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An Introduction

SMALL GROUP TEACHING

ANAESTHETISTS as EDUCATORS



**The Royal College
of Anaesthetists**



SMALL GROUP TEACHING

Aims

Small group teaching is extremely common in both undergraduate and postgraduate medical education. In this chapter, we will consider the characteristics of different types of small groups, how to effectively deliver education in this setting, and some of the challenges a small group can present.

Intended learning outcomes

By the end of this chapter you should be able to:

1. Understand the educational principles behind small group teaching (TM_HK_05).
2. Identify the characteristics and effectively manage different types of small groups (TM_HS_05).
3. Plan, deliver and evaluate a small group teaching session relevant to your area of clinical practice (TM_IS_03).
4. Anticipate, identify and possess strategies for dealing with difficulties that may arise in small group teaching (TM_HS_11).

Activity

Small group teaching is a very common educational modality in clinical medicine.

Basic – Identify the different situations where small group teaching occurs. How are these situations similar? Why are they different?

Intermediate – List some of the key characteristics of each kind of small group. What will the group dynamic be like for each?

Higher – How might you alter your educational approach to suit each kind of small group?

Background

Small groups are recognised as being a highly effective way for adults, and in particular for professionals to learn. Individuals should bring a clear sense of purpose and direction to their learning and in this setting the teacher usually takes on the role of *facilitator*.

A facilitator uses *open* questioning to guide discussion and moderate the involvement of all participants. This encourages a much more interactive process which, by discussion and debate, promotes understanding. However, it is important to remain adaptable, as different groups will have different requirements and need different skills from their teacher or facilitator.

Examples

Small group teaching methods are utilised, not only in the everyday clinical environment but also in more formal learning settings (Gunn 2007). Some examples of common small group encounters include:

Tutorial: Traditionally seen as a mechanism for a teacher to impart information to a small group, whilst offering the opportunity to ask questions and discuss points of interest.

Seminar: Forum for discussion of topics that may be new or developing. Learners often present alternative viewpoints to one another.

Workshop: Similar format to a seminar, but traditionally where the aim is to create a new piece of work or discover fresh information. Now also used when teaching a skill or clinical topic.

Journal club: Presentation of published literature with the purpose of inviting comment and group debate. No one present needs to be an expert on the topic itself.

Reflection

Think about occasions when you have been part of the above types of small group teaching. Which suits your teaching and learning styles most? Try to explain why this might be?

Characteristics

There are many factors that can be used to characterise a small group. Consideration of these elements will help determine not only the content of a teaching session, but also the *process* by which learning is achieved. For a small group teaching session to be effective, both the teacher and learners should have an awareness of these factors:

Group size: Conventionally a small group is between 3 – 12 participants in size. The size of the group will affect the characteristics described below i.e. dynamic of the group and the fluidity of discussion amongst group members. Group size will influence the teaching style and delivery method chosen and may even rule out small group methodology as the most appropriate modality.

Group dynamic: There are many theoretical models describing the interactions of learners with each other and with the facilitator and the roles that learners will assume in a small group. For example, in the clinical environment, seniority and specialty may alter a group's dynamic to as much an extent as the personalities of the individuals themselves.

Some learners may view a session as an *assessment* rather than a learning opportunity. This may alter the amount individuals are willing to contribute (and risk getting it 'wrong'). It is important that the group facilitator has an appreciation of these issues and aims to positively influence a group's dynamics.

Discussion style: Can broadly be either *convergent* (or closed or teacher-centred) or *divergent* (or open or learner-centred) (Brookfield 1999).

In a convergent session, the facilitator acts as the conduit through which discussion and ideas flow and the dialogue occurs between him or her and each learner. With a moderate amount of practice, most facilitators are able to control the direction of discussion and reach a pre-determined end-point. This style is most suited to imparting new knowledge or delivering a prescribed syllabus within a fixed time frame.

Question styles used in a convergent setting tend to be described as closed e.g. "what are the main predictors of a difficult airway?" The discussions tend to impart some knowledge, review what is known and are focussed on areas where there is a definitive answer or end point.

