Encouraging Active Learning in the General Practice Clerkship

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Abstract

Students undertake a clerkship in family medicine during their final year at medical school. We were concerned that the students appeared to take a very passive approach to their learning. They did not appear curious, and were reluctant to ask questions or express their own ideas. When faced with undifferentiated medical problems, they were unable to apply the theory that they had learned in previous years, and were reluctant to use communication skills in order to establish effective working relationships with patients. Their over-riding concern seemed to be to 'get through' the clerkship, and to proceed to the next part of the curriculum.

We decided to make changes to our educational approach, and to introduce elements of problem-based learning (PBL). This action research project explored the motivation of medical students to participate actively in the clerkship, and their ability to adapt to a PBL approach in tutorial sessions.

Focus group interviews with the students indicated that their motivation to learn about general practice was low. The driving force for learning was examinations, and the fact that the GP clerkship did not present an examination hurdle meant that it was seen as an opportunity to rest between the more demanding medical and surgical clerkships. In tutorial sessions, the PBL approach seemed to encourage more participation by the students, but the predominant interaction was still between the teacher and individual students, rather than between the group as a whole. There is some indication that students with poor English skills are less engaged in group activity than their more confident colleagues.

Conventional medical training seems to perpetuate the tendency to didactic and rote learning that appears to be the common experience of Hong Kong students throughout their education. Students are able to adopt more active educational roles given a suitably encouraging educational climate, but teachers need to be aware of the conflicts created by the mixed educational messages that students receive.

Introduction

Students in the Faculty of Medicine undertake a clinical clerkship in general practice during their final year in medical school. The objective of the clerkship is to enable students to see medicine as it is practiced in the community rather than in the hospital, and allow them to see the range of illnesses that are present to the general practitioner, as well as to refine their diagnostic and management skills with a population of primary care patients. The clerkship is the students' first exposure to general practice, even though half of them will become general practitioners.There are three main components:

- An attachment for six half-days to two general practitioners;
- Consultation sessions with patients attending for general practice care;

- A series of teaching sessions in the General Practice Unit.

Although these are senior students, who will be shortly taking their qualifying examinations and thus might be expected to show increased confidence and sophistication in their approach both to patients and to learning, experience shows that this is not the case. When faced with undifferentiated medical problems, they are generally unable to translate the theory learned in earlier parts of the medical school curriculum into effective patient care strategies. They are able to recite facts from memory, but are unable to deal with unfamiliar situations. They are reluctant to use communication skills in order to establish effective working relationships with patients.

They display little curiosity, and show little ability to critically appraise research data for themselves, relying instead on the opinions provided by the last expert they listened to.

In group learning situations, they are silent and reluctant to speak unless spoken to. Spontaneous conversation is rare, and attempts to encourage debate result in general discomfort, and stilted responses. Students appear unable to reflect on their experiences, and rather than being introspective, they try to guess the answer that the teacher 'wants'.They are reluctant to take risks, to identify gaps in their knowledge, or to actively seek out new information. Their over-riding concern seems to be to 'get through' the clerkship and to proceed to the next part of the curriculum.

Are the problems that we have identified due to the inherent intellectual characteristics of Hong Kong students, or do they reflect the damaging effects of inappropriate teaching methods?

Kember and Gow (1991) have argued that the stereotype of Asian students as rote learners may be explained more by the curriculum itself and the environment in which it is delivered, rather than by the inherent characteristics of the students. If they are correct, then educational methods that promote participatory, student-centred learning will encourage skills in deep learning, and so will provide a sounder basis for professional education.

There is both direct and indirect evidence to support such a point of view. Kember and Gow (1991), using Biggs' Study Process Questionnaire, found that the study approaches of Hong Kong students were broadly similar to those of Australian students, with deep study scores being if anything higher in the Hong Kong students. They also found that scores for deep learning in Hong Kong students were lower for second and third year students, implying that students responded to the educational environment by adopting a more surface approach to learning.

