

Teaching and leading small groups

Peter McCrorie

KEY MESSAGES

- Always consider whether a session can better be run in small groups.
- Plan the session carefully in plenty of time.
- Vary the session plan according to the size of the group and the venue.
- For large groups (≈ 30) run the session in workshop format, by splitting the group into four or five smaller groups.
- Consider which format is most appropriate for the group task.
- Include a range of formats in any one session, recognising that active learning is likely to be more successful than passive learning.
- Consider your own role in the group process; remember that being the group leader is only one of several options.
- Remember the importance of maintaining good group dynamics.
- Deal with issues as and when they arise, bearing in mind that it is often better to let the group address the issues themselves.
- Take care not to overstep boundaries and destroy good working relationships.

Introduction

Two people give a lecture on a medical topic. One is charismatic and inspirational. He holds the audience in his hands – they are on the edge of their seats throughout the lecture. He does not use notes, illustrates his talk with a few well-chosen photos and uses the traditional ‘talk and chalk’ approach. He regularly wins the ‘best lecturer’ prize.

Contrast this with the second lecturer – a very dry and serious speaker, who has carefully prepared every word he intends to use, uses a myriad of PowerPoint slides, each laden with detailed information, and who whips each slide away before his audience has had a chance to get down the half of what he says.

Now imagine that each sets an examination question based on his lecture. Which question do you think the students would perform better in?

In fact, they would get higher marks in the second, less charismatic, lecturer’s question. Why? Because in order to make any sense of his lecture, the students would have made a beeline for their textbooks and this self-directed learning would have enabled them to learn and retain the information more effectively. While the first lecture was stunning at the time, the

students would have assumed they would remember every word of it several weeks later and therefore would not have bothered reading around the subject – an approach that would let them down on the day.

The conclusion from the above is that an active, self-directed approach is likely to have a much greater impact on a student’s learning than passive, lecture-based learning. Lectures should be used sparingly and for broad overviews, summaries and difficult topics. Sadly, only about 5% of what is taught in lectures is actually retained and too many people use lectures for imparting large quantities of detailed information that could easily be picked up, and more effectively, by reading a textbook. (See Chapter 10 for more on lectures and lecturing.)

Learning in small groups is a sort of halfway house involving active learning, or more precisely, interactive learning. But here the direction of learning is determined by the group as a whole, rather than individually, as in self-directed learning. Group learning can be a most rewarding and effective experience at all stages in a medical career – undergraduate, postgraduate and throughout years of continuing professional development. Too many people still consider that unless material is passed on from professor to student or consultant to trainee in a formal lecture, it would not be learnt properly. This chapter aims to challenge that assumption and to provide some ideas and suggestions, backed up by educational theory and the available evidence, for getting the most out of the small group learning experience.

The Learner Experience

If you were to ask a group of medical graduates to relate their personal experiences of small group work in their undergraduate course or postgraduate training, their responses would vary considerably. But the two factors most likely to underpin their accounts would probably relate to *tutor variability* and *curriculum philosophy*.

A *tutor* who creates a relaxed atmosphere, who keeps the group focused on the task in hand, who deals effectively with group dynamics, who allows the learners to take ownership of their learning and who helps make the process an effective, yet enjoyable, experience will produce strongly positive and enthusiastic responses. On the other hand, a tutor who talks all the time, who does not encourage group participation, who belittles learners who answer questions incorrectly, who has clear favourites in the group and who creates an atmosphere where one is frightened to open one's mouth does an extreme disservice to education.

A traditional *curriculum*, heavily dependent on imparting information through lectures, where students or trainees are seen as an inconvenience and a hindrance to research and their clinical practice, rather than as a benefit and an opportunity to mould and influence the future medical workforce, and where time spent by large numbers of tutors on small group teaching is perceived as an ineffective use of staff time, is likely to be received unfavourably. A progressive university or postgraduate team that values its students, believes in active learning, encourages small group teaching and trains its staff in the art of facilitation of learning will undoubtedly invoke a positive response.

At the postgraduate level, lectures are of even less value than at the undergraduate level, yet they are used just as frequently. Trainees gain far more from small group teaching sessions and on-the-job training than from, for instance, revision courses for passing membership exams. In the UK, primary care has tended to lead the way with its long-established one-to-one training relationship and regular group-based release courses, but effective education and training is also possible in secondary care and Bulstrode and Hunt,(1) in their training manual *Educating Consultants*, offer a number of very constructive suggestions for running on-the-job training that allow consultants to carry out effective education while at the same time maintaining their clinical practice load. And the training need not be one to one. It is common practice to train senior doctors, junior doctors and medical students at the same time. Bedside teaching is an example of this, but sadly such sessions are often still run in an inappropriate and humiliating way. The effectiveness of bedside teaching is discussed by Jolly in his book entitled *Bedside Manners*.(2)

De Villiers *et al.*,(3) in a report of an evaluation of a continuing professional development programme for primary care medical practitioners in South Africa, suggest that the following aspects should be incorporated into the design of small group activities to make them effective. Namely that they should:

- build on prior knowledge and experience
- relate to the perceived learning needs of the participants
- involve active learning
- be focused on problems
- be immediately applicable to practice
- involve cycles of action-reflection
- allow the acquisition of technical skills.

Steinert(4) researched medical students' perceptions of small group teaching in a Canadian medical school. Her conclusions at the undergraduate level were not a million miles away from de Villiers' findings at the postgraduate level viz that small groups should include:

- effective small group tutors
- a positive group atmosphere
- active student participation and group interaction
- adherence to small group goals
- clinical relevance and integration
- cases that promote thinking and problem solving.

The inefficiency argument is often used by those opposed to small group teaching. Twenty-five tutors spending two to three hours working with students in small groups of eight is clearly less efficient than one lecturer talking to 200 students all at once – but only in terms of delivery of material. Efficiency does not just take account of the delivery of *teaching*; what the students *learn* is what matters. I return to the point made earlier, that the taught curriculum is not the same as the learnt curriculum. Through small group discussion, much more is retained, especially if the learning is contextualised, for example, in case scenarios. In terms of efficiency of learning, small group work wins hands down. More particularly, small group work encourages critical thinking, which, although not impossible, is less common in lectures. See Box 9.1.

What Constitutes a Small Group?

The ideal size of a small group is probably around seven or eight. If the group is smaller, it becomes too threatening, the synergistic effect – the collective knowledge of the group being greater than the sum of the knowledge of each member of the group – is reduced and the interaction is less successful. If the number increases above eight, some learners can get by without fully participating, or without joining in at all, and others are less able to get their voice heard because the size of the group deters them from expressing their point of view. For problem-based learning (PBL), the size of the tutorial group rarely exceeds eight

BOX 9.1 Where's the evidence:
Does small group work encourage
critical thinking?

Most of the research around small group work relates specifically to problem-based learning (PBL) – a specialised form of small group learning discussed in detail in Chapter 3. The nature of courses structured around PBL is such that small group work, and the subsequent self-directed learning, is the main vehicle by which students gain information, with lectures contributing relatively little to students' knowledge acquisition. This is in contrast to courses where lectures and other forms of didactic teaching provide the main source of information for students, and where small group teaching is really an adjunct to their learning. Tiwari *et al.*(5) have compared the effects of these two course styles on the development of students' critical thinking. They found that PBL students had significantly higher levels of critical thinking (measured using the California Critical Thinking Disposition Inventory(6)) compared with students on a predominantly lecture-based course. Furthermore, they continued to have higher scores for two years afterwards. Similar conclusions have emerged from a variety of other sources.(7–9)

– the process would simply fall apart were there any more in the group. Norman(10) recently carried out an email survey of a cross-section of medical schools around the world using PBL, asking about the size of group they felt was appropriate, and eight turned out to be the norm. Peters(11) cites academic evidence that supports his own findings that the optimum size of a group is somewhere between 5 and 10.

