

Does Class Size Matter For Effective Online Teaching-Learning Experience? An Insight Into Small Group Teaching In The Covid-19 Pandemic Era

Rashmi KS, Aparna Tripathy, Trupti Bodhare, Kavitharati Dharwardkar, Swaroop Raj BV,
Pratik Kumar Chatterjee

Article Info	Abstract
<p>Article History</p> <p>Received: May 25, 2021</p> <p>Accepted: December 26, 2021</p> <hr/> <p>Keywords : Small group teaching, Large group teaching, Teacher, Virtual- progression, COVID-19, Pandemic</p> <p>DOI: 10.5281/zenodo.5805354</p>	<p><i>Teaching in a medical setting necessitates the transmission of knowledge and skills necessary for optimal learning and retention. The information given must be basic yet effective so that it can be remembered, reproduced, and applied to clinical situations. The rising demand for medical admissions in our country means that teachers have little control over the size of their classes for more effective learning.</i></p> <p><i>Tutors conventionally regulate troposphere in a educator-positioned lecture theater to rheostat in what way information is strewn in addition being shared among all but in the present COVID-19 pandemic scenario, scholars in a virtual progression are no longer dependent on tutor for information because of their rapid admittance to large catalogues of documents including evidence. Though numerous instructional approaches are existing for practice in virtual erudition milieu, majority were not been established explicitly for virtual training. Large group teaching has been widely used teaching learning methodology including medical sciences, around the globe. Small group teaching, popularly known as SGT was introduced in Medical teaching with an intention to facilitate better interaction between the tutor and the learner for better understanding. Regardless of the methods used, the teacher is still an important part of the learning process. But now it's more important for them to facilitate rather than direct, to coordinate rather than communicate, and to inspire rather than inform.</i></p>

Introduction

Teaching in a medical setting necessitates the transmission of knowledge and skills necessary for optimal learning and retention. The information given must be basic yet effective so that it can be remembered, reproduced, and applied to clinical situations. Medical educators are thus responsible for not only educating, but also for assisting students to learn how to progress, retain, and apply what they have learned. The rising demand for medical admissions in our country means that teachers have little control over the size of their classes. As a result, irrespective of the class size in which they teach, creating the optimum learning environment is a difficult task.(1)

Erudition skills that are adequately designed, also facilitated through skilled tutors are indispensable for active training through online mode. Since pupils have a variety of understanding elegances or a mix of techniques, educators using online platform must offer doings that integrate numerous methods of education. Adapting teaching replicas is also necessary both from educators and students perspectives.

2. Strategies of teaching learning through online mode

2.1. Various Instructional Strategies

Tutors conventionally regulate troposphere in a educator-positioned lecture theater to rheostat in what way information is strewn in addition being shared among all. Scholars in a virtual progression, especially in the present COVID-19 pandemic scenario, are no longer dependent on tutor for information because of their rapid admittance to large catalogues of documents including evidence. Concerted, circumstantial along with dynamic wisdom are more popular in recent times. Educationalists need to principally define their aim(s), form a syllabus, then examine by what means the virtual setting would sustain that program's instructional objectives and accomplishments. This necessitates pedagogical modifications. Instructors in knowledge-aligned education yield on job of the expeditors, sharing facts along with supporting scholars in the direction of answers. In training-understanding partnership, mutually educators along with apprentices should take on responsibilities with tutorial acritous to relinquish resistor of understanding to learners. Interactive techniques are as well required in online learning environments. When it comes to converting specific learning objectives into virtual facsimiles, instructors find that they are paying added responsiveness to instructional strategies for

those sequences. Therefore, excellence, magnitude including forms of communication learner(s) exercise all through their understanding processes mend. Though numerous instructional approaches are existing for practice in virtual education milieu, majority were not been established explicitly for virtual training. Teachers must select approaches that achieve precise learning goals. From this perception, instructional strategies are gear obtainable to mentors for scheming and expediting learning-processes. Certain instructional approaches from customary tutorial room that also toil virtual learning atmosphere are, Learning Intentures, Conversation, Allocution, Self-Directed Learning or SDL, Mentorship, Small Group Work i.e., SGT, Project, Concerted Learning, case-studies, Forum, Panel-discussions, Symposium(s), etc.,(2)

Large group teaching has been widely used teaching learning methodology including medical sciences, around the globe. Small group teaching, popularly known as SGT was introduced in Medical teaching with an intention to facilitate better interaction between the tutor and the learner. The comparison between the two has been discussed in details.

