor-practitioner perspective. The main difference from the students' views on 'history taking' was that the teachers appeared to adopt either one of these perspectives or the other, while students mostly used aspects of both.

In addition, aspects of a patient-person perspective were almost universal within the group interviewed, and overlapped frequently with both the others. This perspective saw a key task of the students as making a relationship with the patient and finding out about their individual stories and concerns. It did not appear to guide the rationale for 'taking a history' for these teachers, but existed in parallel with the 'history taking' process. In published accounts of patient-centred medicine (Stewart et al, 1995) and of communication skills (for example Silverman et al, 1998) this perspective does provide a rationale, but this literature is mainly used in primary care contexts (see page 29).

The analysis is divided into a section on the teachers' views on the students' purposes or task while taking histories, followed by a section on the rationale for the process, describing the different perspectives in each section. This is followed by a section on the teachers' observations of the students' learning processes, to illuminate further the students' own accounts of this.

The interviews

Teachers were selected and recruited in order to maximize the range of different specialties and levels of experience, as described in chapter three, and their characteristics are shown in Table 4.3 (page 76). All had experience of teaching medical students to 'take histories' in the early years of the course. I did not interview any general practice teachers, as discussed in chapter four.

I have only mentioned the disciplines of teachers in the text where this aids the interpretation of their observations, and as I wished to preserve anonymity wherever possible. Teachers are identified as T1, T2 etc, up to T11, with the exception of T3. The interview with T3 proved impossible to transcribe, due to building work affecting the recording. This interview was with an individual in a gender/experience group which was already represented in the sampling matrix, and instead of repeating the interview, I carried out an additional interview (T11) in a relatively under-represented group. The quotations from the transcriptions are identified by the interviewee and the number(s) of the text units as before, and the conventions for representing the transcriptions are as shown in table 5.2 on page 89.

All the teacher interviews were carried out between October and December 2001, and took place in the teacher's office, or, in one case where the office was shared, a meeting room in the hospital. They varied between 25 and 45 minutes in length, and tended to be squeezed into busy schedules, resulting in less relaxed interviews than those with the students. In spite of this, it was notable that there were considerably more volunteers (proportionately) for the study from the teachers than from the students. This may suggest that the topic is of particular interest, or perhaps that the interviews were timely, coming at a time when teachers were considering how they should teach students to 'take histories' in the new Medicine in Practice course. The interview guide is provided in appendix D.

Some of the data in the interviews did not relate directly to the research questions, or to the main arguments, and is not discussed in the analysis. In order to provide an audit trail and support my selection of the data quoted, I have provided an index of the 'units of meaning' coded for all the teacher interviews, sorted into themes and categories, in appendix G.

Teachers' perceptions of the students' purposes

There was little consensus among the teachers interviewed about the student's aims or task when 'taking a history', and sometimes lack of clarity in the expression of these. No teacher suggested that 'taking a history' was an end in itself, but its purpose was rarely volunteered. This may perhaps have been due to an assumption that this would be familiar to me as a fellow clinician, but may also be because this is a question which is not commonly considered by teachers. One teacher admitted that they had not previously thought about what would comprise a 'good history', implying that some of the skills taught are not always questioned:

> *T6: I suppose a good history is the one that doesn't leave me asking any more questions, the symptoms are described fully in terms of their intensity, timeliness and issues around symptoms and direct questions support that and the remaining, ancillary sections, drug history, family history, social history are covered - I suppose. I've never really thought about it, I'm sorry.*
>
> (T6,15)

Tasks or aims mentioned by the teachers in response to my question fell broadly into three categories, corresponding with the three perspectives. 'Doctor-practitioner' tasks included making a diagnosis, planning examination, tests or treatment, as illustrated by the quotation above, 'student-clerk' tasks consisted of gathering comprehensive information about a patient, and 'patient-person' tasks included making a relationship with the patient and finding out about their individual stories and concerns. Nearly all teachers identified this latter as being of importance, but tended to prioritise only one of the others in addition. I have illustrated these under the headings of the perspectives.

The doctor-practitioner perspective

This was illustrated clearly by one doctor, who articulated the tasks to me, but explained that they were implicit rather than explicit to students:

> *Int: Is there a point when you say, or perhaps you get them to work it out, what the aim of this history taking is?*
> *T8: That usually emerges from the discussion. It's not a question of me saying this is why you are doing it, it becomes obvious, they know why they are doing it.*
> *Int: What is why they are doing it then?*
> *T8: The reason why they are doing it is because at some stage they are going to have a specific function to play in their relationship with these people we call patients and depending upon what form of medicine they go into, that might vary, but the bottom line is they need to find out what's wrong with the patient and they need to make a plan of how they can help, or decide they can't help, or whatever, that's the bottom line.*
>
> (T8, 21-24)

The doctor-practitioner perspective was often linked with an associated patient-person task, as for example:

> *T11: Well I think if you look at it from the point of view of a student, obviously the key thing is they want to know the complaints so that by the end of the history they've got some idea of a differential diagnosis and the whole point of what we are here for is to find out - when a patient complains try and attribute it to a system and make some sort of differential* [diagnosis] *and then manage the patient, but I also say to them that it is not just about that, not just about getting a diagnosis and list of differentials at the end it is about communication, about establishing a rapport, creating an atmosphere of trust.*
>
> (T11, 12)

It is of note that both these quotations use the term 'find out' in relation to the student's task, highlighting the relationship with a problem solving approach , in which finding out the diagnosis formed the rationale for the 'history taking' process. This was made explicit by the following teacher:

> *T8: When you say take histories, I mean, you can't really, I don't think you can distinguish the concept of taking a history from the analysis that goes with it, so yes a lot of my teaching in the final year also involves those same areas, I just don't think you can distinguish them, I think its all part of the process of medicine.*
>
> (T8, 2)

Some teachers were less clear about the analytical aspects of the process, but identified the same issues, in the following case while additionally giving the patient-person perspective priority:

> *T2: I think first and foremost they need to be able to establish a relationship with the patient... So once you've done that, then after that it is about getting the sort of facts of their problems and trying to then develop that in a way that will guide you in terms of the examination and subsequent investigations.*
>
> (T2 20)

The student-clerk perspective

This perspective was exemplified by the following, in which *'full data collection'* is recommended, as a skill to be learned entirely independently from the attempt to make a diagnosis:

> *T1: I think it is a matter of full data collection so that they are able in the end, when they've done a full examination, to sit down and gather it all together and write a clinical impression of what the situation is in which the patient finds themselves ... and eventually to make a diagnosis if they can, but I don't think diagnosis is as important as all that, especially at 3rd year, because they don't know any diagnoses. But they need to be able to gather the information so that when they know diagnoses they are able to interpret it and make a diagnosis because you can't make a diagnosis without you get the information and at this stage they can get information but they can't make diagnoses because they don't know them, but if they don't do this properly, when they are clever enough to make diagnoses they won't gather the information to make them.*
>
> (T1, 21-23)

Sometimes it appeared that the collection of information for the history was the aim in its own right, as in the following example, although this teacher mentioned starting to make a diagnosis later on:

> *Int: What would you like the students to be aiming at in their history taking overall?*
> *T4: I think you do it in stages, honestly early on it has to be to some extent nuts and bolts, just getting in their own mind a picture of the blocks of history taking, that seems to take them quite a long time to grasp, presenting complaint, systems review, past medical history, drug history, social history, family history. I think it is important to have that sort of framework.*
>
> (T4, 16,19)

Another issue was the need for the recording of information as a legal record, in addition to being used for diagnosis:

> *Int: So, what is it for? When you are asking what the history is for, what's your answer?*
> *T10: Okay, the answer is that it's a communication tool for your colleagues. Diagnostic tool for you on the spot, but in reality within hospital practice it's a critical document about your findings at that time, so there's the medico legal issues about that.*
>
> (T10, 25-26)

While the first two of these examples might provide the students with a framework in which to present information about a patient, they give little help with a rationale for including or excluding information. The third example, on the other hand, could be used as a rationale for recording key information (assuming this could be clearly identified) in addition to that used for diagnosis and management, thus including data gathering within a doctor-practitioner perspective.

The patient-person perspective

As seen in some of the examples already quoted, many teachers saw making a relationship with the patient as a key task. A second aspect of this perspective was the aim to understand the patient's story and their concerns, as emphasized in the following example:

Int: What do you suggest that the students aim at when they are taking a history?
T7: Get an overall picture of a patient, what they think is wrong with them and what has actually brought them there and what other influences there are, in particular any stresses, strains or family involvement.

(T7, 17-18)

A further aspect was the aim to gain a realistic understanding of the patient's symptoms in the context of their lives, for example:

T4: I say very much to the students, try and get the patients to describe their symptoms in context, get a mental picture yourself... try to imagine the patient with angina or with claudication, having to stop in front of every third shop or something like that, to look in the window in order not to be embarrassed, just get them to give you a real thumbnail sketch of what it's like so you've got it in your mind.

(T4, 15)

Teachers' perceptions of the rationale for teaching students to 'take a history'

These were again characterised by the contrast between the doctor-practitioner and student-clerk perspectives. In order to illustrate these contrasting views, I will describe these two perspectives together in a series of different topic areas. This is followed by the one example of a tentative patient-person rationale.

The ideal history

The contrast between the perspectives was particularly clear when teachers were describing their concept of an ideal history, as taken by a third year student. A typical doctor-practitioner view was:

T2: I think an ideal history is basically one which is succinct, not too verbose, and has identified the key features of the patient's concerns and problems and has bought to a head those aspects of the clinical problem which require further investigation.

(T2, 22)

A student-clerk view of an ideal history, on the other hand, was not likely to be succinct, as illustrated by the quotation on page 143 (T6,15), where the teacher described the comprehensive nature of what might be involved, leaving no further questions to be answered, although admitting that they had not thought about this before. A further teacher commented in relation to a good history in the early part of the third year: *'So it would have to be extremely long and tedious, which it usually is'* (T10, 22). It is notable that, unlike the doctor-practitioner perspective of the ideal history, neither of these latter accounts offered any justification for their comprehensive or tedious nature.

The focused history or asking everything

The tension identified between the perspectives by students, entailing a choice between focusing on the presenting complaint and asking everything, was reflected in the views of teachers. The doctor-practitioner perspective required a focus on a particular problem in order to 'solve' it, and some teachers encouraged students to do this, for example:

> *T11: ...the history taking is to really concentrate as much as possible as much as you can about that history of presenting complaint, and time after time when I have presented to me the histories they have taken, they will give me 3 or 4 lines on the HPC* [history of presenting complaint], *and the thing I always say in the feedback, is fine, you've listed the presenting complaint but there is not enough detail.*
>
> (T11, 8)

The following teacher, on the other hand, illustrating the student-clerk perspective, considered that focus was not appropriate, because everything might be relevant, if not now, in the future:

> *Int: How would you distinguish between something that was within your complete history and something that you thought was superfluous to a complete history?*
> *T1: I think they only learn that by putting it all in and learning by experience what can go in the past history and what they can not put in - I don't think there is anything that is superfluous if the patient volunteers it because quite often they will volunteer*

something which may seem not relevant at the moment, but you put it on one side where you can find it and it may become relevant in a year's time or six month's time.

(T1, 42-43)

Thinking through the 'history taking' process

The doctor-practitioner perspective was also characterised by a specific encouragement to the students to think through what they were doing, but there was a perception from both teachers and students that this might be unusual, for example:

T8: ...they had been taught by all of my colleagues and they were going through the sort of, you know, this is how you take a history and all the different categories and stuff like that and it was quite clear that what they weren't doing and no one had given them, if you like permission to do it, was to actually think about what they were doing and actually trying to put it together and realise that it was actually a two-way process and unless they started thinking about things from the very beginning they couldn't actually take an adequate history, so they were sort of saying things - you mean you want us to actually think - yes, that's part of the - and no one had actually told them that and there was a question that you had to give them permission to do that before they felt able to do it and they found it quite scary and radical...

(T8, 6)

A less experienced teacher appeared to be moving from the student-clerk perspective to the doctor-practitioner one, and had come to the conclusion that thinking through the 'history taking' process would be useful, but implied that this would not be the norm:

T9: I find it a bit odd if someone is watching me taking a history, but I think probably it's just practice and time, but perhaps we just need to think about explaining to people what we are doing and why, so instead of just giving them a long list of potential questions you've got to explain why you are doing it.

(T9, 47)

From the student-clerk perspective, one teacher implied that thinking should be limited to not asking questions that had already been asked:

Int: And do you expect them to do any sort of thinking through the questions that they ask as they ask them.
T1: Oh yes, and the systems review will vary to some extent because they won't ask them about the chest pain again in the systems review if it's been in the history.

(T1, 26-27)

The patient-person perspective

There was only one example of a rationale leading from this perspective, and this teacher acknowledged that they had to teach the conventional method, but on other occasions demonstrated a different approach to the students:

T5: The history, I suppose, because I only do one or two systems, I am not too bothered about the history in the sense that there are specific questions that they are expected to ask about if they are examining a respiratory system, it's in the books and it's fine. But what I do do is at other times demonstrate that story telling by the patient is far more rich and productive in what the real issues are than the history, and, as you may remember or not, when they come here later on in that year I do that with live patients.

(T5, 14)

However, this teacher had some anxiety about how this was received by students:

Int: And do you see any relationship between what you were doing and what they would conceive to be taking a history? Do you see what I mean?
T5: Yes - that's a very interesting question, I can't tell from that little group but previously I felt that they thought that was really not relevant to what they were there for, they were there to learn how to take a history.

(T5, 21-22)

Judging by this sample of ten teachers' diverging views of the rationale for the process of history-taking, it seems unsurprising that students are unclear about a rationale for the skills they are learning. I also asked the teachers for their observations of the students' learning processes, in order to illuminate further the students' accounts of these.

Teachers' observations and reflections on the students' learning processes

A number of these observations further highlighted the difficulties which both students and teachers are facing, with the differing perspectives, and current absence of any consensus about a rationale for 'history taking'. Many of the difficulties described by teachers reflected the tension between the different perspectives.

