

## Team Up! Team Based Learning in Residency Education

Bradley Barth, MD  
Education Fellowship Director  
University of Kansas  
[bbarth@kumc.edu](mailto:bbarth@kumc.edu)  
@ERBrad

Megan Boysen Osborn, MD, MHPE  
Program Director  
University of California, Irvine  
[mbo@uci.edu](mailto:mbo@uci.edu)  
@docMBO

Shannon Toohey, MD, MAEd  
Associate Program Director  
University of California, Irvine  
[stoohy@uci.edu](mailto:stoohy@uci.edu)  
@DrSToohy

### Glossary

**TBL:** Team Based Learning: A structured, instructional technique, where a single moderator guides several small groups through an iRAT, gRAT, and GAE.

**LRC:** Learner Responsible Content: Pre-class preparation via reading (articles, chapters) or podcasts

**iRAT:** Individual Readiness Assessment Test: Each learner takes a pre-test (usually multiple choice questions) at the beginning of the TBL session.

**gRAT:** Group Readiness Assessment Test: Traditionally, these are the same questions as the iRAT, but the learners take the gRAT together on an IF/AT.

**IF/AT:** Immediate Feedback Assessment Technique: Multiple-choice question (MCQ) test with scratch off stickers covering the option choices (A, B, C, D). A star replaces the correct option choice (key). Therefore, the team knows that they have correct answer when they scratch off the correct option choice to reveal a star (see figure 1).

**GAE:** Group Application Exercise: A group exercise following the iRAT and gRAT, where learners apply their knowledge to solve problems.

**Classic TBL:** Incorporates all components of TBL: LRC, iRAT, gRAT, GAE; gRAT is in the form of IF/AT.

**Modified TBL:** Omits one or more parts of classic TBL exercise or gRAT is not in the form of IF/AT.

### Typical schedule/preparation for TBL:

*Prior to TBL session:*

1. Assign LRC to learners one week prior to session, with a reminder two days before the session
2. Prepare for TBL Session:

- a. Team numbers
- b. Copy one iRAT per learner
- c. Create one IFAT/gRAT per 4-5 learners
- d. Copy one GAE per 4-5 learners

