# Definition of TBL

- A special form of collaborative learning using a **specific sequence of individual work, group work and immediate feedback** to create a motivational framework in which students increasingly hold each other accountable for coming to class prepared and contributing to discussion

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TBL Flow

Preparation

↓

Readiness Assurance Process

↓

Active Exercises
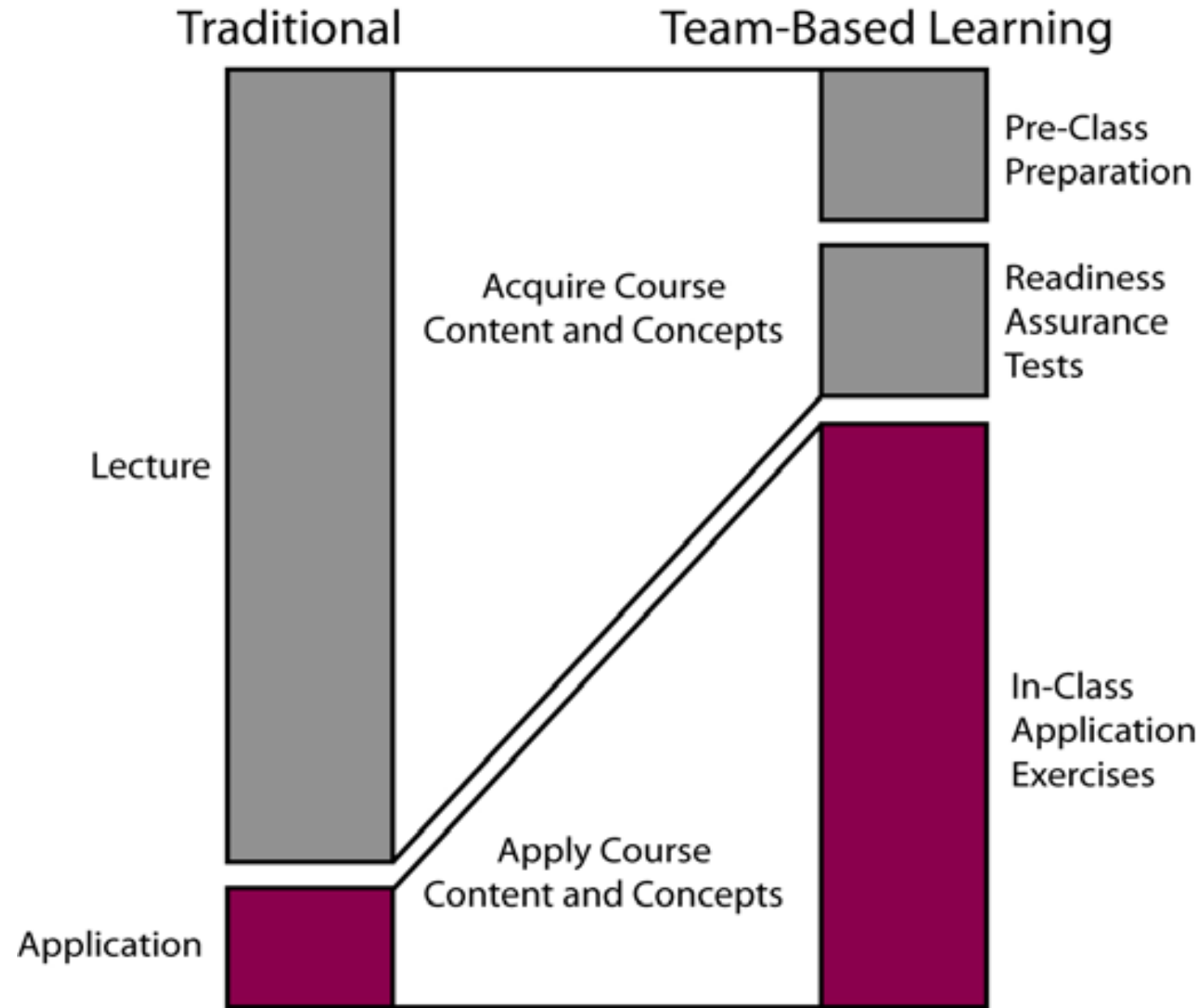
Why TBL?