Some medical schools are so short of willing and able teachers that they operate small groups of 20 or more. This can still be successful, however, if the larger group is run in workshop format, where the whole group is given a task to carry out in smaller subgroups of seven or eight. Here, one facilitator handles several groups. Many postgraduate training courses are run this way.

Group size is probably less important than what the group actually does. The purist view of small group teaching is that it must be learner-centred, with all students joining in free discussion of a particular topic. Some teaching may indeed take place in small groups but sit outside this definition. The seminar is a case in point, where invited speakers present on a topic about which they are passionate. The seminar has its place in a university – particularly at the Bachelor of Science or Masters level – but is invariably teacher-centred, with any discussion taking the form of questions and answers.

Even within the confines of our working definition, a wide range of styles of small group work exists, and many of these are discussed later.

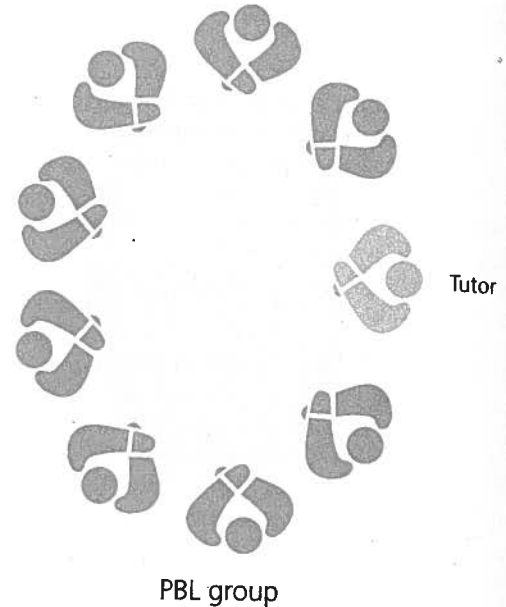


Figure 9.1 Seating arrangement for a problem-based learning (PBL) tutorial.

Housekeeping

Before embarking on small group teaching, some thought needs to be given to the environmental arrangements. It seems obvious to say it, but the first requirement is to hold the session in an appropriately sized room. What is appropriate depends on the number of learners participating. Consideration should also be given to heating, lighting and temperature control in the room, all of which are the unique responsibility of the group leader.

For a group of eight or so undertaking PBL or some similar activity, a room with a table in it, preferably round or oval-shaped and big enough for all to sit around it comfortably – including the tutor, who should be part of the group and not outside it – is ideal (see Figure 9.1). The walls of the room should be lined with whiteboards or flip charts for students to write and draw on.

For a session where argument is more important than capturing information, for example, an ethical debate, then a circle of chairs is all that is required (see Figure 9.2).

The positioning of the tutor is important. To maximise the effectiveness of the process, the tutor should be *in* the group, rather than *separate* from it. Sitting in a circle has two advantages:

- everyone in the circle is equal
- everyone has eye contact with each other.

This arrangement also suits the role of the tutor as *facilitator*.

For larger groups, the workshop format is the method of choice and hence the room has to be larger

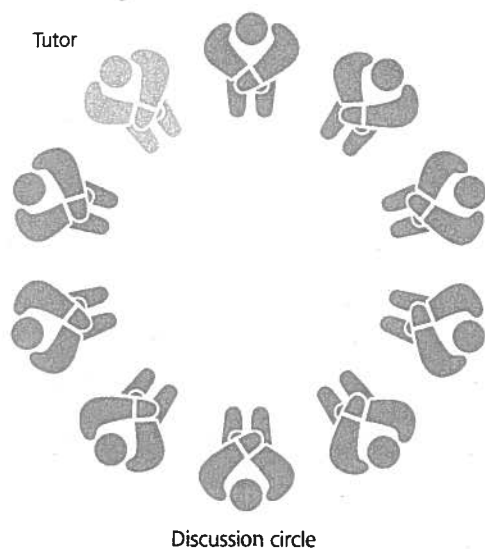


Figure 9.2 Seating arrangement for a group discussion.

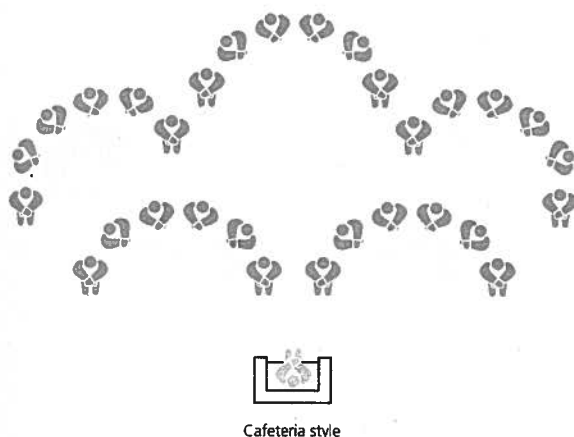


Figure 9.3 Seating arrangement for a workshop.

and laid out in cafeteria style (several round tables with chairs round them, laid out like a cafeteria; see Figure 9.3). There needs to be space at the front of the room for the tutor, PowerPoint and/or overhead projector facilities (including an accessible power source), and whiteboard(s) that everyone can see. Ideally, each group should have a flip chart as well. Again, if there is no requirement for a table, then several circles of chairs will suffice.

Positioning of the tutor is different for a workshop. Plenary sessions are commonly part of a workshop, usually at the beginning to introduce the topic or task, and at the end to take feedback from the groups and summarise what has been achieved. Since the tutor needs to be able to engage everyone together, he or she needs to stand or be seated at the front of the class for these plenaries. But for the rest of the session, the tutor's job is to go round the groups to check how they are getting on.

The Role of the Tutor

The tutor can adopt a range of roles depending on the nature of the small group session. Rudduck(12) suggests that tutors can have four differing roles:

- the instructor, who is there to impart information to the students
- the devil's advocate, who intentionally adopts a controversial view in order to stimulate discussion
- the neutral chair, who literally chairs the discussion but expresses no strong opinions
- the consultant, who is not part of the group, but is there for the students to ask questions.

To these roles, I would add a fifth:

- the facilitator, similar to the neutral chair, but with more of a guiding role, for example, asking the group open-ended questions to facilitate their progress with the task in hand. The facilitator need not be the chair of the group – this role might fall to a student.

Tutors may adopt any or all of the above roles during the course of a small group teaching session. They may begin the session in instructor mode, defining the task for the students. During the rest of the session, they may adopt a more facilitatory role, at times prompting discussion by playing the role of the devil's advocate or taking up a chairing role. If the students get stuck, they may even take on the role of expert to allow them to move on (not in PBL, of course, where the tutor must reflect any questions back to the group and encourage them to research the answers for themselves).

Richmond(13) defines more specific roles for tutors, which he refers to as 'strategic interventions':

- to start and finish group discussion by outlining the group task, summarising the group's or groups' achievements and conclusions, and setting further learning activities
- to maintain the flow of content, for example, by preventing sidetracking and keeping the group(s) focused on the task
- to manage group dynamics by encouraging the shy or bored student(s) and by handling the dominant, aggressive, offensive or nuisance student(s)
- to facilitate goal achievement through open questioning, making suggestions and checking group understanding
- to manage the group environment by keeping an eye on the time and dealing with any distractions (e.g. noise, insufficient flip-chart paper, pens running dry, heating).

According to Brown,(14) tutors need a range of skills in order to make a success of small group teaching. These include questioning, listening, reinforcing, reacting, summarising and leadership. But the *real* skill, one that Brown refers to as a *super skill*, is the skill of knowing when to use which skill.

