

# THE RESEARCH-BASED FLIPPED CLASSROOM: TEAM-BASED LEARNING: A TEACHING AND LEARNING WORKSHOP

*Invited Workshop Facilitator, Dr. Holly Bender*



Hosted by the CVM Teaching Academy

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# The Research-Based Flipped Classroom: Team-Based Learning: A Teaching and Learning Workshop

*Invited Workshop Facilitator, Dr. Holly Bender*

**Holly Bender, DVM, PhD, DACVP** - *Associate Director, Center for Excellence in Learning & Teaching; Director, Preparing Future Faculty Program at Iowa State University College of Veterinary Medicine*



Dr. Holly Bender is a veterinary clinical pathologist who creates tools and methods to improve higher education, especially in the areas of diagnostic skills and problem solving. She has received 28 teaching awards and 10 teaching honors including those on the College, University, State and National level. She is dedicated to the improvement of medical education through scholarly research and software development and brings together experts from a wide range of disciplines including instructional design and evaluation, veterinary medical informatics, computer science and clinical pathology.

Team Based Learning (TBL) is a highly effective, research-based active learning method that has broad application. It's been implemented in many disciplines worldwide, and is emerging as a method of choice in medical schools. A primary advantage is that TBL can be implemented in large classrooms with fixed seats, and does not require multiple facilitators/instructors.

What TBL has provided:

- Provides students with a more intimate, small class feel even in large theater-style settings.
- Teachers report high levels of student attendance, preparation, participation and critical thinking.
- Students report enjoying class and being more motivated and actively engaged.

Collaboration in teams provides students with valuable experience that is reflective of problem solving in real-life workplace environments. Just like on the job, participants are expected to be responsible and prepared as individuals and then bring their best efforts into group activities.

## **Monday (May 19<sup>th</sup>):**

In this interactive session we will introduce all the basics of the TBL classroom including team formation, readiness assessment, the appeals process, peer evaluation and application exercises

**10 am – noon: Session #1:** Introduction to TBL and creation of teams

12 pm -Lunch

**1:00 - 4:00 pm: Session #2:** Nuts and bolts of TBL and backward design

**Tuesday (May 20<sup>th</sup>):**

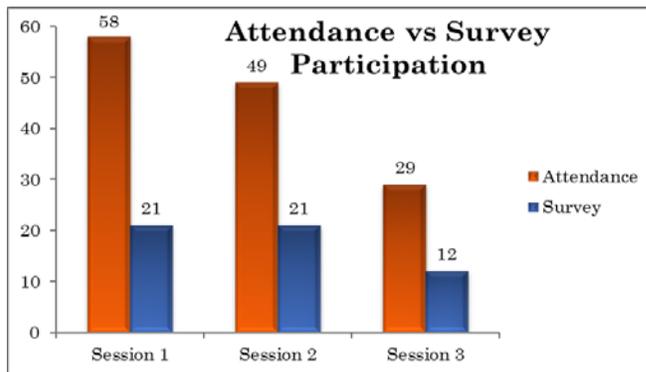
Participants will have the opportunity to design and optimize application exercises for their own courses through the workshop process.

**10:00 am - noon: Session #3:** Optimize your application exercise in teams

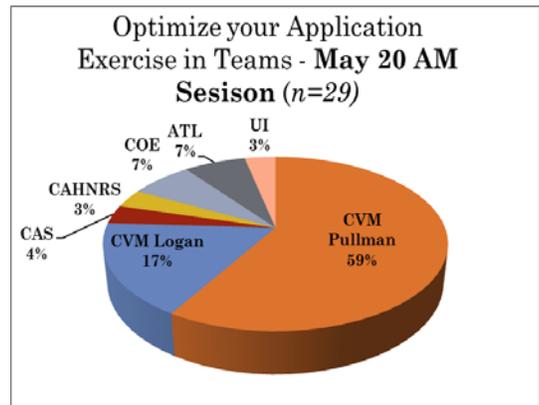
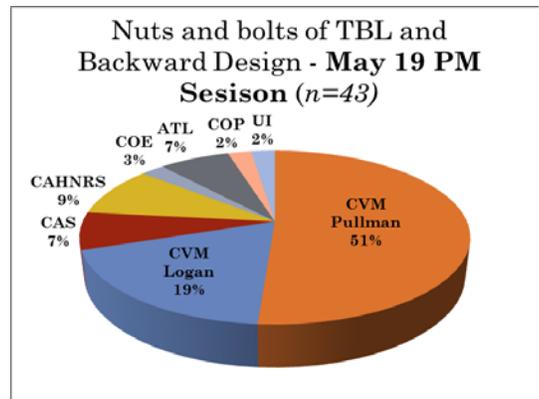
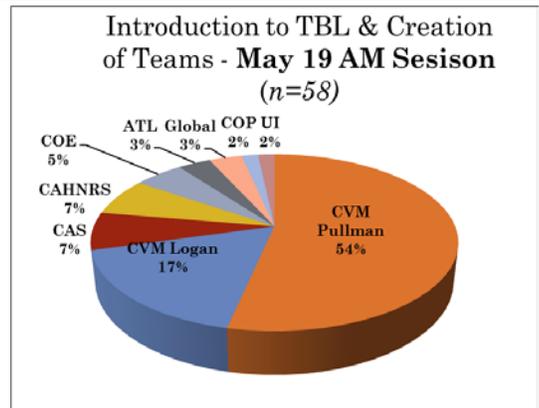
**Attendance of the Sessions:**