A number of teachers commented on the initial difficulty for students of asking personal questions, illustrating the difficulty for students of learning to adopt an appropriate patient-person perspective alongside either of the other perspectives, for example:

> *T4: ... they are faced with a senior person, the patient, and they are expected to ask them all sorts of intimate, if you like, questions you wouldn't dream of asking somebody if you met them at a party.*
>
> (T4, 9)

A further observation showed a more specific tension between the patient-person and student-clerk perspectives, describing how students were hindered from listening to patients by having to remember a string of questions, particularly within the systemic enquiry:

> *T10: then the other thing they do find difficult is they are desperately trying to remember all the questions they ought to ask, ...they tend to sort of make sure they've asked the right questions and go onto the next section without actually stopping and having time to absorb what the patient may or may not have had time to tell them, ...they know that they are going to be expected to know the answers to about a dozen systemic enquiry questions and things like that and you can feel them ticking them off and not really - and the patient giving quick answers to get them off their back - and not really getting a full picture.*
>
> (T10, 41)

One teacher commented on the separate communication skills and history-taking teaching, and suggested that the former might be difficult for students to use without first clarifying the nature of the structured history-taking expected of them.

> *T10: there was a communication skills session here, not mine, a colleague's, and the students came along and said they wanted to learn how to take a history and that wasn't what they were going to be taught and they were not very tolerant in the beginning and I think it could . .*
> *Int: It's interesting, those two are separate then isn't it?*
> *T10: Yes, well they wanted to learn - what they wanted was they wanted the structure, they wanted the paediatric structures so they could hang things on that, and maybe that's going back to what I was saying in the beginning that until they've got the security of the structure around them they cannot sort of flesh it out with the qualitative stuff around doing it well.*
>
> (T10, 44-46)

This suggests that the teaching programme, with its division of teaching about communication skills (usually emphasizing the patient-person perspective) from teaching about taking histories, may be increasing the tension between the perspectives for students.

The observation of one teacher that students felt they were not permitted to think has been mentioned earlier:

> *T8: ...so they were sort of saying things - you mean you want us to actually think - yes, that's part of the - and no one had actually told them that and there was a question that you had to give them permission to do that before they felt able to do it and they found it quite scary and radical...*
>
> (T8, 6)

Another teacher observed the students' lack of confidence about their role and tasks, and remembered having felt the same as a student:

> *T9: They are not very forthcoming with what they've done already, they always look 'oh I don't know', but then I think possibly that's - I think when we were - we were never*

> *confident enough as students to say, 'oh yes we've done that we need to do this, we were like, 'I want to be taught, I want to be guided' and I think a lot of us forget when we go up, we forget how unstructured they feel and how they really don't know what they are supposed to be doing and so I just feel that you have to be quite clear about* [giving instructions].
>
> (T9, 21)

These teachers appear to be have been aware of some of the tensions and difficulties for students, but there was little consensus about how these might be resolved.

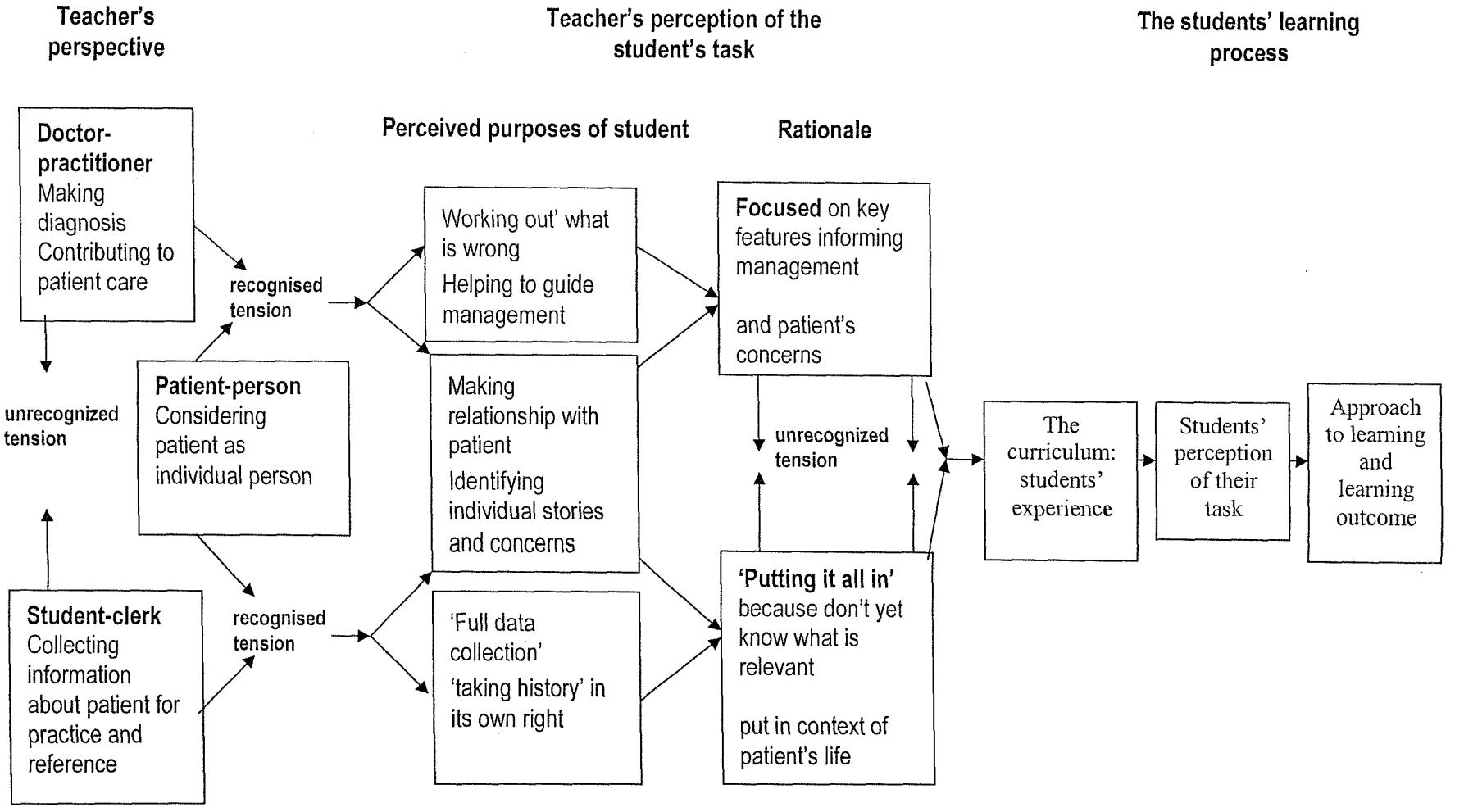
Summary: the teachers' perspectives

Figure 7.1 (page 155) summarises the teachers' perceptions of the students' tasks and rationale for 'taking a history'. These were wide ranging, but tended to link either with the doctor-practitioner perspective or with the student-clerk perspective. This was in contrast with the students, who mostly expressed aspects of both, and sometimes found this confusing. In addition, nearly all the teachers also emphasized the patient-person perspective, which could exist in addition to either of the others, and the rationales expressed by teachers tended to link their two perspectives. The teachers also observed that students had difficulty in reconciling the patient-person perspective with 'taking a history', and recognised this tension. However, the teachers did not appear to perceive either an explicit difference or a tension between the other two perspectives, although some acknowledged that they used a different approach from colleagues. These findings make the tensions between the perspectives experienced by the students in their third year more understandable.

In interpreting the teachers' views on teaching students to 'take histories', it must be remembered that the main formal teaching of this skill takes place during the second and third years of the curriculum. What I did not ask teachers about was their ideas on what type of history they would expect fifth year students or pre-registration house officers to take, and if different, why this was. In retrospect this would have been helpful. The change from formal teaching in the early years to a more apprentice style education in the final year may have had some influence, directly or indirectly, on the reduction in emphasis by

students on the patient-person perspective, but there is no data in the current study to elucidate this.

Figure 7.1 Teachers' perceptions of the student's task: an explanatory model



Chapter eight: Discussion and implications

The final chapter outlines the findings of the study, and discusses their significance in the light of published research in the field. This is followed by a review of the limitations of the study, and how it could, in retrospect, have been improved. Opportunities for further research are identified, and finally I have discussed the implications for policy and practice in undergraduate medical education.

Key findings: the three perspectives

This study set out to explore medical students' and teachers' views on the purposes and rationale for 'taking a history', the influences on these and the students' approaches to learning this skill. The analysis of the student and teacher interviews has been used to build on a theoretical framework of the learning process to develop an explanatory model specifically for the task of learning to 'take a history'. This is based on three perspectives on 'history taking', which arose from the data. The doctor-practitioner perspective sees the student's role when 'taking a history' as acting as a doctor to gather selective information in order to make a diagnosis and plan patient care. The student-clerk perspective sees the student's role as a clerk, collecting comprehensive information about a patient for the purpose of reference, and as part of a traditional formalised training. The patient-person perspective sees the student as a person talking with another person (the patient) about their medical problems, engaging with their individual context and concerns.

These three perspectives broadly encompassed the majority of views held by both the students and teachers interviewed on perceptions of the students' task when 'taking a history'. They could also be used to explain the tensions between differing views of the students' task, which led to difficulties for some students. Table 8.1 (page 158) shows a summary of the key findings from the interviews, as described previously in chapters five, six and seven and illustrated in Figure 5.1 (page 112), Figure 6.1 (page 140) and Figure 7.1 (page 155). The third year students interviewed, who were near the beginning of their clinical training, were advised by textbooks and many teachers to adopt a student-clerk perspective, and experienced tensions when they observed experienced clinicians working in a quite different way. On occasions when a doctor-practitioner perspective was

recommended by teachers, students found it difficult to follow this advice, perhaps due to their unclear clinical role and difficulty in making diagnoses at this stage. They tended to favour the student-clerk perspective, memorising lists, and had little rationale to support their 'history taking', necessitating a surface approach to learning. However, they also identified the need for a patient-person perspective.

Students interviewed in their fifth year were expected to adopt a doctor-practitioner perspective, and had a clear clinical role in which they could use their 'history taking' to make diagnoses. They were more confident in recognising and dealing with the tensions between perspectives, and saw this as 'playing the game' within the culture of medicine. In general they favoured the doctor-practitioner perspective, and tried to 'work things out when 'taking a history', developing a rationale and adopting a deeper approach to learning. They also learned about the circumstances in which to use the student-clerk perspective, not in order to benefit patients, but in order to please teachers and examiners. This became almost a ritualistic process, particularly the systemic enquiry, which was engaged in as part of the medical culture, with a number of teachers and students expressing little faith in its value. The students interviewed at this stage placed less emphasis on the patient-person perspective than the third year students.

The teachers interviewed tended to focus on either the doctor-practitioner or the student-clerk perspective in their teaching, alongside the patient-person perspective, and this influenced their perceptions of the students' task. It was the polarisation of their views that first drew attention to the competing perspectives in the analysis. They recognised and made explicit the tensions between the patient-person and their preferred perspective but did not identify the tension between the doctor-practitioner and student-clerk perspectives, or draw attention to the difference of opinion on this matter. The difference between teachers' perspectives may explain some of the difficulty experienced by third year students when presented with differing ideas on their role.

Table 8.1: Summary of key findings from interviews

	Favoured perspective	Key influences or issues	Favoured perception of students' task and rationale for 'history taking'	Students' approach to learning

Third year students	Student-clerk	• Textbooks and teachers recommend it
		• Confused by different method observed in use by clinicians
		• Some teachers recommend doctor-practitioner, but difficult for students to understand rationale for this because:
		  • unclear clinical role
		  • can't make diagnosis
		  • difficulty understanding 'relevance'
		• Patient-person also given attention
			• Take 'proper' long history
			• Don't miss things
			• Confused rationale, with tensions between perspectives
				Mainly surface approach, memorising lists

Fifth year students	Doctor-practitioner	• Teachers expect it • See clinicians doing it, and understand reasons • Clear role in clinical settings and can use history to make diagnosis • Will need to use as PRHO • Examinations, textbooks, pressure not to miss things and systemic enquiry still encourage student-clerk perspective • Little attention to patient/person	• Primarily take focused history to make diagnosis • Secondarily ask everything so as not to miss things • Rationale clearer, can 'play the game' to manage tensions between perspectives	Mainly deeper approach, aiming to 'work it out', also strategic, recognising where memorising list is required
Teachers	**Either** doctor-practitioner with patient-person **or** student-clerk with patient-person	• Tension between doctor-practitioner and student-clerk perspectives not explicitly recognised • Tension between preferred perspective and patient-person perspective recognised	• **either** focusing on key features to work out what is wrong **or** 'putting it all in' to enable 'full data collection – both with concern for patient	

Figure 8.1: The three perspectives and their influences on 'taking a history'