2.2. Large Group Teaching or LGT: An Overview

The instructor in LGT is more of an information source than a learning facilitator, and the majority of the material can be found in a book or online programme. The delivery may be tough to follow because to the densely packed with information graphics. It's conceivable that the content isn't appropriate: irrelevant, advanced, or fundamental. Students retain just about 5% to 10% of what they hear during a regular lecture. It's likely that specialists who provide lectures aren't always effective educators. The lecture does not always lead to the best results in some learning approaches. Teaching speaking skills, cooperative group thinking, and movement abilities, for example, is challenging using the lecture format. Students will only be able to perfect such abilities via practice.

In most circumstances, delivering content beyond the comprehension level of the cognitive domain necessitates more than a formal lecture. The formal lecture may be ineffective as well. (1)

2.3. Small Group Teaching

i. How Small has the group has to be - To be effective?

Small-group instruction is a style of learning that is intimately linked to active participation. It allows students, usually in groups of eight to twelve, to explore, make errors, and figure out how to think about what they're learning on their own terms.

Following a lecture, or perhaps a day or two later, small-group sessions are frequently held. They allow students to get rapid answers to queries or misunderstandings, as well as demonstrate that they are not alone in their bewilderment or uncertainty. People learn more by what they do than what they say. A small-group session can mean the difference between students being able to repeat and mastering what they've learnt.(3)

A small group of students, consisting of [2-10] individuals, is formed in a small group teaching (SGT) technique. Lectures are prepared jointly by lecturers and students, and students are encouraged to interact on the subject matter. They take notes, discuss the pros and disadvantages of the topic, ask questions, and solve problems in an interactive manner; the speaker serves as a facilitator rather than a traditional instructor in the group. Because the class is small, the lecturer can focus on the students' mistakes and difficulties one-on-one, providing adequate time for problem solution. This functions as a tremendous motivator for the students, who begin to build problem solving skills in a much more analytical manner. The teacher takes on the role of facilitator, shifting the learning paradigm from lecturer-centered to student-centered. The lecturer ensures that everyone has an equal opportunity to engage, that work is distributed evenly, and that the discussion and instruction are brought back on topic when the conversation veers off course.(1) Fig. 1 describes the components that are required for deeper learning:

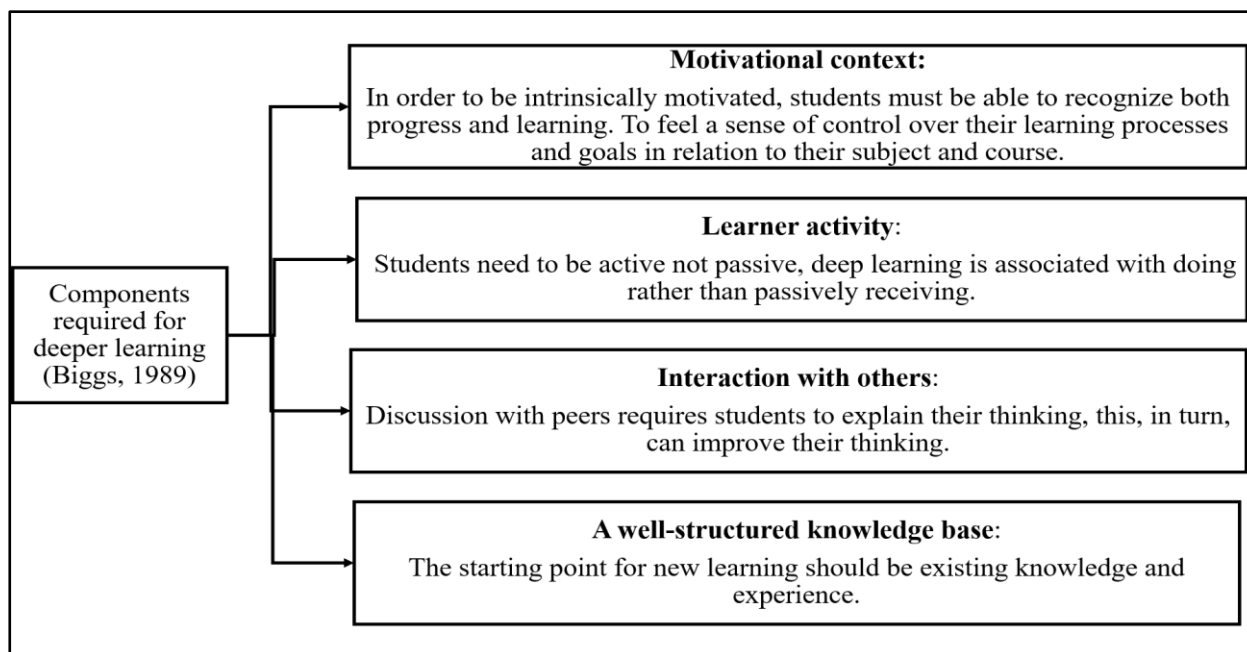


Figure 1. Components of deeper learning. (1)

ii. Methods and techniques applied for SGT

It's crucial to 'shake things up. Scheming SGT sitting(s) using 'diversity' in cognizance helps students to graft in their coziness precincts while simultaneously introducing new challenges. Different tactics encourage various levels of student participation and provide various learning opportunities. The appellation of SGT only reveals the overall teaching technique that will be employed. The degree to which the instructor is obliged to be directive varies between these:

- A. **Focused discussion group:** Learners gather in small groups to discuss a topic or a current situation. (4)
- B. **Tutorials with individual attention:** Tutorials with a pastoral component to pupil's care with learners seeking aid from a wider spectrum of persons if they are suffering academic and personal problems.
- C. **Problem classes:** Devoted to solving a specific collection of glitches which are typically statistical in nature.
- D. **Colloquia:** Clusters debate on topic(s) using information from articles published in indexed journal(s) or other learning sources.
- E. **Workshops:** A blend of trifling responses by facilitator interposed by work on group/individual chores, tailed by discussion and comment(s) to the whole group by the educator.
- F. **Problem-based learning or PBL sessions:** A clutch of learners work through a given scenario to reach at a differential diagnosis followed by the actual diagnosis of the clinical condition. The group usually encounters 2 or 3 times on each problem, with the first session being brainstorming followed by presentation of the approach to reach at the solution to problem addressed, accordingly. (5)
- G. **Student-led groups:** The topic of discussion, methodology and the other needed aspects are solely planned by the students only. The role of the facilitator is merely to observe or intervene if the discussion goes out of the way or wherever required, accordingly.
- H. **Self-help groups:** Students do it for their own learning with facilitator being the

sole resource person.

I. Action Learning Set: Teacher's role is as a facilitator with each scholar presenting their issues in turn with others asking questions and clarifying their doubts, accordingly.

In selected modules it is anticipated that educator being well-informed should be able to prime on an explicit issue. The instructor is in lecture to stake their proficiency and her or his opinions to the cluster. But in many SGT assemblies this is unquestionably not the part of the professor. In other instances, more commonly, the facilitator is there to assist to accomplish the progression of learning mainly by expediting conversation along with assisting the apprentices to slog through learning activities and errands. Works that have been planned to embolden the learners to ponder on themselves, share their notions actually help them to cultivate a set of greatly appreciated, educational and communicative talents.