Getting Started

The first time the tutor meets with a new group of students or trainees is always exciting. Is it going to be the group from heaven or the group from hell? Often, the first encounter is the defining moment for the group. How the tutor handles the opening small group teaching session may establish the atmosphere for the sessions that follow.

The group members may or may not know each other. At the start of the course they almost certainly would not, but even later on, particularly in undergraduate curricula, because of the trend to have large numbers of students on courses they may still not know every other person on the course. Ice-breakers have a useful role here – ways of introducing strangers, trying to relax the group and getting group members to interact with each other.

There are many ice-breakers in common use – some simple, some elaborate. A standard technique is to ask the group members to pair up and talk to someone they do not know. Their task is to learn something about their partners and report it back to the group. This exercise works better if the task is fairly specific, and in addition to their partners' names and brief biographical details, participants may be asked to report back on the most interesting place their partners have visited, something unusual that they have done in their life or something they have done of which they are proud. Participants could also be asked to imagine themselves as a musical instrument or a vehicle or a colour, and to describe which most closely matches their character – all of which can be quite revealing!

An example of a more complex ice-breaker, which needs a bit of time, is to divide the group into two teams, which have to compete with each other to build a bridge of specific dimensions and requirements out of Lego bricks in a specified time. The dimensions and rules they have to adhere to make this a hard task, but it enables the tutor to observe how each member of the team behaves under pressure. It also provides an opportunity for discussing people's behaviour at the end of the exercise, and seeing how each team worked. Such exercises or games are common on off-campus postgraduate training courses.

Having got the group talking, the next thing to do is set the ground rules. This is a really important activity and should never be omitted. It is essential that the group itself comes up with the ground rules – they must not be imposed by the tutor. Box 9.2 shows examples of ground rules that my own undergraduate students have come up with.

Probably the most important ground rule is to do with valuing each other's contribution. That way a relaxed atmosphere is created where no one is embarrassed about saying something stupid. Humiliation must be avoided at all costs.

BOX 9.2 Examples of ground rules for small groups

- Turn up punctually
- Finish on time
- Do not talk over each other
- Do not interrupt
- Value each person's contribution
- Respect each other's viewpoint
- Turn off mobile phone
- Turn up prepared
- Join in the discussion
- Keep personal issues outside
- Maintain confidentiality within the group

Techniques to Use in Small Groups

Following on from the ice-breaker, a good technique to get a group engaged in the topic under discussion is known as snowballing. The students are given a question, for example, 'How might cystic fibrosis affect the life of a 15-year-old young man?', and asked to think about it individually, without conferring with anyone else. After five minutes, the students are asked to pair up with another student and discuss their thoughts with each other. After another 5 minutes, the pairs are invited to join with another pair and all four students continue their discussion. Two sets of fours then compare notes and so on. The process is called snowballing because of its resemblance to a snowball rolling down a hill, gathering more and more snow and getting bigger and bigger in size. The big advantage of this technique is that everyone has to participate, even the most reticent of students. By allowing time for them to gather their own thoughts and then share these thoughts with one other, it gives even the shyest student confidence to speak. A variation on snowballing is called jigsaw groups, where the participants divide into small groups and discuss an issue. After a period, the groups reform into new groups, with each of the new groups containing one member of each of the old groups, thereby maximising the mix of participants (see Figure 9.4).

Brainstorming is another widely used technique. Again, learners are given something to think about (e.g. possible diagnoses for a patient who presents with lower back pain). One group member acts as scribe and writes all the suggestions from the group – in this case possible diagnoses – on a whiteboard. Absolutely everything is written up, no matter how unlikely the suggestion may be. No one is allowed to make any value judgements on the suggestions at this stage. It is followed by reflective analysis of what has

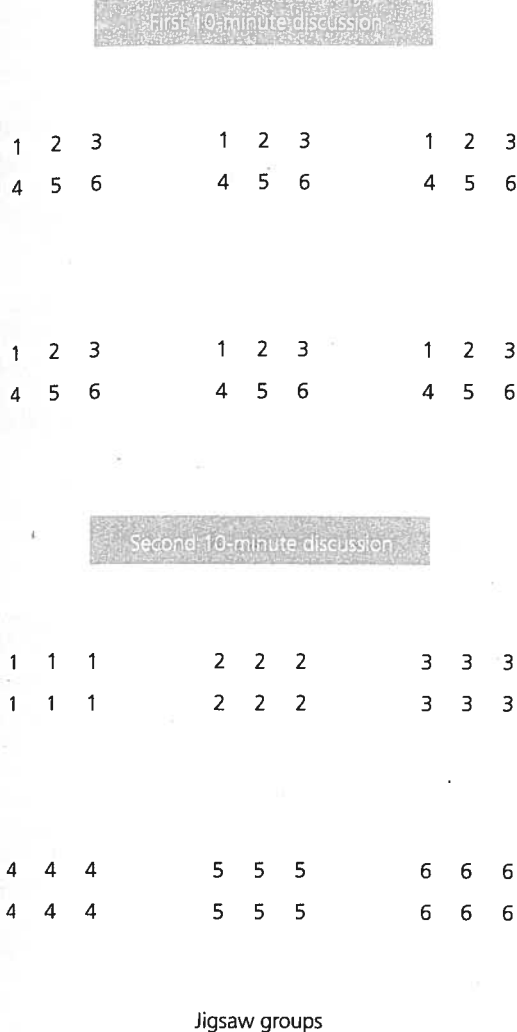


Figure 9.4 How jigsaw groups work.

been written up, where items are prioritised, grouped together or removed altogether.

A third introductory technique involves the use of buzz groups. This technique is more generally used in lectures, but can also be used in small groups if the group becomes stuck in its thinking. The tutor who senses an impasse can interrupt the discussion and throw in a question for the group to ponder in pairs or threes, to help the members get back on track. If students are struggling to understand respiratory acidosis for instance, the tutor might ask them to discuss in pairs what the role of the kidney is in maintaining pH or what blood buffers exist. When this technique is used in lectures, there is a loud 'buzz' as members of the audience start talking with their neighbours – hence the name.

Further on in the life of the learning group, a number of other techniques may be used.

Simply chairing a discussion – or, better still, getting one of the group members to do so – works well when

there is more than one perspective about an issue, such as a genuine ethical dilemma like abortion, animal experimentation or euthanasia. Occasionally with moral and ethical arguments, the tutor may need to step in to clarify matters of fact, such as primary legislation, case law or professional guidelines – an example of the tutor acting as a consultant or expert. A more imaginative and hands-off approach to such issues would be to get the students to set up a formal debate, with students primed to speak for or against a particular motion such as 'This house believes that patients with coronary artery disease, who continue to smoke after they have been repeatedly counselled about the dangers of smoking, should be refused heart bypass surgery'. The advantage here is that the relevant factual elements to the discussion are prepared in advance.

A variation of the discussion group is called line-ups. The tutor makes a controversial statement, such as 'Doctors should be allowed to hasten the death of old people who have a terminal illness'. The tutor identifies a point in one corner of the room where everyone who strongly agrees with the statement should stand. Another point is identified, as far away as possible, where those who strongly disagree should stand. The rest of the group members have to line up somewhere between the two points, according to how much they agree or disagree with the statement. The participants have to talk to the others in the line and argue their point of view. The tutors, and indeed the participants, get an immediate view of the spread of participants' opinions on the topic. If the line-up is carried out at the beginning and the end of a session, the tutor can gauge if there has been a change of opinion after the session has been run and the participants are better informed.

