

This manual describes in brief the team based learning environment in the college of pharmacy, Qassim University. Starting with a short introduction and then the followed learning procedure till the forms and supportive tools utilized in providing the TBL technique.

Qassim University
College of pharmacy
Department of pharmacy practice

1- Introduction	
a- What is TBL? -----	2
b- Why do we use TBL? -----	2
c- How an effective TBL goes? -----	3
2- TBL Procedure -----	6
3- A TBL session step by step -----	7
4- Grading system -----	9
5- Forms utilized in providing TBL	
a- IF-AT answer sheets -----	10
b- Peer feedback -----	11
c- Appeals form -----	12
d- Instructor’s evaluation -----	13
6- Figures -----	14

Introduction

In the [college of pharmacy Qassim University](#), we adopted team based learning as our main instructional strategy. We have been applying TBL for more than two years now, we are members of the international team based learning collaboration (TBLC) & we have recognized publications in this interest.

What is TBL?

Team Based Learning is an instructional strategy that was developed in the 1970's by Dr. Larry K. Michaelsen, a Professor of Management at the University of Oklahoma, who wanted to change the passive learning in his lectures into active learning by testing and assigning students to teams.

In team-based learning, small group of students interact as in-class teams to apply content to simple and complex problems with the feedback from the instructor as the content expert.

According to Michaelsen and Sweet (2008), "the primary learning objective in TBL is to go beyond simply covering content and focus on ensuring that students have the opportunity to practice using course concepts to solve problems."

Why do we use TBL?

Team based learning has many advantages over traditional lecture based style. Many benefits could be achieved on either student or instructor's level like it encourages team performance behavior and skills, which are necessary for effective medical teams. Team-based learning facilitates applying complex concepts because the instructor spends less time on basics and more time on applications and it motivates the student by learning as a member of a team and the instructor by changing the old traditional and boring teaching pattern.

HOW an effective TBL goes?

TBL as a strategy may tolerate some customization according to individual circumstances anyhow; there are essential concepts on which TBL depends.

The four essential principles of team-based learning (without which TBL will not work):

Principle 1 – Groups Must Be Properly Formed and Managed [Figure 1]:

- a- Mix students to form new groups from ground up.
- b- Never allow students to make “self-formed” groups.
- c- Groups should be equitable based on academic and linguistic abilities of their members (e.g. GPA and English fluency).
- d- Group’s size should not be less than five and more than eight members.
- e- Groups should be permanent throughout the year or at least the semester to allow groups transformation into teams where communication becomes easier, commitment becomes higher and the synergistic team-based learning effect appears (the team outperform the best member on learning related tasks).

Principle 2 - Students must be Made Accountable:

Students must understand their responsibility towards:

- a- Pre-class preparation
- b- Readiness assurance tests (IRAT & GRAT)
- c- Peer assessment
- d- Case discussion & Applications

Principle 3 – Team Assignments must Promote Both Learning and Team Development:

Appropriate assignments for TBL should have these criteria:

- a- Foster group interaction, minimize free loaders & avoid members conflict.
- b- Requires simple decision-making and short reports. Lengthy tasks compel students to divide the work and work separately (against TBL).
- c- Significance (demonstrating the concept's usefulness).
- d- Same for all groups and require a specific choice.
- e- Simultaneously reported (Parallel voting).

Principle 4 – Students must Receive Frequent and Immediate Feedback:

Students should be provided with regular and timely (immediate as possible), feedback that guides them about the effectiveness of their performance and how to recover failures.