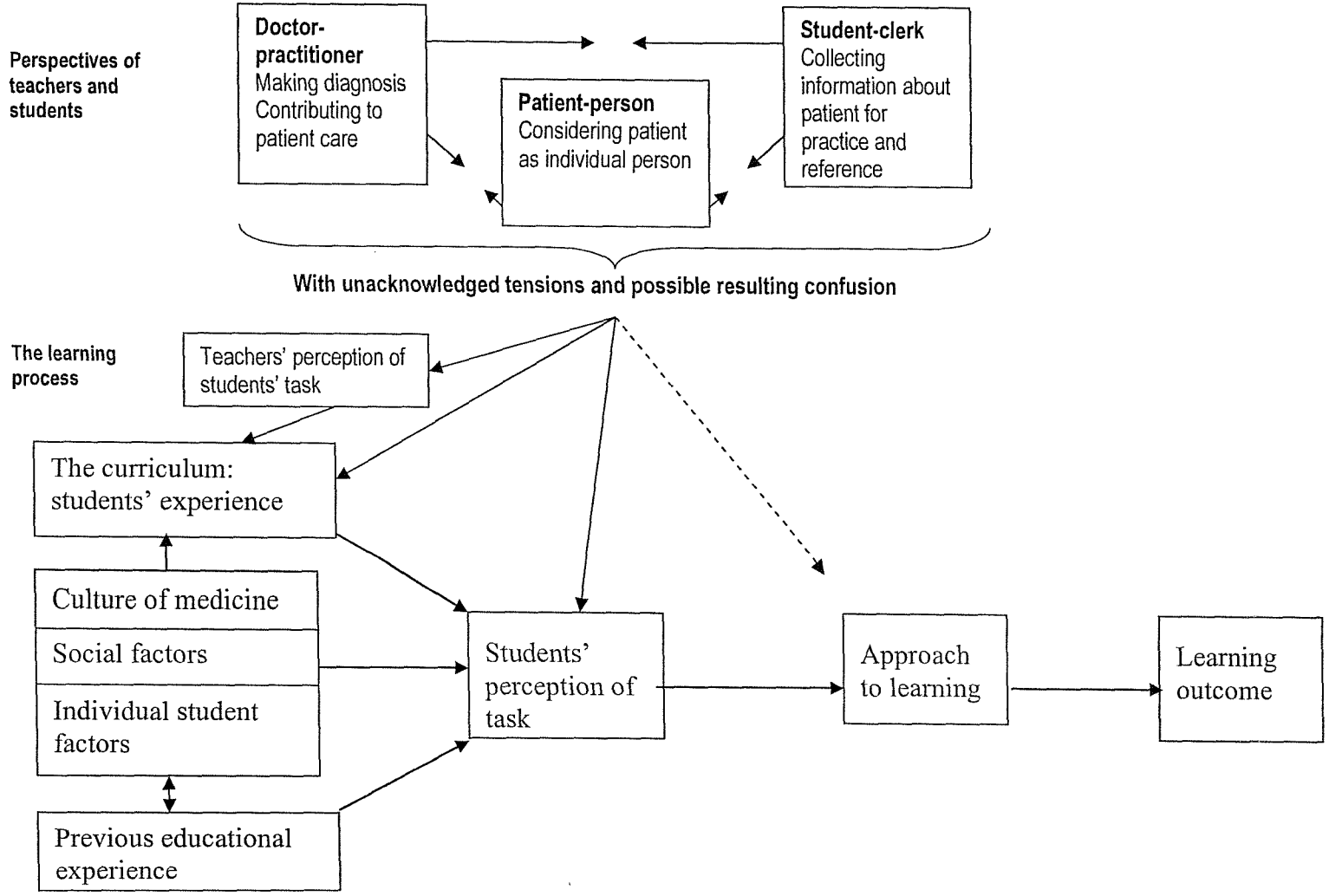


Figure 8.1 (page 159) provides a simplified model of the influence of the perspectives on the learning process. The three perspectives could all be adopted at different times and for different purposes by the same individual. For the teachers, they were associated with the teachers' perception of the students' task, which might then influence the students' perception of their task. For the students they were directly associated with their perception of their task, and the tendency of unacknowledged tensions to cause confusion may also have had a direct effect on the students' approach to learning.

Perspectives on perspectives

The argument of this thesis is that the perspectives have utility in that they enable a conceptual analysis of this learning process. In summary, I suggest that the current approach to teaching students to 'take histories' is fraught by the tensions between the three perspectives, and the situation could be improved by making the perspectives and tensions explicit. Although this study was carried out with a small number of students in one medical school the findings are closely aligned to those of previous workers. In spite of the Atlantic and 40 years separating their work from this, Becker et al (1961) described a related set of perspectives, or sets of ideas governing behaviour, (see page 51), although, as they applied to the whole of the medical undergraduate experience, these were more all-embracing than the perspectives of the current study. In their study the perspectives of *'Clinical Experience'* and *'Medical Responsibility'* were both related to the students' aim in the current study to gain a doctor-practitioner perspective, with an implication that this required some effort. Becker et al's perspective of '*Student Co-operation'* was not identified as an issue in the current study, perhaps because, in the third year, access to patients is fairly carefully regulated due to the number of students now on hospital wards, and in the fifth year students normally work on their own with a clinical team. The *'Academic'* perspective of Becker et al's study, which described the aim to please capricious teachers, was very similar to the fifth year students' accounts of 'playing the game' when adopting the student-clerk perspective in examination situations. Becker et al did not describe a perspective relating to students' relationships with patients, but did analyse these, dividing student comments into those derived from the medical, lay and student cultures, with the student culture (valuing patients who gave opportunities for clinical experience, responsibility and opportunities to impress faculty) predominant

(Becker et al 1961). This relative absence of the patient-person perspective could be seen as similar to the findings from the fifth year student interviews in this study, but may also be related to the more general change in the way in which the doctor-patient relationship has been perceived in medical discourse over the last 40 years (Armstrong 1984).

Sinclair (1997) used Becker et al's work to derive his seven cognitive 'dispositions', which guided student behaviour (see page 51), and these too were in line with the three perspectives. For example, *Idealism* (personal as opposed to professional) could be seen as underlying the patient-person perspective, and *Status,* as well as *Experience* and *Responsibility* underlying the doctor-practitioner one. The disposition of *Co-operation* was similar to Becker's mentioned above, and was not identified in this study. Unlike Becker et al, but as in the current study, Sinclair identified tensions between dispositions, and his final *Economic* disposition described the way in which students traded their dispositions against each other when necessary. However, the effect of these tensions on learning was not examined further.

A closer link with the current work may be seen in Mountford's (1989) description of two approaches to teaching (see page 56). Her 'training approach' was illustrated by teachers who taught the skill of 'clerking' a patient as an end in itself, not a tool in a larger process of medical care, and was closely related to the student-clerk perspective. The second approach was the 'working approach', in which 'clerking' was clearly focused on making a diagnosis and planning management, and so altered students' perception of their task. This has more similarities with the doctor-practitioner perspective. The contrast between the two medical firms in Mountford's work mirrors the polarisation between two perspectives observed in the teachers in the current study.

Mountford (1989) was the only one of the previous writers to make observations on the influence of different approaches on student learning, arguing that, while students experiencing the training approach achieved better grades, those experiencing the working approach asked more questions. She felt that this latter approach was more likely to foster intellectual honesty and rigour, and reduced the conflict between the observed clinical behaviour of the teachers and the conventional teaching. The current study adds to this by arguing that the student-clerk perspective actively discourages a deep approach to learning,

as demonstrated by the students' use of memorised lists, and lack of a rationale to enable understanding. Mountford's study was also carried out in Southampton, and included only two student groups on the two firms, but the correspondence between the studies tends to add some weight to the current findings.

Atkinson's (1997) description of 'hot and cold medicine' (see page 56) provides further support for the concept of the polarisation of the doctor-practitioner and student-clerk perspectives. He argued further that 'cold medicine' (similar to Mountford's (1989) training approach) was a contrived 'mock-up' of 'hot medicine' (similar to Mountford's working approach) and that teachers were more in control in the former. They were often teaching students about making a diagnosis with the benefit of hindsight, that is, knowledge of the results of subsequent tests, which made it difficult for students to question their reasoning. Atkinson comments very little on the influence on learning of *'The construction and reconstruction of medical reality'* that he describes (Atkinson 1997, title), but comments on the behaviour of the teachers, which seems likely to have influenced learning:

> *Whereas the first teaching session* [when the patient was admitted or 'hot' medicine] *came off as a more collaborative venture, based on a more egalitarian negotiation of the diagnosis, in the second* [later, when results of tests were known, or 'cold' medicine], *the surgeon tended to be much more dismissive of the students' suggestion, which did not correspond to 'the facts of the case' as he knew them.*
>
> (Atkinson 1997, p163)

The current study supports the relevance of the concepts of 'hot' and 'cold' medicine and adds to it by exploring the influence of these on learning. The student-clerk perspective, with strong similarities to both 'cold medicine' and the 'training approach' made it difficult for students to develop a rationale for 'taking a history', as they could not see its relationship to real medical practice. This perspective was predominant in the third year, and students were more likely to take a surface approach to learning. For fifth year students the doctor-practitioner perspective was more prominent, they were more involved in patient care or 'hot medicine' and experienced more of a 'working approach', but still had to 'play the game' by using the student-clerk perspective in examinations.

The three perspectives derived from this study, therefore, are in keeping with the work of previous writers, but are more specific to the task of 'taking a history' and may have more utility in the analysis of this particular learning process. This study has added to the literature by underlining the tensions between the perspectives, and how these may influence learning, and also emphasises the negative influence on learning of the student-clerk perspective.

Transition from novice to expert

Some of the findings of this study are also in keeping with the novice/expert model of the development of professional expertise, developed by Dreyfus and Dreyfus (1980) and reviewed by Schmidt et al (1990) in the medical context (see page 48). Compared with novice students in their third year, the students in their final year had considerably more clinical experience, and so would have acquired more 'illness scripts' with which they could compare patterns and make diagnoses, and this may have accounted for some of their increased confidence in this area. But Schmidt et al also (1990) suggested that this development of expertise is based on learning 'rules' in the early stages, to which the expert may return in complex or unusual cases. This thesis argues that a clear purpose and rationale underpinning 'rules' for 'taking a history' would facilitate students' learning in the early stages more than the current practice of memorising lists. This could be seen as an elaboration of the novice/expert model, which does not in itself provide any guide to helping novices use either 'rules' or 'illness scripts' most effectively.

What the novice/expert model does emphasise is the need for clinical experience, also a significant issue for students in this study. The model could be used to suggest that 'illness scripts' offered by experience of 'hot medicine', based in real health care situations, could have greater educational value than 'cold medicine', in which patient stories are viewed in the light of subsequent findings, as they have more validity. This would be in keeping with the finding in this thesis that a clear role for students in clinical care helped them to develop a rationale for 'history taking' in their final year.

The fading patient-person in the final year and the culture of medicine

The finding in this study that students in their final year mentioned the patient-person perspective less frequently is difficult to interpret, in that it could reflect either a real change of attitude or a change in the way attitudes are expressed, subject to the prevailing medical culture. Changes in medical students' attitudes to patients during their training have been debated since the 1950s. Eron (1955) suggested that idealism was gradually replaced by cynicism. Becker et al (1961) suggested that this was an oversimplification, and that the students in their study maintained their *Idealism* perspective about their overall goals of helping people, but became cynical about some of the everyday pressures of medical school life. In relation to the students' concentration on these pressures, when they appeared to express lack of concern, they commented:

> *The requirements of their immediate situation force these practical considerations on them. This attention to short-run considerations in situations containing tragic elements is the kind of student behaviour that dismays laymen, although to the students it seems reasonable and necessary.*
>
> (Becker et al 1961, p424)

This is entirely in keeping with the findings of the current study, where none of the students expressed lack of concern for patients, and some commented negatively on clinicians who failed to value the patient as a person. However, compared with all the other influences on 'history taking', the patient-person perspective was less prominent in the final year. The students' actual beliefs about the importance of the patient as a person could not be determined from the interview data.

Work on the developing communication skills of medical students has produced contradictory findings on changes in students' attitudes during their medical education, as demonstrated in their communication with patients. Older studies suggested that more senior students demonstrated less empathic behaviour and elicited less personal information, and more recent ones have showed less deterioration, possibly due to the introduction of communication skills teaching (see page 44). However, Pfeiffer et al (1998) again reported a decrease in interview behaviours implying concern for the patient as a person, and suggested that the cause of this might have been a gradual reduction in

emphasis in their medical school on communication skills during the clinical course, alongside the increasing effect of the medical culture. It is possible that the increased focus on teaching communication skills may have counteracted the prevailing culture in some schools but not in others, perhaps related to timing of this teaching in the curriculum.

Students in Southampton focused on communication skills mainly in their second and third years, and the fading of the patient-perspective in the final year might have related to the unopposed effect of the medical culture, which will have influenced both students' attitudes and how they were expressed. The teachers placed emphasis on the importance of the patient-person perspective in their teaching, which calls into question the assumption that the prevailing culture did not favour the patient/person perspective, but the teaching was carried out earlier in the course, when the students valued it also, and it is not clear whether teachers' practice was consistent with their teaching. The cause of the fifth year students' reduced emphasis on this perspective in the interviews must remain uncertain, but is of some concern, as their change in priorities may influence behaviour.

As neither I nor the participants in this study could extricate ourselves from the medical culture, and therefore had difficulty identifying its nature and effects, it may be more helpful to ask where the culture of medicine actually impedes student learning. The findings in this study, supported by earlier research, suggest that the student-clerk perspective, based on a historical and cultural concept of the student as a clerk, encourages a surface approach to learning, particularly in students in their third year. Sinclair (1990) described the medical culture as one in which *'open profession of personal Idealism is not endorsed'* (p130, original capitals) and it seems possible that the culture of medicine may have inhibited students in their fifth year from expressing a patient-person perspective.

Limitations of the study

Shortcomings of the methods

In retrospect, a number of changes or additions to the data collection methods might have improved the ability of the analysis to refine the theoretical model. Had time allowed, analysis of each interview before the next would have allowed the model to be developed before completing the interviews, and for further interviews to have been used to test the

validity of the model. Similarly, had the fifth year student interviews been analysed before completing the teacher interviews, teachers could have been asked for their views specifically on the differences between third and fifth year students, as well as exploring the research questions more generally. It would have been possible in theory to arrange further group interviews with both students and teachers to present the perspectives model, and to incorporate the views of participants into the data, which would have added to the comprehensiveness of the data. However, the timing of the study with the constraints of other work made this impossible, and these questions must remain a focus for future research.

I was a novice research interviewer at the beginning of this study. By the end, my research interviewing skills had improved significantly, and I found in the transcripts fewer examples of leading questions and missed opportunities for probing, though these were never completely absent. This skill development has been of benefit to me, at the cost of the quality of some of the earlier interviews. The group interviews may have been somewhat less subject to interviewer skill deficiency, as the students were often able to prompt and probe each other.

Trustworthiness

The findings of this study must be interpreted in the light of its limitations, both on the trustworthiness of the analysis, and on the extent to which the findings can be generalised to other students.

Riessman (1993) has pointed out that research procedures can be seen as stages of 'representation', at each of which the original experience of a research participant is modified and interpreted in the process. She identified the stages of attending to the original experience, telling, transcribing, analysing, and reading. In the current study, selection of participants was an additional procedure influencing the trustworthiness of the final report. Some potential effects of these stages of representation can be identified.

The students interviewed were either volunteers responding to a written invitation to contribute, in the case of the individual interviews, or members of randomly selected

student seminar groups who were personally asked to attend a group interview. The interviewees, as intended, included male and female students, overseas, mature and graduate students, and the analysis did not identify any obvious differences between responses from these groups. It is likely that the students interviewed individually may have tended to be more confident than average in view of their willingness to volunteer, but their views did not differ significantly from the students interviewed in the group. There is therefore no reason to believe that the collated views of these students were atypical, although this possibility cannot be excluded.