Biggs (1991) reports another comparison between Australian and Hong Kong students that focussed specifically on medical students. In this case, the scores for the Australian students, participating in an innovative medical school using a problem-based approach to learning, were higher for deep learning strategies than for Hong Kong students studying at a traditional medical school. The differences, in Biggs' words, were 'huge'. Moreover, the scores for the Australian students appear to indicate a progressive increase in deep learning scores from the first year onwards. Biggs concludes that teaching in a problem-based context encourages the development of deep and achieving approaches, while at the same time discouraging a surface approach.

In summary then, the evidence seems to indicate (Watkins and Biggs, 1996) that Hong Kong students generally have an approach to learning that shows a natural tendency to a deep-learning approach that is at least equivalent to the strategies of Australian students, and in many students may be better. The effect of the learning environment, however, is crucial. Students in an educational environment that encourages surface learning will respond with surface strategies, and a progressive decay in deep-learning approaches. In contrast, Australian students demonstrated a striking reverse trend, by adopting progressively stronger deep learning strategies when placed in an environment that emphasised problem-based learning and actively encouraged a deep learning approach.

There is considerable contemporary concern (General Medical Council, 1993) that the pedagogical methods used in medical education do indeed encourage students to adopt a surface approach to learning. Traditional methods of education in medicine concentrate on the learning and regurgitation of huge volumes of facts, learned largely out of context and which are often forgotten soon after the relevant examination hurdle has been jumped. Students by and large are forced by the curriculum into a passive approach to learning, and as a result of an often fragmented curriculum in which pre-clinical and clinical sciences remain divorced, are generally unable to mobilise the information they have learned when challenged to apply it to complex problems of medical care. There is ample evidence that medical students, when placed in such an educational context, become disillusioned and cynical , a process that has been given the label (Kay, 1990) of 'traumatic deidealization'! Such an environment also fosters feelings of stress , expressed as feelings of anxiety and depression, and medical students in Hong Kong (Stewart et al., 1995) are as vulnerable to this as students elsewhere.

What features of an educational programme are likely to foster a deep approach? In their survey of a number of educational studies, Biggs and Telfer (1987) suggested that four features seemed to be crucial:

- an appropriate motivational context
- a high degree of learner activity
- interaction with peers and teachers
- a well-structured knowledge base.

The purpose of the present project was to try to encourage more active learning on the part of our students, first by attempting to identify the factors that might encourage student motivation, and second by introducing an educational methodology (Problem-based learning) designed to increase deep learning by providing an increased level of student activity and interaction.

Student motivation

Methods

This part of the project employed qualitative research methods to determine what ideas students had about general practice before the clerkship, and the extent to which the clerkship changed their ideas. A total of 20 focus group discussions were held over the course of one academic year, involving 150 students. Each session took place at the end of the clerkship, and lasted approximately two hours. A loosely structured approach was used in which the moderator explained the purpose of the group session, and then solicited the students' views of the clerkship, allowing the students to raise their own concerns and questions. It was emphasised that the interviews were not going to be used to evaluate the students. The students were also asked to address three specific questions:

- What were your ideas about general practice before the clerkship, and where did those ideas come from?
- How do you decide where to concentrate your efforts in a busy curriculum, and what influence does future career interest have on your approach to learning?
- Have your ideas about general practice changed as a result of the clerkship?

All members of the groups were encouraged to talk freely and to contribute to the discussions, which were audio taped. Transcriptions of the sessions were made from the audiotapes, and the

transcripts were then checked for accuracy against the original recording by the tutor who had led the group.

For some of the students, English is a second language. As a result, there are frequent pauses in the audiotapes, repetitions and the use of words that may not be the best choice. In presenting transcripts of their comments, and to provide clarity and ease of reading, pauses and repetitions have been edited out. On occasions where a word or words have been added or substituted for the sake of clarity, this is indicated by the use of (brackets).