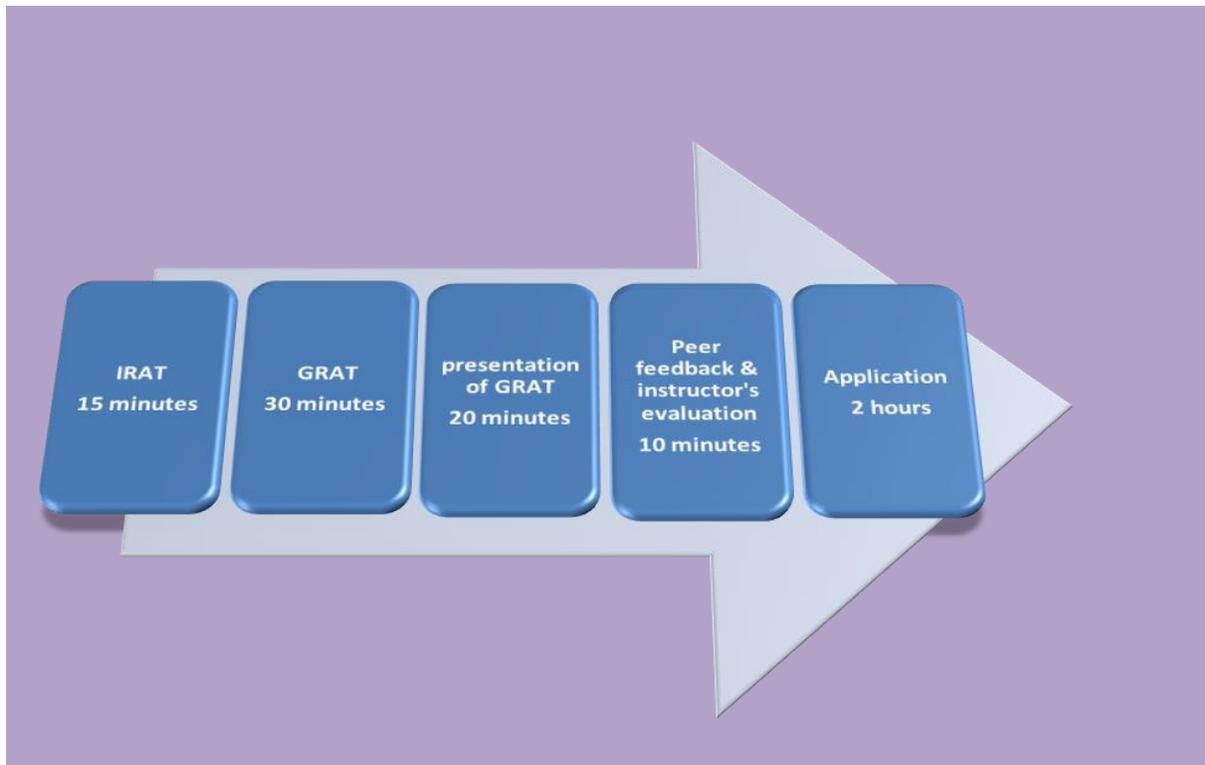
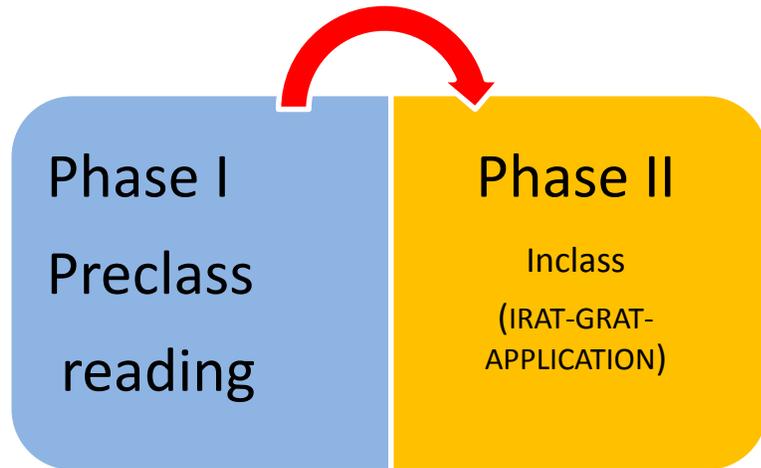
Twelve tips for doing effective TBL: ¹

- 1- Start with good course design
- 2- Use a “backward design” when developing TBL course and modules
- 3- Make sure you organize the module activities, so that students can reach your learning goals and you (and they) will know that they have done it
- 4- Have application exercises that promote both deep thinking and engaged content-focused discussion
- 5- Do not underestimate the importance of the RAP (Readiness assurance process)
- 6- Orient the class why you are using TBL and how it is different from previous experience they may have had with learning groups
- 7- Highlight accountability as the cornerstone of TBL
- 8- Providing a fair appeals process that will inspire further learning

- 9- Peer evaluation is a challenge to get going, but it can enhance the accountability of the process
 - 10- Be clear and focused with the advanced preparation
 - 11- Create the team thoughtfully
 - 12- Several low-budget “props” facilitate the implementation of a good module
-

¹ PARMELEE, D.X. & Michaelsen, L.K. (2010). “Twelve tips for doing effective team-based learning (TBL)”, *Medical teacher*, 32(2), pp. 118-122.