The teachers interviewed came from a variety of disciplines, with the exception of general practice, due to the difficulty of arranging unbiased interviews with the latter (see page 75), and this may or may not have influenced the findings. General practice training prioritises the patient-person and doctor-practitioner perspectives, but it is possible that when teaching medical students, general practitioners may be influenced by the medical culture and knowledge of students' hospital experience and may adopt a student-clerk perspective. The views expressed here must be seen solely as those of hospital based teachers. However, the overwhelming majority of students' accounts of learning to 'take histories' were based in hospital settings, in spite of the fact that they knew I was a general practitioner, so the views of hospital teachers are likely to have been the major influence on their learning.

My role both as a general practitioner and a member of academic staff made it impossible for me to be seen as a disinterested researcher during the interviews, and the interviews must be interpreted in the light of their *'opportunities for impression management'* (Murphy et al 1998 p120 citing Goffman, 1959). My status in the medical school may have led students towards a more conventional attitude to 'taking histories', and my general practitioner role towards a patient-person perspective. On the few occasions where my inexperience as a research interviewer led me to judgementally encourage students who were expressing concerns about their own performance, I believe I was tending to support either a patient-person perspective or a rationale for making a diagnosis, in contrast to the textbook or student-clerk perspective, and as my personal prejudices lie in this direction, if I have influenced the findings, I feel it is more likely to have been in this direction.

Mason (1996) and Murphy (1998) both posed a further question about trustworthiness, which was whether the interpretation of the findings is more compelling than alternatives. Two attributes of an interpretation which may be considered are utility and simplicity. The conceptual model of the perspectives has utility in that it can be used to explain the tensions between the competing strategies used for 'taking histories' and making diagnoses without criticising individual practices. It should also enable explanation of how these strategies are related to the purposes of 'history taking' (which may be different in different contexts) leading to a clearer rationale and encouraging a deeper approach to learning. As described in chapter four, my initial analysis produced a more complex picture, with fewer opportunities for aiding understanding, and was modified when the development of the theoretical model enabled a simpler explanation, incorporating more of the data. I therefore argue for this interpretation on the grounds of utility and simplicity, in the knowledge and hope that further work may improve on it.

Generalisability

This study has been based on interviews with 31 students and 10 teachers in one medical school. The method of analysis, using the constant comparative method, has enabled the building of a theoretical model of learning to 'take a history', refining a more general theoretical framework of the learning process. It has not attempted to carry out any testing of that theory. Similarities with the work of other researchers, in this and other medical schools and at other times, tend to lend support to the model, but no claim is made for generalisability on the grounds of statistics or hypothesis testing. The value of the work in other contexts stands on the utility of the model as an aid to conceptual thinking about the 'history taking' process, and as a stimulus to further research and discussion of educational practice.

Implications for further research

The development of the perspectives model raises a number of questions for further research and may simultaneously help to create a framework for exploring these questions. One immediate question to be addressed is whether teachers and students find the concept of the perspectives, with their inherent tensions, an aid to learning to 'take histories'. A risk

of the explicit use of the model is that it may highlight difficulties with the rationale, and may expose differences between teachers in their choice of the doctor-practitioner or student-clerk perspective. However, a dialogue about the rationale and the relative merits and disadvantages of perspectives might benefit teachers and students, and eventually, patients. An action research study looking at this process might inform practice.

This study has only explored part of the learning process, and did not attempt to observe the actual practice of teaching students or of taking histories, or to make any judgements about how the quality of 'history taking' might be judged. However, this remains a crucial underlying question, and the perspectives model may aid exploration of it by explicitly linking the 'history taking' process to its purposes, which may be different in different contexts. For example, a patient with severe acute illness will need a focus on the purpose of making a diagnosis and planning management (doctor-practitioner perspective), while a patient with long term chronic illness may prioritise their overall needs as a person (patient-person perspective), and a patient about to undergo an anaesthetic requires a screening procedure relating to possible anaesthetic problems, which would incorporate some aspects of the student-clerk perspective. The advantage of identifying a purpose for each 'history taken' would be that it would provide one method of examining outcomes in research on 'history taking', in that the history should achieve its stated purposes, which in most cases could be explicitly negotiated with patients. Further research could then examine to what extent identifying a purpose influences the nature of the 'history taken', patient preferences and ultimately, outcomes for patients.

Another area for research is the decline in focus on the patient-person perspective in the fifth year, reported in both this and earlier studies. This raises some concern, even if due to the medical culture rather than to students' underlying attitudes to patients, as it may be reflected in students' behaviour. This warrants further research on how, when and why, during undergraduate and postgraduate medical training, does the value and focus given to the patient-person perspective change. It would be important to link this work with the communication skills of medical students, as teaching these specifically values the patient-person perspective. This in its turn underlies the need to develop and evaluate a concept of 'history taking' which incorporates high quality communication with a strategy for diagnosis and management, or the doctor-practitioner and patient-person perspectives.

Implications for policy and practice

This thesis argues that 'taking a history', which is a basic and universal medical procedure, is problematic, has been little researched, is subject to conflicting pressures, and, due partly to these problems, is ineffectively taught. It is possible that, at a relatively small cost, improvements could be made that would have beneficial results for patients. It is time to make some changes to this situation, and the perspectives model derived from the data may facilitate this.

Firstly, the value of the student-clerk perspective must be seriously questioned. Its purposes are not linked with those of medical practice; it deters students from taking a deep approach to learning, and, in some cases, has become a ritualistic aspect of medical culture. Some teachers have already abandoned it. This does not imply that students should be deprived of a structure for history taking, but that the structure used should be guided by a rationale based on the purpose for which the history is being 'taken', and this purpose should be related to patient care, not merely to please teachers or examiners, or to follow tradition.

However, because this perspective is embedded in medical culture, and cultural change occurs very slowly, changes to the rhetoric of 'history taking' may be needed in the meantime. One simple way of enabling this would be to encourage students (and teachers) to make explicit their purpose each time they take a history. This would tend to prioritise the doctor-practitioner and patient-person perspectives, and might render the student-clerk perspective redundant. For example, when a patient is assessed for fitness for an anaesthetic, there is a clear rationale for a set of questions to be answered to achieve this purpose. The same set of questions, perhaps currently memorised as a list by a student using a student-clerk perspective, could be re-considered as a set of questions which the student could derive from the medical purposes of the exercise, so changing this to a doctor-practitioner perspective. This might encourage a change from a surface approach to a deep approach to learning.

Secondly, there is a need for a 'history taking' approach that integrates the doctor-

practitioner and patient-person perspectives, which can be used by both clinicians and communication skills teachers. There is already a new rhetoric for 'history taking' in existence, in the form of patient-centred medicine (Stewart et al 1995). This recommends that doctors interweave questions about patient's disease (a pathological process) with the patient's illness (or beliefs, concerns and experiences), and integrates the doctor-practitioner and patient-person perspectives. Silverman et al (1998) have used a modification of this strategy in a communication skills textbook which attempts to base recommendations for each aspect of doctor-patient communication on empirical evidence for its value. However, most descriptions of this strategy ignore the tensions with the student-clerk perspective, with its comprehensive data gathering aspect, which precludes sensible time management and hinders relationships with patients. This may be because challenging the historical conventions of medical education, in which this perspective is deeply entrenched, is perceived to be risky. Patient-centred medicine has also been advocated most often in primary care settings, where time constraints have always prevented use of the student-clerk perspective. However, further elaboration of the patient-centred approach developed by Stewart et al (1995) and then Silverman et al (1998), incorporating the three perspectives, but clarifying their differing priorities in differing settings, might provide a useful framework for students and teachers.

An idealistic explanatory model for 'taking a history' is shown in Figure 8.2 (page 174). This could apply to medical students at any stage of their training. Major changes that would need to occur to enable this are shown in red. Firstly, a new structure for 'history taking', in which the nature of the history taken is related directly to its purposes, needs to be developed and implemented. This could be based on the patient-centred approach and might integrate the doctor-practitioner and patient-person perspectives. Secondly, this is unlikely to be effectively taught unless practised by a significant number of clinicians. Thirdly, students must have sufficient involvement in real clinical care to understand the role of 'history taking'. Fourthly the new approach must be required by all those examiners involved in assessing medical students. One cultural change which is already underway is the rise in consumer influence of patients, and patients may become more likely to insist on an approach which respects them as individuals. If these changes did occur, they would enable an evaluation of the quality of 'histories taken', in relation to its appropriateness for its purpose or purposes.

Recommendations based on an idealistic vision are, however, unlikely to be effective in achieving change. While the findings of this study can not be used to make generalisations about how all medical students learn to 'take histories', they suggest that changes should be made to ensure that students are no longer confused by the conflicting messages they receive. The perspectives model may help to clarify the issues. Given that there may be difficulties in agreeing on a new structure for 'taking a history', minimum guidelines for curriculum development might include:

- **Students should have enough involvement in patient care to understand the role of 'history-taking' as one aspect in the overall process of patient care**
- **Whenever students are asked to 'take a history' or observe a teacher doing so, their approach should be informed by the purposes of the process**
- **The curriculum (including teaching and assessment methods) should encourage students to understand the rationale for how the method of 'taking a history' will achieve its purpose, and will therefore be different depending on its purpose**
- **Stated purposes should relate to real medical tasks, and should never be purely to please teachers or examiners**
- **Students should be helped to link the patient-person perspective with the doctor-practitioner perspective. This should be supported by the integration of communication skills teaching with standard clinical teaching.**

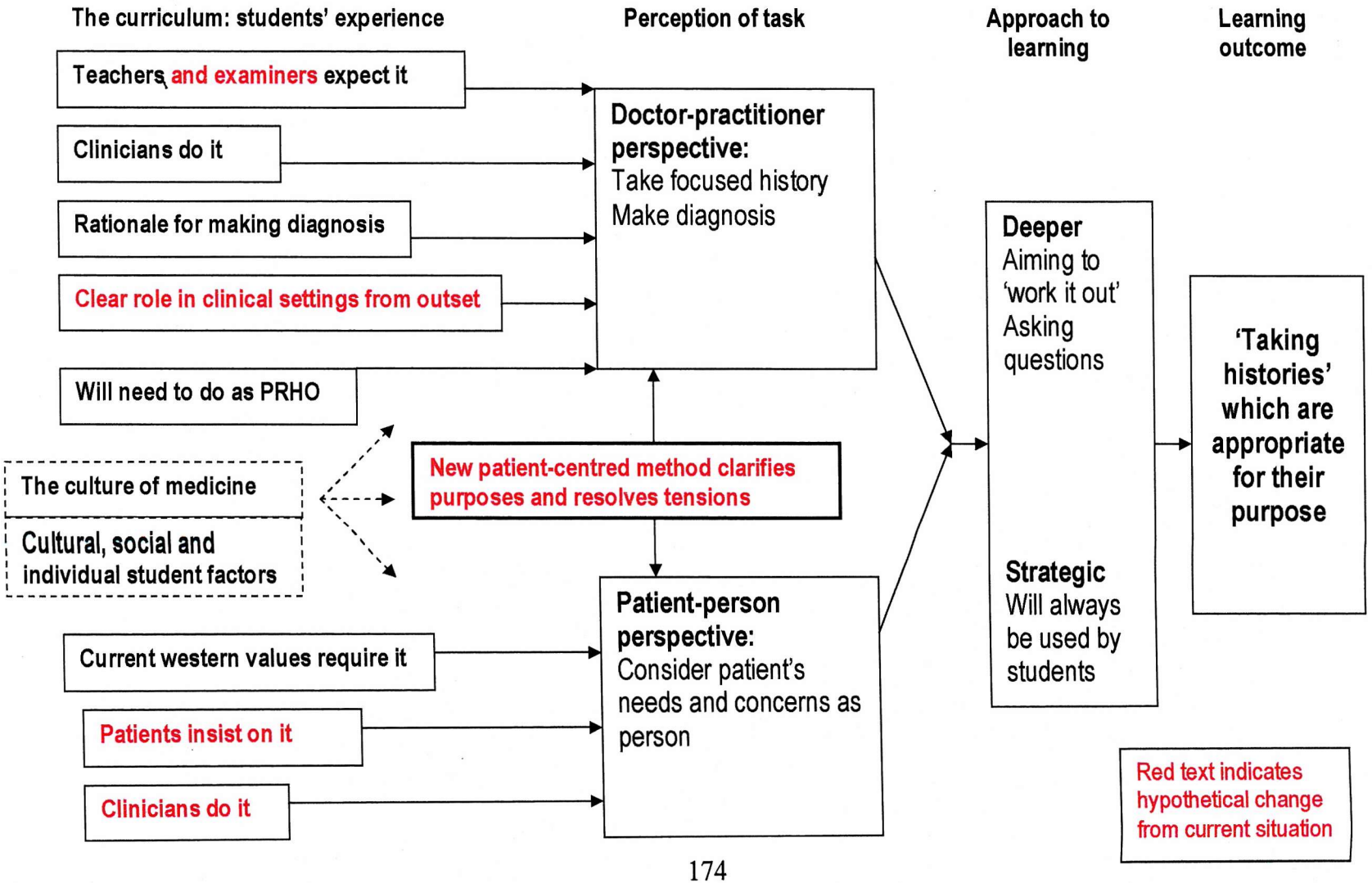
The results of following these recommendations would ideally be that students are encouraged to take a deeper approach to learning, that they are taught to 'take histories' which will differ, depending on their purpose, and that it becomes acceptable within the medical culture to integrate concern for patients and their views into the medical history.

A requirement for these guidelines to promote effective learning is that experienced clinicians should be able to make more explicit their own strategy for 'taking histories', and to use their expertise and experience to good effect. They should not have to be apologetic about their methods not conforming to textbook descriptions, nor about the tensions between the different purposes of the 'history taking' process. The perspectives model may offer one method of aiding them in this explanation. Textbooks might then be

expected gradually to change in line with clinicians' behaviour.

Although these ideas may appear to problematise 'history taking', transforming it from the process of memorising a list to a more complex intellectual exercise, with many different forms for different purposes, this only reflects its real nature. Our students are bright and enthusiastic both to learn skills and to understand the underlying concepts, and we should not demean them by minimising the complexity of the medical task.

Figure 8.2 An idealistic explanatory model for 'taking histories'



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Appendix A: Information sheet for students

How do medical students learn to 'take histories' from patients?

Background

I have been involved in the process of teaching medical students to 'take histories' from patients for many years, and more recently also in the process of co-ordinating and developing courses for this purpose. I have become concerned that students may receive a number of different and sometimes conflicting messages, from both teachers and others, about this process. However, most students succeed in learning the relevant skills without obvious difficulties. Understanding the ways in which students learn, and the influences on this, should enable a rational approach to developing courses for students in the future. This work will form the basis of my dissertation for a Doctorate in Education at the University of Southampton.