Why TBL?

- Because we want this…

- Not this…

Why TBL?

1998 study by Richard Hake

- 4458 students in 48 courses

- He found that students taught with TBL exhibited learning gains almost **two standard deviations** higher than those observed in the traditional courses (0.48 +/- 0.14 vs. 0.23 +/- 0.04).

4 key principles

- Large teams are required
  - Diverse
  - Permanent

- Student accountability
  - Pre-class preparation
  - Contribution to team success

- Students make complex decisions
  - Must require application of key concepts
  - Reported in simple form

- Frequent and timely feedback

7 core TBL components

1. Team Formation

2. Readiness Assurance Process (RAP)

   1. Individual Readiness Assurance Test (IRAT)

   2. Group (Team) Readiness Assurance Test (GRAT)

3. Immediate Feedback

4. Sequencing of in-class problem solving

5. 4 "S" structure

6. Incentive structure

7. Peer evaluation

Principle 1: structuring teams

- Random groups of 5-7 students

- Groups will be utilized between multiple courses
    - Pharmacotherapeutics (PT)
    - Patient Assessment
    - Pharm Care
    - Pathophysiology

- New groups made annually

Core components: Team formation

Principle 2: student accountability

- Pre-reading(s) will be assigned
  - Journal articles
  - Book chapters
  - News articles

- Individual Readiness Assurance Tests (IRAT)

- Contributions to team success on Group Readiness Assurance Tests (GRAT)

- Contributions to team Application Exercises (AEs)
  - Mostly cases

- Peer assessments from team members

Core Components: RAP | Immediate Feedback | Peer Evaluation

Principle 3: complex decisions

- Activities progress through bloom's level
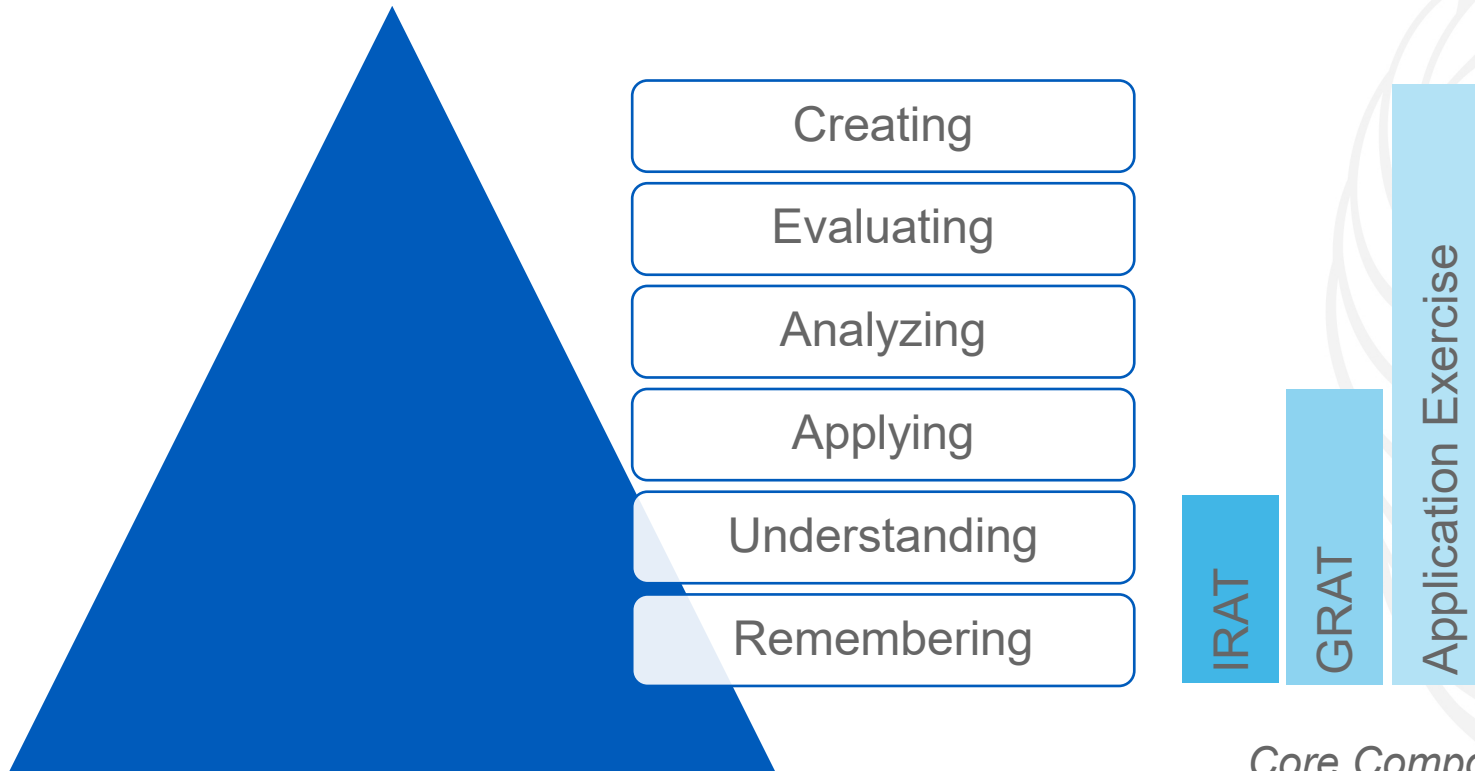
4 *"S" structure:*

