Facilitating the integrated small-group tutorial in a medical programme – the University of Transkei (Unitra) experience

Jehu E Iputo

Context. The Unitra (now Walter Sisulu University) medical programme is problem- and community-based, offered in a small-group tutorial setting under a tutor. The first 3 years of the programme are integrated horizontally and vertically. The hypothetico-deductive format, with progressive disclosure, is utilised in the tutorial process. Regular training of tutors is carried out to assist faculty in adapting to the new methods of training. Performance of tutors is regularly assessed by students.

Objectives. To describe the students' perceptions of the faculty performance as tutors over the past 10 years of the problem-based learning/community-based education programme and to construct a profile of a Unitra tutor.

Design. A prospective longitudinal study.

Setting. The first 3 years of the medical programme is divided into 10 blocks lasting 10 weeks each. At the end of each block, students evaluate their tutors using a pre-designed form with items pertaining to both process and content facilitation. For each item, the tutor is assigned a score on a scale that ranges from 'unacceptable' to 'superlative'. Students' evaluations over the years were reviewed and the findings were analysed for trends and similarities.

Main outcomes. Process facilitation and content facilitation.

Results. Evaluations from 460 individual tutorial groups, and of 83 tutors, were analysed.

Process facilitation. Tutors were regular in attendance, were punctual and showed enthusiasm for the tutorial process. They were proficient in keeping the group on track, in giving feedback to the group, and in helping the group to function. They were less proficient in managing group time and in giving feedback to individuals within the group. They did not give students adequate direction in the clinical reasoning process.

Content facilitation. Tutors were proficient in asking probing questions, in encouraging students to pursue learning issues, in integrating basic and clinical sciences and in identifying learning errors, and they often shared their experiences with students. They tended to teach within the tutorial session, and did not lay strong emphasis on psycho-social issues raised by the cases.

Conclusion. The students are generally happy with the Unitra tutors. Content is better facilitated than process. Integrating psychosocial issues into the tutorial process, minimising teaching in the tutorial room, giving feedback to individuals, and giving appropriate guidance to students in the hypothetico-deductive clinical reasoning process are the major challenges facing the Unitra tutor.

S Afr Med J 2005; **95:** 959-962.

The Unitra (now Walter Sisulu University) medical school adopted the problem-based, community-based model of training doctors in 1993. The formal teacher-centred, discipline- and lecture-based model of teaching was replaced with student-based, small-group integrated learning, in which the teacher is a facilitator of the learning process rather than a resource expert.[1] The core of the student activity is a group of 8 - 10 students plus one or two members of the teaching staff who act as facilitators (tutors). Groups meet 3 times a week for 2-hour periods. Each group exists for 10 weeks, after which students are re-shuffled into new groups and new facilitators arrive.

In the first 3 years of the curriculum (the pre-clerkship phases) the tutorial process is based on set-piece clinical scenarios developed from real cases. The cases are formatted in a manner similar to the practice-based learning described by Barrows and Tamblyn.[2] The first session begins with a brief statement regarding the patient's chief complaint. The students then discuss their hypotheses regarding the possible differential diagnosis or disease mechanisms, and also discuss other questions that they would like to ask the patient. More information is then provided based on the actual information available (i.e. the progressive disclosure method). The same process is then applied to physical examination. The information gathered from the history and physical examination is then used to determine which laboratory investigation should be performed, and the interpretation of the laboratory studies emerges from the discussion. Because the Unitra curriculum is based on the bio-psychosocial model, each case is analysed by the students from the clinical angle, the biomedical angle, and the psychosocial angle. Issues pertaining to the above three broad domains of knowledge are identified by the students

Quality Assurance Unit, Faculty of Health Sciences, Walter Sisulu University, Mthatha, E Cape
Jehu E Iputo, MB ChB, PhD

Corresponding author: *J E Iputo (iputo@getafix.utr.ac.za)*

959

with the help of their tutors. These then become the learning issues for students to study and report on during the subsequent sessions. It is the duty of the tutor to ensure that the agreed list of learning issues is relevant to the case. In the Unitra curriculum, the direction of learning is a shared responsibility between students and tutor. When the group reassembles, the learning issues are the first item of business.