Aims of the research

I hope to address the following research questions:

What do medical students perceive as the purposes and rationale of 'taking a history'?
What do medical teachers perceive as the purposes and rationale of 'taking a history'?
What do students perceive as the influences on how they 'take a history'?
What type of approach to learning to 'take a history' do students take?

I am not intending to investigate the actual behaviour of teachers and students in the teaching sessions.

How volunteer students will be involved

I hope to interview a number of groups of third and fifth year students, as well as some individual interviews.

Topics to be discussed

These will be based directly on the questions above.

Confidentiality/anonymity.

With your permission, I will tape record the interview, and this will be transcribed. Only I will know the names of the students, and both the tapes and the transcriptions will be seen or heard only by the secretary who transcribes them, my two supervisors and myself. These are Professor Helen Simons in the School of Education and Dr Robert Peveler, in the Department of Psychiatry. I may use extracts from the transcriptions in my final report, but these will not be identifiable in any way to an individual student.

If you wish to withdraw

You may of course do so at any time.

What's in it for students?

It is possible that there is some benefit to be gained from discussing the process of history taking in more depth than is customary. The cost of involvement is largely the call on your time.

Thanks very much for your help

Jenny Field, 19.11.2001
email jhf@soton.ac.uk
tel 02380 241068

Appendix B: Student interview guides

1. Individual interview with third year student

Preamble: who I am,
aims of my research,
explanation of their role in it
areas I will ask them about
promise of anonymity.
request for their help
request to tape record

When you are asked to take a history from a patient, what are your main aims or purposes? In other words, what do you see as your task?

Prompts as necessary:

To make a diagnosis
To make a plan about how to help the patient
To contribute to patient care
To prepare a good presentation
To practise for exams

How do you go about it? (probe to clarify)

How do you decide what to include?

What do you think has influenced the way you go about taking a history?

Prompts as necessary:

Any particular memorable experiences?
Any particular teaching you have received?
Any particular role models?
Any particular experiences outside your medical student career?

Can you say anything about how you personally have gone about learning to take a history over the last two years?

(If not yet covered adequately)
What were you taught to do in taking a history?
What do you think about that teaching now?
Prompt: what was useful, less useful?

To what extent do you think you take a history now as you have been taught?
If you have changed the way you go about taking a history from the way you were taught, can you say why you have done that?
Probe to clarify reason for difference from method taught

How helpful do you think the standard way of taking a history is for looking after patients?
Have you ever thought it could be made more helpful? How?

Thank you very much

2. Individual interview with fifth year student

PREAMBLE: REMINDER

aims of my research,
explanation of their role in it
areas I will ask them about
promise of anonymity.
request for their help
request to tape record

When you are asked to take a history from a patient now, how do you go about it? (probe to clarify)

What are your main aims or purposes? In other words, what do you see as your task?

Prompts as necessary:

To make a diagnosis

To make a plan about how to help the patient

To contribute to patient care

To prepare a good presentation

To practise for exams

How do you decide what to include?

What is your idea of what comprises a good history?

Is there anything you find particularly difficult?

Student specific questions – (relating to previous interview)

How do you think your approach has changed since the third year? (and why?)

Do you think it will change when you are a houseman and have actual responsibility for patients? (and why?)

What do you think has influenced the way you go about taking a history?

Prompts as necessary:

Any particular memorable experiences?

Any particular teaching you have received?

Any particular role models?

Have you observed other people taking histories?

Any particular experiences outside your medical student career?

Can you say anything about how you personally have gone about learning to take a history over the last two years?

What do you think about the way you have been taught?

Prompt: what was useful, less useful?

Is there anything that might have made it easier for you to learn?

To what extent do you think you take a history now as you have been taught?

How do you think your way of 'taking histories' fits with your teaching about communication skills?

Have you any ideas about how history taking, either by doctors or by students, could be improved?

Have you any other ideas or comments about learning to take histories?

Thank you very much

3. Group interview with third and fifth year students

Preamble: who I am,

aims of my research,

explanation of their role in it

areas I will ask them about

promise of anonymity.

request for their help

request to tape record

confidentiality issues within group

When you are asked to take a history from a patient, what are your main aims or purposes? In other words, what do you see as your task?

Prompts as necessary:

To make a diagnosis

To make a plan about how to help the patient

To contribute to patient care

To prepare a good presentation

To practise for exams

How do you go about it? (probe to clarify)

What do you think an ideal history would be like?

Is there anything you find difficult?

Can you tell me how your history taking has developed since you started/your third year?

What do you think has influenced the way you go about taking a history?

Prompts as necessary:

The way you have been taught?

Seeing others taking histories?

Being observed taking histories?

Any particular memorable experiences?

Any particular teaching you have received?

Any particular role models?

Any particular experiences outside your medical student career?

Communication skills teaching?

Expectation of becoming a PRHO soon?

Any other thoughts?

Thank you very much

Appendix C: Information sheet for teachers

How do medical students learn to 'take histories' from patients?

Background

I have been involved in teaching medical students for some years, and I have observed students developing their own individual patterns of history taking, while watching experienced clinicians using a wide variety of techniques, and being taught in a variety of different contexts. I am carrying out research to explore the ways in which students learn this skill, and the influences on this, in the hope of enabling a rational approach to developing courses for students in the future. This work will form the basis of my dissertation for a Doctorate in Education at the University of Southampton.

Aims of the research

I hope to address the following research questions:

- *What do medical students perceive as the purposes and rationale of 'taking a history'?*
- *What do medical teachers perceive as the purposes and rationale of 'taking a history'?*
- *What do students perceive as the influences on how they 'take a history'?*
- *What type of approach to learning to 'take a history' do students take?*

I am not intending to observe the actual behaviour of teachers and students in dedicated teaching sessions, and would anticipate that the influences on students' learning often lie outside these sessions. I hope that this work may have implications for future curriculum planning.

Methods

I am carrying out an interview study of students' and teachers' experiences and views.

Student interviews

I have already carried out a group interview with final year students, and seven initial interviews with third year students, who were also audio-taped while 'taking a history' from an actor in a patient role. I intend to carry out further follow-up interviews with this

group of students in their final year, and to interview further students and student groups in a purposive manner, depending on the initial findings. This may be followed by a survey of a whole student cohort.

Teacher interviews

I would like in addition to interview around ten clinical teachers, with experience of teaching students to take histories, which is why I have contacted you. The aim of this is to find out about your views on the skill of 'taking a history'. I would anticipate that this would last around thirty minutes, with the topics of discussion based on the questions above. I would like to audiotape the interview if you agree to that, but, if you prefer, I could take notes. The taped interviews will be transcribed for analysis.

Analysis

Analysis will use a qualitative approach, using a constant comparative method to derive recurring themes from the interviews. The relationship between these will be investigated, looking particularly at how students' and teachers' views are influenced by their understanding of the task and by other experiences or ideas, within and without their formal education or clinical work.

Confidentiality/anonymity.

Following transcription, both the tapes and the transcriptions will be seen or heard only by myself, the secretary who transcribes them, and my two supervisors. These are Professor Peter Figueroa in the School of Education and Dr Robert Peveler, in the Department of Psychiatry. I may use extracts from the transcriptions in my final report, but these will not be identifiable in any way to an individual teacher or student.

If you wish to withdraw

You may of course do so at any time, and I will destroy tapes or transcripts if you request this.

What's in it for you?

Hopefully, an opportunity to talk through a concept and skill may enable some reflection and clarification of thoughts, for which there often isn't time in a busy job. I hope you may also feel that involvement in research could have a long term benefit to the development of teaching programmes. The cost of involvement is the call on your time.

I would be happy to discuss any aspect of the work in more detail if that would be helpful. I am currently on sabbatical leave, so do not have a reliable direct phone line, but Frances Nyland, teaching administrator at Aldermoor Health Centre, (see below) can easily arrange a telephone call.

Jenny Field
3.9.01
email jhf@soton.ac.uk

tel Frances Nyland on 023 8024 1019

Appendix D: Teacher interview guide

Preamble: aims of my research,

explanation of their role in it

areas I will ask them about

promise of anonymity.

request for their help

request to tape record

if questions confusing, please say

Can you tell me in what circumstances you have taught medical students to 'take histories' from patients?

When you teach students how to take a history from a patient, how do you suggest they go about it? (Probe to clarify)

What do you want the students to be aiming at? In other words, what is their task?

Prompts as necessary:

To make a diagnosis

To make a plan about how to help the patient

To contribute to patient care

To prepare a good presentation

To practise for exams

Do you normally make this explicit?

What would you see as the characteristics of a really good history?

What would make you think it was 'comprehensive' 'relevant' etc (their words)?

Is there anything you think students find particularly difficult?

What have you observed about how they go about learning this skill?

How do you think they change between first starting and progressing to being a PRHO?

What do you think has influenced the way you teach students this skill?

Prompts as necessary:

Any particular memorable experiences?

Any particular role models?

Changes in medical education?

In what way do you think the way you take a history has changed since you were a student?

What do you think has influenced this?

Do you think your colleagues take a history in the same way as you do?

Have you any ideas about how history taking or teaching about it could be improved, either by students or doctors?

Have you any other ideas or comments about teaching or learning to take histories?

Thank you very much.

demography						
demography	gender					
demography	gender	female				
demography	gender	male				
demography	previous degree					
demography	previous degree	yes				
demography	previous degree	no: school leaver				
demography	previous degree	no: mature				
demography	year of course					
demography	year of course	third				
demography	year of course	fourth				
demography	year of course	fifth				
demography	interview type					
demography	interview type	individual				
demography	interview type	group				
demography	overseas					
perception of task						
perception of task	purposes of HT					
perception of task	purposes of HT	doctor-practitioner				
perception of task	purposes of HT	doctor-practitioner	make diagnosis			
perception of task	purposes of HT	doctor-practitioner	think about plan to help pt			
perception of task	purposes of HT	doctor-practitioner	make relationship with pt for doctor			
perception of task	purposes of HT	doctor-practitioner	make relationship with pt for doctor	more likely to get history		
perception of task	purposes of HT	doctor-practitioner	make relationship with pt for doctor	more likely to get history	find out about social factors	
perception of task	purposes of HT	doctor-practitioner	make relationship with pt for doctor	more likely to get history	find out about social factors	sexuality
perception of task	purposes of HT	doctor-practitioner	make relationship with pt for doctor	learn interpersonal not medical		
perception of task	purposes of HT	patient-person				
perception of task	purposes of HT	patient-person	find out what patient wants			
perception of task	purposes of HT	patient-person	be pat's advocate			
perception of task	purposes of HT	patient-person	to understand the pt's problem			
perception of task	purposes of HT	student-clerk				
perception of task	purposes of HT	student-clerk	to demonstrate learning to others			
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	for assessment		
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	for assessment	no	
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	for assessment	just get facts for exam	
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	for assessment	write essay	

perception of task	purposes of HT	student-clerk	to demonstrate learning to others	following instructions
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	following instructions find out why came to hospital
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	following instructions to fulfill some requirement
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	following instructions go through list
perception of task	purposes of HT	student-clerk	to demonstrate learning to others	following instructions not to make diagnosis initially
perception of task	purposes of HT	student-clerk	make presentation	
perception of task	purposes of HT	student-clerk	make presentation	good pres not same as good history
perception of task	purposes of HT	student-clerk	make presentation	take hist with more structure if for presentn
perception of task	purposes of HT	student-clerk	make presentation	using right language
perception of task	purposes of HT	student-clerk	make presentation	don't think about till later
perception of task	purposes of HT	student-clerk	make presentation	get all info I'll be asked for
perception of task	purposes of HT	student-clerk	for own learning	
perception of task	purposes of HT	student-clerk	for own learning	to help remember about the disease
perception of task	purposes of HT	student-clerk	for own learning	to develop skills
perception of task	purposes of HT	student-clerk	for own learning	to add to experience
perception of task	purposes of HT	student-clerk	for own learning	remembering all the questions
perception of task	purposes of HT	student-clerk	ask psychosocial Qs that Drs don't have time for	
perception of task	purposes of HT	student-clerk	contribute to pt care as student	
perception of task	rationale			
perception of task	rationale	clear to student		
perception of task	rationale	clear to student	different in diff specialties	
perception of task	rationale	clear to student	diff for diff purposes	
perception of task	rationale	clear to student	relevance: can explain how defined	
perception of task	rationale	clear to student	relevance: can explain how defined	risk factors
perception of task	rationale	clear to student	relevance: can explain how defined	for diagnosis and management
perception of task	rationale	clear to student	risk of jumping to diagnosis	
perception of task	rationale	clear to student	think what need to know	
perception of task	rationale	clear to student	remember list when prompted by patient	
perception of task	rationale	not clear to student		
perception of task	rationale	not clear to student	relevance: can't define	
perception of task	rationale	not clear to student	relevance: can't define	intuitive
perception of task	rationale	not clear to student	relevance: can't define	know from experience
perception of task	rationale	not clear to student	relevance: can't define	ask all questions as not clear what's relevant
perception of task	rationale	not clear to student	relevance: can't define	not enough knowledge to know what's relevant
perception of task	rationale	not clear to student	ideal history: undefined	
perception of task	rationale	not clear to student	ideal history: undefined	don't know what it is