Results

Preexisting Ideas About General Practice

Students' impressions of general practice before they undertook the clerkship were almost entirely negative, and reflected three main themes: that general practice is an easy job; that it is boring; and that the general practitioner can make a lot of money. They also revealed the confusion in Hong Kong, as in other places in Asia, between general practice and private practice, the latter conducted by doctors who would describe themselves as specialists, but involving a significant amount of primary care.

> Two students summed up their views succinctly when asked their original ideas about general practice:
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> I could think of three points. Point number one....general practitioners deal with common diseases. Point number two, their life and jobs are relatively easy. Point number three, they make a lot of money.
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> Before the clerkship ....I also think that it is very easy to be a general practitioner because general practitioner always deal with simple disease....and you have to

The themes of treating common, mundane diseases, and so being able to see many patients in a day, are firmly linked in the minds of many students. One comments:

> Before the clerkship, I just think (that) general practitioners are those who set up a clinic sign outside and which are for profit making, and also seeing a lot of patients a day in a busy clinic.

Where do these ideas of general practice come from. What is the source of such negative stereotypes? For some, it is from personal experience:

> What (I think of) the role of the general practitioner in my mind just comes from my experience visiting the general practitioner. Most time I go I want to see the general practitioner because of URTI and I only have three to four minutes consultation and get drugs, and that's all. So, in my mind, general practitioners take a history very fast, give drug and then you go home.

However, much of the anecdotal impression of general practice apparently comes from conversations with hospital doctors. For example, one student comments:

> Sometimes the doctor in hospital see the referral letter of the general practitioner, they think the general practitioners are wrong. They say 'Why the general practitioner has such an idea, I don't think so.So, from these pieces of teaching we have the idea (that) the general practitioner is not so good in making diagnosis.

He goes on:

> It has happened many times during our bedside teaching, or in the Out Patient department. Many doctors (said) that the general practitioners are poor in medicine and they cannot make correct diagnosis and even cannot read ECG correctly....so in my one to two years clinical experience I have got ...in mind that GP can only treat simple disease.

How do Students Decide What Amount of Effort They Will Put into a Particular Clerkship?

Students, by the nature of the medical course, have to become pragmatists and determine how they can most effectively spend their time. How much effort they put into a subject seems to depend on whether the subject features in the examinations, how much importance the medical school appears to be place on the subject, and the extent to which they are interested in a subject and consider it as a possible career option.

But the greatest of these is concerns regarding the examination.....

> I am a very practical person. (If) I know that this is a subject that is not to be examined and is not important, I will not put much time into it because (even) for subjects that I need to study (because) I will be examined, I still don't have enough time to study them.

> The effort I put into a clerkship depends whether failing in the clerkship will have any long-term or short-term complication. Long term means I am not allowed to take my final examination, and short term means extra homework for me.

> If the subject will be examined I will put more effort (into the) subject, (even if) I do not really enjoy it.

One student identifies a conflict between how he rations his time, and what he thinks about the importance of a topic. Acknowledging that the effort that he put into the general practice clerkship was less than it might have been because there was no examination, he notes:

> I think for my own sake, how to treat the patient in general, how to approach the patient, how to deal with vague and non-specific symptoms, how to (understand) the patient's background, (may be) more important than (learning) how to deal with rare disease, rare investigation and ....sophisticated management.

For another, he puts in the minimum effort, but keeps his fingers crossed!

> I think, as a student, that if a subject does not appear in the final examination, they will not put too much effort into it....so I spend (a) very little time on general practice, but I do hope I can pass in this clerkship by such a small amount of time.

Some lore has been passed down from more senior students who have already done the clerkship:

> Some of our senior colleagues (tell us) it is not exam-oriented and...is not related to the final examination and it is quite a waste of time.

However, another student notes that while general practice does not feature in the final exam, he has heard via the student grapevine that some of the things learned in the clerkship may in fact be very relevant to the exam:

> Frankly speaking, if general practice (makes) a contribution to the final medical examination, we will put much time (into) it. But only in the last week I know the importance of general practice because some of my colleagues have just taken their obs and gynae exam, and some of them have failed, not because they don't have enough medical knowledge, but just because they don't have (a) good manner to the patient...I can see that (in) general practice

> (we have) a chance to (learn) how to approach the patient, and that is not something I can learn before.