In contrast, with a divergent discussion style, the dialogue occurs between learners and they voice their opinions to each other. Discussion may not follow the expected direction and a different end-point may well be reached. Divergent sessions are often considered to be more challenging to effectively facilitate (and to time-manage), but when the dialogue provides its own momentum it can often yield some of the most rewarding discussions.

Here the question styles are more open e.g. "what are your views on DNACPR?", where the discussions are opinion based, and may not yield a final definitive answer. The learning happens for an individual by being part of the process of discussion and debate.

Structure – bringing life into your teaching

Breaking a larger group into smaller units can encourage group interaction. Organising these on a heterogeneous or random basis will prevent cliques forming. Different structures will require varying amounts of leadership from the facilitator but once established, may require you to step out of the discussion and allow the process to determine the direction of the session (Jacques 2011).

Buzz groups: Students are asked to turn to their neighbour to discuss a question for a few minutes, see Fig 1. This offers a sense of participation and enables students to freely express ideas they would have been unwilling to reveal to the whole group. A variation is to permit only one-way communication initially, allocating half the allotted time to each individual within the pair. This can help each individual to develop their own ideas and enhance the other participant's active listening skills.

Snowball groups: or pyramids are an extension of buzz groups, where pairs join up to form fours, then fours to eights, until the whole group reports back to the facilitator. This developing pattern of interaction can ensure comprehensive participation. The tasks should become increasingly sophisticated as the groups amalgamate to limit repetition and boredom.

Fishbowls: An inner group discusses an issue or topic while the outer group listens, looking for themes, patterns, and the soundness of arguments, see Fig 2. The outer group then offers feedback, not only on the material and the ideas discussed but also critiques the inner group's dynamic. The two groups then swap over roles.

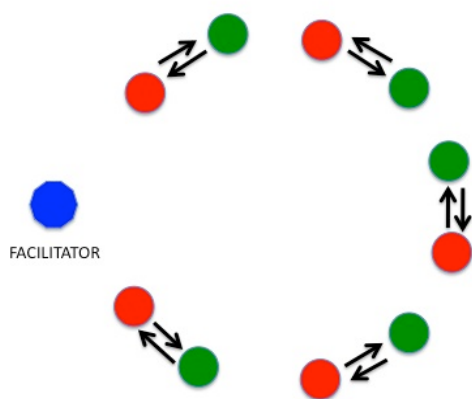


Figure 1: Buzz groups

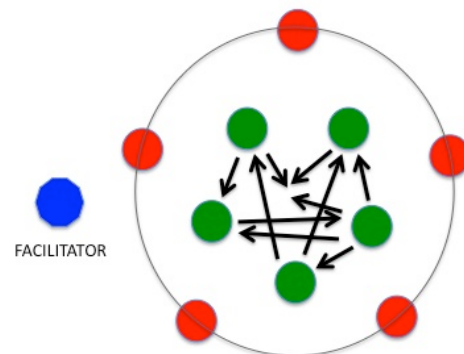


Figure 2: Fishbowls

Crossover groups: Students are divided into subgroups that are subsequently split up to form new groups in such a way as to maximise the crossover of information.

Circular questioning: One group member formulates a question relevant to the discussion topic or problem and puts it to another person, for example to the person opposite them. After sufficient time has been given to develop an answer, the answering individual then asks the next question to someone else, until everyone has contributed. At this point the whole group can review the questions and answers to develop the discussion further, see Fig 3.

Horseshoe groups: This method allows the focus of attention 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, see Fig 4. You can then talk formally, for example from a white board, before switching to a group task such as discussion or problem solving.