There are a number of variations on the discussion approach to small group teaching. Some of these are less than satisfactory, however. One approach used frequently in postgraduate medical education is the journal club. Staff are asked to present their comments on recent papers in the medical literature. This works well, provided the topic is of direct relevance to everyone and there is plenty of opportunity for discussion. It is less successful at the undergraduate level, where it is more usual to run the session along the lines of a syndicate presentation, where a topic such as diabetes is subdivided into several subtopics (e.g. mechanism of action of insulin, diabetic ketoacidosis, clinical presentation of diabetes, treatment of diabetes) and each of these subtopics is given to a student or pair of students to research. They then all report back at the next tutorial. The problem with both of these methods is that the presentations become mini-lectures, are frequently delivered in an uninspiring manner and, frankly, bore the pants off everyone. Discussion is limited because only the chosen few have researched the topic, and then only the subtopic they were

allocated. Unless everyone researches everything, the only people who join in the discussion are those who researched the topic and the tutor!

Another old favourite at the undergraduate level is the post-lecture tutorial. This is another disaster site. Most students come unprepared and have not read up around the lecture topic (indeed they may not even have attended the lecture or may be blissfully unaware what lecture topic is being discussed). Many students see it as an opportunity to listen to a rerun of the original lecture, which is what it often turns into, particularly if the tutor gets monosyllabic responses to the questions they ask to try to stimulate the students. There is really only one solution to this – ensure that students are given a self-directed learning exercise to prepare *before* the tutorial. A good example would be to give them a detailed case study to read up, with some questions attached for them to research, for example, a case history of a patient with a peptic ulcer, followed by a series of questions on, for instance, medical imaging, regulation of intestinal pH, *Helicobacter pylori*, drug treatment and dietary advice. In this way, the students know what the topic of the tutorial is, have done their homework, and therefore feel able to join in the discussion and get a lot more out of the whole exercise.

The use of triggers provides an ideal springboard for a tutorial. The tutor can design a whole session around one or more of these. They are commonly used when running sessions in the workshop format. At the beginning of the session, after a brief introduction, the tutor hands out a trigger. A trigger is simply a tool to get the discussion started. They might take various forms. For example:

- an electrocardiogram (ECG) strip from a patient with ventricular fibrillation – to stimulate a discussion about cardiac muscle, the sinoatrial node, ECGs, arrhythmias, defibrillation
- a photomicrograph showing neoplastic growth changes to stimulate discussion about the appearance of cancerous tissue, the characteristics of cancer cells, metastasis
- a chest X-ray showing a pneumothorax to stimulate discussion about X-rays, pleura of the lungs, pneumothorax – its causes, presentation and treatment
- an audiogram from a patient with age-related and noise-related hearing loss to stimulate discussion about the anatomy of the ear, the hearing mechanism, sensorineural hearing loss, audiometry, Rinne and Weber's tests
- a copy of *Good Medical Practice* to stimulate discussion on what constitutes a good standard of practice and patient care, professionalism, working with colleagues and probity
- an anonymised or mock-up of a patient record for students to discuss record keeping in the context of a particular case
- a photograph of a patient with an obvious goitre and exophthalmos to stimulate discussion around the thyroid gland, thyroid disorders including clinical signs, symptoms and treatment
- a photograph of a man in a wheelchair playing with a young child to stimulate discussion around disability, psychosocial sequelae of chronic illness, social care, child care, single-parent families
- a family pedigree, showing the distribution of a genetic disorder such as haemophilia to trigger a discussion on genes and patterns of inheritance
- a video showing, for example, a doctor explaining to a couple that their baby has Down's syndrome
- a paper, or excerpts from a paper, showing some statistical data, in order to get the students talking about *P*-values or odds ratios or randomised control trials.

In PBL, a paper-based case scenario would normally act as the trigger and there are two main variants of this: one where the case is presented in the form of a short summary; the other where the case is much longer, and is released in stages by the tutor (presentation, history, examination findings, investigations, treatment, patient progress, outcome). The former is generally used for school leavers, the latter for graduates. The tutor has rather different roles in the two versions. In short-case PBL tutorials, the students take turns at being chair of the group and the tutor is passive, intervening only to ask the odd question to stimulate discussion or to keep the group on track. In the long, progressive-release version of PBL, the tutor acts as the chair, moves the group along when their discussion has come to a halt and occasionally asks specific, programmed questions. Both styles of PBL are student-centred and produce deep and high-level discussions, particularly with graduate students.

PBL is covered in more detail in Chapter 3.

Role play also uses a trigger. Students are given a scenario to act out, for example, taking a headache history, explaining a medication regime for eczema or breaking bad news about a cervical smear result. Professional actors are often employed to simulate real patients and students can try out their clinical communication skills in a safe environment. If the students are video-recorded as well, they can study their communication attempts in their own time and work on improving their technique before encountering the real thing. This technique works well at the postgraduate level too, especially with doctors who have been identified as having a communication problem. Watching your own performance can be very revealing and informative. Discussing your performance, captured on videotape, with a trained communication skills expert, is invaluable and always leads to improvement. The secret is to have enough insight and be brave enough to do it in the first place.

Clinical skills are also taught in small groups, but rather than using a trigger, the clinician will demonstrate the skill to the group before letting them have a go. One commonly used technique takes place in four stages:

- the tutor demonstrates the skill in silence
- the tutor runs through it again, but explains the rationale behind the technique at the same time
- the students then talk the tutor through the technique
- finally, a volunteer student runs through the technique without tutor intervention.

The Balint group(15,16) is a special kind of group activity undertaken mainly by general practitioners (GPs), although increasingly patients, and even students, are becoming involved. Michael Balint was a Hungarian psychoanalyst who worked extensively with UK GPs in helping them to understand the psychology behind the doctor-patient relationship. He set up discussion groups with GPs to allow them to share their personal experiences of specific problems or dilemmas that had arisen in their practice. A modern-day Balint group consists of a handful of GPs, who meet on a regular basis, often with a psychoanalyst and sometimes with one or more patients, to discuss specific issues concerning patients arising from their daily practice. The presenting clinician brings to the group cases that have given cause for thought. The purpose of the group is to increase understanding of the doctor-patient relationship, not to find solutions to the patient's problem. Discomfort or distress in the doctor are not ignored, but are worked through in the context of the needs and problems of the patient rather than of the doctor. Balint group members find the benefit gained by sharing their experiences far outweighs any pain they may feel as a result of the experience. Balint groups are not for everyone and should not to be entered into lightly.

Another type of group activity used in the post-graduate arena is the action learning set. An action learning set is a group of six to eight people who meet regularly to help each other learn from their experiences. The set is not a team, since its focus is on the actions of the individuals within it rather than on a shared set of work objectives. Sets are usually facilitated by a set adviser whose responsibility is to create a suitable learning environment by encouraging, challenging and focusing on learning. Action learning is based on the concept of learning by reflection on experience. It is underpinned by the cycle of experiential learning,(17) as shown in Figure 9.5, where the stages of reflection and generalisation are worked through with the members of the set.

The action learning approach was first developed by Revans.(18) Each participant works on a project or task over the life of the set (which may be a few weeks, or spread over several months). The set decides on its

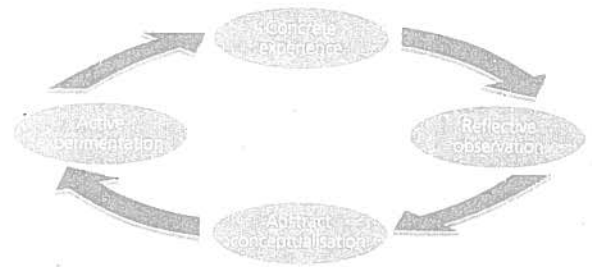


Figure 9.5 The 'Kolb' cycle.

own way of working, but usually a meeting involves participants taking turns to present their project to the set.