perception of task	rationale	not clear to student	ideal history: undefined	explored every avenue
perception of task	rationale	not clear to student	ideal history: undefined	complete when covered list
perception of task	rationale	not clear to student	pt's concerns not in structure	
perception of task	rationale	not clear to student	tension between diagnosis and taking good history	
perception of task	rationale	not clear to student	must know the 'right questions'	
perception of task	rationale	not clear to student	uncertainty re student's role	
perception of task	rationale	not clear to student	confusion re presenting complaint	
perception of task	rationale	not clear to student	list is universal	
perception of task	rationale	not clear to student	difference wards and clinic not clear	
perception of task	rationale	not clear to student	confusion textbook v practice	
perception of task	rationale	not clear to student	reason for questions not clear	
perception of task	rationale	not clear to student	uncertainty re aim to make diagnosis	
perception of task	rationale	not clear to student	(difficult to explain)	
perception of task	rationale	not clear to student	can't work it out, need list	
perception of task	rationale	reflection on rationale		
perception of task	rationale	reflection on rationale	students must ask all, Drs can take shortcuts	
perception of task	rationale	reflection on rationale	tension between diagnosis and bringing comfort	
perception of task	rationale	reflection on rationale	need to ask everything to avoid jumping to conclusions	
perception of task	involvement in patient care			
perception of task	involvement in patient care	no opportunity		
perception of task	involvement in patient care	reluctance to say a student		
perception of task	involvement in patient care	fun and useful		
perception of task	involvement in patient care	contrast with not contributing		
perception of task	involvement in patient care	feel bad when not		
perception of task	involvement in patient care	uncertainty re student's role		
perception of task	ethical issues			
perception of task	ethical issues	misinformaing pt to get hist		
perception of task	ethical issues	reluctance to say a student		
perception of task	ethical issues	feel bad upsetting if not helping		
influences				
influences	previous experience			
influences	previous experience	experiences as med student		
influences	previous experience	experiences as med student	student error	
influences	previous experience	experiences as med student	not listening	
influences	previous experience	experiences as med student	difficulty relating to some patients	
influences	previous experience	experiences as med student	setting boundaries: sometimes difficult	

influences	previous experience	experiences as med student	student contact can influence pt's condition	
influences	previous experience	experiences as med student	difficult interviews	
influences	previous experience	experiences as med student	other students' experiences	
influences	previous experience	work experience		
influences	previous experience	work experience	working for church	
influences	previous experience	work experience	work with less privileged	
influences	previous experience	work experience	work with ill people: diff types	
influences	previous experience	illness experience		
influences	previous experience	illness experience	family illness	
influences	previous experience	illness experience	friend illness	
influences	individual and social			
influences	individual and social	personal characteristics		
influences	individual and social	personal characteristics	like talking to people	
influences	individual and social	personal characteristics	don't listen	
influences	individual and social	personal characteristics	being mat st	
influences	individual and social	personal characteristics	confidence helps	
influences	individual and social	personal characteristics	don't want to upset people	
influences	individual and social	personal beliefs		
influences	individual and social	personal beliefs	respect for all people	
influences	individual and social	personal beliefs	not making assumptions	
influences	individual and social	personal beliefs	building rapport creates trust	
influences	individual and social	personal beliefs	influences judgement	
influences	curriculum			
influences	curriculum	watching clinicians		
influences	curriculum	watching clinicians	leading to understanding	
influences	curriculum	watching clinicians	leading to understanding	patients answer differently
influences	curriculum	watching clinicians	leading to understanding	housemen take full history
influences	curriculum	watching clinicians	leading to understanding	HOs remember and present key points
influences	curriculum	watching clinicians	leading to understanding	diff expectations for students from HOs
influences	curriculum	watching clinicians	leading to understanding	nurses know more re pt's feelings
influences	curriculum	watching clinicians	leading to understanding	consultants know from experience what's relevant
influences	curriculum	watching clinicians	leading to understanding	watching juniors presenting
influences	curriculum	watching clinicians	leading to understanding	to improve judgement of quality
influences	curriculum	watching clinicians	leading to confusion about rationale	
influences	curriculum	watching clinicians	leading to confusion about rationale	they only ask about HPC
influences	curriculum	watching clinicians	leading to confusion about rationale	ask more closed questions

influences	curriculum	watching clinicians	leading to confusion about rationale	wouldn't be diff if had more time	
influences	curriculum	watching clinicians	leading to confusion about rationale	no structure observed	
influences	curriculum	watching clinicians	leading to confusion about rationale	students ask more open questions	
influences	curriculum	watching clinicians	leading to confusion about rationale	don't copy me	
influences	curriculum	watching clinicians	leading to confusion about rationale	GPs don't take histories	
influences	curriculum	watching clinicians	leading to confusion about rationale	don't know where questions come from	
influences	curriculum	watching clinicians	to copy		
influences	curriculum	watching clinicians	learn what not to do		
influences	curriculum	watching clinicians	learn what not to do	missing cues	
influences	curriculum	watching clinicians	learn what not to do	lack of concern	
influences	curriculum	watching clinicians	learn what not to do	lack of concern	can't cope with their feelings
influences	curriculum	watching clinicians	learn what not to do	not listening	
influences	curriculum	teaching methods			
influences	curriculum	teaching methods	provide structure		
influences	curriculum	teaching methods	tell you how		
influences	curriculum	teaching methods	tell you what you could have done		
influences	curriculum	teaching methods	learning under pressure		
influences	curriculum	teaching methods	by humiliation		
influences	curriculum	teaching methods	pt's and st's interests at heart		
influences	curriculum	teaching methods	using video		
influences	curriculum	teaching methods	using video	non verbal	
influences	curriculum	challenging exams			
learning process					
learning process	reflections on				
learning process	reflections on	more confident than re phys exam			
learning process	reflections on	learn from more knowledge about disease			
learning process	reflections on	HT taken for granted			
learning process	reflections on	value of reflection after			
learning process	reflections on	now see importance of comm skills			
learning process	reflections on	tension between diagnosis and bringing comfort			
learning process	reflections on	tension between diagnosis and taking good history			
learning process	reflections on	if take good history can understand diagnostic process			
learning process	reflections on	learning HT diff from phys exam			
learning process	reflections on	tensions between listening and remembering questions			
learning process	reflections on	diff to know when doing it right			
learning process	techniques used				

learning process	techniques used	good- thrown in at deep end		
learning process	techniques used	watching other students		
learning process	techniques used	responding to questions		
learning process	techniques used	writing out		
learning process	techniques used	positive feedback		
learning process	techniques used	wards and OP clinics - diff		
learning process	techniques used	comparing with notes		
learning process	techniques used	feedback on presentation		
learning process	techniques used	notepad system		
learning process	techniques used	haven't been observed - don't mind		
learning process	techniques used	working with other student		
learning process	techniques used	learn from practice		
learning process	would be helpful			
learning process	would be helpful	like to be observed		
learning process	would be helpful	like to watch proper history		
learning process	would be helpful	pt"s with straightforward histories		
learning process	would be helpful	would like to know re other profs' roles		
learning process	barriers to learning			
learning process	barriers to learning	don't see whole process		
learning process	barriers to learning	don't understand how wards work		
learning process	barriers to learning	teachers expect diff things		
learning process	barriers to learning	teaching not structured		
learning process	barriers to learning	teachers not clear what teaching		
learning process	barriers to learning	tension between pt's needs and instructions		
learning process	barriers to learning	conflicting advice		
learning process	barriers to learning	diff to know when doing it right		
learning process	approach to learning			
learning process	approach to learning	strategic		
learning process	approach to learning	strategic	learning from patient	
learning process	approach to learning	strategic	learning from patient	lead from patient's answers
learning process	approach to learning	strategic	learning from patient	summarise and check
learning process	approach to learning	strategic	learning from patient	make rapport with patient
learning process	approach to learning	strategic	learning from patient	put self in patient's shoes
learning process	approach to learning	strategic	learning from patient	see it as story
learning process	approach to learning	strategic	learning from patient	ask Qs to clarify
learning process	approach to learning	strategic	learning from patient	clarify st role with pt

Appendix E: Index of coding for interviews with third year students

learning process	approach to learning	strategic	trial and error	
learning process	approach to learning	strategic	trial and error	being told what's missing
learning process	approach to learning	strategic	trial and error	get all info I'll be asked for
learning process	approach to learning	strategic	use all sources	
learning process	approach to learning	strategic	following instructions	
learning process	approach to learning	strategic	following instructions	find out why came to hospital
learning process	approach to learning	strategic	following instructions	to fulfill some requirement
learning process	approach to learning	strategic	following instructions	not to make diagnosis initially
learning process	approach to learning	deeper		
learning process	approach to learning	deeper	think through more logically if not taking notes	
learning process	approach to learning	deeper	working out	
learning process	approach to learning	deeper	working out	ruling things in or out
learning process	approach to learning	deeper	should be about discovering, not fulfilling criteria	
learning process	approach to learning	deeper	seeking understanding	
learning process	approach to learning	surface		
learning process	approach to learning	surface	using list	
learning process	approach to learning	surface	using list	fishing
learning process	approach to learning	surface	using list	use linear structure
learning process	approach to learning	surface	using list	don't think about plan till end
learning process	approach to learning	surface	using list	use list outline
learning process	approach to learning	surface	using list	use list of questions
learning process	approach to learning	surface	get on with it (less time) for exam	
medical culture				
medical culture	old school			
medical culture	language			
medical culture	language	address the complaint		
medical culture	competitive			
medical culture	medical hierarchy			
medical culture	not part of team			
medical culture	professional status			
medical culture	professional status	medical amateur		
medical culture	confusion re presenting complaint			
medical culture	see presentation under perc of task			
medical culture	no criticism when I would expect			

demography					
demography	gender				
demography	gender	female			
demography	gender	male			
demography	previous degree				
demography	previous degree	yes			
demography	previous degree	no: school leaver			
demography	previous degree	no: mature			
demography	year of course				
demography	year of course	third			
demography	year of course	fourth			
demography	year of course	fifth			
demography	year of course	PRHO			
demography	interview type				
demography	interview type	individual			
demography	interview type	group			
demography	overseas				
demography	accelerated				
demography	intercalated BSc				
perception of task					
perception of task	purposes of HT				
perception of task	purposes of HT	doctor.practitioner	persp		
perception of task	purposes of HT	doctor.practitioner	persp	make diagnosis	
perception of task	purposes of HT	doctor.practitioner	persp	make diagnosis	totally on diag, not on social interaction
perception of task	purposes of HT	doctor.practitioner	persp	make diagnosis	make D to test own learning
perception of task	purposes of HT	doctor.practitioner	persp	make diagnosis	boring when know diagnosis
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health care	
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	think about why taking history
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	pat satisfaction
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	think about use for patient's care
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	creating database for team
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	watching HOs helps focus on future role
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	find precipitating causes
perception of task	purposes of HT	doctor.practitioner	persp	thinking about relevance to pt's health c:	how it affects them influences management
perception of task	purposes of HT	student.clerk	persp		

perception of task	purposes of HT	student.clerk persp	make presentation	
perception of task	purposes of HT	student.clerk persp	make presentation	using right language
perception of task	purposes of HT	student.clerk persp	make presentation	style over content
perception of task	purposes of HT	student.clerk persp	make presentation	diff criteria med and surgery
perception of task	purposes of HT	student.clerk persp	make presentation	very important
perception of task	purposes of HT	student.clerk persp	make presentation	re-order notes for presentation
perception of task	purposes of HT	student.clerk persp	make presentation	diff consultants want diff formats
perception of task	purposes of HT	student.clerk persp	for assessment	
perception of task	purposes of HT	student.clerk persp	for assessment	whole attachment geaqred to long case
perception of task	purposes of HT	student.clerk persp	for assessment	seeing pts on ward necessary, even though dull
perception of task	purposes of HT	student.clerk persp	for assessment	exhaustive history for exam
perception of task	purposes of HT	student.clerk persp	for assessment	history in exam broader, less focused
perception of task	purposes of HT	student.clerk persp	for assessment	assessment is onpresentation not history
perception of task	purposes of HT	student.clerk persp	for assessment	in exams consultants already know details
perception of task	purposes of HT	student.clerk persp	for assessment	anxiety alters relationship with pt
perception of task	purposes of HT	student.clerk persp	for assessment	hoops to be jumped through, play the game
perception of task	purposes of HT	student.clerk persp	for assessment	not history as much as rest
perception of task	purposes of HT	student.clerk persp	for assessment	chancy but fair?
perception of task	purposes of HT	student.clerk persp	for assessment	include everything
perception of task	purposes of HT	student.clerk persp	for own learning	
perception of task	purposes of HT	student.clerk persp	for own learning	remember without writing
perception of task	purposes of HT	student.clerk persp	for own learning	sorting info in head
perception of task	purposes of HT	student.clerk persp	for own learning	to improve skills for self
perception of task	purposes of HT	student.clerk persp	for own learning	build up patient databank
perception of task	purposes of HT	student.clerk persp	for own learning	for practise alone
perception of task	purposes of HT	student.clerk persp	for own learning	practisetalking to pts
perception of task	purposes of HT	student.clerk persp	for own learning	being inclusive to learn
perception of task	purposes of HT	student.clerk persp	creating database for team	
perception of task	purposes of HT	patient.person persp		
perception of task	purposes of HT	patient.person persp	no focus on p.p persp	
perception of task	purposes of HT	patient.person persp	no focus on p.p persp	totally on diag, not on social interaction
perception of task	purposes of HT	patient.person persp	pat satisfaction	
perception of task	purposes of HT	change since yr 3		
perception of task	purposes of HT	change since yr 3	now tool as part of HC process	
perception of task	purposes of HT	change since yr 3	less going through list	

perception of task	rationale			
perception of task	rationale	doctor.practitioner persp		
perception of task	rationale	doctor.practitioner persp	take focused history	
perception of task	rationale	doctor.practitioner persp	take focused history	
perception of task	rationale	doctor.practitioner persp	take focused history	relate to diagnosis
perception of task	rationale	doctor.practitioner persp	take focused history	starting with main problem and asking round that
perception of task	rationale	doctor.practitioner persp	take focused history	starting with main p picked up from SHOs' notes
perception of task	rationale	doctor.practitioner persp	take focused history	starting with main p what happens in practice
perception of task	rationale	doctor.practitioner persp	take focused history	starting with main p problem orientated clerking
perception of task	rationale	doctor.practitioner persp	take focused history	tailor history to the situation
perception of task	rationale	doctor.practitioner persp	take focused history	take directed history now
perception of task	rationale	doctor.practitioner persp	take focused history	think what info I need
perception of task	rationale	doctor.practitioner persp	take focused history	like painting a picture
perception of task	rationale	doctor.practitioner persp	DON'T NEED EVERYTHING	
perception of task	rationale	doctor.practitioner persp	using discriminating questions	
perception of task	rationale	doctor.practitioner persp	using discriminating questions	clinching questions
perception of task	rationale	doctor.practitioner persp	using discriminating questions	less good if only one only relates to one specific disease
perception of task	rationale	doctor.practitioner persp	using discriminating questions	good to use single question that gives a lot of info
perception of task	rationale	doctor.practitioner persp	using discriminating questions	key questions
perception of task	rationale	doctor.practitioner persp	using discriminating questions	defining relevant negatives
perception of task	rationale	doctor.practitioner persp	limiting it down	
perception of task	rationale	doctor.practitioner persp	limiting it down	what part of body
perception of task	rationale	doctor.practitioner persp	limiting it down	questions to rule things out
perception of task	rationale	doctor.practitioner persp	limiting it down	rule out emergencies
perception of task	rationale	doctor.practitioner persp	limiting it down	ideas then proving wrong
perception of task	rationale	doctor.practitioner persp	limiting it down	what could cause Sx then ask Qs about
perception of task	rationale	doctor.practitioner persp	limiting it down	anatomical sieve
perception of task	rationale	doctor.practitioner persp	limiting it down	limiting it down to system
perception of task	rationale	doctor.practitioner persp	limiting it down	learn clinching questions from discussion
perception of task	rationale	doctor.practitioner persp	limiting it down	narrow down before TH
perception of task	rationale	doctor.practitioner persp	limiting it down	think of diagnosis and ask confirmatory questions
perception of task	rationale	doctor.practitioner persp	systematic questioning	
perception of task	rationale	doctor.practitioner persp	systematic questioning	go through systems
perception of task	rationale	doctor.practitioner persp	systematic questioning	use list as framework
perception of task	rationale	doctor.practitioner persp	systematic questioning	use framework