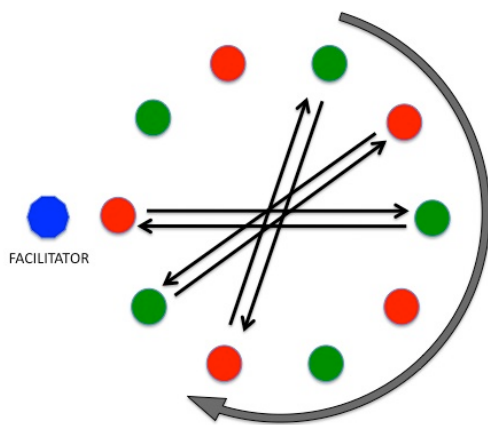


Figure 3: Circular questioning

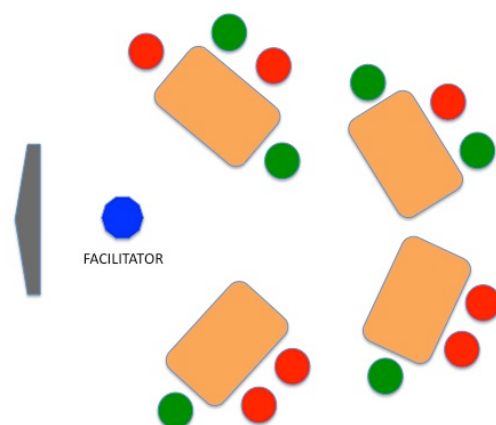


Figure 4: Horseshoe groups

Practicalities

When organising a small group teaching session, it can be helpful to consider Maslow's Hierarchy of Needs (Maslow 1943). In practical terms, an individual student will not achieve their learning potential (higher order needs) if their physical and social environment (lower order needs) is not optimal.

Task

Think about some of the practicalities of small group teaching.

- How would you arrange the chairs and tables for the different styles or examples of teaching?
- How might the chosen set (layout) influence the interaction of participants with the material, intended learning and each other?
- How might you use audio-visual aids in each context?

Physical environment: The temperature, lighting and room size are often difficult to control but position of furniture can and should be altered to suit your needs. The position of learners relative to the facilitator and each other will also affect the group dynamic.

Time limitations: It is important to determine how long a session should last for and share that information with your learners at the beginning of the session. Individuals may have limited time available due to clinical commitments and this will alter the group dynamic, especially if they turn up late or have to leave early. Learners are able to concentrate to varying lengths of time and for example after lunch, group attention may wander. When designing the session, these factors should be borne in mind and adjusted accordingly; ideally in consultation with the learner group.

Group composition: Knowing your audience is imperative and whether the learners know each other socially, academically or clinically will also change how a session plays out. Varying knowledge levels will also alter a group's dynamic and how comfortable individuals feel to participate. If the session is pitched correctly it will engage all the learners rather than confusing some or boring others.

Task

You are tasked with planning a teaching session. You must prepare a 30 min workshop in your anaesthetic department for eight 4th year medical students on 'basic airway management'.

- Think about your learners. How might you decide what *they* would find useful from this session?
- What does your seminar room/coffee room look like? What are the constraints of this space?
- How might you use audio-visual aids?
- What extra equipment would you like and why?

Planning

There are several steps that can be helpful to consider, when preparing a small group teaching session (London Deanery 2011). We will use the example above to illustrate these key steps:

1. **Consider group characteristics:** Our medical students are all at the same level, may know each other and will probably have had limited clinical exposure. However, these are all assumptions and it is important to clarify the knowledge and experience of your learners, because, for example, one student may have been an anaesthetic nurse before becoming a medical student.

Introductions will be useful as an 'icebreaker' at the start of the session even if the learners know each other. Your introduction and background will add credibility to your role as facilitator.

2. **Constraints of your environment:** To some extent you are guided by the structure of the space you have available to you. Access and assess your room before your session to identify the facilities, available furniture and work out how best to use your space.

Don't be afraid to change the room layout to suit your needs: move the chairs and tables around or fold them away completely. Work out what audio-visual aids you

might use if any and what extra equipment you might have to bring with you. Lighting is also key, and if you are lucky enough to have some natural light – use it.

3. **Content:** You may already have an idea about what you want to teach this group of medical students; however identifying their 'learning needs' is more difficult. Asking them what they would like to get out of the session is a good first step and may also serve to engender a relaxed and open atmosphere.