This will normally involve:

- an update of progress on actions from the last meeting
- a discussion about current issues or problems
- an agreement on actions for the future.

Participants work with the presenter, by listening and questioning, to help them decide what actions to take. This kind of group is useful for individuals working on an educational or research project largely on their own.

Group Dynamics

Before considering the role of the tutor in addressing issues of poor group dynamics, it is worthwhile taking a look at how a group evolves during its lifetime. Tuckman(19) has summarised it into four stages, which have been further interpreted by Walton(20) and Mulholland.(21)

Forming

The participants get to know each other, form alliances and establish themselves. The tutor must ensure they are introduced to each other.

Norming

The participants set the ground rules for working as a group. Being unfamiliar with what is expected of them can lead to some uncertainty and insecurity at this point. The tutor may need to explain the way the tutorials are to be run to alleviate anxiety at this point.

Storming

The group begins to function. Individuals adopt the roles with which they feel comfortable. One might be a leader; another good at initiating conversation; a third might be skilled at asking probing questions; a fourth might be good at clarifying and explaining; another might be good at keeping the team together, coming to the rescue of anyone who appears lost, frustrated or angry; one or two may simply be good

listeners and may only contribute to the process when they have something to say. There is the potential for a good deal of friction during this stage while the group is sorting itself out. The tutor needs to keep a careful watch on the group members, identifying problems and trying to relieve tensions. If the participants are mature enough, they may be able to address their own issues as a group. This is to be encouraged. The less the tutor gets involved the better. Such a group skill takes time to develop and the tutor will undoubtedly need to facilitate the process initially.

Performing

This is the position every group should aim for. Essentially the group has settled down and is functioning well. The group members are comfortable with their roles. There is a good atmosphere within the group and the goals of each tutorial are generally accomplished through successful collaboration. The tutor can now relax.

Unfortunately, some groups never achieve this state. This is usually due to one or two personality clashes and the odd difficult student. If the group cannot sort itself out, the tutor must act. Otherwise participants and tutor will dread meeting up for tutorials and attendance will fall off.

Adjourning

This is the final stage of working in groups. The lifetime of the group has run out and members move on to join new groups. This phase is a mixture of celebration and sadness (or relief, in the case of an unsuccessful group). A good group will look back over its achievements and reflect on each other's contribution, on lessons learnt, on what worked well and what could have been done better.

This process of reflection can be formalised and the tutor can help the group debrief itself in a structured way. One process that works quite well is carried out in two stages. First, the group rates itself as a whole against set criteria. The criteria depend on the nature and purpose of the small group work, but might include attendance and punctuality, preparedness for the sessions, adequacy of input into the sessions and behaviour towards each other within each session. Having established a group rating for each criterion, the members of the group then rate themselves against the group rating. Everyone shares their scores and a discussion ensues. A good group will recognise individual's strengths and weaknesses, will be constructively critical, and will try to be supportive and encouraging to the more self-effacing members of the group. A good group will also not shirk its responsibility to address issues arising from individuals who are lacking in insight as to their own behaviour. Often, as a result of this kind of caring, inward reflection, change does take place when the member moves on to their next group (Box 9.3).

BOX 9.3 Focus on: Discussion in small groups



Visschers-Pleijers *et al.*(22) have carried out an analysis of verbal interactions in tutorial groups.

They have subdivided these interactions into five types:

- exploratory questioning – exchanging ideas, critical exchange of ideas
- cumulative reasoning – uncritical accumulation of information
- handling conflicts about knowledge – discussion of contradictory information; arguments and counter-arguments
- procedural interactions – conversations relating to process matters
- off task/irrelevant interactions – general asides; discussion about the weather

Most of the interactions (about 80%) were learning oriented, demonstrating the high task involvement of the group and confirming the findings of De Grave *et al.*(23)

The Interprofessional Group

Interprofessional learning is considered important at both the undergraduate and the postgraduate level (see Chapter 4 for a full discussion).(24) Healthcare is all about working in teams and it is sensible therefore to have regular joint educational training throughout the continuum of learning. The key to interprofessional education is that it should relate to real practice and should not be contrived just so that the box can be ticked for the next accreditation visit. Furthermore, interprofessional education does not require the participation of *all* the professions at each session – only those for whom it is appropriate.

Interprofessional team meetings are common at the postgraduate level, interprofessional training less so although both acute and primary care trusts provide programmes of training sessions for their staff. Quite a few of these are interprofessional, although they tend to be for large numbers, rather than small groups. Training in leadership and management for senior staff is less likely to be profession-specific and often follows the workshop format.

At the undergraduate level, certainly in the UK, there is only a small amount of useful interprofessional education taking place. What there is takes a variety of forms, ranging from a common foundation term with shared PBL, lectures and anatomy sessions,(25) shared clinical skills training,(26,27) a simulated ward environment for junior medical and nursing students,(28) and an interprofessional training ward(29–31) to regular joint interprofessional sessions spread over a number of years.(32) Apart from the lectures

and the anatomy sessions, most of this involves small group work.

The skills training described,(26,27) involved final-year medical students with newly qualified staff nurses and took place in an interprofessional clinical skills centre. The programme was based around a developing patient scenario, which was pertinent to the participants' area of practice. Each session was led by an experienced nurse lecturer and doctor, supported by specialist contributors. The style of learning was participative, with small interprofessional groups addressing a range of patient management issues. In this way, relevant clinical and communication skills were integrated within the context of holistic patient care. This short exposure to interprofessional learning appears to have been highly effective.

The interprofessional training ward takes small group learning in the context of simulation even further. Here, final-year nurses, physiotherapists, occupational therapists and medical students look after a small ward.(29-31) They work shifts, carry out all ward duties, work extensively with each other and learn about each other's professions while at the same time building up their uniprofessional skills. Handover from one shift to another is key to the learning process. This provides students with an excellent preparation for working on the wards when they graduate, and is again popular with most students.

Undergraduate or postgraduate, the issues around interprofessional learning are the same and revolve around group relations (*see* Bion in the Further reading section). There is a strong hierarchical culture, which pervades all areas of the health service. When people from different professions find themselves being trained together, there is a tendency to adopt these hierarchical roles. Even at the undergraduate level, medical students, physiotherapists, occupational therapists and nurses all have different entry requirements, and immediately a barrier exists. Of course, that is one of the aims of interprofessional education - to break down such barriers. Another aim is for the members of one profession to have a clear understanding of the roles of the other healthcare professionals. Putting these two aims together leads to the third, overarching, aim - to learn how to work in teams, thereby leading to a more efficient and effective health service. Small group learning in interprofessional groups is one way to help achieve this last aim.

For an inter-professional group, good facilitation is essential. If the guidance described for any small group work activity is followed, the majority of problems will soon disappear. Setting clear ground rules and ensuring that the group adheres to them is vital - particularly the rule about valuing everyone's input. In addition, the topic or activity needs to be inclusive, that is appropriate for all professions present. The learning needs of the students or trainees must be taken into account as they will not be the same

for all professions. Where they *are* the same, then joint interprofessional learning is more likely to succeed.

Dealing with Difficult Group Members

Dealing with difficult group members is a key role of the tutor running small group teaching sessions. Box 9.4 provides a list of common problems encountered, and regular group leaders will recognise them all. It is not the purpose of this chapter to provide suggestions for dealing with *each* form of aberrant behaviour - for a full discussion of this topic read Tiberius's excellent book *Small Group Teaching: a trouble shooters guide*.(33) One general point, however: wherever possible, the group should sort out its own problems. This is liable to be much more effective in the long term than the tutor taking control, which often leads to resentment. The tutor's role here is to raise the group's awareness of the issue. One way of doing this is to say 'Let's take time out for a minute. Is everyone happy the way the group is working? Does anyone want to make a comment about the group process?' Then stand back and watch the sparks fly!