One of the features of the tutorial process is the adherence to the principle of student ownership of the process and activities of the group. Tutors are facilitators of the process rather than resource experts in any area under discussion. They are actively discouraged from answering questions of substance. They serve to monitor and counsel on process matters and critical thinking.

Because of the relative newness of the problem-based and community-based learning medical programme in our environment, and its innovative focus on active learning, staff development was identified as a top priority by our institution. Regular training workshops are held to help the traditionally trained faculty to adapt to their new role. The faculty has been encouraged to believe that students can and will identify relevant material for study on their own. They should know when and how to offer help when the group is struggling and when to back off. The faculty has been urged to consciously exercise restraint and desist from turning the integrated small-group, problem-based tutorial into a traditional one. New tutors are teamed up with experienced tutors who act as their mentors. Frequent use is made of personnel from outside the institution to assess and endorse the programme, which brings objective judgements, high-quality expertise and new ideas to the programme. We make frequent use of instruments and procedures to assess the quality of student learning experiences. The performance of tutors, for example, is regularly monitored through both peer and student evaluation.

In this article we describe students' evaluation of tutors' performance as facilitators of integrated small-group learning over the first 10 years of the problem-based, community-based learning programme at University of Transkei. We also construct the profile of a 'Unitra tutor' from the point of view of our students.

Methods

The first 3 years of the medical curriculum is based on integrated small-group tutorial learning. It is divided into 10 blocks lasting on average 10 weeks each. In each block, students are randomly allocated to small groups of 8 - 10 students under one or two tutors. At the end of each block, students (as individuals) evaluate their tutors with regard to regularity of attendance, punctuality, and their abilities at process and content facilitation. The performance is graded as 'unacceptable', 'cause for concern', 'competent', 'better than competent', or 'superlative'. The students' evaluations over the

first 10 years of the curriculum have been reviewed, and the findings analysed for trends and similarities. The focus has been on the grades 'unacceptable' and 'cause for concern', which are deemed to be unsatisfactory.

Main outcomes

Intake into the medical programme rose from 30 students in 1993 to 110 in 2002. The total number of tutorial groups in the pre-clinical phases rose from 15 in 1993 to 80 in 2002. A total of 460 tutorial groups were analysed over the 10-year study period.

Eighty-three different faculty staff members participated as tutors over the 10-year study period. Faculty from the Republic of Cuba was introduced into the programme (a small group in 1997, and a much larger group in 2001) and contributed to about 40% of faculty staff that participated in the tutorial process during the study period. Of the 83 tutors, 65 (78%) had basic medical qualification and the rest were science graduates. There was no tutor with a behavioural sciences background. The tutor pool for the pre-clerkship phases rose from 15 in 1993 to 49 in 2002. Of the 49 members of the tutor pool in 2002, 21 (43%) had been with the programme throughout the 10-year period under review. The average period of activity within the programme by faculty staff was 3 years. It took an average of 2 years of tutoring for individual faculty members to attain their best level of performance.

Throughout the 10 years of the programme, more than 95% of the students were satisfied with the regularity of tutors' attendance, with their punctuality, and with the enthusiasm they showed for the tutorial process. The majority of the tutors accepted feedback from the group non-defensively. They often shared their experiences with students, and they did not hesitate to identify useful resources for students.

Process facilitation

Fig. 1 summarises the findings on process facilitation. The students' level of dissatisfaction with various aspects of process facilitation ranged from 10% to 55% over the 10-year study period. In general, the tutors were proficient in guiding the group. They encouraged group processing, and helped the groups to function. They were proficient in keeping the groups on track. However, they were less proficient in F managing time (where the level of dissatisfaction was consistently higher than 25% over the study period), and were reluctant to give feedback to individual students within the group (the level of dissatisfaction was consistently more than 25% over the study period).

