ABC of learning and teaching in medicine
Teaching small groups

David Jaques

Group discussion plays a valuable role in the all-round education of students, whether in problem based learning and team projects or in the more traditional academic scenario of the tutorial or seminar. When it works well, discussion can allow students to negotiate meanings, express themselves in the language of the subject, and establish closer contact with academic staff than more formal methods permit. Discussion can also develop the more instrumental skills of listening, presenting ideas, persuading, and working as part of a team. But perhaps most importantly, discussion in small groups can or should give students the chance to monitor their own learning and thus gain a degree of self direction and independence in their studies.

All these worthy aims require active participation and the ready expression of ideas. Yet it frequently doesn't work out this way. Indeed many tutors too readily fall back on their reserve positions of authority, expert, and prime talker. Many of the problems associated with leading small groups effectively are likely to be exacerbated with larger groups. So how can we avoid the common traps?

If you are leading a group discussion you will need to consider both the configuration of the group and your own behaviour. Groups often communicate poorly because the physical conditions make it difficult to communicate. For example, in a group of 10 students seated round a rectangular table, at least four students on either side of the table have no eye contact with each other, thus reducing participation. If you ask and answer questions all the time, even less interaction is likely.

If a group sits in a circle without a table, communication is likely to be easier. When the discussion has started, it is your responsibility as discussion leader to listen to and respond to the whole group. Listening becomes a problem when the students regard you as an expert or you engage with one or two of the more vocal students rather than the whole group.

More structure, less intervention

Being a democratic discussion leader involves making the right sort of nudges and interventions. The role can be made a lot less demanding by using more structure and less intervention in the group process. The rest of this article shows how clear and purposeful group structures can help to bypass many of the problems outlined above, by delegating responsibility for group interaction (and therefore for learning) to the students.

Group structures and processes

You can minimise your internal involvement in the group process by organising or structuring groups into smaller units, especially when the group process is likely to be problematical. This is particularly so when you wish to mobilise a sense of coherence and full participation among a largish group of students. A sequence of tasks might then be set. For example:

- Students work individually for five minutes drawing up a list
- They share their ideas in pairs for 10 minutes
- In groups of four to six, students write up categories on a large sheet of paper

"By separating teaching from learning, we have teachers who do not listen and students who do not talk"

Based on Palmer P (*The Courage to Teach.* Jossey Bass, 1998)

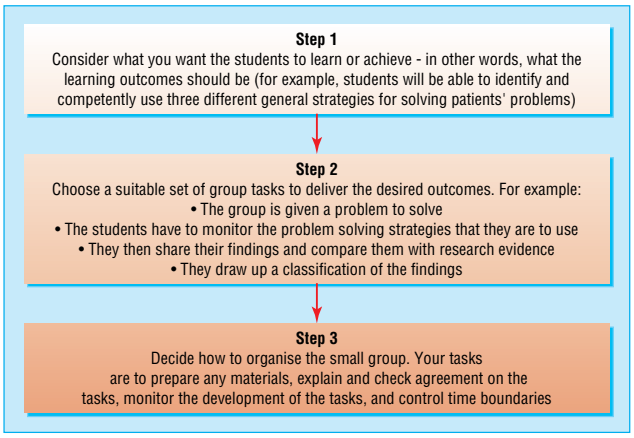
Problems associated with leading effective small groups

- The teacher gives a lecture rather than conducting a dialogue
- The teacher talks too much
- Students cannot be encouraged to talk except with difficulty; they will not talk to each other, but will only respond to questions from the tutor
- Students do not prepare for the sessions
- One student dominates or blocks the discussion
- The students want to be given the solutions to problems rather than discuss them

Your own behaviour can have an enormous effect on how the group functions

Techniques for effective facilitation in group discussion

- Ensure that group members have an agreed set of ground rules—for example, not talking at the same time as another group member
- Ensure that the students are clear about the tasks to be carried out
- When you present a question don't answer it yourself or try to reformulate it—count to 10 silently before speaking again
- When you have something you *could* say (which could be most of the time), count to 10 again
- Look round the group both when you are speaking and when a student is speaking. That way the students will quickly recognise that they are addressing the group rather than just you. It will allow you to pick up cues from those who want to speak but are either a bit slow or inhibited



Planning the structure of a small discussion group

• This is followed by 25 minutes of open discussion among the groups.

