

Review Article

Small Group Teaching- An Update

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Introduction:

Teaching medicine is an ever-evolving process which requires that both students and teachers continuously update themselves¹. Effective teaching in medicine requires flexibility, energy, and commitment of clinical care. Successful medical teaching also requires that teachers are able to address learner's needs and understand the variations in learner's styles and approaches². There are varieties of theories and systems of learning in medical worldwide even in the same country³. Traditional lecture format of most large introductory science courses presents many challenges to both teaching and learning. Although a traditional lecture course may be effective for efficiently disseminating a large body of content to a large number of students, these one-way exchanges often promote passive learning and fail to stimulate student motivation, confidence, and enthusiasm. As a consequence, the traditional lecture model can often lead to students completing their undergraduate education without skills that are important for professional⁴. The most basic and skills which all medical students should master are history taking and physical examination. Tutorial class, problem-based learning (PBL) and team-based learning (TBL) in small group is suitable to acquire these skills. Thus the development of self-learning system is expected as more efficient method than lecture-based education. Small group education through PBL or TBL will promote the self-learning ability of students⁵. Over the past two decades, a series of influential reports and articles have gained attention to the need for changes in approaches to undergraduate medical education in ways that promote meaningful learning, problem solving, and critical thinking for a diversity of students⁴.

What is a 'small group'?

In small group teaching-learning activities the size of the group plays a significant role. The smaller the group the greater is the likelihood of close relationships, full participation and consonance of aims and objectives. However, while designing a group size, keep in mind that, larger group may impair the flavor of small group teaching-learning⁶. A typical small group consists of usually 8-10 students who try to achieve their educational aims under the supervision of a teacher. But in clinical settings groups may comprise a pair of students or trainees working with a health-care team. Whereas, other small group may comprise 25-30 people^{7,8}.

Why learning in small groups is important?

Small-group teaching-learning has achieved an admirable position in medical education and has become more popular as a means of encouraging the students in their studies and enhance the process of deep learning. The main characteristics of small group teaching are active involvement of the learners in entire learning cycle and well defined task orientation with achievable specific aims and objectives in a given time period. It increases the students' interest, teamwork ability, retention of knowledge and skills. It also enhances transfer of concepts to innovative issues and improves the self-directed learning. Self-motivation, investigating the issues, allows the student to test their thinking and higher-order activities are developed in this process. Moreover, it enhances student-faculty and peer-peer interaction, improves communication skills and provides opportunity to share the responsibility^{6,9}.

Some small group methods

A variety of methods can be used with small group teaching and these include:

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Tutorial: Is a small class of one or only a few students, in which the teacher gives individual attention to the students. The group discusses material already covered or previously assigned. For tutorials to work, students must take responsibility for preparing material¹⁰.

Problem-based learning: Teacher generates a problem and makes it available to the students. Students establish the learning needs raised by the problem and then undertake self-directed study and a critique of the learning needs. In follow-up sessions the group meets to discuss the material studied, to summarize and integrate. Finally the group, facilitated by the teacher, meets to draw generalization and conclusions¹⁰.

Clinical teaching: Teaching of students in small groups in the clinical setting remains the cornerstone of medical teaching. It is frequently conducted around patients' bedsides or in the ambulatory setting¹⁰.

Seminar: Teacher negotiates with students a piece of work for the students to present. All students prepare the material, then it is presented to the group by one or more students and feedback is given. It promotes research ability, presentation skills and critical discussion¹⁰.

Brainstorming: Teacher receives answers to a question from the students without comment. After a short period, the teacher reviews the list of "answers" with the whole class. The answers can be used to provide material for the next part of the lecture or to give students an idea of where they are before they move on¹¹.

Buzz groups: Consist of groups of two to five students working for a few minutes on a question or problem. Ideas generated fed back and discussed by the whole group. It also encourages interaction¹².

