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_method.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