TBL Procedure



A TBL session step by step

1- IRAT (Individual readiness assurance test).

A digital clock with a white background and a blue border, displaying the time 08:00:00 in red digits.

IRAT must, sharply, be started on time at the start of the class (i.e. 8 o'clock). The students who come late are allowed to enter within 5 minutes from the start of IRAT, but all the papers must be collected after 15 minutes (time allowed for IRAT).

A digital clock with a white background and a blue border, displaying the time 08:15:00 in red digits.

2- Within the next 5 minutes the students are grouped into groups (5-7 each)

A digital clock with a white background and a blue border, displaying the time 08:20:00 in red digits.

Do not change the TBL groups:

Changing groups precludes the establishment of the team concept. The reason is that it takes time for a group of students to get to know each other well enough to start functioning effectively as a team. Thus, changing the group will move it back to "square one" in terms of becoming an effective team. So we will divide students into stable groups for the whole semester, taking into account that students should be equally distributed according to their previous GPAs (each group should involve students from different levels of performance)

3- G(T)RAT (Group or team readiness assurance test):

The same IRAT questions are re-distributed to all groups for discussion, answering and justifying the answers. Time allowed for G(T)RAT is 30 minutes. The students are encouraged to vote for the best correct answer, if there is no consensus, to enrich discussion and interaction between the group members. GRAT is run using IF-AT forms.

A digital clock with a white background and a blue border, displaying the time 08:50:00 in red digits.

- 4- The next 20 minutes are considered for the **in place presentation** of the answers. The presentation of the answer must be done simultaneously among the groups (at the same time) by voting to make it more interactive, followed by justifying and defending against the answers.

09:10:00

- 5- The next 20 minutes are assigned for **open discussion**.

09:30:00

- 6- The next 10 minutes are assigned for **peer evaluation & appeals**.

09:40:00

- 7- **Compulsory break** after G(T)RAT.

10:00:00

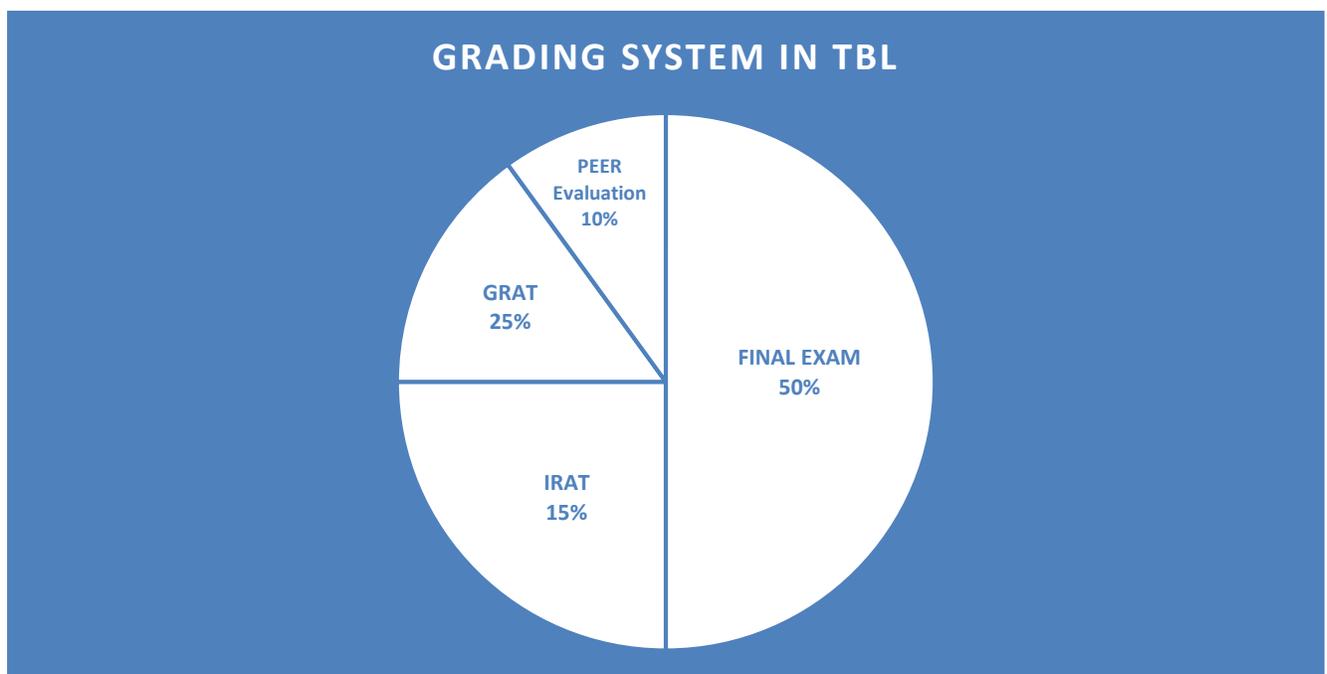
- 8- After the break, 2 hours are utilized in **application activities**, which are case, based.