Fishbowl: Small group consists of 2 - 4 students discuss or present topic in front of remainder of group who watch and then discuss. The small group then acts as observers to the remainder of group who re-present the topic¹².

Snowballing: Teacher assigns to pairs of students prepared stimulus material on a topic. The pairs discuss it and each pair then joins with another pair. The process is continued until the whole group meets together. It allows clarification of ideas and values¹⁰.

Free-discussion group: Teacher introduces stimulus, which the group discusses. The teacher facilitates the discussion, which should range freely within the topic and then summarizes the discussion¹⁰.

Role play: In role play the students take on various roles usually chosen by the teacher. It is particularly valuable in exploring communication issues and attitudes¹⁰.

Group round: Each person has a brief time, to say something in turn round the group. The direction round the group can be decided by the first contributor or members can speak in a random order¹³.

Small group teaching environment

While establishing a small group, it should be kept in mind that the small-group environment must be designed to promote cooperation, rather than competition. In order to achieve a better small group teaching-learning environment, it is important to develop appropriate groups so that students can be actively involved in the activities. The faculty has an important role in providing a pleasant environment in which the learners learn happily. Pleasant academic environment promote a culture through knowing and valuing each student and respect for individuals. A constructive environment can not only release more energy and imagination in a group, but affects the way students feel about belonging to it⁶.

Role of the teacher in small group teaching

The first use of educational technology probably occurred when someone picked up a stick and drew in the sand or when someone picked up a piece of cinder and wrote on a cave wall. Chalk, papyrus, paintings, printed books, chalkboards and recently photographs, overhead projectors, televisions and computers all represent technological advances that can be used for educational purposes. No technology, no matter how sophisticated, will supplant a skilled teacher. The role of the teacher is typically that of facilitator of learning: leading discussions, asking open-ended questions, guiding process and task and enabling active participation of learners and engagement with ideas⁸.

Role of the students in small group teaching

The role of students is also important in small group teaching. Students should cooperate and participate actively with teacher and in between them for successful teaching. Without cooperation from students, achieving the goals of small group teaching is not possible. They need prior preparation of a topic. The students must also attain essential knowledge and

additional skills such as verbal and communication skills. They should hold others attitude in esteem, have knowledge of group dynamics, ground rules and phases of group development^{14,13}.

Problems associated with effective small group teaching

However, although small-group teaching looks very prominent, it also poses certain limitations. Teaching in small groups can be more costly because it requires a higher teacher-student ratio and demands more time¹⁵. It can easily be misused; if teacher gives a lecture rather than conducting a dialogue, teacher talks too much, students do not prepare for the session, one student dominates or blocks the discussion and if students want to be given the solutions to problems rather than discuss them¹³.

Assessment methods in small group teaching

Since the 1950s, there has been rapid and extensive change in the way of assessment is conducted in medical education. Several methods of assessment have been developed and implemented over this time and they have focused on taking history, performing physical examination, communication skills, procedural skills and professionalism¹⁶. A wide range of assessment methods currently available which include; essay question, patient management problem, modified essay question (MEQ), objective structured practical examination (OSPE), objective structured clinical examination (OSCE), constructed response question (CRQ), multiple choice question (MCQ), critical reading papers, rating scales, extended matching items, tutor reports, short case assessment, long case assessment, log book, trainer's report, video assessment, self-assessment and peer assessment¹⁷. Whatever the purpose, one assessment method will not assess all domains of competency, as each has its advantages and disadvantages; therefore a variety of assessment methods is required so that the shortcomings of one can be overcome by the advantages of another¹⁸.

Conclusion

Transition from a traditional lecture-based educational system into a small group teaching based educational system is vitally important especially in medical and health educational systems all over the world. Small-group teaching-learning sessions provide productive academic environment, strategy for dynamic and collaborative learning both in basic and clinical medical science. Small group methods have a valuable role to play in undergraduate medical education. It can be said that these techniques are useful to encourage learners' engagement with a topic.

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