Of course, this is not always appropriate, nor does it always work. In such circumstances, the group leader has to step in. Sometimes issues have to be addressed in the presence of the group; at other times

BOX 9.4 Challenging learners

- the dominant learner
- the arrogant learner - the know it all
- the learner who wants to be the centre of attention all the time
- the aggressive or argumentative learner
- the offensive and rude learner
- the politically incorrect learner
- the flirtatious learner
- the joke-a-minute learner
- the garrulous learner
- the disengaged learner
- the bored learner
- the learner who relies on everyone else to do the work
- the lazy learner
- the shy learner
- the delicate, tearful learner
- the over-dependent learner
- the constantly late learner
- the frequently ill learner
- the mentally disturbed learner

the leader needs to address the issue outside the group, for example, in the case of a learner who is clearly upset, or one who has failed to respond to everything the tutor has tried in the session. Failure to address group dynamics by one means or another can be very harmful, not just for that particular group, but for future groups. The issue will rarely go away of its own accord and often gets worse and worse if nothing is done about it. No matter how difficult or painful it is, the tutor has a responsibility to sort matters out.

Here are some ideas.

The dominant group member

People can dominate discussions for a number of reasons:

- they simply know a lot
- they think they know a lot – but are frequently wrong
- they like to be the centre of attention and are showing off
- they want to impress the tutor, or their girlfriend/boyfriend
- they enjoy teaching others and are keen to share their knowledge
- they feel that someone has to start the ball rolling, as no one else seems to want to.

If dominating group members are allowed to continue, the group will get really angry, the shy group members will disappear into their shells and people will either switch off or drop out. Often the dominant member can contribute successfully to a group and does actually have some really useful information to bring. The secret is to reduce their input while not causing offence.

Sometimes group members realise that they have a tendency to dominate and readily accept being told to keep quiet. Not many have such insight, and one suggestion for dealing with those who do not is to give them a specific task to do, for example, acting as scribe for the rest of the group. Make sure, however, that they do put up the group's ideas on the whiteboard, and not just their own interpretation. Another technique is to ask them to discuss a particular point and let them have their say, but next time invite someone else to start the ball rolling. Seating can also play a key role. If the tutor sits opposite the dominant student, then that student has the eye of the tutor for the whole session. On the other hand, if the dominant student sits *beside* the tutor, interaction is significantly reduced and the tutor's eye catches other students much more readily. The use of the sweeping hand gesture directed at the dominant student can sometimes be effective – the held-up hand is saying 'Hang on a minute. I want to hear contributions from other students.' Indeed, sometimes the tutor has to speak these very words aloud. If none of this works, then a word outside the session is necessary, explaining how valuable the individual's contribution is, but how it is important to give *everyone* a chance to be heard.

The reticent group member

The converse of the above is the reticent group member. Again there are many reasons for this:

- they *are* innately shy
- they are upset or worried about something going on in their lives
- they are in a bad mood
- they are upset with someone in the group
- they have not done any work for the session
- they do not know anything about the topic
- they are completely out of their depth
- they are very tired
- they are very bored
- they have lost their motivation to be a doctor
- they are ill or depressed.

Some of these are most definitely not in the group tutor's remit to deal with, particularly the last one. Ill or depressed group members need to be seen by qualified practitioners – GPs, occupational health physicians or student counsellors. Under no circumstances should the small group learning tutor attempt to address such issues. Other issues may need to be taken up with the learner's personal tutor, trainer or educational supervisor.

The group leader's role is to encourage the individual concerned to seek help from the appropriate person, and to help identify who that person might be.

But dealing with a genuinely shy, or work-shy, learner is down to the tutor of the small group session. The former needs to be subtly encouraged to join in. Snowballing and buzz groups work quite well, since the learner does not have to speak in front of the whole group. Like the dominant group member, giving the shy individual a task to do, such as being scribe, works well. They are responding to the rest of the group's ideas, a role they are comfortable with. Pointing a finger at them and asking them a direct question is likely to send them deeper into their shell. Humiliating them in any way, for instance by laughing at their answers, is hugely counterproductive. Getting them to comment on something that they are almost certain to know might work, but sometimes the shy person simply needs to be left alone for a while, particularly if the reason for their non-involvement is transitory.

As to the work-shy, usually peer pressure takes care of this, but if not, then a quiet word outside the group is the solution. If a student is really out of his or her depth, this is a more serious situation and needs reporting to the appropriate member of staff responsible for academic progress, so that they can consider whether some form of remediation would help.

The flirtatious, 'jokey' or offensive group member

These are definitely examples of when the tutor should get the *group* to deal with the issue. One way is to get the group to take time out from the session and ask them if everyone is comfortable with the atmosphere

in the group, or with the behaviour of everyone in the group. Usually someone is heartily sick of it and says so. If this does not do the trick, the tutor should speak to the student out of hearing of the group. They should be very firm with them.

The late or absent group member

Groups can get really angry with perpetually late or absent group members and usually make their feelings on the matter quite clear. Starting the group later to accommodate the perpetually late learner is not an option. The only possible exception to this is the person who has *genuine* problems getting in for, say, a 9 a.m. start – perhaps for child care reasons or finishing off a ward round. If they really are unable to change their arrangements, then the issue should be taken up with the group right at the beginning, when forming the ground rules.

Persistent absence is a course or programme attendance issue, even if this is due to illness. The learner may, as a result, be held back and the school or post-graduate dean may refuse to sign them off or award credits. These are issues of professionalism, and unprofessional behaviour must be addressed when it first appears, not left to smoulder until it is too late to help learners amend their behaviour.

And there is one other essential ground rule, particularly at the undergraduate level: if a person is unable to attend a session for whatever reason – planned or last-minute – they must inform the tutor prior to their absence, or as soon after as is possible. If the tutor is unavailable, then they must inform someone in the group. In the era of mobile phones, there really is no excuse for not adhering to this policy.

The over-dependent group member

Here, the tutor has to learn to keep a distance from that individual and must take great care not to overindulge him or her. Some people are good at manipulating vulnerable members of staff for their own ends – another instance when the person concerned should be seated out of the sightline of the tutor.

Exploring Boundaries

Before taking charge of a small group, it is essential to be trained in the art of facilitation. Usually such training will itself take the form of a workshop in which an experienced facilitator demonstrates how to facilitate a small group by example. The facilitator is likely to cover the issues described in this chapter. The training session is likely to include some consideration about handling difficult group members and may also include some consideration about interpersonal boundaries – boundaries for the students, and boundaries for the staff. Boxes 9.5–9.8 depict four scenarios

BOX 9.5 Case A

Stephen is tutor to a group in which Tom and Sarah are students. Tom is a likeable but dominant member of the group who has strong knowledge that he likes to demonstrate to the group. Sarah is a student who comes from an arts background and is not confident about her ability. During a session, Tom begins (as always) to tell the group about his understanding of the learning issues. Stephen stops Tom briefly, and asks everyone if they understand what Tom is describing. The group nods, apart from Sarah, who replies 'This is all over my head, but don't worry about me. I just don't have the basic knowledge to join in this conversation. I'll catch up one day I'm sure.' Tom continues his feedback and Sarah immerses herself in a textbook. Stephen is sympathetic to Sarah but does not want the group to get behind. He believes that it is important that the group finishes its work in the time allocated and never allows the session to run over. Anyway, he has a lecture to give immediately after the session.