Content facilitation

Fig. 2 summarises the findings on content facilitation. The students' level of dissatisfaction with the various aspects of content facilitation ranged from 5% to 52% over the 10-year
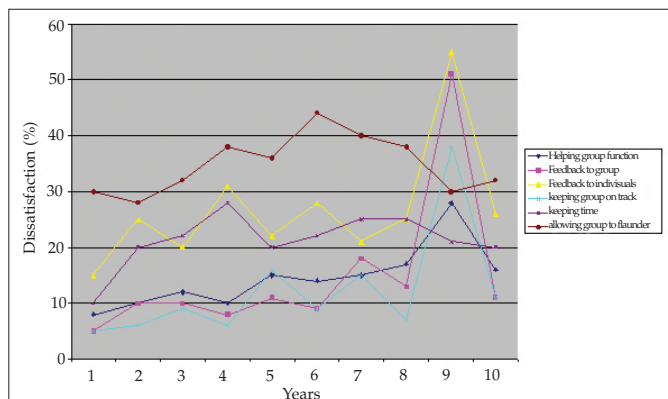
Fig. 1. Process facilitation in the integrated small-group tutorial.

study period. In general, the tutors were proficient in content facilitation. They asked probing questions, encouraged the pursuit of learning issues, and helped students identify learning errors. Students were satisfied with the tutors' help in integrating basic and clinical science issues. However, the students felt that the tutors did not offer sufficient help during the clinical reasoning process (i.e. they could have been more directive). This was more evident in the earlier blocks, where the level of dissatisfaction was as high as 46% in some instances. Students felt that psycho-social issues (especially in the later blocks) were often not adequately discussed (the level of dissatisfaction was consistently higher than 30% throughout the study period). The tendency for the tutors to lecture during the tutorial was unacceptably high (the level of dissatisfaction was more than 25% throughout the study period).

2001 was a particularly bad year, in which the level of dissatisfaction with most aspects of process and content facilitation rose sharply. This was due to the influx of new tutors from Cuba. However, by the year 2002 the new tutors had settled in and student satisfaction had improved to the previous levels.
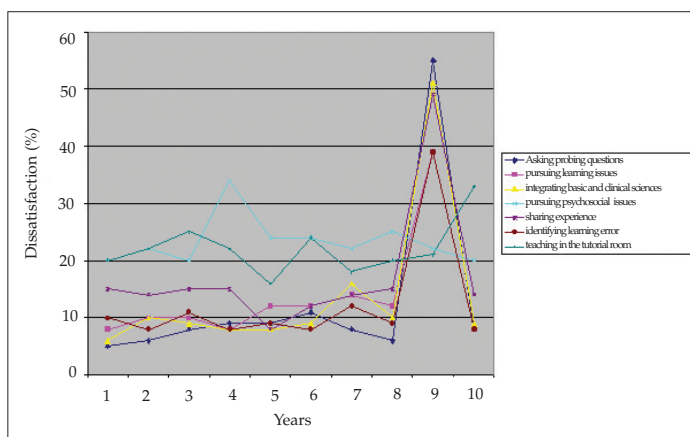

Fig. 2. Content facilitation in the integrated small-group tutorial.

Discussion

This study presents the evaluation of the performance of Unitra faculty as facilitators of integrated small-group tutorial sessions by students in the medical training programme. Students are a reliable and valid source of information about tutor performance in the tutorial room and have often been used to evaluate tutors.[3,4]

This study shows that Unitra students in the problem-based learning/community-based education integrated small-group tutorial system are generally happy with the performance of their tutors. The level of enthusiasm about the programme among the tutors is still high 10 years into the programme despite the high workload necessitated by the increasing student numbers and a relatively small tutor pool. In general, content facilitation has been achieved better than process facilitation. The are four major challenges facing the Unitra tutors: how to give feedback to individuals within the group; how to minimise teaching in the tutorial room; determining how much direction to give to the students in the hypothetico-deductive clinical reasoning process; and how to integrate psychosocial issues into the tutorial process.

Our tutor training programme emphasises the importance of giving immediate feedback to students, offering tips on how to give feedback in a non-judgemental and non-threatening manner. Research has shown that students benefit from immediate feedback from tutors so that misconceptions can be cleared promptly,[5] and yet giving feedback to individuals within the group, especially if the feedback is negative, remains a challenge to a sizeable portion of our tutor pool.