Your role in this kind of situation may be to move round checking that everyone understands and accepts the task and is doing it in an appropriate way and to encourage completion as the end point approaches. You could leave the room for a while and let the groups work without supervision.

The following group structures require some assertive leadership to set up but allow you to take a back seat as the process itself takes over the direction of events.

To encourage group interaction consider breaking a larger group into smaller groups of five or six students; organise membership on a heterogeneous or random basis to prevent cliques forming

Group rounds are particularly useful at the beginning of any meeting so that everyone is involved from the start and, depending on what the group is asked to speak about, as a way of checking on learning issues

Group round

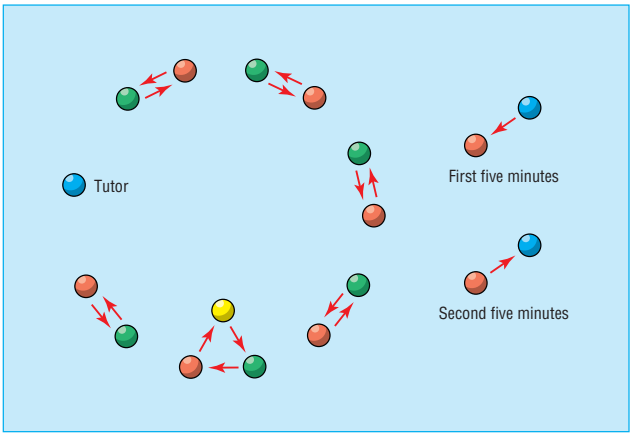
Each person has a brief time—say, 20 seconds or one minute—to say something in turn round the group. The direction round the group can be decided by the first contributor, or members can speak in a random order. More interest and energy is usually generated, however, if the first person chooses who should go second, the second who should go third, and so on.

Buzz groups

With larger groups a break is often needed:

- To provide a stimulating change in the locus of attention
- For you to gain some idea of what the students know
- For the students to check their own understanding.

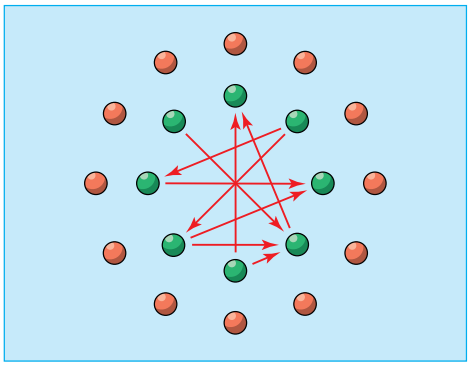
During a discussion students could be asked to turn to their neighbour to discuss for a few minutes any difficulties in understanding, to answer a prepared question, or to speculate on what they think will happen next in the proceedings. This will bring a sense of participation and some lively feedback. Buzz groups enable students to express difficulties they would have been unwilling to reveal to the whole class. (A variation is to allocate three or five minutes each way to the pairs—each phase is for one-way communication.)



Buzz groups, with pairs for one-way, five-minute communication

Snowball groups

Snowball groups (or pyramids) are an extension of buzz groups. Pairs join up to form fours, then fours to eights. These groups of eight report back to the whole group. This developing pattern of group interaction can ensure comprehensive participation, especially when it starts with individuals writing down their ideas before sharing them. To avoid students becoming bored with repeated discussion of the same points, it is a good idea to use increasingly sophisticated tasks as the groups gets larger.



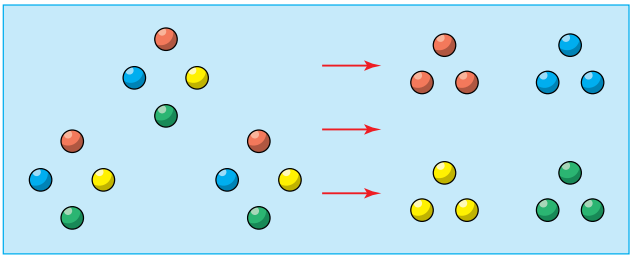
Fishbowl structure—inside group discusses, outside group listens in

Fishbowls

The usual fishbowl configuration has an inner group discussing an issue or topic while the outer group listens, looking for themes, patterns, or soundness of argument or uses a group behaviour checklist to give feedback to the group on its functioning. The roles may then be reversed.

Crossover groups

Students are divided into subgroups that are subsequently split up to form new groups in such a way as to maximise the crossing over of information. A colour or number coding in the first groupings enables a simple relocation—from, for example, three groups of four students to four groups of three, with each group in the second configuration having one from each of the first.