BOX 9.6 Case B

Hannah is a student in Rebecca's group. Hannah is a lively and strong character who has said quite openly that she 'wears her heart on her sleeve'. During a tutorial that focuses on lung cancer, Hannah spends a lot of time describing very emotionally how her grandmother died from lung cancer last year. As learning issues are written up on the board, Hannah says that she does not think she will 'be able to do many of these as it's all too close to home for me'. Later in the tutorial, Hannah suddenly begins to cry and says 'its all too much for me', and runs out of the tutorial in tears. Rebecca follows her and is out of the room for about 20 minutes.

BOX 9.7 Case C

Claire has been a student in Maria's group for several weeks. She is known to be struggling with the course and is open about a number of personal problems that she says are 'affecting her work'. Maria is concerned about Claire and has become something of a confidante to her. At various points in tutorials, Maria has mouthed the words 'are you okay?' to Claire. Maria has offered to talk to Claire 'any time' about her difficulties and Claire has taken to staying behind after teaching sessions to chat to Maria.

that illustrate some situations that may arise for group leaders. There are no comments on these scenarios. They are presented for the reader to think about whether the tutor's response was appropriate.

BOX 9.8 Case D

Mike is a student in Hardeep's group. Mike is an extremely confident and able student who is a lively and enthusiastic contributor to the group. At the start of the tutorial Hardeep asks the group how their week has been. Most members of the group make comments about how useful they have found the lectures so far and how they have enjoyed their GP visits. Mike adds, looking at Hardeep, 'The content of that Asian guy's session was crap. I could hardly make out one word he said.' Later, when the students are presented with the first page of a new problem, Hardeep asks them to identify its key features. The front cover to the week's problem shows a picture of a young woman in some distress. Mike says, 'Well, she's blonde, about 20 and far too skinny. Not my type at all. She's probably gay anyway!' The group dissolve into laughter. Hardeep joins in.

Frequently Asked Questions

How long should a small group teaching session last?

There is no simple answer to this. Everyone's attention span is limited. The key is to vary the activities on a regular basis. This is easy in a workshop format, but in, for instance, a PBL session, students may be incarcerated in a window-less room engaged in more or less the same activity for up to three hours. In any lengthy session, it is essential to build in a reasonable break for rest and refreshment. In summary, a session should last between 45 minutes and 3 hours, depending on the activity. The less the students are engaged in active learning, the shorter the session has to be.

Many postgraduate workshops last all day, sometimes they are spread over two or three days, or even a week, for example, for residential training courses. All-day workshops must be split into manageable chunks, separated by frequent refreshment breaks. Week-long courses should include at least a half day of relaxation.

How often should groups be changed?

In undergraduate education, a group should generally remain together for something between a term and a year. It is important for students to learn to mix and establish new teams. Groups that function well never want to change; groups that function poorly cannot wait to change. A term is probably a good compromise.

In postgraduate education, for example, day-release courses in vocational GP training schemes, or Balint groups, it is important to maintain as much continuity as possible, and groups should stay together for their natural lifetime (welcoming newcomers as appropriate).

Should learners who do not get on be swapped into other groups?

As far as medical students are concerned, absolutely not – under any circumstances. Doctors have to work in teams for the rest of their lives. These teams may not always function ideally. There may be personality clashes, jealousy, rivalry, too many chiefs and too few Indians – but they still have to work as a team. The sooner they learn to find a way to get on with people they do not like, the better they will function when it really matters.

In postgraduate education, doctors know their own needs (unfortunately not always) and are free to attend whatever courses they feel they will gain the most from. Continuing professional development is a requirement for all healthcare professionals, but apart from essential updating of skills, for example, resuscitation and life-support courses, few courses are compulsory and most are one-offs. Apart from GPs and psychiatrists, doctors therefore do not tend to attend regular workshops with the same people, although they do meet together as teams all the time. Instead, doctors tend to create their own 'clubs' and meet up frequently at conferences. Rarely, these national or international meetings involve small group work, consisting mainly of hundreds of usually fairly dire presentations.

Do I need to be an expert on a topic to run a small group?

It depends. For PBL, there is some evidence that the best tutors are those who are expert facilitators, but that it helps to have knowledge expertise as well. (34,35) Knowledge experts who have no skills of facilitation and who turn each PBL session into a question-and-answer session, or worse still, a mini-lecture, make poor tutors, as do those who do not even have the excuse of being knowledge experts and who are unable to grasp the principles of PBL (and indeed scorn the whole approach to learning). But for other small group activities, such as a seminar or workshop, and for most postgraduate teaching, where the tutor has more input, knowledge expertise is indeed necessary, again alongside the skills of small group facilitation.

Can a group survive with a series of different facilitators?

Generally, continuity of group leader is important, although rarely is an undergraduate tutor available to take every session in a term because of other commitments. One solution to this is to have paired tutors, so that when one is absent, the other can take over.

In the case of, say, a series of small group sessions covering a range of specialist topics, such as in day-release workshops for junior doctors, then it is actually desirable to have different tutors because specialist medical expertise is required. The problem then is that

the group never really has the time to develop a meaningful relationship with each tutor, because they are with them for such a short time. The group may get beyond the forming stage, but the tutor rarely does. There are two solutions to this: reduce the number of guest tutors; or maintain continuity through the use of a regular co-facilitator.

Is there such a thing as a floating facilitator?

In fact, that is exactly what a workshop facilitator does. But the question is more to do with a single facilitator looking after more than one group simultaneously, where the groups are not located in the same space but, for example, in nearby rooms. This is rather like the consultant surgeon keeping an eye on his trainees in adjacent operating theatres – common enough practice, but is it *good* practice? Usually this kind of multi-group facilitation only happens because of tutor shortages, and is aimed at making economies. The economies are really perceived economies rather than actual economies, because they only take into account savings in staff time and not quality of student learning. The learning experience is unlikely to be beneficial to the student (although sharing one good tutor is undoubtedly better than being tutored by two separate bad tutors). For multi-group facilitation to work, the activities being undertaken by each group must be task-based, with the tutor popping in now and again to check on group progress. Again, in the postgraduate arena, where the learners are often more committed and motivated, groups can be left to get on with the task by themselves for a while, which leads nicely to the next frequently asked question.

Do groups need a facilitator at all?

Again, the answer is that it depends. Students in the early stages of their course undoubtedly need a facilitator around. Partly this is simply because they do not know what to do, and partly for reassurance that they are learning what they are supposed to be learning. 'Will it come up in the exam?' is a question frequently asked of tutors. As students develop and become more mature, the need for a tutor is reduced. Such students can facilitate their own groups. Once they are let loose on the wards, students revert to Stage One again and need a bit of mollycoddling and guidance.

Postgraduate groups can survive without a tutor if the purpose of the small group session is clear. They may then appoint a chair from within the group and get on with the task in hand.

Summary

Learning in small groups can be very productive, if at times challenging. Not everyone enjoys the process, particularly if the group is dysfunctional. Here, the

skills of the facilitator are put to the greatest test, although there are guidelines for handling difficult group members, which are touched on here and elsewhere. A poor facilitator can jeopardise the success of even the best of groups, however – through bullying, humiliating, patronising, prejudicial or over-didactic behaviour. A good facilitator can help the group to achieve a high standard of learning, by encouraging active learning and reflective thinking, by questioning and challenging, and by setting a good example. The most successful groups are tutored by people who are good at facilitation, and not necessarily those who have subject expertise.

Small group learning is particularly successful if the facilitator adopts a variety of techniques during sessions. Workshops, which often last a morning or afternoon, must be split up into a range of activities – discussion, role play, debate, exercises using triggers, watching videos, practising skills, observing demonstrations, problem solving, question-and-answer sessions, presentations – the list is endless.

Facilitation expertise does not grow on trees. People who are brilliant teachers do not necessarily make good facilitators, because they may find it hard to get out of the information-giving mode in which they excel. Group facilitation should never be forced on such people. It is more sensible to recognise their skills and make use of them in the more didactic elements of a course, leaving facilitation to those who are good at it. Would that life were that simple ...