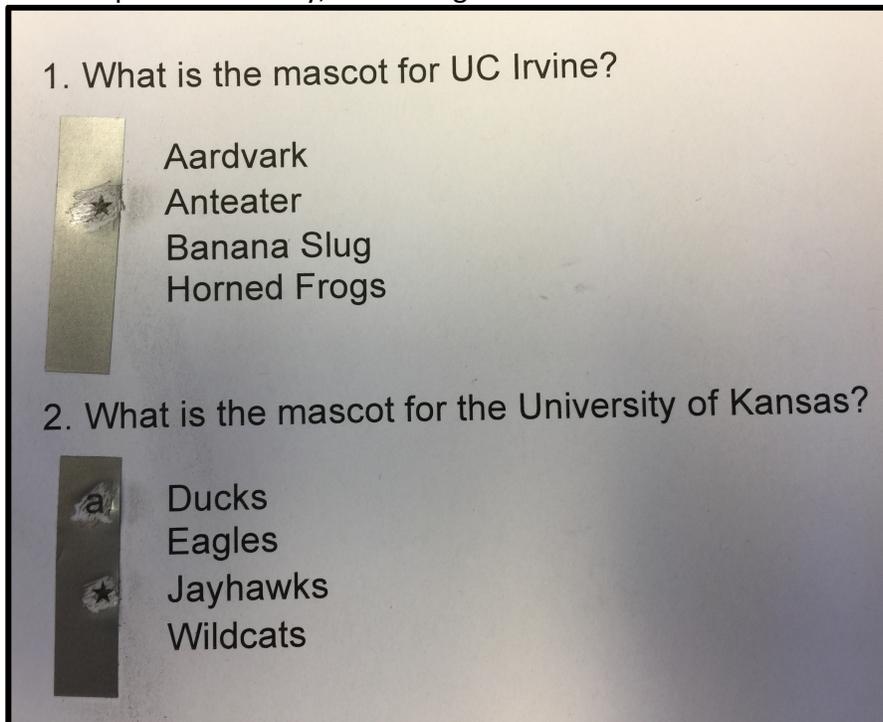
*Day of TBL session:*

1. For more difficult topics, you may consider giving a 5-10 minute lecture on the topic
2. Have learners complete the iRAT (5-10 minutes)
3. Assign learners to groups (can be mixed level groups or class-specific groups)
4. Have groups complete the gRAT (5-10 minutes)
5. Instructor answers any questions about the RAT (5 minutes)
6. Groups complete the GAE (20 minutes)
7. Call on individual teams to give their answers for the GAE; instructor clarifies points of confusion and adds further discussion (20-30 minutes)
8. Optional: Post-test, we often use Kahoot! ([www.getkahoot.com](http://www.getkahoot.com)) for post-test

**Supplies needed:**

Scratch-off stickers: Can be purchased at amazon.com by searching “scratch off stickers.” We prefer to buy the 2” x 1” rectangular ones (easier to cut).

**Figure 1: Sample Immediate Feedback Assessment Technique (IF/AT) Group Readiness Assessment Test (gRAT).** Note that the team got the first question correct. They missed the second question initially, but then got the correct answer on the second try.



## Sample Team Based Learning Modules

Title	Link
A Faculty Development Session or Resident as Teacher Session for Didactic and Clinical Teaching Techniques; Part 1 of 2: Engaging Learners with Effective Didactic Teaching	<a href="http://jetem.org/didactic-teaching/">http://jetem.org/didactic-teaching/</a>
A Faculty Development Session or Resident as Teacher Session for Clinical and Clinical Teaching Techniques; Part 2 of 2: Engaging Learners with Effective Clinical Teaching	<a href="http://jetem.org/clinical-teaching/">http://jetem.org/clinical-teaching/</a>
Emergencies in Hemodialysis Patients	<a href="http://jetem.org/emergencies-hemodialysis-patients/">http://jetem.org/emergencies-hemodialysis-patients/</a>
Emergencies in Hemophiliacs	<a href="http://jetem.org/emergencies-hemophiliacs/">http://jetem.org/emergencies-hemophiliacs/</a>
Transfusion Related Emergencies	<a href="http://jetem.org/transfusion-emergencies/">http://jetem.org/transfusion-emergencies/</a>
The Acute Red Eye	<a href="http://jetem.org/acute-red-eye/">http://jetem.org/acute-red-eye/</a>
Ventilators	<a href="http://jetem.org/ventilator_tbl/">http://jetem.org/ventilator_tbl/</a>
Team-Based Learning Collaborative (variety of medicine TBLs, paid membership)	<a href="http://www.teambasedlearning.org/tblc-resource-bank/">http://www.teambasedlearning.org/tblc-resource-bank/</a>
Teaching Patient Safety Using an Interprofessional Team-Based Learning Simulation Model in Residency Training	<a href="https://www.mededportal.org/publication/10409">https://www.mededportal.org/publication/10409</a>
Interpretation of the Abnormal Complete Blood Count	<a href="https://www.mededportal.org/publication/10335">https://www.mededportal.org/publication/10335</a>
Diagnostic Testing Team-Based Learning	<a href="https://www.mededportal.org/publication/10155">https://www.mededportal.org/publication/10155</a>
Team Based Learning: Preterm Labor (PTL), Preterm Premature Rupture of Membranes (PPROM) and Medical Complications of Pregnancy	<a href="https://www.mededportal.org/publication/9668">https://www.mededportal.org/publication/9668</a>
Team-Based Learning of EBM: Randomized Controlled Trials	<a href="https://www.mededportal.org/publication/9513">https://www.mededportal.org/publication/9513</a>
Four Medical Ethics Team Based Learning Modules	<a href="https://www.mededportal.org/publication/9268">https://www.mededportal.org/publication/9268</a>

**Relevant citations:**

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