The absence of an examination encourages some students to view the GP clerkship as an opportunity to 'take a breather'. In talking to students, the notion of the stress that they are under is never far from the surface.

As one of them puts it:

> I think medical life is like a rubber band...when there is an examination you are stretched and stretched to the limit, but when there is no exam, then I don't have any intention to learn

The fact that the GP clerkship comes in between the two major blocks of medicine and surgery, means that it is often seen as a time when the students can take something of a break:

> I think the GP Clerkship is a transition period between Medicine and Surgery, (when) the student can have a rest between the clerkships...to recharge power to the batteries.

One student makes the interesting distinction between the hard work demanded in other clerkships, and learning:

> Some (senior) students told me that this is the time that you can relax yourself and learn something that maybe more important to you...because (many of us) will do general practice in the future...and (the clerkship) is a good chance to learn more about communication

Another student picks up on this point, and talks about the relationship — or lack of one — between hard work and learning:

> I think I am very passive, and I will respond to the teacher's attitude. If they are very demanding...then maybe I would work harder, and put more effort into that subject. But it doesn't mean that I enjoy it. It makes me work harder, but it is not enjoyable. I think (I learn better) under an enjoyable situation. I will remember the knowledge longer. After...a hard lesson, maybe I will remember much more, but it is only short-term memory and I will lose that memory very fast.

General Practice as a Career Choice

Do students who might be more interested in general practice as a career pay more attention to the clerkship? For many students, with final examinations looming, their time horizon is much more limited, with thoughts about career plans placed firmly on the back burner:

> Our time is limited...so the first thing for us to do is to pass the examination and then we can be a house-officer, and then we can choose what we want to be in the future. So the first priority is to pass the examination. I think sometimes interest may override, may become the second priority, but it can never become the first one. If there is a contradiction, the first priority always wins.

At least half the class-based on current data — will become general practitioners, but for most, thoughts about career choice do indeed seem to be distant. The more immediate goal is to pass the final examination, and to become a house officer — career decisions can be deferred until after the 'finals' hurdle has been jumped. A group of students discuss this:

> S1 'I think about whether I am interested in a speciality and whether it will become my future career...but I think the first priority for me is whether this topic will be examined or any test will be held...the second is my own interest.'

S2 ‘Our time is limited, so we think the first thing for us to do is to pass the examination and then we can become a house officer, and then we can choose what we want to be in the future’

S3 ‘So the first priority is to pass the examination.’

S2 ‘I think interest may (sometimes) override and may come up a bit. It can go up to the second priority.’

S1 ‘But it can never become the first one’

S2 (laughing) ‘Unlikely’

S1 ‘if there is a contradiction, the first priority always wins.’

In any case, many have not seriously considered general practice as a career option. Their ambivalence seems to relate in part to the perceived status of the discipline, which they assess by the amount of time and resources given to it. As one student comments:

> I think the (general practice) clerkship is not highly respected...because we only spend one month compared to Medicine and Surgery (in both of which) we spent a half year. Also, there are not a lot of teachers here...

Another student reinforces his colleagues arguments:

> I think that if this clerkship is (to be) respected, more staff should be put into this clerkship, more time should be spent, and thirdly a significant degree of examination should be put into this clerkship.

Also, having spent his entire clinical time based in a hospital, one student at least does not see the mission of the medical school to be related to the training of general practitioners:

> I think maybe the medical Faculty has (the) purpose to train all the students to be a doctor in a hospital. Why I have this impression is that after more than one and a half clinical years I have no experience in seeing any upper respiratory infection, or to see any self-limiting or minor disease. All (we see) are patients in the hospital with more severe diseases.

Other students wrestle with the question of whether general practice is a ‘speciality’, and so a legitimate career choice:

> I have heard of general practice and primary care before, but I don't know what it really means. To me general practice is not a speciality like surgery, hepatology etc.

