

“Team-Based Learning”™

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Intro – Ultimate in Cooperative Learning

- very little lecture – instead, students do economics
- students face many positive incentives
- refined by numerous instructors in many disciplines
 - good support network & extensive documentation
- as described here, best for classes of ~60 or less
- I've used in Money & Banking (twice), Intermediate Macro (once), & Macro Principles (once)

Why Use TBL?

- students
 - come prepared for class
 - are clearly in charge of their own learning
 - receive frequent & immediate feedback on their learning
 - are engaged in the classroom
 - face many incentives to do well
- instructors
 - get frequent feedback on their students' learning
 - will likely find it much more enjoyable than lecturing
 - can find many resources as it is used on many campuses in a variety of disciplines; also it is based on the work of many others (just like research!)
- key: it should lead to better learning

Basics

- the semester is broken up into 5-7 units, each 2-3 weeks long
- each unit starts w/ “*Readiness Assurance Process (RAP)*”[†]
 - goal: prepare students to be ready to use the material
 - students read the material for the unit on their own
 - takes ~1 hour & is composed of a quiz taken individually and then retaken as a *team* with immediate feedback
- the rest of the unit is spent on carefully crafted *in-class applications* answered by teams with instructor feedback
- students spend the vast majority of class time using the material, not receiving it
- TBL is widely used, based on the work of many instructors, & is internally consistent (why trademarked)

Positive Incentives Students Face

- they see a summary of individual scores, so they know their relative performance as an individual
- they & their peers see contributions to team *RATs*
- they directly contribute to the teams in *application exercises*
- they see how their teams perform versus other teams on *team RATs* and in *application exercises*
- in short, students face incentives at all times to do well

Free-Riding is Rare

- developers thought long and hard about incentives
- projects can't be divvied up (like a paper or presentation)
- all students are in one place at one time, so free-riding is obvious to all
- students peer grade their teammates

[†] Entries in italics are explained on the poster to the right.

Details

Teams

- 5-7 members
- publically assigned the first day of class w/ different skills split between teams (major, from overseas, work experience, etc.)
- no assigned roles – students determine
- kept for the length of the semester
- considerable effort on “team development”
- members are peer-graded at the semester’s end
- TBL instructors argue they’ve very different from “groups”

Readiness Assurance Process (RAP)

- ~1 hour at the start of each unit (5-7 units in the semester)
- Part 1: “individual Readiness Assurance Test” (iRAT)
 - ~20 multiple choice questions on that unit’s readings
 - questions cover essential topics and are typically definitions and simple applications
- Part 2: “team Readiness Assurance Test” (tRAT)
 - same questions, but taken as a team after individual results are turned in
 - recorded on “IF-AT cards” (same technology as lottery scratch-off cards) – teams receive immediate feedback, which aids their development
 - ~95% of the time teams outperform their best member
- Part 3: appeal of problem questions to the instructor
- Part 4: mini-lecture on problems identified via the RATs

In-Class Exercises

- occurs after the RAP process
 - thus, up to nearly 3 weeks long
 - are done entirely in the teams
- 4 S’s essential for the problems teams solve
 - the problem is Significant
 - all teams work on the Same problem
 - all teams must make a Specific choice
 - all teams must report Simultaneously
 - I use small dry-erase boards that teams display simultaneously
- questions become increasingly more difficult
- team results are compared and they must justify their answers
 - common errors are addressed by the instructor

Observations, Outcomes, and Challenges

- the most difficult part has been writing good questions for the application exercises
 - it is challenging to write them at the appropriate level of difficulty – must be difficult, but doable by most teams
- must explain to students why TBL is being used
 - in Macro Principles I faced considerable resistance – “You’re not teaching.” & with poor attendance; I didn’t forcefully address
- takes a semester or two to gain some proficiency as an instructor with TBL
- I’m continually surprised at what students find easy and hard – I receive a lot of feedback on their learning or lack thereof
 - my biggest benefit
- the classroom is much more dynamic than the typical one in economics
- would be good to pair with explicit learning objectives
- my role has changed, which I’ve enjoyed – I’m now a guide rather than the “sage on the stage”
- excellent attendance in Intermediate Macro and Money and Banking
 - overheard comment from one student to another: “Where were you?”
- no comparison data yet by me, but TBL is similar to “Interactive Engagement” in the sciences which has been shown to improve conceptual learning
 - see http://cook.rfe.org/teaching_methods.html

Resources

- TBL website
 - teambasedlearning.org
 - link to a very useful listserv
- Books
 - *Team-based Learning: A Transformative Use of Small Groups in College Teaching*, Michaelsen et al., 2004, Stylus Publishing
 - *Team-Based Learning: Small Group Learning’s Next Big Step. New Directions for Teaching and Learning*, Michaelsen et al., 2008, Jossey-Bass