- Dr. Holly Bender’s TBL workshop reached a wide variety of audiences, totaling **61** faculty, graduate, and staff members over **8** different colleges, from 3 campuses (Pullman, Logan & University of Idaho).

		Total
19-May	AM	58
	PM	43
20-May	AM	29



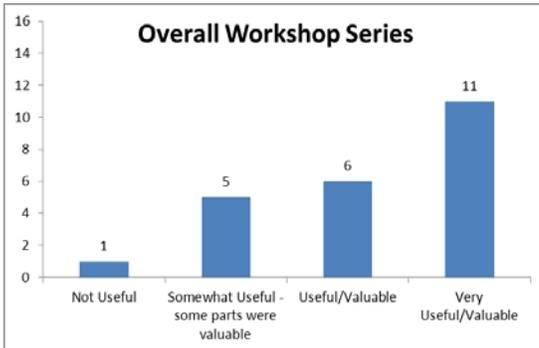
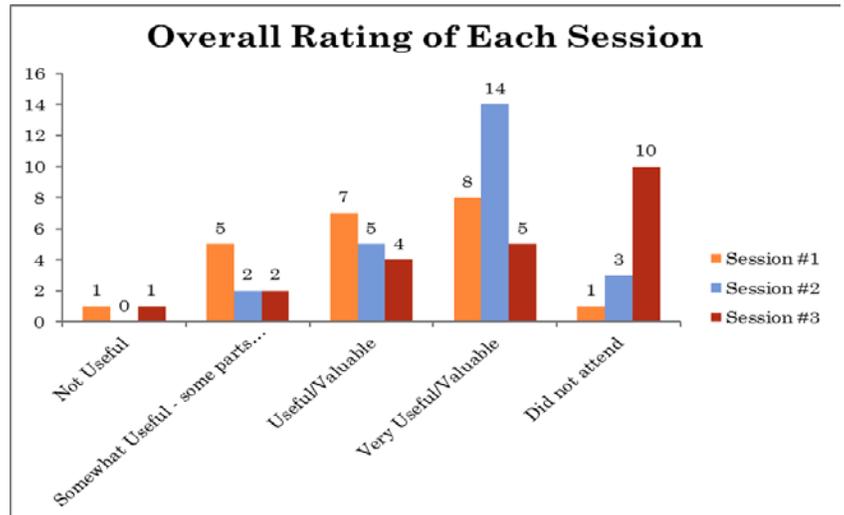
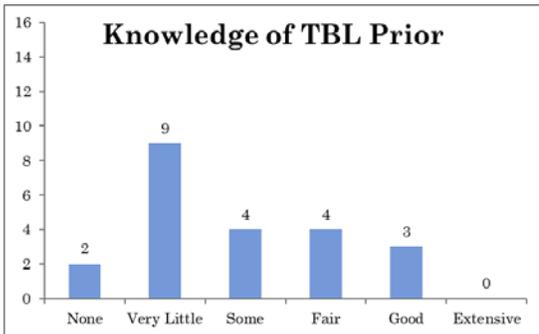
*\*\*Average survey participation was 40.1%*



## Survey Results:

Survey Participants:

Junior faculty	10	47.6%
Senior faculty – Associate Professor/Professor	8	38.1%
Administrator	2	9.5%
PhD student	1	4.8%



***Overall, 73.9% of the survey participants found the TBL workshop to be useful/valuable to very useful/valuable experience.***