Other have picked up the message that general practice is a career choice made by default:

> Before this course, I think everyone will think that if you are not a success in your medical life you will become a general practitioner...if you are not competent to become a specialist you will become a general practitioner. It is because you have no choice.

Does the Clerkship Change Students’ Ideas?

What about after the clerkship? To what extent are the students ideas about general practice reinforced, or to what extent are they changed? For the students, this is the first experience of life outside the walls of the hospital, and the first time that the teachers have been generalists rather than specialists. For many of them, the contrast with their previous hospital-based teaching presents many contradictions. Indeed, ‘contradiction’ is a word that crops up frequently in their conversations on this topic:

> In other clinical clerkships such as Medicine or Obstetrics and Gynaecology we are very comfortable with (using) a structured guideline for taking the history and doing the physical examination. But in general practice the message (the tutor) conveyed to me is that we should not be so strictly attached to that sort of structured guideline, because (many times) we might find that it would cause more confusion than help to make the correct diagnosis. (For a) correct understanding of patients' problems we have to be more flexible and sensitive and reactive to the patients who have approached you. I think that is quite a new insight during this clerkship, because in the past we are so comfortable with that sort of guideline.
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> I think there is so much contradiction that it makes me agitated, because we have hospital teaching for several years and now when we go into this clerkship we learn to explore the patients satisfaction, his expectation, things like that. We have touched on the theory, but never had to practice this with patients before. In hospital we are always obsessed by the discussion of the physical illness.

Based on their hospital experiences, students anticipated that general practice would bring a succession of trivial complaints, with none of the urgency and complexity of hospital practice. To their surprise, they found that general practice is not as straightforward as they had anticipated, and that the GP does indeed need specific skills:

> Before (this clerkship) my impression of general practice is doing some boring job, just seeing patients who do not have severe diseases.But now...I have another insight....I think the general practitioner has an important role in the community....They require a lot of communication skills (and) I think that in the hospital setting we are not aware of using these skills...we do not count them. But in general practice we are actually encouraged to communicate with the patients better, because it will help with the patients more rather than in the hospital setting, because in the hospital setting it is usually an acute condition and the most important thing is to treat the patient immediately.

The speed with which the general practitioner makes decisions impresses some students, and they link such speed with the idea that, contrary to their expectations, GPs have a wide range of knowledge to draw on:

> Now I think the general practitioner is a lot more knowledgeable than I thought before. (When I was attached) to my tutor, I found that he think very fast, and there is a lot of knowledge in his mind, and whenever he ask me I cannot catch up with his speed, he think too fast...So now I change my mind and I think that general practitioners are actually quite knowledgeable.
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> Actually, I think the GP may not have less knowledge than the doctor working in the hospital, because each consultation is very short, and the GP should (make) a focused examination in a very short (time). That means he should think very quickly, and know things...very comprehensively, to think of all the possibilities and to confirm his diagnosis.

Not only are they impressed with the diagnostic speed they see displayed, but they also note that in general practice diagnoses have to encompass psycho-social as well as disease issues:

> It is difficult, it is really difficult to be a good and competent general practitioner. You have to be open minded with a wide range of medical knowledge, (with) good communication skills...and tackle different kinds of patients (with) different problems...if he is a good GP, for example like my tutor...when he sees a patient in the very first consultation, he knows that it is a psycho-somatic complaint and notices the depression of the patient...it is quite impressive.

> After the clerkship, I really have some impression that...being a GP requires a lot of communication skills and (understanding) of psychology. The wording that a GP uses,how they relieve the patients discomfort...really depends on how they tell the patient. And the more they know about the patient, the more they know about the patients thoughts, the more (successfully) they will deal with the patient...these communication skills and knowledge of psychology are not emphasised in hospital teaching.