Crossover groups—redistribution of 12 students (each allocated one of four colours) for second period of session

Circular questioning

In circular questioning each member of the group asks a question in turn. In its simplest version, one group member formulates a question relevant to the theme or problem and puts it to the person opposite, who has a specified time (say, one or two minutes) to answer it. Follow up questions can be asked if

time permits. The questioning and answering continues clockwise round the group until everyone has contributed, at which time a review of questions and answers can take place. This could also include answers that others would like to have given. Alternatively, you or the students could prepare the questions on cards. You could also mix the best of the students' questions with some of your own.

Horseshoe groups

This method allows you to alternate between the lecture and discussion formats, a common practice in workshops. Groups are arranged around tables, with each group in a horseshoe formation with the open end facing the front. You can thus talk formally from the board for a time before switching to presenting a group task. Subsequent reporting from each group can induce boredom. To avoid this danger, the tutor can circulate written reports for comment; get groups to interview each other publicly or get one member of each group to circulate; ask groups to produce and display posters; ask the reporters from each group to form an inner group in a fishbowl formation; or use the crossover method to move students around.

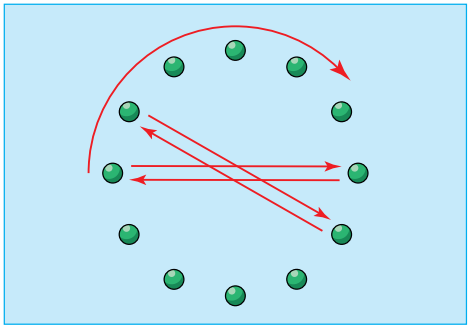
The group structures described require an explicit task and topic, and they are possible only if the furniture is movable. Tutors could also consider experimenting with furniture to see if other group structures work. The physical configuration is a strong determinant of social (and hence learning) processes, as is the sequence of activities

Conclusion

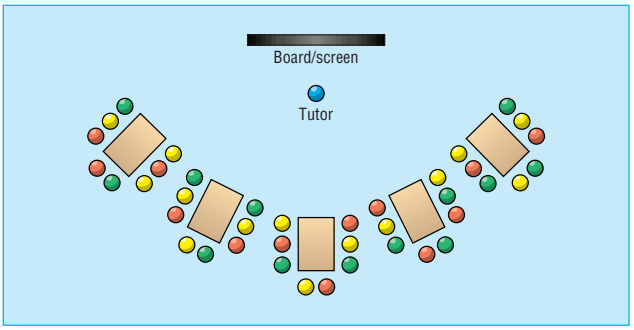
This article has emphasised the choices available to you in working with groups. Some of these involve more skilled and sensitive handling of group process from within the group; others require imaginative management in the setting of tasks and the organising of purposeful activities for subgroups. Well organised and purposeful group discussion can create a firm foundation for qualities such as openness, networking, and proactive communication—important ingredients in the process of personal and organisational change. The value of effective group management in professional development and lifelong learning cannot be underestimated.

David Jaques is an independent consultant in learning and teaching in higher education.

BMJ 2003;326:492–4



Circular questioning



Horseshoe groups

Recommended reading

- Brookfield S, Preskill S. *Discussion as a way of teaching—tools and techniques for university teachers*. Buckingham: Open University Press, 1999.
- Forster F, Hounsell D, Thompson S. *Tutoring and demonstrating—a handbook*. Sheffield: Universities' and Colleges' Staff Development Agency, 1995.
- Habeshaw T, Habeshaw S, Gibbs G. *53 interesting things to do in your seminars and tutorials*. Bristol: Technical and Educational Services, 1992.
- Jaques D. *Learning in groups*. 3rd ed. London: Kogan Page, 2000.
- Tiberius R. *Small group teaching: a trouble-shooting guide*. London: Kogan Page, 1999.

The ABC of learning and teaching in medicine is edited by Peter Cantillon, senior lecturer in medical informatics and medical education, National University of Ireland, Galway, Republic of Ireland; Linda Hutchinson, director of education and workforce development and consultant paediatrician, University Hospital Lewisham; and Diana F Wood, deputy dean for education and consultant endocrinologist, Barts and the London, Queen Mary's School of Medicine and Dentistry, Queen Mary, University of London. The series will be published as a book in late spring.