## Comments:

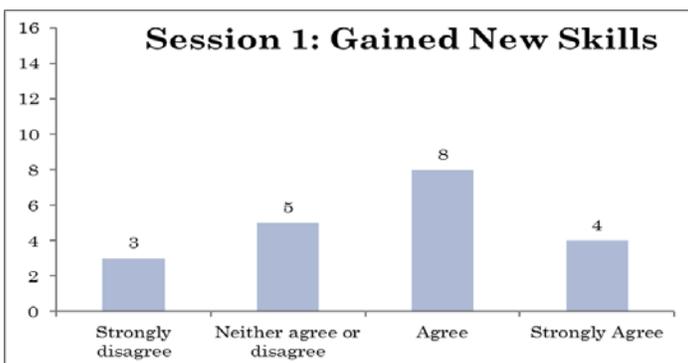
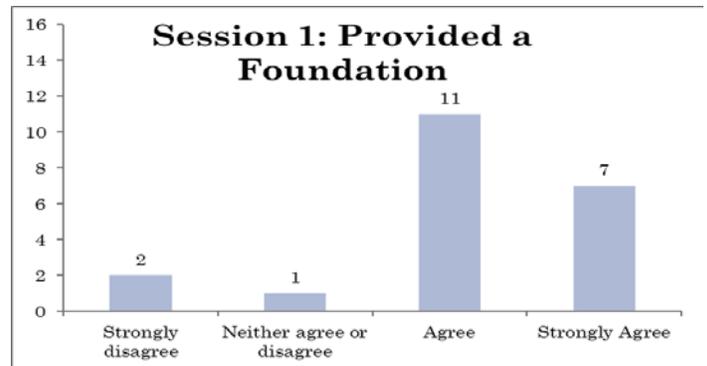
- It would be nice to have built in breaks especially to the late afternoon session.
- Session 3, giving feedback on the two best exercises was fine. However, that meant those of us with poorly received exercises did not get any feedback. It would have been more helpful if (after critiquing the class' best exercise) each team then reviewed the exercises of their team mates and provided discussion and feed-back. That way, everyone gets some feedback and ideas.
- Unfortunately, due to a variety of other commitments, I could not attend sessions 2 or 3. I assume those would have helped a lot since we were kind of left "hanging" at the end of session 1.
- I left at the point where Holly was asking the audience to describe aspects of their own classes. I do not teach, so I did not participate
- I was only able to attend a portion of the optimization portion
- The introduction was almost completely useless -- the only valuable piece of information I learned was optimal team size. I was frustrated that I could not glean more from an entire 2 hours of my time devoted to this. The introductory session was really not necessary and should be eliminated.
- I learned a lot from these exercises. She has some very good ideas and was really specific. The only negative comment I have is that she didn't seem to acknowledge ANY pitfalls of the TBL approach.
- Excellent session-very applied and useful!

- A lot of time was spent doing introductions and could have been used to start setting the frame of the concept.
- Would have like less time on introductions in session #1, and more time spent on TBL and examples of applications.
- I wish we could have spent more time optimizing our group ideas rather than the best ones of all the workshop participants. I think the team thing was good, but it seemed not the best use of time critiquing the best TBL ideas. Unfortunately some of the distance technology issues weren't a real positive aspect of the workshop. I know we can't control band width.
- It is valuable to see how different approaches may work, and this was the ultimate example of a TBL practitioner
- Please try to constrain such workshops to the shortest period possible -- faculty are used to absorbing information quickly, and those of us who teach AND conduct research (and run departments, in my case) really need condensed trainings so we can get to the application phase as efficiently as possible.
- I would like to have a discussion with the teaching academy about taking these ideas forward.
- Excellent! Good demonstration of actual class mechanics, helping me see ways to implement this practice.
- Instead of 2 days, 6 hours max. should have been sufficient.
- Dr. Bender was a very engaging speaker and workshop leader. Her enthusiasm and experience were much

## Session #1: Introduction to TBL and creation of teams - Monday, May 19, 10:00 am – 12:00 pm:

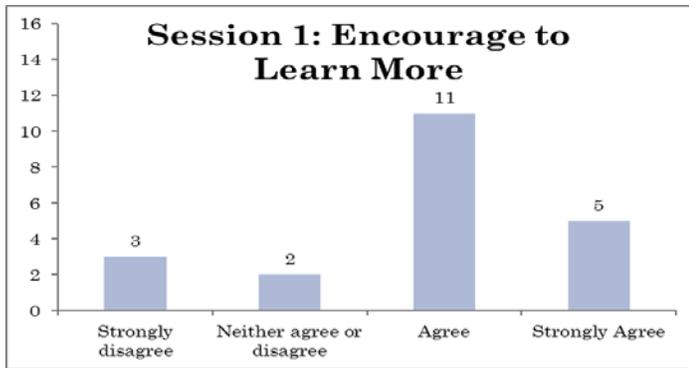


- 85.7% of the survey participants agreed to strongly agreed that Session #1 provided a foundation on Team Based Learning that can be used in a classroom and how to form teams.