12:00:00

Grading system

1- Marks are distributed as follows:

- a- IRAT (15 marks)
- b- GRAT (25 marks)
- c- Peer evaluation (10 marks).
- d- 2 marks bonus are given as a reward for students or groups who have a critical thinking to solve and identify the DTRPs and other questions during the case discussion.
- e- The final exam will be (50 marks).



2- The number of questions in IRAT and GRAT should be 10 MCQ's (Multiple Choice Questions).

Forms utilized in providing TBL

1- IF-AT answer sheets (IF-AT©)

The IF-AT forms are self-scoring answer sheets that provide immediate affirmative and/or corrective feedback for the **Group** Readiness Assessment Tests (GRATs). Students scratch off the coating of the suspected answer searching for the mark that indicates finding the correct answer.

If students answer correctly on their first try they receive full marks. The mark the students get decreases gradually with every unsuccessful attempt.

We use these forms on an occasional basis alternatively with the parallel presentation method in which students use colored cards to express the choice they believe to be the right one where every card represent one of the given multiple choices.

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT)
Name Team #3 Test # 1
Subject _____ Total 23
SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4
2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1
5.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
6.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4
7.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

This kind of answer sheets has many benefits like:

- 1- Promoting teamwork (Everyone has to share the scratching decision).
- 2- Increasing information retention (The last response is the correct one).
- 3- Making assessment more enjoyable.

2- Peer feedback form

Please assign scores that reflect how you really feel about the performance of your teammates. Please **be honest**, giving everyone almost the same score will hurt those who did the most and help those who did the least.

Instructions:

- 1- List the names of your teammates.
- 2- Assign an average of ten points to your teammates.
- 3- Provide a written feedback for each teammates describing in what way they were most helpful and in what way they could improve to be more effective.

	Team member	Score	Feedback
1			
2			
3			
4			
5			
Enter total points =		<u>If you do not submit both written and numerical peer feedback for each member of your team you will receive a zero for your scores in the team exercise.</u>	

Peer evaluation should be anonymous and so be honest. The student sits in place away from his peers in the group.

3- Appeals form

Re-write

Team # _____

QUESTION _____

Re-write the question so that it is a better one!

4- Instructor's evaluation form

Instructor's name: _____

Subject: _____

Part one: Quantitative Assessment

Cooperative learning skills	Never	Sometimes	Often	always
Arrives on time and remains with team during activities				
Demonstrates a good balance of active listening & participation				
Asks useful or probing questions				
Shares information and personal understanding				
Identifies references with relevant information				
Self-directed learning	Never	Sometimes	Often	always
Is well prepared for team activities				
Shows appropriate depth of knowledge				
Identifies limits of knowledge				
Shows confidence in areas of understanding				
Inter-personal skills	Never	Sometimes	Often	always
Gives instructive feedback				
Accepts instructive feedback				
Shows care and concern for others				

Part one: Qualitative Assessment (write at least one sentence of each question)

- 1- What is the single most valuable contribution made by this instructor?

- 2- What is the single most important thing this instructor could do to do improve his performance?