Significant problem
Same problem
Significant answer
Simultaneous reporting

Creating

Evaluating

Analyzing

Applying

Understanding

Remembering

IRAT

GRAT

Application Exercise

Core Components: Sequencing | 4 "S" structure 11

Principle 4: frequent and timely feedback

- Readiness Assurance Process (IRAT/GRAT)

- Application Exercises
  - Discussion of the cases

- Peer Evaluation

mechanics

IF-AT Forms

Team Folders

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Scoring the "IF-AT" form

- Correct on first try?   1 Point
- Correct on second try?   1/2 Point
- Correct on third try?   1/4 Point
- Correct on fourth try?   0 Points

https://www.youtube.com/watch?v=z70_H-DBBq0

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Attendance Policy for IRAT/GRAT classes

- If an individual has an *unexcused absence* from a class period where IRAT/GRATs are given, they will receive a zero grade for that IRAT and GRAT scores.

- If the *absence is excused*, they will receive the grade from their team's GRAT as their IRAT grade and receive the teams GRAT score.

- **There will be no make-up offerings for IRAT/GRAT work.**

Team Discord

- You are expected to use inter-personal skills to work together with your team members

- Much like how you will interact with other health care professionals on teams in hospitals or outpatient clinics when you are on IPPE's, APPE's and as PharmDs

- If your team is dysfunctional → confront the problem first, then speak with the Course Coordinator

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Peer Assessment

- Peer assessment helps you prepare to assess peer pharmacists, technicians or others who you will manage.

- Giving your fellow classmates a perfect score when their contribution does not merit it does not help that person change behavior and harms the team.

- Some courses use **forced scoring**
  - You cannot give all students in team a perfect 10 – at least one student must be scored below 10 and one student above 10

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You might feel like…

- "You'll be teaching yourself"
  - To some extent you are…for that topic! We don't teach using TBL during every class everyday
  - However…active learning is the best way to remember information long-term (not just for the exam)
  - We CANNOT teach you everything, we equip you with the tools to be a good critical thinker
- "It's so much extra work outside of the classroom"
  - For every 1 hour in the classroom (1 credit course), you should be spending 2-3 hours outside the classroom on preparation and studying
  - **18 credit hours = 36 – 54 hours outside of class preparing/studying**
  - Faculty are conscience of this and try not to overburden you