Team-based learning

- Team-Based Learning in Physician Assistant/Associate Education: A Mixed Scoping Review
- Tips for Harnessing the Educational Potential of Tumor Boards for Medical Students
- Interprofessional education interventions for healthcare professionals to improve patient safety: a scoping review
- Measuring Interprofessional Collaboration's Impact on Healthcare Services Using the Quadruple Aim Framework: A Protocol Paper
- Preoperative Brain Tumor Imaging: Models and Software for Segmentation and Standardized Reporting
- Developing and Implementing Noninvasive Ventilator Training in Haiti during the COVID-19 Pandemic
- Teaching and Assessment of Medical Students During Complex Multifactorial Team-Based Tasks: The "Virtual on Call" Case Study
- Expanding the stroke team to include interventional cardiology

Team-Based Learning (TBL) is an active learning methodology designed to enhance student engagement and deepen understanding of concepts through structured collaboration in small teams. It is widely applied in medicine, engineering, and business education. Below is an overview of its main features and implementation process:

Key Features of TBL

1. **Teamwork**:

   1. Students work in permanent, heterogeneous teams.
   2. Teams usually consist of 5–7 members to optimize collaboration.

2. **Pre-class Preparation**:

   1. Students complete assigned readings or preparatory activities before attending the session.
   2. This ensures they acquire foundational knowledge in advance.

3. **Immediate Feedback and Evaluation**:

   1. Assessments and activities are designed to provide instant feedback to students.
   2. This helps identify gaps in understanding and reinforces learning.

4. **Application-Oriented Learning**:

   1. Teams work on complex, real-world problems that require application of knowledge rather than rote memorization.
   2. The problems are significant and often involve decision-making under constraints.

5. **Accountability**:

   1. Students are accountable for their individual preparation and team contributions.
   2. Peer evaluation is often used to assess participation and effectiveness.

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Four-Step Process of TBL 1. **Preparation Phase**:

1. Students complete pre-class readings or assignments to build foundational knowledge.

2. **Readiness Assurance**:

1. Students take an **Individual Readiness Assurance Test (iRAT)** to assess their understanding.
2. Teams then take a **Group Readiness Assurance Test (gRAT)** to discuss and answer the same questions collectively, promoting peer teaching.

3. **Team-Based Activities**:

1. Teams engage in application exercises that focus on real-world problems, encouraging discussion, collaboration, and critical thinking.
2. These activities often have a competitive element to increase motivation.

4. **Reflection and Feedback**:

1. Facilitators provide feedback on team performance and decisions.
2. Teams reflect on their learning process to improve future collaboration.

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Advantages of TBL - Encourages **active engagement** and collaboration. - Fosters **critical thinking** and problem-solving skills. - Promotes **peer-to-peer learning** and accountability. - Prepares students for **real-world teamwork** scenarios.

Applications TBL is particularly effective in educational settings where teamwork and decision-making are key, such as: - Medical education (e.g., case-based learning for clinical scenarios). - Business schools (e.g., strategic decision-making exercises). - Engineering programs (e.g., solving design or technical challenges).