Contact your learners by 'group e-mail' inviting them to set the learning outcomes themselves. If they are not forthcoming, you may need to offer them suggestions but well-placed questioning might just unearth some overlooked learning needs.

4. **Time frame:** Awareness of how much time is available and how long the planned session will actually take is important to ensure each part of your session is completed.

Rushing through the second half of a session in the last five minutes is not ideal, so plan and practice your tutorial. Allow time for interaction and questions both during and at the end of the session.

5. **Identify the AIM:** Use this subheading to offer an overview of what might be learnt and describe why the session is important. Signposting the aim of the session to the learners, ideally prior to the session, will help you to structure your teaching and help them to understand what they are going to learn. An example:

Management of the airway is a cornerstone of resuscitation and implementing simple airway manoeuvres is often all that is required to improve ventilation and oxygenation. During this session we will look at basic airway equipment and introduce the practicalities of basic airway management.

6. **Learning outcomes:** will more specifically define the goals of the session and will offer structure to the teaching. An example:

By the end of this session you will:

- *Understand the importance of correctly managing the airway*
- *Have a working knowledge of the clinically relevant anatomy*
- *Be familiar with the equipment used in airway management*
- *Be able to size and place relevant basic airway equipment*
- *Be able to support the airway using basic airway equipment*

7. **The learning:** A decision must be made about how the content of your session will be delivered, how practical a session it will be and how much theory you will discuss. Remember the learners may have already been taught some of the relevant anatomy and physiology in lectures and finding out how much they already know can help to engage them in a dialogue and avoid repetition.

- 8. Question style:** This style of teaching lends itself to participation and active discussion and is preferable to a lecture-style monologue. Your first questions for the learners can be crucial to success and will often establish the tone for the rest of a session. Asking a broad, enquiring, open-ended question will motivate the group and invite interaction. Closed questioning can command the group's attention, but care must be taken not to promote anxiety and stress. The wrong type or style of questioning may close down discussion and prevent enquiry for fear of ridicule.

Enquire if any of the learners have seen an obstructed airway or had experience with managing an airway. Individuals often feel more at ease talking about their experiences because there are no wrong answers.

- 9. Key elements:** Interaction is key to this style of teaching and using different techniques to engage the learners will make the session relevant and interesting whilst maintaining focus and concentration. With a bit of luck, the group may even retain some of the information shared during the session. Below is by no means an exhaustive list, but are some of the ways to engage the learner:

- *Tasks and activities – using flip-chart paper and coloured pens, split the learners into smaller groups and ask them to draw diagrams or make lists, which can then be presented to the group. This type of activity is interactive, identifies and pools existing knowledge and reduces the confrontational element of asking specific knowledge-based questions.*
- *Audiovisual – with care, technology can enhance learning. Showing a short video clip or using recorded sounds can offer relevance and stimulate discussion.*
- *Clinical scenarios – relating the material back to what the learners might see clinically will make the session relevant and offer context.*
- *Mannequins and equipment – getting the learners comfortable with equipment and practicing, will reinforce new and existing knowledge.*
- *Problem-based learning – self-directed learning can help to identify the learner's needs. Set a 'problem' and then ask the group to research and investigate the possible 'solutions'. (NB. If you do not want the learners to leave the room, appropriate resource material must be made available).*

- 10. Close:** A teaching session needs to be ended appropriately. It is important to answer any final, relevant questions and then summarise the key learning points. A 'take home message' can often help to tie a session together and it is worth directing the learners to further resources, to enable them to continue to solidify their understanding of the subject matter covered.

- 11. Feedback:** It is important to offer some element of feedback to your learners during the session. Most of this will be formative (*for* learning) but there is sometimes a need for summative feedback (*of* learning), where the learners need to reach an approved standard. Constructive critique can be a very valuable process but if a certain level or grade is required, this should be made explicit at the start of a session.