Studies have depicted that, there are broadly 2 diverse teaching-learning philosophies - A teacher-led methodology and a student-led/centered line to education.

- **Teacher led approach**

The findings of research on what teachers should do to facilitate these processes during small group instruction are mixed. According to several studies, teachers should refrain from asking specific questions on the task's substance and instead ask general questions, such as soliciting contributions. Teachers' involvement with problem content is regarded to enhance students' reliance on the teacher while removing their autonomy and initiative in the job. Teachers who employ questions to convey minimum problem topic information might promote students cooperative learning by reinforcing their autonomy, initiative, and interdependence.(6)

- **Learning that is centered on the student**

Student-centered learning (SCL) is a way of thinking about teaching and learning that focuses on students' ownership of tasks such as organizing knowledge acquisition, interacting with teachers and other students, researching, and learning evaluation. As a result, SCL demands students to actively participate in the learning process and take charge of their own learning. Throughout this process, teachers focus on what their students do and why they do it rather than on their own performances as instructors. During this process, mutual respect between the learner and the teacher is vital.

There are hundreds of different ways in which students can be encouraged to participate in a small group teaching session and actively engage with new knowledge, concepts and ideas...(and with each other). Encouraging active learning through some other techniques commonly used are summarized here, as follows,(7)

- The class is divided into two or more smaller groups, with some students transferring between groups at suitable periods. This pattern is often referred to as '**cross over groups**'. E.g. after completing part A of an assignment in groups of four, two students from one group trade places with two students from another group - forming a new group of four. The assignment then moves on to component B.
- A question or a topic is put up on the board and each student is encouraged to write down any ideas or responses they have. Then, for a few minutes, they are asked to discuss their opinions with a colleague. Time is given to them to deliberate before repeating the question once more, this time asking for their thoughts. The whole format is often referred to as '**Buzz group**', widely used in some Institutional settings.
- On the board, a statement or a question is written. Students are asked to shout out their views and ideas and a note of it is made without any remark. A list of comments is made accordingly without stopping to analyse any of the recommendations. If, running out of ideas or time, working together to organise and critique the list often works. This method is called as '**Ideas storming**'. The goal is mainly to separate the idea generating phase from the editing and verification phase.
- Students present on a tutor-created or a self-generated or group-generated topic, individually or as a group, referred to as - '**Presentations**'.

- A debate between two opposing viewpoints might be brought up by the teacher or students, the technique as the name suggests is known as **'Debates'**. The teacher chairs the debate after setting aside time before or during class for preparation of arguments.
- In **'Jigsaw method'**, two sets of cards with two different sets of variables or circumstances on each are made. Each student is given one card from each set, in order to create their own set of circumstances. For example, one set of cards can have the names of various historical personalities, while the other set might contain the names of various political concerns; the students must discuss or present on the connections between both.
- Individuals, then duos, then tetrads, and so on are used to gradually build broader perspectives on a topic in **'Snowballing'** strategy. The working group's size is effectively expanded and attracts a wider range of perspectives.
- Individual students or a group works on a specific assignment in **'Mini projects format'** and report to the entire group
- In **'Resource based tasks'** strategy, a variety of resources available to students (Eg., articles, quotations, x-rays, data tables, test results, photographs, etc..) is made. It is then urged to the students that they should use the materials provided to solve an issue or reach a conclusion.
- Students take on certain roles in **'Role play'** method and play out the views or acts connected with those roles. This could include encountering diverse points of view or putting specific skill and techniques into action, for instance obtaining a patient history, or probing a witness, etc..(4)
- The teacher gives the class a series of briefs that provide information and context for the simulation. Students usually work in small groups to play various roles in the simulation and hence, as per the name, the technique is also known as **'Simulations'**. For example, groups representing various European countries in a European Union policy negotiation.
- The majority of a class analyse a subset of students (in the 'fishbowl'), the technique, as obvious is named as - **'Fishbowl'**. Students in the bowl are instructed to argue a case, debate a topic, or role-play a scenario. The observing students are then asked to provide feedback, recap the discussion, or play the opposite role.

