Team-Based Learning:
Effective Group Work and Inclusive Practices

Michael Sweet, Ph.D. | Director of Design and Integration
Alexia Ferracuti, Ph.D. | Associate Director
Center for Advancing Teaching and Learning Through Research
Team-Based Learning (TBL)

• A “flipped-classroom” instructional strategy.
• A collection of interlocking techniques.
• A set of principles, not a cookbook.
• A “motivational exoskeleton” to hang over much of what you already do.
• An evidence-based practice used by thousands of college teachers in all disciplines.
Individual Readiness Assurance Test (iRAT)

For each question, you have 3 points to distribute across possible answers.

- If you are sure the answer is A, put all 3 points on A.
- If you are fairly confident it’s A but are also leaning towards C, then put 2 points on A and 1 point on C, etc..

For Example:

<table>
<thead>
<tr>
<th>Question</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Four Pillars of Team-Based Learning

1. Strategically-formed, permanent teams
2. Readiness assurance
3. 4-S Application activities
4. Peer evaluations of teamwork
Group Formation Process
Group Formation Process
Group Formation Process
Stereotype Threat

- Being at risk of confirming, as self-characteristic, a stereotype about one's group

- The degree that one of our social identities is highlighted for which there exists a stereotype in a domain, the higher the vulnerability to stereotype threat
Stereotype Threat

The way one of your identities is perceived interferes with your intellectual performance, loading the experience with self-consciousness and anxiety.

“places like classrooms, university campuses, standardized-testing rooms...though seemingly the same for everybody, are, in fact, different places for different people. Depending on their group identity, different people would simply have different things to contend with in these places—different stereotype threats, different ambiguities about how to interpret their experience, different goals and preoccupations.” (60)
In your classroom...

• What student characteristics might you categorize to distribute among teams?

• How can you reduce the threat of students feeling stereotyped by you and their peers?
Timeline of a TBL Unit

Team-Based Learning Sequence
(Repeated for each major instructional unit, 5-7 per course)

**Preparation**
- Individual Study

**Readiness Assurance**
- 45-75 minutes of class time
- Team Test
- Individual Test
- Written Appeals (from teams)

**Application of Course Concepts**
- 1-4 hours of class time
- Clarifying Lecture
- Application Activities
BREAK
(5 minutes)
1. Significant problem
2. Same problem
3. Specific choice
4. Simultaneous report
A young faculty member is leading a math class that is diverse in terms of both gender and nationality. At one point during all-class discussion, an international student who has been trying very hard and made great progress speaks up. He comments that a certain set of numbers must be female. When asked why, he replies “Because they’re irrational!” Several students laugh, while others exchange concerned looks.
Looking over the practices listed on the handout:

• Which of these just happened in our discussion?

• Mark for yourself:
  • one or more practices that you can commit to doing when engaging in whole-class discussion
  • one or more practices that you already use
Scenario/MCQ format is the most common and scalable

Other formats:

- “Pinpointing”
- Sorting
- Gallery walk
“Pinpointing” - Choosing a Location
1. **Recall** stylistic features of La Tene/Celtic (c.450 BC–c.100AD) artwork and Scandinavian/Viking (c.800AD–c.1200AD) artwork
2. **Compare** and **differentiate** artifacts by style and age
<table>
<thead>
<tr>
<th>La Tene / Celtic (c. 450 BC – c. 100AD)</th>
<th>Scandinavian / Viking (c. 800AD – c. 1200AD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Tene Mirror, c.100BC, England</td>
<td>Mammen Button, c.900AD, Denmark</td>
</tr>
<tr>
<td>La Tene Torc, c.250-c.50BC, England</td>
<td>Mammen Axe, c.900AD, Denmark</td>
</tr>
<tr>
<td>La Tene bronze flagon, c. 450BC, France</td>
<td>Jelling Style chalice, c.900AD, Denmark</td>
</tr>
</tbody>
</table>
Microbiology: Michael McInerney
University of Oklahoma
Thompson, Wintersen and Manyan (2010) received this concept map from a team diagramming the primary and secondary biochemical effects in the case of an 18 month old infant with medium chain acyl CoA dehydrogenase deficiency.

Red was used to show the events associated with the primary biochemical defect, with green and blue depicting the secondary effects.
<table>
<thead>
<tr>
<th><strong>Content</strong></th>
<th>All relevant concepts are included and are correct</th>
<th>Most relevant concepts and mechanisms are included and are correct</th>
<th>Few relevant concepts and mechanisms are included and are correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Logic and Understanding</strong></td>
<td>Understanding of facts and concepts is clearly demonstrated by correct links and active verbs</td>
<td>Understanding of facts and concepts is demonstrated but with some incorrect links and/or some missing active verbs</td>
<td>Poor understanding of facts and concepts with significant errors in links and active verbs</td>
</tr>
<tr>
<td>Points</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>Concept map is neat, clear, legible has easy-to-follow links and no spelling errors</td>
<td>Concept map is neat, legible but with some links difficult to follow or some spelling errors</td>
<td>Concept map is untidy with links difficult to follow and spelling errors.</td>
</tr>
<tr>
<td>Points</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Peer Evaluations

Team Reflection and Feedback

Team#______ Name __________________________

To help your team become more effective, give your team-mates some anonymous feedback.

Consider such things as:
- Preparation: were they prepared when they came to class?
- Contribution: did they contribute to the team discussion and work?
- Gatekeeping: did they help others contribute?
- Flexibility: did they listen when disagreements occurred?

You have 25 points to distribute among your team-mates. These are anonymous, so be honest. :-)

1. Team Member Name:  

Things I appreciate about this team member:

Things I would like to request of this team member:

http://teammatesv4.appspot.com/
Thank You!

Michael Sweet, Ph.D. | Director of Design and Integration
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“Group Projects” – Production, not learning

<table>
<thead>
<tr>
<th>Student A</th>
<th>Weeks 2-3</th>
<th>Weeks 4-5</th>
<th>Weeks 6-7</th>
<th>Weeks 8-9</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Mgr.</td>
<td>Role 4</td>
<td>Role 3</td>
<td>Role 2</td>
</tr>
<tr>
<td>Student B</td>
<td>Role 2</td>
<td>Project Mgr.</td>
<td>Role 4</td>
<td>Role 3</td>
</tr>
<tr>
<td></td>
<td>Role 2</td>
<td>Role 2</td>
<td>Project Mgr.</td>
<td>Role 4</td>
</tr>
<tr>
<td>Student C</td>
<td>Role 3</td>
<td>Role 2</td>
<td>Role 2</td>
<td>Project Mgr.</td>
</tr>
<tr>
<td>Student D</td>
<td>Role 4</td>
<td>Role 3</td>
<td>Role 2</td>
<td>Project Mgr.</td>
</tr>
</tbody>
</table>

- Milestone Deliverables
- Peer evaluations

- Arguably equitable experience across the semester
- Project must be “chunkable”
- Requires same number of roles, phases, and students per team
- Recommend having one role be **Project Manager**