

Learning Science

Team-Based Learning



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What is it?

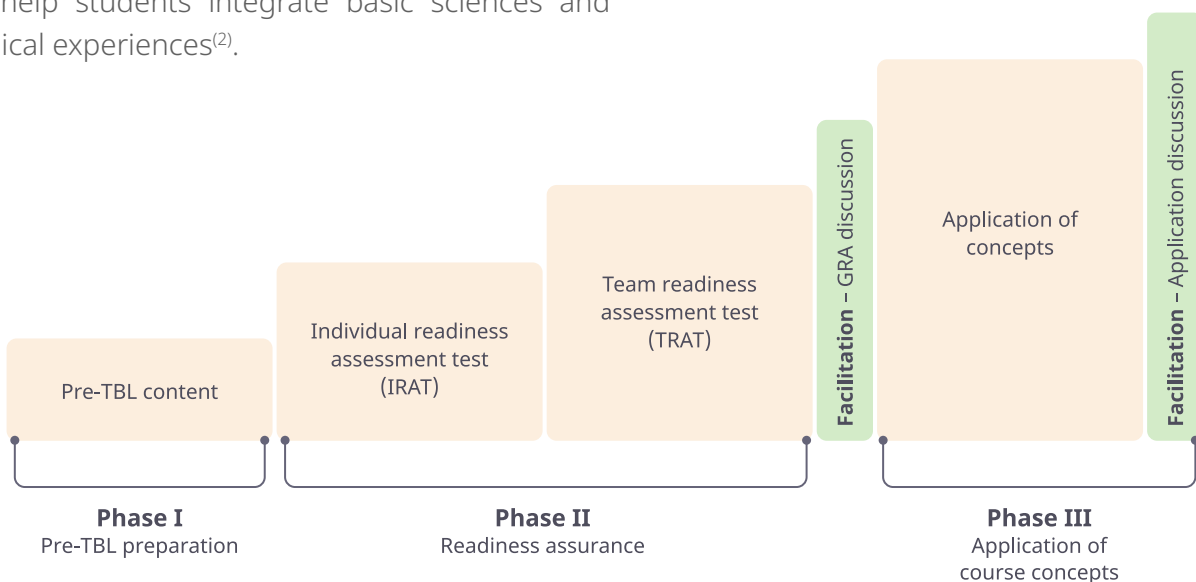
Team-based learning (TBL) is an instructional strategy that involves small groups engaged in collaboration and active learning. Students work together to solve problems, generate solutions, and/or complete tasks. TBL often incorporates problem-based learning, case-based learning, or other authentic, real-world problem solving.

Why does it work?

TBL is a form of collaborative learning. Collaboration helps learners build self-regulation skills and encourages social learning which can prepare learners for team-based care in the clinical setting and may help develop expertise⁽¹⁾. TBL often includes active learning tasks such as **generation, elaboration, and reflection** as learners generate potential solutions, elaborate by connecting new and old material, and reflect on their reasoning and solutions as well as their peers' results. TBL gives instructors of large classes the opportunity to provide active learning experiences that may be otherwise difficult to manage with large groups⁽²⁾. TBL also allows for team teaching, in which basic scientists and clinicians can work together to help students integrate basic sciences and clinical experiences⁽²⁾.

How does it work?

Pre-reading and prepared materials should be provided to students. Before class, students should be assessed on their readiness. Students should be assessed individually and may also be assessed for team readiness at the start of class, allowing the instructor to resolve any misconceptions or confusions. Students are then divided into small groups, such as 4-6 students per group. Students must complete given tasks while the instructor acts as facilitator. Teams should present their results to each other with further discussion. The instructor should check for misunderstandings and encourage discussions, but should avoid giving any answers or solutions, only clarifying difficult concepts as needed.



Adapted from Twelve Tips for facilitating team-based learning⁽³⁾

TBL and master adaptive learners

Master adaptive learners (MALs) are resilient, self-regulated learners who continue to learn and improve their skills and knowledge. MALs can adapt their expertise to solve new problems or adjust to new situations and technologies, which allows MALs to continue to learn and innovate throughout their career^(4,5). **Learning environments such as TBL can help promote curiosity, increase motivation, and help build a growth mindset and the resiliency needed for MALs to develop and thrive⁽⁴⁾.**



Practical implications for the classroom

1. Instructors need to prepare materials according to learning objectives and desired tasks.
 - a. Pre-reading should be given for students to prepare individually⁽⁶⁾.
 - b. Any necessary resources and materials should be available for teams to perform their tasks.
 - c. Prepare neutral and open-ended questions that will further discussion and thought among students⁽³⁾.
2. Expectations and roles (if assigned) should be made clear to students.
3. Instructors may want to consider using methods to ensure individual accountability and group performance such as individual assessments, peer evaluations, and team performance assessments.
4. Instructors may begin with an assessment to determine individual readiness as well as team readiness. Readiness assessments allow for clarification of basic concepts before the team assignment begins^(3,6).
5. Feedback should be provided as immediately as possible to inform students of their progress, clear up misconceptions, and help students identify any need for improvement^(2,3).

References

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