References

- 1 Bulstrode CJK and Hunt VL (1997) *Educating Consultants*. SUMIT, Oxford.
- 2 Jolly BC (1994) *Bedside Manners: teaching in the hospital setting*. Universitaire Pers Maastricht, Maastricht.
- 3 De Villiers M, Bresick G and Mash B (2003) The value of small group learning: an evaluation of an innovative CPD programme for primary care medical practitioners. *Medical Education*. 37: 815–21.
- 4 Steinert Y (2004) Student perceptions of effective small group teaching. *Medical Education*. 38: 286–93.
- 5 Tiwari A, Lai P, So M and Yuen K (2006) A comparison of the effects of problem-based learning and lecturing on the development of students' critical thinking. *Medical Education*. 40: 547–54.
- 6 Facione NC, Facione PA and Sanchez CA (1994) Critical thinking disposition as a measure of competent clinical judgement: the development of the Californian Critical Thinking Disposition Inventory. *Journal of Nursing Education*. 33: 345–50.
- 7 Barrows HS (1986) A taxonomy of problem-based learning methods. *Medical Education*. 20: 481–6.
- 8 Engel CE (1997) Not just a method but a way of learning. In: Boud D and Felett G (eds) *The Challenge of Problem-based Learning* (2e), pp. 17–27. Kogan Page, London.
- 9 Kamin CS, O'Sullivan PS, Younger M and Deterding R (2001) Measuring critical thinking in problem-based learning discourse. *Teaching & Learning in Medicine*. 13: 27–35.

- 10 Norman GR (2006) Personal communication.
- 11 Peters T (1995) *In Search of Excellence: lessons from America's best-run companies*. Harper Collins Business, London.
- 12 Rudduck J (1979) Learning to teach through discussion. Centre for Applied Research in Education occasional publications no. 8. University of East Anglia, Norwich.
- 13 Richmond DE (1984) Improving the effectiveness of small-group learning with strategic intervention. *Medical Teacher*. 6: 138–45.
- 14 Brown G (1982) How to improve small group teaching in medicine. In: Cox KR and Ewan CE (eds) *The Medical Teacher*, pp. 70–78. Churchill Livingstone, Edinburgh.
- 15 Balint M (1957) *The Doctor, His Patient and the Illness*. Churchill Livingstone, Edinburgh. [1964, reprinted 1986].
- 16 Balint E and Norell J (eds) (1983) *Six Minutes for the Patient: interaction in general practice consultations*. Tavistock Publications, London.
- 17 Kolb DA (1984) *Experiential Learning: experience as the source of learning and development*. Prentice Hall, Englewood Cliffs, NJ.
- 18 Revans R (1982) *The Origins and Growth of Action Learning*. Chartwell Bratt, Bromley.
- 19 Tuckman BW (1965) Development sequence in small groups. *Psychological Bulletin*. 63: 384–99.
- 20 Walton HJ (1997) *Small Group Methods in Medical Teaching*. ASME medical education booklet no. 1. Association for the Study of Medical Education, Edinburgh.
- 21 Mulholland H (1994) Teaching small groups: facilitating learning. *Hospital Update*. 20: 382–4.
- 22 Visschers-Pleijers AJSF, Dolmans DHJ, de Lang BA *et al.* (2006) Analysis of verbal interactions in tutorial groups: a process study. *Medical Education*. 40: 129–37.
- 23 De Grave WS, Boshuizen HPA and Schmidt HG (1996) Problem-based learning: cognitive and metacognitive processes during problem analysis. *Instructional Science*. 24: 321–41.
- 24 Molyneaux J (2001) Interprofessional teamworking: what makes teams work well? *Journal of Interprofessional Care*. 15: 29–35.
- 25 Mitchell BS, McCrorie P and Sedgwick P (2004) Student attitudes towards anatomy teaching and learning in a multiprofessional context. *Medical Education*. 38: 737–48.
- 26 Freeth D and Nicol M (1998) Learning clinical skills: an inter-professional approach. *Nurse Education Today*. 18: 455–61.
- 27 Tucker K, Wakefield A, Boggis C *et al.* (2003) Learning together: clinical skills teaching for medical and nursing students. *Medical Education*. 37: 630–37.
- 28 Ker J, Mole L and Bradley P (2003) Early introduction to inter-professional learning: a simulated ward environment. *Medical Education*. 37: 248–55.
- 29 Areskog N (1994) Multiprofessional education at the undergraduate level – the Linköping model. *Journal of Interprofessional Care*. 8: 279–82.
- 30 Reeves S, Freeth D, McCrorie P and Perry D (2002) 'It teaches you what to expect in future ...': interprofessional learning on a training ward for medical, nursing, occupational therapy and physiotherapy students. *Medical Education*. 36: 337–44.
- 31 Kirk A, Parish K and Buckingham I (2006) Interprofessional education – the benefits and drawbacks of an interprofessional training ward. Paper presented at the 12th International Ottawa Conference on Clinical Competence, New York, 20–24 May.
- 32 O'Halloran C, Hean S, Humphris D and Macleod-Clark J (2006) Developing common learning: the New Generation Project undergraduate curriculum model. *Journal of Interprofessional Care*. 20: 12–28.
- 33 Tiberius RG (1990) *Small Group Teaching: a trouble-shooting guide*. Ontario Institute for Studies in Education Press, Toronto.
- 34 Barrows HS (1988) *The Tutorial Process* (2e). Southern Illinois University School of Medicine, Springfield, IL.
- 35 Schmidt HG, van der Arend A, Moust JHC *et al.* (1993) Influence of tutors' subject-matter expertise on student effort and achievement in problem based learning. *Academic Medicine*. 68: 784–91.

Further Reading

- Bion WR (1952) Group dynamics: a review. *International Journal of Psycho-Analysis*. 33: 235–47. [Reprinted in: Klein M, Heimann P and Money-Kyrle R (eds) (1955) *New Directions in Psychoanalysis*, pp. 440–77. Tavistock Publications, London; Bion (1961), pp. 141–91].
- Bion WR (1961) *Experiences in Groups*. Tavistock Publications, London.
- Campkin M (1986) Is there a place for Balint in vocational training? *Journal of the Association of Course Organizers*. 1: 100–104
- Dennick R and Exley K (2004) *Small Group Teaching: tutorials, seminars and beyond*. Routledge, Abingdon.
- Habeshaw S, Habeshaw T and Gibbs G (1988) *53 Interesting Things To Do in Your Seminars and Tutorials*. Technical & Educational Services, Bristol.
- Jacques D (2000) *Learning in Groups: a handbook for improving group work* (3e). Kogan Page, London.
- Jacques D (2003) Teaching small groups. *British Medical Journal*. 326: 492–4.
- Lee A and Higgs J (1988) How to help students learn in small groups. In: Cox KR and Ewan CE (eds) *The Medical Teacher* (2e), pp. 37–47. Churchill Livingstone, Edinburgh.
- McGill I and Beaty L (1995) *Action Learning, a Guide for Professional, Management & Educational Development* (2e). Kogan Page, London.
- Newble D and Cannon R (2001) Chapter 3: Teaching in small groups. In *A Handbook for Medical Teachers*, (4e) pp. 39–54. Kluwer Academic Publishers, Dordrecht.
- Norman GR and Schmidt HG (2000) Effectiveness of problem-based learning curricula: theory, practice and paper darts. *Medical Education*. 34: 721–8.
- Weinstein K (1995) *Action Learning: a journey in discovery and development*. Harper Collins, London.
- Westberg J and Jason H (1996) *Fostering Learning in Small Groups*. Springer Publishing Company, New York.