The transition from 'sage-on-the-stage' to 'guide-by-the-side' has not been easy for the Unitra tutors. A proportion of our tutor pool has had difficulty in adapting to the role of PBL tutor, even after training and staff development sessions. They are more familiar with directing students in lectures and are still directive even in the PBL setting. They refuse to surrender the seat of authority to the students. Ideally we should not be using these people as tutors, but the very real staffing problems we face give us no choice. We often pair them with good tutors to try to limit their influence on the tutorial process.

One of the features of the Unitra curriculum is early clinical exposure. From the second semester of the first year of the programme, students are introduced to the hypothetico-deductive clinical reasoning process using the progressive disclosure method. It is not often appreciated that clinical reasoning is a skill that students need to acquire. Some students find it difficult to cope when asked to transform into active and critical thinkers. The tutor should offer scaffolding to the students, preparing them to think critically and to make informed decisions.[6] Students should be 'coached' to the extent that they perform intellectual tasks, like the clinical reasoning process, on their own. The tutor must go beyond just being a

961

'facilitator' of the tutorial process to being an 'activator' of learning by motivating students, and challenging them with non-directive questions at the meta-cognitive level.[7] Tutors without a medical background might have difficulty in offering this type of support, and students facilitated by such tutors often complain of being left to flounder. In the early stages of the programme, when the hypothetico-deductive clinical reasoning skills are still rudimentary, students should probably have a medically qualified person as one of the tutors.

The Unitra medical curriculum is based on the bio-psychosocial model of medical training and delivery which puts emphasis on the social, psychological, and behavioural dimension of illness at par with the biomedical dimension.[8] Every problem that is developed for the PBL programme is placed in its proper social context. In the tutor training and development programmes, tutors are urged to encourage students to approach the patient in his or her social context and to treat a person as a whole. The reality on the ground, however, is that a sizeable portion of our tutor pool pays scant attention to psychosocial issues in the tutorial process. It is difficult to change attitudes and practices of people trained in the traditional biomedical model and working in a technologically driven health care system. This has been the experience in developed countries and is certainly true for Unitra as well.[9] The absence of tutors with a behavioral sciences background compounds the problem. Steps are being taken to create a fully fledged department of human behavioural sciences within the faculty of health sciences to spearhead the integration of behavioural sciences into the medical training programme.

Conclusions

Students are generally happy with the Unitra tutors. Content facilitation is better done than process facilitation. How to integrate psychosocial issues into the tutorial process, how to minimise teaching in the tutorial room, and determining how much direction to give the students in the hypothetico-deductive clinical reasoning process are the major challenges facing the Unitra tutor.

References

1. Iputo JE, Nganwa-Bagumah AB. The innovative medical curriculum of the University of Transkei Medical School. Part I. Problem-based learning. *S Afr Med J* 1996; **86:** 649-651.
2. Barrows HS, Tamblyn RN. *Problem-Based Learning: An Approach to Medical Education.* New York: Springer, 1980.
3. Morrison J. ABC of learning and teaching in medicine: Evaluation. *Br Med J* 2003; **326:** 385-387.
4. Zanolli MB, Boshuizen HP, De Grave WS. Students' and tutors' perceptions of problems in PBL tutorial groups at a Brazilian medical school. *Education for Health* (*Abingdon*) 2002; **15**(2): 189-201.
5. Norman GR, Schmidt HG. The psychological basis of problem- based learning. A review of evidence. *Acad Med* 1992; **67:** 557-565.
6. Boud D, Feletti, G, eds. *The Challenge of Problem-Based Learning.* 2nd ed. London: Kogan, 1997.
7. Mayo WP, Donnelly MB. The characteristics of the ideal problem-based learning tutor in clinical medicine. *Evaluation and the Health Professions* 1995; **18**(2): 124-136.
8. Engel GL. The need for a new medical model: a challenge for biomedicine. *Science* 1977; **196:** 129-136.
9. Borrell-Carrio F, Suchman AL, Epstein RM. The biopsychosocial model 25 years later: Principles, practice, and scientific inquiry. *Ann Fam Med* 2004; **2**(6): 576-582.