An important experience that the students report is to see that their GP tutors enjoy their role, and get satisfaction from what at first sight might be mundane problems. Students pick this up from the way that the GP tutors approach their job:

> Before the clerkship, I think that what the GP could do is simply (treat) some physical problem...and that the work of the GP would be boring...but now I change my view, because what I think is that what makes you bored is not the nature of your job, but the way you view your job.

> Before this clerkship I have the impression of general practitioners that they are very money-oriented, and that they are time limited, not really because of time restriction, but because they are not willing to spend the time. They just want to know 'What is your complaint?' Cough? nasal obstruction? OK I will prescribe drugs and you can go...But after the attachment, maybe it is because my tutor is a very, very nice guy, and very competent, (now I think) that general practitioners really can do prevention, health education, and can explore the psychological problems of the patients, treat the patient as a whole patient, not just (treat) the physical illness...I think if I am going to be a general practitioner, I would like to be like him...I don't know if my tutor is representative (of general practitioners), but I think he is a very good model for me.

Effects of Problem-Based Learning

Problem-based learning (Alavi, 1995; Boud and Feletti, 1990) is an important and widely discussed educational method that was first used in medical education, but can now be found in teaching settings of many different and disparate disciplines. PBL is concerned with both what students learn and how they learn it. The process of learning is seen to be at least as important as the content, and a prime goal of PBL is for students to learn how to learn.

The starting point in PBL is a problem or a puzzle that challenges the student and arouses their curiosity. Students, working in a group, pool their ideas and previous experience, and identify the new knowledge required to understand the problem situation. They seek out this information, then bring it back again to the group for synthesis and application to the problem. Thus students learn as a result of tackling real life problems. This is in contrast to traditional methods of education in which students learn isolated batches of knowledge that are stored up, to be applied to practical problems at some indeterminate date in the future. PBL is seen as a method for developing active and independent learners, creative and divergent thinkers and good communicators.

PBL tutorials were introduced as one of the components of a five week general practice clerkship, using common problems in general practice as a stimulus for exploring issues in the content, context and concepts of general practice. The PBL process was modified to cope with the realities of the current timetable. Most problems were dealt with in one session, with little opportunity for students to engage in independent learning outside the tutorial setting. This part of the action research project explored the ability of students to adapt to a PBL approach during tutorials.

Methods

PBL tutorials were recorded on videotapes. They were then analysed, at 30 second intervals, to measure:

- The proportion of tutor talk versus student talk
- The pattern of interaction during the tutorial
- The degree of involvement by students in the tutorial process, by observing whether the student made eye-contact with other students, or with the tutor.

Results

Tutor vs Student Talk

Fifty-eight tutorials were analysed. In about one third of the tutorials the students spoke less than 30% of the time, in one third they spoke between 31-40%, and in one third they spoke more than 40% of the time.

In only two out of the 58 tutorials did the students speak more than the teachers. Of six Cantonese tutorials that were analysed, in two the students spoke from 21-30% of the time, in two they spoke from 31-40% of the time, and in two they spoke from 41-50% of the time.

There was not much variation between experienced tutors. Of the three main tutors on the unit, one held the floor for an average of 61% of the time during the tutorials, while the other two talked for 65.5% and 67.5% of the time. However, the effect of inexperience is demonstrated in the data collected from tutorials lead by a tutor involved in PBL sessions for the first time. In the course of four tutorials this tutor held the floor for 90.2%, 88.9%, 78.6% and 80% of the time respectively.

Pattern of Interaction

1875 verbal 'turns' were examined to establish the prevailing pattern of interaction.

In 914 (48.7%) of the turns the tutor was talking, while in 961(51.3%) a student was talking. From the previous results, it is evident that although the students 'held the floor' most often, the tutor talked for a longer time during his turns. What is most striking is the fact that one student followed another student only 47 (2.5%) times. The tutor was involved in 97.5% of the exchanges, and was evidently the medium through which all conversation was conducted.

Nor does the language in which the tutorial is conducted appear to have much effect. In the course of 887 exchanges in tutorials conducted in English, only 17 (1.9%) were initiated by students. Of 988 exchanges in tutorials conducted in Cantonese, 30 exchanges (3.0%) were initiated by students.