12. Evaluation: The learners should help to evaluate the teaching episode to highlight areas for improvement. This is commonly accomplished using an anonymous feedback form distributed at the end of the session. There is obviously a balance to be had between having a form that is easy to complete and obtaining enough useful information to change elements of the session. The compromise is usually to limit the evaluation sheet to one-side of an A4 page and have a combination of closed questions, which are scored and open-ended questions with space for free text.

13. Reflection: It is worth reflecting (as soon after the teaching episode as possible) on elements of the session that worked well or areas that could be improved. Writing down events and key reflections can help to solidify your ideas. If you can, employ the services of an observer. Structured feedback on your teaching methods and style and your interaction with the learners can offer invaluable insight.

Reflection

Have you ever been part of a teaching session where there was a disruptive individual in the group? It may even have been you! Think about why he or she acted in this way. What techniques could or did the facilitator use to bring the session back on track.

Dealing with difficult personalities

A group of learners will have a range of different personalities and learning styles and this will affect the dynamic. Awareness of these factors will help to understand why some individuals naturally engage more than others with different types of teaching styles. Sometimes a particular personality can be detrimental, either to that individual's learning or worse, to the learning experience for other members of the group. Negative attitudes can be the most destructive and the art of good facilitation is knowing how to balance these personality types and allow the group to function without making the individuals concerned feel isolated or picked upon.

Setting 'ground rules' for the group from the outset can often help to define acceptable behaviours within the group, and then be used to prevent or quash clashes between students quickly. Ground rules are best set by the learners themselves, and examples might include: arriving on time, maintaining confidentiality within the group, not interrupting, respecting others opinions even though you may not agree with them.

Key thoughts

With respect to how you deliver your educational aim and learning outcomes, the fascinating thing about small group teaching is that the world is your oyster and you are only limited by your imagination. Play around with the format, try out new ideas and really think about how best to present your material to deliver an engaging and interactive encounter. If you get it right, the rewards will far outweigh the time and effort taken to organise the session.

Evidence of progression

Basic level

- Constructively critique the next small group teaching session you attend under the following headings:
 1. Was it *teacher* or *learner* centred and who did most of the talking?
 2. How did the learners interact with the facilitator and each other?
 3. Which elements worked well and what could have been improved?
 4. How might you have run the session differently?

Intermediate level

- Prepare and deliver a small group teaching session and ask the learners for written feedback on your teaching. Write a 200 word reflective piece on the feedback you received. How might the feedback and your reflections change how you would deliver the same teaching session in the future?

Higher level

- Ask an observer to watch and then critique a small group teaching session that you facilitate. Ask them for written feedback. Write a 300 word reflective piece on how you think the small group teaching went and on the written feedback you received. In the last paragraph state three things you will try out that might improve the session for next time.

Further reading

Habeshaw, T., Habeshaw, S., Gibbs, G. (1982). 53 interesting things to do in your seminars and tutorials. Bristol, Technical and Educational Services.

References

Brookfield, S., Preskill, S. (1999). Discussion as a way of teaching - tools and techniques for university teachers. Buckingham.

London Deanery. (2011). "Small Group Teaching." e-learning, 2011, from: www.faculty.londondeanery.ac.uk/e-learning/small-group-teaching, London.

Gunn, V. (2007). Approaches to small group learning and teaching.

Jacques, D. (2011). "Small Group Teaching." from: <http://www.brookes.ac.uk/services/ocslid/resources/small-group/index.html>, Glasgow.

Maslow, A., H. (1943). "A Theory of Human Motivation." Psychological Review **50**(4): 370-396.

RCoA 2010 Syllabus Key

- TM_IS_01** Participates actively in departmental education and learning and records their participation in their reflective portfolio.
- TM_IS_03** Plans and conducts a teaching session e.g. lectures, workshop, tutorial, and seeks written feedback on their performance from participants.
- TM_HK_05** Understands the educational principles underlying the preparation of effective lessons and presentations.
- TM_HS_05** Demonstrates effective lecture, presentation, small group and bed-side teaching sessions.
- TM_HS_11** Is able to lead departmental teaching programmes including journal clubs.
- TM_HS_17** Assesses the quality of teaching both classroom and workplace-based and records this in their reflective portfolio.