34 Team-based Learning: A Team Reflection
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Introduction

The "Fundamentals in Team Based Learning (TBL)" workshop series offered within TUS Midlands in 2019 and again in 2021 provided faculty with formal training in TBL as well as the opportunity to apply the TBL process to their subject area. [Link to TBL Intro]

In TUS Midlands, TBL has been implemented by educators within subjects as diverse as pharmacology, research methods, communications, programming, software engineering, consumer psychology, management, health and safety and accounting.

The present authors met regularly throughout the academic year as part of the TUS Midlands TBL Community of Practice to share insights from their practice. The following is an overview of how the authors consider that learning about and adopting TBL has impacted their practice. **Less absenteeism and more engagement make for a better class dynamic.**

Overall, we have found that absenteeism from TBL classes is greatly reduced (e.g., Torralba and Doo, 2020). Low stakes in-class quizzes seem to encourage students to turn up to class. We have also found that there is high engagement during the TRAT and application exercise phase of TBL.

One explanation for this might be that the TBL approach puts in place conditions where intrinsic motivation can flourish (Jeno et al., 2017). Students take the driving seat during class (autonomy) and work within a team (relatedness) to complete tasks and exercises (competence).

The highly structured approach of TBL helps everyone in the classroom feel more confident. As students settle into their in-class teamwork, we observe increases in confidence (Huitt, Killins and Brooks, 2015) and can see students "coming out of their shells" as the weeks go by. This motivates and helps us to be ambitious in terms of what we plan to achieve with our students.

Immediate, impactful and instructive feedback.

TBL creates a highly dynamic feedback-based environment for all involved. Students obtain immediate feedback during the tRAT, including the opportunity to discuss wrong answers as they arise. This immediate feedback (correct /incorrect) is impactful in several ways. Firstly, it encourages critical thinking as students continue to search for the right answer. It is evident that students display higher retention of key concepts as time goes by. The discussion process cultivates skilled graduates with higher cognitive skills such as critical analysis, complex problem solving, self-reflection and lifelong-learning.

With the emphasis on teaching using questions and immediate feedback, TBL acts as "assessment for learning" for the educator i.e., it informs and instructs our next teaching moves. TBL allows the practitioner to monitor understanding of the whole class as opposed to just the individual students who engage.

Once we identify gaps in student knowledge, we pose follow-up questions to further challenge thinking and to develop understanding through discussion.

Overall, TBL leads educators to focus on areas of student weakness, rather than to prioritise our preferred lecturer-led content. Knowing the mistakes and errors that students usually make is helpful when it comes to devising questions and plausible distractors for MCQs and application exercises. Reviewing patterns of iRAT and tRAT scores, as well as application exercise answers from the previous year can assist with this also.

More authentic team experiences and mutual respect.

Because of the permanent nature of the teams, and the ongoing collaboration required, we have found that students get a stronger sense of what teamwork in a workplace might involve (Huitt, Killins and Brooks, 2015). As noted earlier, the TBL process develops a range of graduate attributes required to be an effective team member. Ensuring diversity within the teams has supported the development of a collaborative and respectful culture in the class, and students have had the opportunity to get to know and learn with and from other classmates that they may typically not have interacted with (e.g., local and international students).

Distributed teaching in a more democratic classroom.

We have found that TBL disrupts the traditional hierarchy of the teacher-student relationship. Firstly, TBL places the focus on the materials and as such, it takes the spotlight off the educator who in fact designed them. The design work is in a sense invisible to students and, as a result, students are less conscious of the teacher as being the more knowledgeable party. Secondly, the students shoulder most of the talking load as they explain answers to their peers. In this way, the TBL process distributes the teaching to the students. During this time, the TBL practitioner listens in preparation for the class discussion stage (Gullo, Ha and Cook, 2015). Finally, the classroom is further flattened as students become "promoted" to a greater position of authority through simultaneous revealing of answers, gallery walks and commenting on their peers' answers.

Backwards design starting with learning outcomes.

When designing a TBL unit, one commences at the end, identifying the learning outcomes for each unit (Parmelee and Michaelsen, 2010). This helps to identify appropriate application exercises that will shed light on whether our students have absorbed the learning fully.

The core concepts that are needed to engage with those application exercises are then identified. These concepts will form the basis of the "Readiness Assurance Test" (RAT) content. Feedback from the RAT help practitioners ascertain if students are au fait with the key concepts and ready to move on, or whether further teaching is first required. Having devised the RAT, the final step is to curate pre-class content that students will study.

Using a TBL approach has made us more mindful of the scaffolding that we need to put in place to help our students achieve the learning outcomes through active learning.

Pivoting to TBL is challenging but peer support helps.

Adopting TBL can be challenging (Haidet, Kubitz and McCormack, 2014) with a variety of preparatory work necessary to be completed before live classes. Whilst implementing TBL might require significant rethinking of one's practice, it does not mean reinventing the wheel! We creatively rework existing teaching material to be a set of questions, problems and scenarios to be used in MCQs and application exercises.

The peer-to-peer support from fellow early adopters of TBL from throughout TUS Midlands through a regular TBL community of practice (CoP) meeting and ad-hoc one-to-one meetings has helped us to surface challenges and share tips. Most importantly, it has provided reassurance, collegiality and cross-faculty collaboration. Leveraging peer supports such as the TBL CoP would be a great way to nurture cross-campus connections, as well as promote more active learning for all TUS students.

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