Engagement — Eye Contact

Pooled measurements of eye-contact indicate that during English tutorials students had established eye-contact with the tutor for 31.9% of the time, and with other students 15.1% of the time. For 52.9% of the time, students were looking elsewhere, and there was no eye-contact with either other students or the tutor. During tutorials conducted in Cantonese, students had eye-contact with the tutor for 42.4% of the time, with other students 21.6% of the time, and there was no eye-contact 36% of the time.

Pooled data, however, conceals considerable individual variation amongst individual students. The amount of eye-contact by various students participating in an English tutorial may be compared with students in the same group involved in a tutorial conducted in Cantonese.

Discussion

The focus group discussions were moderated by members of the General Practice Unit who had also been closely involved with teaching the students. Despite concerns that this would inhibit the students, or encourage them to tell us what they thought we wanted to hear, this did not seem to be the case. Because the interviews took place at the end of the clerkship, and as a result had no evaluative impact, the students keen to give us their impressions. Their responses to questions about their preexisting attitudes to general practice, their ideas about career choice, and their approach to managing their time reveals information about their motivation to become involved in the general practice clerkship, as well as the competing pressures they face during this part of the curriculum.

Attitudes to General Practice

By the time they reach the General Practice Clerkship, towards the end of their time at medical school, students have strong negative stereotypes of general practice and general practitioners. For many, then, the experience of general practice comes as something of a revelation. Many find that it is not so 'boring' as they had anticipated, and realise that it presents its own set of challenges.

What produces this change in attitude? While the formal teaching activities on the unit may play some part, it is clear that the greatest share of credit must go to the community GPs, who provide the real-life experience in their practices. What seems surprising is the speed with which this change of heart takes place, and indeed the strong identification with the GP tutor that occurs. Students will begin to comment on how their ideas are changing after only one or two GP sessions and for many, even after such a short attachment, the conversion for many is complete.

The power of role modelling (Lublin, 1992) is obviously of huge importance in both producing and correcting misperceptions, and students are evidently very sensitive to its influence. In the hospital setting, they pick up and identify with one set of values, and in general practice they learn another set.

For some students, it is not easy to recognise the sources of these influences, or to reconcile them. For others, the relationship with the GP may have been less happy, and they may not have been clearly exposed to the alternate point of view. For this reason, we hold a 'debriefing' session at the end of the attachments. This gives the students the chance to compare experiences, to discuss the significance of these experiences, and to put them into perspective.

Influence on Career Choice

As yet we have no evidence as to whether the general practice clerkship has any impact on career choices. It might be thought that vocational studies such as those undertaken at medical school might be intrinsically motivating, linked as they are to the apparent desire of students to become doctors, and to deal with patient problems. However, while many students seem to have some ideas about what they would like to do in the future, for most of them that is not a pressing issue. Their immediate goal is to pass the final examination, and to become a house officer - all other decisions can be safely postponed until after that. The goal of learning about medicine seems to get lost as the goal of passing examination hurdles becomes the over-riding motivational force.

Competition for Attention

The interviews reveal how carefully students manage their time and mental resources in an overcrowded curriculum full of conflicting demands. Interest, career choice and 'deep' learning all take a back seat to the most pressing goal of passing examinations, and moving on to become a house-officer.

As Choy (1991) has noted, Hong Kong students see themselves as heavily overloaded with work. At every point in the course they make deliberate decisions about what needs attention, based on the perceived status of the subject. Status depends on the size of the Department, the length of time allocated to its study, and its power within the examination system.

This presents a dilemma for a small unit that is not part of the traditional examination structure, but it seems that the carrot of clinical relevance may help overcome the absence of an examination stick, because students also discriminate based on their interpretation of the subject's clinical relevance. Information seen as relevant to clinical care is retained, while facts of little clinical relevance are held in the memory until after the examination, and are then forgotten in order to 'make room' for the next load of information.