perception of task	rationale	doctor.practitioner persp	systematic questioning	ask list, mouth to bum
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	same, as in same situations
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	PRHOs histories shorter and more relevant
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	as HO, HT role will be supervised by firm
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	will be more diff to answer questions
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	professional and task oriented
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	need to find out eg ifneedthrombolysis
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	treated like HO in fifth year
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	will be problem solving not passing exam
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	will have less time
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	more assertive, extract information
perception of task	rationale	doctor.practitioner persp	relationship to role as PRHO	in yr 5 asking many things, as PRHO won't if superfluous
perception of task	rationale	doctor.practitioner persp	caught out if wrong discipline	
perception of task	rationale	doctor.practitioner persp	rel with phys exam in neuro	
perception of task	rationale	student.clerk persp		
perception of task	rationale	student.clerk persp	NOT MISSING THINGS	
perception of task	rationale	student.clerk persp	NOT MISSING THINGS	things missed may differ by consultant
perception of task	rationale	student.clerk persp	NOT MISSING THINGS	ask everything so don't miss something
perception of task	rationale	patient.person persp		
perception of task	rationale	patient.person persp	don't understnd ptbetter, understand disease better	
perception of task	rationale	patient.person persp	difficulty when pat says too much	
perception of task	rationale	patient.person persp	communication issues	
perception of task	rationale	patient.person persp	communication issues	good to interleave facts and emotions
perception of task	rationale	patient.person persp	communication issues	tension social v professional
perception of task	rationale	patient.person persp	communication issues	many diff ways of putting pt at ease
perception of task	rationale	patient.person persp	communication issues	tension: being natural and not missing things
perception of task	rationale	patient.person persp	communication issues	tension: normal conversation and writing notes-remembering
perception of task	rationale	ideal history		
perception of task	rationale	ideal history	ever;y subject area is covered	
perception of task	rationale	ideal history	need to ask to know not relevant	
perception of task	rationale	ideal history	not done because no time	
perception of task	rationale	ideal history	all relevant info logged,	
perception of task	rationale	ideal history	geared to diagnosis	
perception of task	rationale	ideal history	past, drugs don't bother, social, allergies	

perception of task	rationale	ideal history	Groups of Sx to paint picture
perception of task	rationale	ideal history	appears logical
perception of task	rationale	ideal history	right words and right negatives
perception of task	rationale	ideal history	not missing things out
perception of task	rationale	ideal history	write clear story, not in front of pt
perception of task	rationale	ideal history	no consensus on
perception of task	rationale	ideal history	matches consultants
perception of task	rationale	ideal history	logical,with pos and neg
perception of task	rationale	ideal history	ideal history comprehensive but not poss so not ideal
perception of task	rationale	ideal history	gold standard
perception of task	rationale	'relevant' info	
perception of task	rationale	'relevant' info	experience teaches what's relevant
perception of task	rationale	'relevant' info	select for relevance
perception of task	rationale	'relevant' info	order and relevance during HT for presentation after
perception of task	rationale	'relevant' info	relevant info and other to answer Qs
perception of task	rationale	systems review	
perception of task	rationale	systems review	more prob orientated clerking now
perception of task	rationale	systems review	things get missed if don't do
perception of task	rationale	systems review	consultants bad at it
perception of task	rationale	systems review	diff to know if missed something in SE
perception of task	rationale	systems review	nurses do by proforma
perception of task	rationale	systems review	conflicting advice
perception of task	rationale	systems review	told stupid if do properly
perception of task	rationale	systems review	what is point of SE
perception of task	rationale	systems review	about time management
perception of task	rationale	systems review	licence to detail all ills
perception of task	rationale	systems review	HPC more important in final year, SE less so
perception of task	rationale	reflection on rationale	
perception of task	rationale	reflection on rationale	ideal history comprehensive but not poss so not ideal
perception of task	rationale	reflection on rationale	comm skills dont apply to TH
perception of task	rationale	reflection on rationale	discomfort with directed history, need to take baggage home
perception of task	rationale	reflection on rationale	humanity driven out of me
perception of task	rationale	reflection on rationale	depends on specialty, and time availablr
perception of task	rationale	reflection on rationale	analytical people may find H wishy-washy
perception of task	rationale	reflection on rationale	discomfort with illness stereotypes

perception of task	rationale	reflection on rationale	guilt re asking everything as implies don't know what's relevant
perception of task	rationale	reflection on rationale	tension between TH and maintaining rapport only in exams
perception of task	rationale	reflection on rationale	need to know about things before asking right questions
perception of task	rationale	reflection on rationale	would like to be methodical and analytical?
perception of task	rationale	reflection on rationale	tension: asking everything and refining
perception of task	rationale	stages in learning to TH	
perception of task	rationale	stages in learning to TH	start with zilch, then everything, then refine
perception of task	rationale	stages in learning to TH	thought model clear until started asking Qs
perception of task	ethical issues		
perception of task	ethical issues	being called Dr	
perception of task	ethical issues	informed consent difficult	
perception of task	ethical issues	not keen on giving option to say no	
perception of task	change since yr 3		
perception of task	change since yr 3	didn't know why asking in 3rd yr	
perception of task	change since yr 3	bring SE into HPC now	
perception of task	change since yr 3	now tool as part of HC process	
perception of task	change since yr 3	more accepted on ward	
perception of task	change since yr 3	more listening, less worrying	
perception of task	change since yr 3	more problem orientated	
perception of task	change since yr 3	more discipline orientated	
perception of task	change since yr 3	what other info do I need	
perception of task	change since yr 3	didn't know how to narrow down inthird year, now do	
perception of task	change since yr 3	can tailor to consultant now	
perception of task	change since yr 3	asked everything in third year	
perception of task	change since yr 3	more methodical and analytical	
perception of task	change since yr 3	more able to go back and ask	
perception of task	change since yr 3	less going through list	
perception of task	role of student in clin settings		
perception of task	role of student in c	involvement in patient care	
perception of task	role of student in c	involvement in patient care	prefer it
perception of task	role of student in c	involvement in patient care	good when invoved and opinion sought
perception of task	role of student in c	involvement in patient care	easier when a purpose
perception of task	role of student in c	involvement in patient care	hope more in 5th yr
perception of task	role of student in c	involvement in patient care	not supposed to be
perception of task	role of student in c	in the way in third year	

perception of task	role of student in (	med students don't have much role (intercal)		
perception of task	role of student in (	wishy washy		
perception of task	role of student in (	more accepted on ward		
perception of task	role of student in (	got a bit to give back in 5th yr		
perception of task	role of student in (	difficult to be clear about it		
perception of task	role of student in (	doctor role,allowed to touch people		
influences				
influences	previous experience			
influences	previous experien	more sensitive to pts' concerns		
influences	individual and social			
influences	individual and soc	mature students more aware of own fallibility		
influences	individual and soc	evangelism		
influences	individual and soc	not listening		
influences	curriculum			
influences	curriculum	watching clinicians		
influences	curriculum	watching clinicians	behaviours not to emulate	
influences	curriculum	watching clinicians	behaviours not to emulate	not seen much negative
influences	curriculum	watching clinicians	behaviours not to emulate	nurses and HOs using proforma
influences	curriculum	watching clinicians	behaviours not to emulate	cynicism rubs off
influences	curriculum	watching clinicians	behaviours not to emulate	learn how no t to behave non-verbally
influences	curriculum	watching clinicians	Drs don't take full histories	
influences	curriculum	watching clinicians	Drs don't take full histories	ask Qs for specific purpose
influences	curriculum	watching clinicians	Drs don't take full histories	ask Qs for specific because pts have specific problems
influences	curriculum	watching clinicians	Drs don't take full histories	ask Qs for specific algorithmic method (surgeon)
influences	curriculum	watching clinicians	Drs don't take full histories	ask Qs for specific sorted out beforehand for specific pt
influences	curriculum	watching clinicians	Drs don't take full histories	ask Qs for specific often very specialised aim in clinics
influences	curriculum	watching clinicians	Drs don't take full histories	ask Qs for specific brief or not brief
influences	curriculum	watching clinicians	Drs don't take full histories	do it in their head and on their own
influences	curriculum	watching clinicians	Drs don't take full histories	consultants take short cuts because of experience
influences	curriculum	watching clinicians	Drs don't take full histories	SHOs take short cuts because emergencies
influences	curriculum	watching clinicians	Drs don't take full histories	SHOs up never take histories
influences	curriculum	watching clinicians	Drs don't take full histories	never seen full history
influences	curriculum	watching clinicians	Drs don't take full histories	don't take full hist because have PRHOs
influences	curriculum	watching clinicians	behaviours to emulate	
influences	curriculum	watching clinicians	behaviours to emulate	learn which questions are most hel[ful

influences	curriculum	watching clinicians	behaviours to emulate	HOs get there quickly, not sure why
influences	curriculum	watching clinicians	behaviours to emulate	confident so can engage socially
influences	curriculum	watching clinicians	behaviours to emulate	they just ask clinching questions
influences	curriculum	watching clinicians	behaviours to emulate	admire politeness, not losing cool
influences	curriculum	watching clinicians	behaviours to emulate	unsual questions
influences	curriculum	watching clinicians	watching HOs helps focus on future role	
influences	curriculum	elective		
influences	curriculum	elective	learning good non'verbal skills	
influences	curriculum	elective	understand re touchy feely medicine	
influences	curriculum	exams		
influences	curriculum	exams	in 5th year always conscious	
influences	curriculum	exams	more regimented if observed, like driving test	
influences	curriculum	exams	must use list in exam	
influences	curriculum	teaching methods		
influences	curriculum	teaching methods	using video	
influences	curriculum	teaching methods	using video	less threatening than being observed
influences	curriculum	teaching methods	hypothesis testing	
influences	curriculum	teaching methods	how first taught crucial	
influences	curriculum	teaching methods	at bedside being asked questions	
influences	curriculum	teaching methods	want to be challenged	
influences	curriculum	comm skills teaching - can't remember		
influences	curriculum	intercalated		
influences	curriculum	seeing pts and conditions		
learning process				
learning process	reflections on			
learning process	reflections on	feedback		
learning process	reflections on	feedback	need FB on hist, not same as presentation	
learning process	reflections on	feedback	trial and humiliation	
learning process	reflections on	feedback	happy to get FB on presentation, not history	
learning process	reflections on	feedback	better when feedback gives reason	
learning process	reflections on	feedback	feedback less useful when about obscure syndrome	
learning process	reflections on	feedback	feedback best when not pedantic	
learning process	reflections on	HT taken for granted		
learning process	reflections on	HT taken for granted	never been watched HT	
learning process	reflections on	HT taken for granted	important for HT to be observed and probs identified	

learning process	reflections on	HT taken for granted	presentation shows up how H taken	
learning process	reflections on	need practical experience		
learning process	reflections on	need practical experience	experience nec of non verbal behaviour, seminar no help	
learning process	reflections on	need practical experience	learn more from practice than from watching others	
learning process	reflections on	need practical experience	learn more with real pats and doctors	
learning process	reflections on	change since 3rd year		
learning process	reflections on	change since 3rd year	confidence - less worrying andbetter listening	
learning process	reflections on	change since 3rd year	more listening, less worrying	
learning process	reflections on	change since 3rd year	didn't like asking Qs before knew about disease	
learning process	reflections on	change since 3rd year	was stuck in preclinical mode	
learning process	reflections on	change since 3rd year	needed routine as haven't got a clue	
learning process	reflections on	some things specific to consultant		
learning process	reflections on	mind works better when don't know diagnosis		
learning process	reflections on	steep learning curve after 4th yr break		
learning process	reflections on	good to have initial backbone		
learning process	reflections on	right level of confidence		
learning process	reflections on	depends on teachers' expectations of student		
learning process	reflections on	think in purely clinical mode (not physiol)		
learning process	reflections on	Intermediate helped		
learning process	reflections on	H seems airy fairy to intercalated, not evidence		
learning process	reflections on	difficult to teach and examine making rapport with patient		
learning process	reflections on	introducin self etc not always linked to good rapport		
learning process	reflections on	ok to 'chat' so use more time TH than PE		
learning process	reflections on	stages in learning to TH		
learning process	reflections on	sometimes diff to ask questions: seniority, personality, time		
learning process	reflections on	should be healthy to practise but prob not gettingmuch out of it		
learning process	approach to learning			
learning process	approach to learn seeking understanding			
learning process	approach to learn seeking understanding	asking questions		
learning process	approach to learn seeking understanding	asking questions		better when can ask why
learning process	approach to learn seeking understanding	asking questions		usually understand why or ask
learning process	approach to learn seeking understanding	working it out		
learning process	approach to learn seeking understanding	working it out		working out what is relevant
learning process	approach to learn seeking understanding	working it out		make the connections
learning process	approach to learn seeking understanding	working it out		thinking out logical method