- 60% of the survey participants agreed to strongly agreed that during Session #1 they gained new skills that they are planning to use in their classroom.





- **76.2%** of the survey participants agreed to strongly agreed that Session #1 encouraged them to learn more about TBL



**BEST/MOST VALUABLE aspects of this session:**

- I definitely have a clearer idea what TBL entails. I like the pros and cons exercise as well.
- The exercise on how to form teams
- It was good and important to know that the teams need to be fixed throughout the class and that the teams cannot change.
- Learning how to "sell" the concepts to the students
- Discussing pros and cons of teams & Learning strategies for making teams
- She gave very practical advice about forming the teams, including diversity in the teams, ideal team size, etc. She also was specific about team exercises for making decisions rather than writing.
- Working in teams to practice TBL
- Using TBL to learn TBL
- Just learning about the approach to TBL was good.
- General overview was worthwhile.
- The practice exercise in groups
- 1. Overview of the "readiness Assurance Process" 2. Ideas of how to mix and set-up the teams
- Practicing the concepts with the other participants
- How to set TBL in the classroom. How to start this technique and assess the learning of the students.
- Learning of the many ways that TBL has been used at ISU
- Discussions of how teams are formed and how to address issues.

**Suggestions to IMPROVE this session?**

- Right or wrong, I think we spent a bit too much time on introductions and not enough time on the actual details - even just introductory details - of putting this into practice. To me, it felt kind of like the answer to every question was, "We'll get there." I assume that you did get there in the next section!
- Make it more condensed - the first half-hour was only mildly useful.
- It was great. I don't have any ideas about how to improve it.
- Stay on time
- More application
- Little less background info
- Never have each person in a large group introduce themselves. Get on with the subject.
- Shorter introduction to TBL, more practical work. Also, it would be good to have a

troubleshooting session, going over what does not work well.

- More quickly getting to the content
- Skip introductions

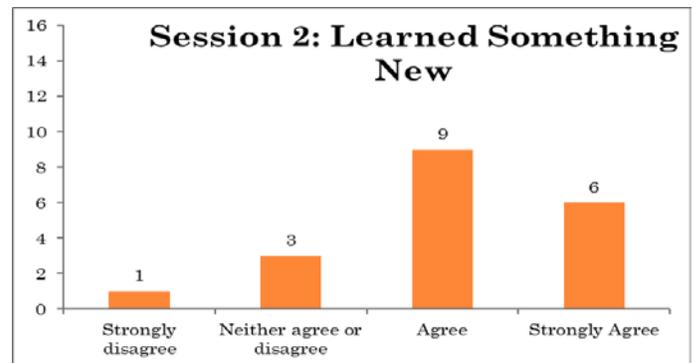


- People that attend the workshop have to be there the whole time, it was disrespectful to Dr Bender that people showed up to the first session and missed the remaining. Also, work out with the tech personnel to improve the remote communication.
- The first session got off to a very slow start. I wish we could have moved forward more quickly as we have limited time away from our other responsibilities and we need to make the most of it.
- Less time for participant introductions, and some additional specific examples/case studies as part of the overview.



## Session #2: Nuts and bolts of TBL and backward design - Monday, May19, 1:00 - 4:00 pm:

- 78.9% of the survey participants agreed to strongly agreed that during Session #2 they learned something new.



- 68.4% of the survey participants agreed to strongly agreed after participating in Session #2 they plan to use TBL in their classroom.

### BEST/MOST VALUABLE aspects of this session:

- The 4's and Peer evaluations
- Stressing the importance of the students agreeing to do it, and effectively breaking the class into groups
- Ideas about team testing.
- Ideas on how to design course were excellent.
- Working in teams
- Great demonstration of how to use the system to deliver course material and logistically keep learners on task. (e.g. 4 minute rule). I also thought it helped to use Bustad 145 and show that the room's physical set-up wasn't a big factor in the effectiveness of the session.
- Practical
- Practicing TBL concepts
- Learn the techniques and the advantages that TBL offer in the classroom



- This was perhaps the most useful of the 3 sessions as it really did help us learn the "nuts and bolts" of the method.
- Using the process of TBL in running the workshop so participants would get first-hand experience.

