



Team-Based Learning in Medical Colleges: Need, Scope, and the Potential Factors for Successful Implementation

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Abstract

Owing to the rapid advancements in the field of medicine, it is a major challenge for the medical educators to prepare the medical students to be ready and competent in their future clinical practice. It is a must that the medical students should not only be knowledgeable and skilled but also acquire the trait of being a lifelong learner. The adoption of team-based learning is an effective teaching-learning strategy to prepare the medical students for all the above roles, as it envisages working in teams to resolve the clinical-practice-related issues. In conclusion, team-based learning is an effective teaching-learning method that advocates practical application of the learned knowledge and encourages teamwork for the resolution of medical problems. However, successful implementation of team-based learning in a medical college is dependent upon the support from administrators, faculty members, and active participation of the medical students.

Keywords

- ▶ team-based learning
- ▶ student-centered
- ▶ medical colleges

Introduction

Owing to the rapid advancements in the field of medicine, it is a major challenge for the medical educators to prepare the medical students to be ready and competent in their future clinical practice.¹ At the same time, considering the information overload in each and every field of medicine coupled with the rapid changes in the existing knowledge, it is not practical for a medical student to memorize everything.^{1,2}

Team-Based Learning: Need and Scope

It is a reality that we cannot practice medicine in isolation, rather we will need a team of healthcare professionals to ensure safe, outcome-focused, and quality assured care for the patients.² Acknowledging the above facts, it is a must that the medical students should not only be knowledgeable and skilled but also acquire the trait of being a lifelong learner. In addition, the medical professionals should be competent enough to solve the problems of clinical practice with the

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help of the knowledge and skills of a diverse team members.^{1,2}

Team-based learning (TBL) is one of the small group teaching methods wherein students apply their knowledge by participating in a series of activities, including individual work, teamwork, and also receive immediate feedback about their performance.³ The merit of this method is that a single teacher can simultaneously facilitate multiple small groups within a single lecture hall.^{2,3} The adoption of TBL is an effective teaching-learning strategy to prepare the medical students for all the above roles, as it envisages working in teams to resolve the clinical-practice-related issues.⁴

Attributes of TBL

In general, TBL is a student-centered approach, which encourages active learning in small groups to reach solutions of medical problems.¹ This type of learning employs grading, peer evaluation, and ensures provision of prompt feedback to both the individuals and the teams to facilitate learning.^{1,2} As the method requires students to come for a session after adequate preparation, and supplements the same with in-session assignments, which envisages application of the learnt knowledge to take decisions in teams, it is an extremely effective method of teaching-learning.^{1,4} The method ensures that all the members of the team are accountable and there are ample opportunities for peer teaching and thereby all types of students are benefited.^{2,4}

In a study done in an Australian Medical school with an intention to compare the preference of medical students of TBL and problem-based learning, a significant proportion of the participants opted for TBL as the optimal teaching strategy.⁵ In fact, the students reported that the format of TBL makes it more appealing to learning and encourages active engagement of students in contrast to the problem-based learning sessions.⁵ On a similar note, in a prospective cohort study done in the Kansas City, it was reported that TBL was significantly better than conventional lectures, in terms of creating a beneficial and stimulating learning experience for the medical students.⁶

Successful Implementation of TBL in Medical Colleges

Though TBL has been associated with multiple benefits, its successful implementation in a medical college is dependent on a range of factors.⁴⁻⁹ It is extremely essential that the administrators extend their support for introduction of TBL in classroom settings and the scheduling of such sessions should be encouraged.⁷ As faculty members have a defining role in the fruitful conduction of such sessions, they have to be trained in TBL with special focus on creation of effective teaching-learning material, matching the learning objectives with the teaching module, formulation of effective questions, and the art of giving feedback and facilitating discussion among team members.⁸ It is the decision of the administrators to either train all the faculty

members or a specific set of them based on the amount of curriculum which they want to cover through TBL sessions.^{4,8}

On a similar note, students have to be also sensitized about TBL and the ways in which it will benefit them more in comparison to the traditional mode of teaching-learning.^{7,9} In fact, a pilot session can be run for them and emphasis should be also given toward development of team and team-working skills.^{4,7} Finally, to ensure better discussion among the team members, it is ideal to make them sit in a circle and in such a way that the teacher can observe all of them. This calls for the need to have adequate physical space for the smooth organization of the sessions.⁴

Running a Pilot Session of TBL

To organize a TBL session, the first step will be to sensitize the students and faculty members about the basics of TBL and in what all ways it enhances active learning.^{7,8} This has to be followed by dividing the available students into small teams, each comprising of four to six members. The teacher has to select an appropriate topic for the session, which should be in alignment with the curriculum and should also map the learning objectives and competencies.⁹ The teacher then shares the pre-session reading material with the students, declares the date on which TBL session will be organized, and instructs the students to come to the session after reading the given reading material. The organizing department should develop the application exercise for the individual and team readiness assurance test well in advance. It is important to note that the designed exercises should be in alignment with the curriculum.⁸⁻¹⁰

A TBL session should be organized using the standard format, wherein a set of multiple-choice questions designed with an aim to cover the pre-session reading material are given to the students. These questions are solved by the students first individually (individual readiness assurance test) and then as a team (group readiness assurance tests) by discussing between team members. The facilitator gives feedback to the students regarding their performance. Subsequently, the teams are given an application exercise in which students have to apply the knowledge for solving a clinical case.^{7,10} This part essentially includes the students to make diagnostic and management decisions and all the teams simultaneously work to resolve the given problem by discussion between individual team members.^{9,10}

In the last stage, each of the teams presents their solution to the large group and all the teams debate about the responses of each team. Finally, the present facilitator presents a brief verbal summary of the discussed topic and the key messages of the session.¹⁰ At Shri Sathya Sai Medical College and Research Institute, a constituent unit of Sri Balaji Vidyapeeth, Puducherry, the approach of employing TBL is in nascent stages and faculty members are being sensitized about the same for their future implementation.

Conclusion

In conclusion, TBL is an effective teaching-learning method that advocates practical application of the learned knowledge and encourages teamwork for the resolution of medical problems. However, successful implementation of TBL in a medical college is dependent upon the support from administrators, faculty members, and active participation of the medical students.

Authors' Contributions

SRS contributed in the conception or design of the work, drafting of the work, approval of the final version of the manuscript, and agreed for all aspects of the work.

PSS contributed in the literature review, revision of the manuscript for important intellectual content, approval of the final version of the manuscript, and agreed for all aspects of the work.

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Conflict of Interest

None declared.

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