Appendix F: Index of coding for interviews with fifth year students

learning process	approach to learn seeking understanding	working it out	needed routine in third yr, now work it out
learning process	approach to learn seeking understanding	better when feedback gives reason	
learning process	approach to learn seeking understanding	consultants check you understand	
learning process	approach to learn seeking understanding	focus on why taking history	
learning process	approach to learn seeking understanding	using books - difffrom 3rd yr	
learning process	approach to learn seeking understanding	Intermediate helped	
learning process	approach to learn seeking understanding	trial and error with reason	
learning process	approach to learn seeking understanding	trial and error with reason	FH - how much to take
learning process	approach to learn seeking understanding	trial and error with reason	match hist with consultant's
learning process	approach to learn list		
learning process	approach to learn list	when know what's wrong might use list	
learning process	approach to learn list	went through list for SE	
learning process	approach to learn list	common list for systems enquiry	
learning process	approach to learn list	must use list in exam	
learning process	approach to learn list	listed everything but tedious	
learning process	would be helpful		
learning process	would be helpful	more clin contact in first two years	
learning process	would be helpful	more obs and feedback	
learning process	would be helpful	taking histories without language	
learning process	would be helpful	teaching about comm skills as PRHO	
learning process	techniques used		
learning process	techniques used	learning from experience	
learning process	techniques used	learning from experience	many different patients
learning process	techniques used	learning from experience	gain confidence to eg interrupt
learning process	techniques used	learning from experience	how questions have gone with patient
learning process	techniques used	learning from experience	question left out that would have helped
learning process	techniques used	learning from experience	refined with experience
learning process	techniques used	learning from experience	learn from practice
learning process	techniques used	not to write notes - helps thinking	
learning process	techniques used	not to write notes - helps thir notes better if written after	
learning process	techniques used	watching others present	
learning process	techniques used	presenting to lots of different people	
learning process	techniques used	learning in small gp	
learning process	techniques used	focus on commn issues	
learning process	techniques used	seeing third yrs as confidence boost	

learning process	techniques used	learn clinching questions from discussion
learning process	techniques used	learning in pairs - best in third yr
learning process	techniques used	just soak it in
learning process	techniques used	watching HOs helps focus on future role
learning process	find difficult	
learning process	find difficult	pills and sexual histories
learning process	find difficult	presenting complaint
learning process	find difficult	how much FH to take
learning process	find difficult	taking HPC
learning process	find difficult	taking control
learning process	find difficult	sensitive subjects
medical culture		
medical culture	language	
medical culture	language	S2 no problem now
medical culture	language	S6 poor historian
medical culture	language	G2 using right language
medical culture	language	S6 NAD rubbish
medical culture	language	S4 medical terminology incomprehensible
medical culture	language	S2 presenting complaint
medical culture	conforming to norms	
medical culture	conforming to nor S1 play the game making rapport	
medical culture	conforming to nor S4 jumping through hoops and towing the line	
medical culture	conforming to nor S4 fully accepted need to perform didd for diff consultants	
medical culture	conforming to nor S4 probs surviving if don't conform	
medical culture	conforming to nor G2 can tailor to consultant now	
medical culture	conforming to nor S1 play the game in exams	
medical culture	S how questions have gone with patient	
medical culture	S2 slicker, more professional	
medical culture	S3 doctor role,allowed to touch people	
medical culture	S4 distress re time constraints of system	
medical culture	S4 Drs don't like no straight answer	
medical culture	S4 elite band of doctors	

Appendix G: Index of coding for interviews with teachers

demography	gender		
demography	gender	male	
demography	gender	female	
demography	year of qualification		
demography	year of qualification	61-72	
demography	year of qualification	73-84	
demography	year of qualification	85-88+97	
demography	specialty		
demography	specialty	renal medicine	
demography	specialty	cardiac surgery	
demography	specialty	chest medicine	
demography	specialty	palliative medicine	
demography	specialty	elderly care	
demography	specialty	anaesthetics	
demography	specialty	gastrointestinal medicine	
demography	specialty	child health	
purposes	doctor-practitioner		
purposes	doctor-practitioner	diagnosis, invests, management	
purposes	doctor-practitioner	diagnosis, invests, management	T2 for guidance with exam, and invests
purposes	doctor-practitioner	diagnosis, invests, management	T2 identify key features which need invest
purposes	doctor-practitioner	diagnosis, invests, management	T4 make diagnosis appropriate to stage
purposes	doctor-practitioner	diagnosis, invests, management	help you arrive at diagnosis
purposes	doctor-practitioner	diagnosis, invests, management	what wrong and what brought them
purposes	doctor-practitioner	diagnosis, invests, management	to help pt
purposes	doctor-practitioner	diagnosis, invests, management	find out what's wrong and how to help
purposes	doctor-practitioner	diagnosis, invests, management	make diagnosis with good comm skills
purposes	doctor-practitioner	make relationship with pt	
purposes	doctor-practitioner	make relationship with pt	put pt at ease
purposes	doctor-practitioner	make relationship with pt	make rel with patient
purposes	doctor-practitioner	make relationship with pt	identify key features including pt's concerns
purposes	doctor-practitioner	make relationship with pt	get patient's trust
purposes	doctor-practitioner	T4 put patient's problem in context	
purposes	student-clerk		
purposes	student-clerk	create database for clinical and legal purposes	
purposes	student-clerk	create database for clinical and legal purposes	covering everything

purposes	student-clerk	create database for clinical and legal purposes	present key info, record rest
purposes	student-clerk	create database for clinical and legal purposes	employment history (SHOs)
purposes	student-clerk	create database for clinical and legal purposes	drug history
purposes	student-clerk	create database for clinical and legal purposes	communication tool for colleagues
purposes	student-clerk	create database for clinical and legal purposes	info not just fortoday's problem
purposes	student-clerk	follow the book	
purposes	student-clerk	ask relevant questions (follow textboook)	
purposes	student-clerk	T10, 5, 7 not diagnosis	
purposes	patient-person		
purposes	patient-person	make relationship with pt	
purposes	patient-person	make relationship with pt	put pt at ease
purposes	patient-person	make relationship with pt	make rel with patient
purposes	patient-person	make relationship with pt	identify key features including pt's concerns
purposes	patient-person	make relationship with pt	get patient's trust
purposes	patient-person	hear patient's account	
purposes	patient-person	hear patient's account	write description not interpretation
purposes	patient-person	hear patient's account	try and imagine the pt's experience
purposes	patient-person	hear patient's account	story telling not history taking
purposes	patient-person	hear patient's account	story telling more than pushing in fingers
purposes	patient-person	hear patient's account	receive not take a history
purposes	practice using framework for history		
purposes	must be honest		
rationale	ideal history		
rationale	ideal history	ideal presentation is understanding	
rationale	ideal history	ideal pres is effiicient communication	
rationale	ideal history	inclusive not exclusive in third yr	
rationale	ideal history	includes process and outcome	
rationale	ideal history	lots of detail about HPC, including past social etc	
rationale	ideal history	good history is complete picture	
rationale	ideal history	ideal history succinct and identifies key features and those needing invest	
rationale	ideal history	ideal history is mixture HT and story telling	
rationale	ideal history	really good history leaves teacher asking no more Qs	
rationale	ideal history	ideal is follow Macleod	
rationale	systems enquiry		
rationale	systems enquiry	SE must becomprehensive	

rationale	systems enquiry	obsessive at first, filter out later
rationale	systems enquiry	least important, leads to ticking boxes
rationale	systems enquiry	ask key Qs in each area
rationale	systems enquiry	problem in eld care, but good practice
rationale	systems enquiry	unsure re value
rationale	systems enquiry	would do if had more time
rationale	asking everything	
rationale	asking everything	relevance - either all or learn from experience
rationale	asking everything	full data collection nec before poss to make diagnosis
rationale	asking everything	hist limited by relevance to problem -but not for students
rationale	asking everything	covering everything
rationale	asking everything	ask everything re presenting problem, problem is box filling
rationale	asking everything	I'm morefocussed but st should not take short cuts
rationale	asking everything	thorough means all relevant, defined by Dr who knows pt
rationale	gather info first then think later	
rationale	gather info first then think later	some SHOs write down at end - worrying
rationale	gather info first then think later	gather all info then make problem sheet
rationale	gather info first then think later	full data collection nec before poss to make diagnosis
rationale	gather info first then think later	relevance determined later
rationale	provide structure	
rationale	provide structure	need to give some structure
rationale	provide structure	ok to leave things till later, but say why
rationale	provide structure	deciding on chron or prob-based structure
rationale	provide structure	structure standard coping with all situations
rationale	provide structure	suggest lists and notes
rationale	provide structure	text book structure excluding 'box filling'
rationale	provide structure	fam hist crucial and badly done
rationale	provide structure	think (only) what already asked
rationale	encourage thinking	
rationale	encourage thinking	help st to think through rather than doin it by rote
rationale	encourage thinking	should be encouraging thinking , not learning by rote
rationale	encourage thinking	can't distinguish taking history from analysis
rationale	encourage thinking	must base history on analysis of info collected
rationale	encourage thinking	encouraging students to think
rationale	encourage thinking	joining together thinking with what learned before

rationale	focus on purpose or presenting problem	
rationale	focus on purpose or presenting problem	lots of detail about HPC, including past social etc
rationale	focus on purpose or presenting problem	different route for different problem
rationale	focus on purpose or presenting problem	focus on presenting complaint
rationale	focus on purpose or presenting problem	hist determined by how pt can be helped
rationale	ways of helping st manage their task	
rationale	ways of helping st manage their task	importance depends on discipline
rationale	ways of helping st manage their task	need to listen and get overall picture
rationale	ways of helping st manage their task	conflict between telling story and guiding
rationale	ways of helping st manage their task	be inquisitive
rationale	ways of helping st manage their task	no problems deciding whenasked enough
rationale	ways of helping st manage their task	don't jump to conclusions
rationale	ways of helping st manage their task	don't worry about irrelevant details
rationale	not having goal may stop filtering	
rationale	distinguish between skills of acquiring info and using info	
rationale	do it better or more fully when st watching	
culture of medicine		
culture of medicine	history not as 'smart' as invests	
culture of medicine	take social history now	
culture of medicine	pressures of time making HT worse	
culture of medicine	concern re fragmentation of med care and education	
culture of medicine	more value for pushing fingers than getting to root	
culture of medicine	people can't make decisions	
culture of medicine	science thought to be black and white, but is grey	
culture of medicine	change in junior doctor medicine	
culture of medicine	bluffing in hosp notes	
culture of medicine	change in teaching practice	
influences		
influences	observing others or not	
influences	observing others or not	observations of colleagues
influences	observing others or not	people worked with who are good with people
influences	observing others or not	seeing colleagues histories reassuring
influences	observing others or not	no obs of colleagues
influences	observing others or not	don't know how colleagues do it
influences	observing others or not	role models important

influences		specialism - no Sherlock Holmes	
influences		teaching with video	
influences		no idea	
influences		medical education?	
influences		how taught	
influences		time constraints - cut the crap	
influences		no influence from med ed	
influences		not textbook	
reflection on st	learning process		
reflection on st	learning process	students not encouraged to think	
reflection on st	learning process	students not encouraged to think	tension between thinking for self and guidelines
reflection on st	learning process	students not encouraged to think	students believe they shouldn't think
reflection on st	learning process	st hindered by trying to remember Qs	
reflection on st	learning process	st hindered by trying to remember Qs	diff because remembering all the Qs
reflection on st	learning process	st hindered by trying to remember Qs	st frozen by remembering all the Qs
reflection on st	learning process	tension between personal rel with pt and TH	
reflection on st	learning process	tension between personal rel with pt and TH	diff to ask Q you wouldn't normally ask
reflection on st	learning process	tension between personal rel with pt and TH	tension between personal angle and st needs
reflection on st	learning process	tension between personal rel with pt and TH	diff to get balance between pt's story and med info
reflection on st	learning process	tension between personal rel with pt and TH	sloppy about drug history because diff to push patient
reflection on st	learning process	tension between personal rel with pt and TH	diff to focus on comm skills till have structure
reflection on st	learning process	tension between personal rel with pt and TH	diff of integrating structure and comm skills
reflection on st	learning process	tension between personal rel with pt and TH	st intolerant of teachers 'wasting time' when should be teaching TH
reflection on st	learning process	tension between personal rel with pt and TH	need tiered approach
reflection on st	learning process	tension between personal rel with pt and TH	most diff to overcome social barriers
reflection on st	learning process	tension between personal rel with pt and TH	diff because st less life experience
reflection on st	learning process	students not clear about task	
reflection on st	learning process	students not clear about task	they don't really know what they are supposed to be doing
reflection on st	learning process	students not clear about task	st don't really understand why they are TH
reflection on st	learning process	concern re fragmentation of med ed and med care	
reflection on st	learning process	concern re fragmentation of med ed and med care	continuity with teacher helpful
reflection on st	learning process	concern re fragmentation of med ed and med care	more diff because no long term contact
reflection on st	learning process	concern re fragmentation of med ed and med care	concern re fragmentation of med care and education
reflection on st	learning process	get more focused, summarise by end of yr 3	
reflection on st	learning process	not sure that comm skills better with more teaching	

reflection on st	learning process	would demonstration help?	
reflection on st	learning process	poor medical vocabulary	
reflection on st	learning process	st read before and after clin exp	
reflection on st	learning process	st are active sponge not passive pudding	
reflection on st	learning process	not good at giving info, because not taught	
reflection on st	learning process	should st learn to take simplw hist first?	
reflection on st	learning process	st don't pursue info far enough	
reflection on st	learning process	diff when pt has vague symptoms	
reflection on st	learning process	st in a hurry to move on from HPC	
reflection on st	learning process	important that teachers have right attitude (not military)	
reflection on st	learning process	no problems deciding whenasked enough	
how TH oneself			
how TH oneself		more focused	
how TH oneself		more focused	reduced because time limited
how TH oneself		more focused	no open Qs because no time
how TH oneself		more focused	more controlling and more focused
how TH oneself		more focused	I'm morefocussed but st should not take short cuts
how TH oneself		more focused	more focused and more accurate
how TH oneself		depends on specialty or purpose	
how TH oneself		depends on specialty or purpose	system as anaesthetist
how TH oneself		depends on specialty or purpose	specialism - no Sherlock Holmes
how TH oneself		depends on specialty or purpose	take fewer formal histories
how TH oneself		depends on specialty or purpose	be general physician
how TH oneself		depends on specialty or purpose	responsibilityy for whole pt and relatives
how TH oneself		influence of students	
how TH oneself		influence of students	anxious re student noting deficiencies
how TH oneself		influence of students	do it better or more fully when st watching
how TH oneself		?skills related to cultural diffs orexperience	
how TH oneself		use diff words with (poss) similar result	
		Free Nodes	would prefer all to use POMR