iii. Assessment techniques applicable to SGT's(4), (8), (9)

Assessment is an important part of any teaching learning strategy. Commonly used methods for assessment of students in SGT's include, posters, joint reports, group oral presentations/videos, project products, diaries, logs, journals, learning contracts, negotiated-assignments, etc.,

iv. Advantages of SGT (Walton, 1997)

Students participate actively in class and take charge of their own education. Professor talent and competence are required for SGT, just as they are for LGT, but the results can be substantially better. At SGT, student-centered teaching (SGT) is usually practiced. It is widely used in the West nowadays because of its versatility and dynamism. Although large group lectures save time and resources, higher critical thinking, understanding, and engagement between lecturer and students can only be achieved when the professor and students interact face to face, which is only possible in SGT. Small groups provide the most opportunities for connection and participation. We can catch the attention of the most difficult kids and devote more time to them. Because students' queries may be answered and complex subjects can be addressed numerous times, it is more engaging and exciting for them. It also helps to strengthen and mature the student-lecturer connection by allowing students to ask questions.(10), (11)

FIRE is one of SGT's four major strengths. Flexibility SGT creates dynamic, responsive pedagogic spaces that can be changed as needed. This adaptability aids the lecturer in instilling awareness in the pupils and responding to the group's evolving learning. Interaction is just amongst students, but also between professor and student, there is a high level of contact. Both from each other and from their professor, the students receive rapid and extensive formative feedback. The nature of the relationships that emerge over time between students and lecturers is also crucial. Reflexivity SGT preaches and enables students to be aware of their impact on a social situation, teaches them their role as doctors and how to interact appropriately with individuals, and teaches them

how to put this effect to work. SGT cultivates creativity, passion, and enthusiasm through engagement. At its best, it goes beyond the lecturer–learner relationship.(1), (13). According to Bloom’s taxonomy, SGT sessions are supposed to attain a higher level in learning, (14) enabling the students to go into depth of understanding.(15), (16)

v. Limitations of SGT

SGT's objectives are frequently ambiguous. Failure to set goals can lead to abstract learning, which deviates from the main topic and instead forms a faulty group notion. 17.Students may not be as active as they should be as a result of poor time management and superficial debate, which leads to students participating in pursuits other than learning.(1), (17), (18)

3. Conclusion

The constant need and quick expansion in the field of medical education has led to the invention and implementation of a variety of alternative pedagogical approaches especially over the last number of decades there has been a shift in medical education practice from traditional forms of teaching to other media like, virtual and electronic learning.(18,19,20) Regardless of the methods used, the teacher is still an important part of the learning process as the effectiveness of a teaching learning program depends mainly on the teacher’s leadership quality.(14,21) But now, especially in the present COVID-19 pandemic scenario, it's more important for them to facilitate rather than direct, to coordinate rather than communicate and to inspire rather than inform the students in medical field.(1,22,23,24,25), (19), (20)

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Author Information

Rashmi KS

Associate-Professor, Department of Physiology, Kasturba Medical College, Mangalore, Manipal Academy of Higher Education, Manipal, India

Trupti Bodhare

Professor, Department of Community-Medicine, Velammal Medical College Hospital and Research Institute, Madurai, India

Swaroop Raj BV

Associate Professor, Department of Physiology, Sri Devaraj Urs Academy of Higher Education and Research

Aparna Tripathy

Senior Grade Lecturer, Department of Physiology, Melaka Manipal Medical College, Manipal Academy of Higher Education, Manipal, India.

Kavitharati Dharwardkar

Professor and Head, Department of Biochemistry, Sri Aurobindo Medical College and PGI, Indore, India.

Pratik Kumar Chatterjee

Associate-Professor, Department of Physiology, Kasturba Medical College, Mangalore, Manipal Academy of Higher Education, Manipal, India.