Problem-Based Learning

Given the competing pressures for time and attention that are experienced by students, how did they react to the demands of a new teaching methodology in which they were given much more opportunity to contribute to the tutorial process, and were encouraged to discuss problematic situations?

The data from the videotapes reveals the challenges faced by tutors in this setting in achieving a high level of student participation. While the experienced tutors managed to encourage a much greater involvement of students in the tutorials than their more inexperienced colleague, it is evident that all the tutorial discussions were routed through the tutor. On remarkably few occasions were the comments of one student followed by those of another, indicating that almost no inter-student debate or discussion took place. Nor did this seem to be solely the effect of using a second language as the medium of discussion. Tutorials conducted in Cantonese produced remarkably similar results, even though we anticipated that the use of Cantonese would allow a much more free-flowing discussion.

Measurement of student eye-contact, which we used as a surrogate measure of 'involvement' in the tutorials, revealed that for a great proportion of the time, students were 'disengaged', and were avoiding eye-contact. Was this was a deliberate strategy to avoid being 'called on' by the tutor? Was the reason that tutors were so active in the tutorials, and appeared to play such a dominant role in the interactions, because the tutors were trying to encourage individual students to contribute to the process? Conversations with students suggest that the avoidance of eye-contact in small-group sessions is a 'survival' strategy that is learned early in medical school!

The greater proportion of engagement during tutorials conducted in Cantonese may reflect greater comfort on the part of students when they are involved in a discussion conducted in a familiar language. The variations in engagement among individual students may be a measure of their confidence in English language skills, although we have no other data to support that hypothesis.

It would appear that even when care is taken to create an educational climate that encourages discourse, the effect of the prevailing educational philosophy of the school is overwhelming. Given that our students had been used to a didactic educational climate that encouraged passivity on the part of the students, perhaps it is not surprising that they were inexperienced in a role that demanded participation and interaction.

While we were disappointed that in only two of the 58 tutorials examined did the students talk for more than half the time, the students by contrast were excited by their degree of participation. In their evaluative feedback on the tutorials, students regularly commented how much they enjoyed the participatory nature of the tutorials, and how they had never had so many discussions before!

The challenge remains of identifying the reasons behind the reluctance of students to engage with each other during tutorials, and to understand why the tutor retains such a dominant role.

Lessons for the General Practice Clerkship

- The influence of the hidden curriculum is pervasive and strong. Students readily pick up ideas and attitudes that may be in conflict with the goals of the school. Role modelling by faculty is a powerful force in both the creation and correction of misperceptions, and may influence the career choices of students. The process and context of education is important, and must not be neglected in favour of decisions based solely on the delivery of educational content.
- Examinations determine where students will put their maximum effort even at the expense of their personal interests, and long-term career goals. This creates a quandary for the teachers of subjects not included in examinations, and is a strong reason for reducing the significance of formal examinations in favour of other forms of continuing assessment.
- Students constantly evaluate subjects by their perceived relevance to medical practice, in part because their time is so full that they only have so much energy to spare. Subjects that are seen as 'theoretical' will be learned until the relevant examination is over, and then actively forgotten to leave room for the next batch of information.Planners need to ensure that subjects are presented in both classroom and clinical contexts, and that the relevance of the material and skills to be learned is continually reinforced.
- Students value the introduction of PBL sessions, and such sessions encourage much more active participation by them than would otherwise be the case.However, the overwhelming focus on didactic teaching in the rest of the course means that teachers who wish to introduce such an inter-active teaching methodology will have an up-hill struggle as they attempt to encourage discussion and debate between peers in the tutorial group. Care also needs to be taken to monitor the performance of novice tutors, as they struggle to find their role within a small-group setting. The language of instruction seems to be less of a moderating influence than might be expected, although more rigorous forms of discourse analysis would be required to measure the quality of the interactions, as well as their quantity. It may be, for example, that discussions in English result in more 'superficial' conversations than those conducted in Cantonese, especially for students with marginal language skills.