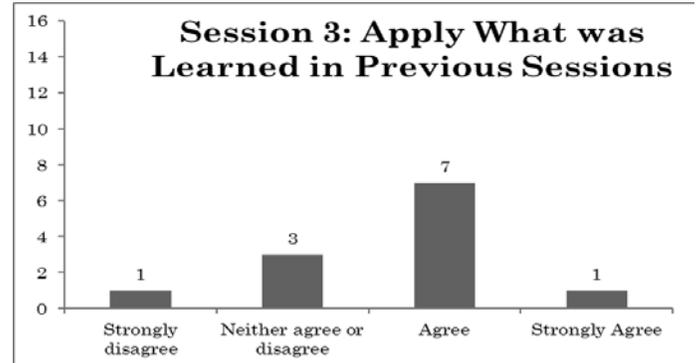
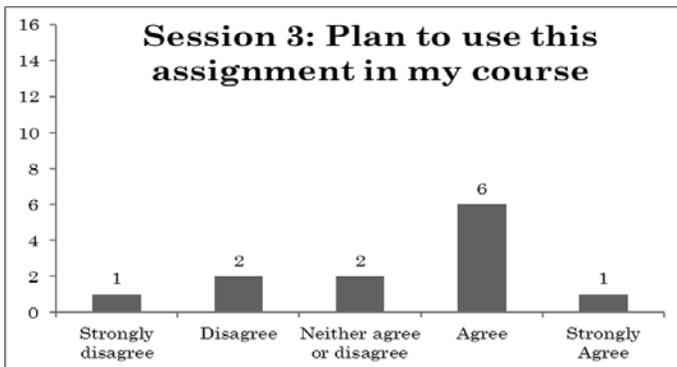
**Suggestions to IMPROVE this session?**

- Examples of questions aimed at the right level for teams to be challenged but still do better than individuals.
- None.
- It was a great session-no suggestions for ways to improve
- Shorten
- No suggestions



**Session #3: Optimize your application exercise in teams - Tuesday, May 20, 10:00 - 12:00 pm:**

- 66.7% of the survey participants agreed to strongly agreed that they were able to apply what they learned in the previous sessions to the exercise during session #3.



- 58.3% of the survey participants agreed to strongly agreed that they plan to use this exercise that they made during this session in their course.

**BEST/MOST VALUABLE aspects of this session:**

- The practice of designing an exercise was tough, but if you followed the 4's it was more manageable.
- Having a whole class discussion on a couple of exercises
- It was great that it was so interactive.
- Critiques
- Practical
- It help me to realize the mistakes that I have in my project, and also to improve my project
- The discussion of the 2 posters was a good practice. It's too bad we didn't have more time for the second, or for one that was vet med focused.
- Seeing a variety of examples of exercises from other people.



## Suggestions to IMPROVE this session?

- I would have liked to have time to optimize my own TBL idea in the group rather than go through and optimize the best example. I was not sure what an instructional goal was versus learning objective.
- Feedback on more exercises, particularly the not-so-good exercises
- Less time on a single person's exercise, more on multiple types...
- Wasted time trying to get distance class to participate. Fix technology.
- Hmm... my least favorites session because it was quite time consuming
- Shorten
- Session #3 was very helpful. The posters that got the most votes also presented their plan much more effectively. I think a few examples of effective posters might have helped us better understand what was expected and how we might have better explained our ideas. With that, I think the group as a whole would have gained more.
- Discussion of a few more of the exercises. There were too many to discuss all of them, but I would have liked to have short discussions of several rather than long discussions of just one or two.




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## Conclusion:

### Final comments about the sessions (or anything else)?

- This was a great workshop, and invaluable in helping me understand how to improve on my first attempt to flip a class. I already have four new lectures redesigned with iRATs/tRATs and in-class exercises. It's going to be a busy summer!
- I wish I could have stayed and learned more, but it was asking too much of me personally to set aside 5 hours of my day for this particular workshop. I guess I can read up on it! It seemed like it would be interesting.
- I liked Holly's style!
- None.
- Dr. Bender's expertise helped the credibility of TBL with me. I have seen it executed poorly and doubted the effectiveness. In this context, done well, it has great potential.
- Enjoyed the sessions
- Take a break every 40 minutes!!!!
- Thank you for hosting - I got some good ideas, even from the one session I was able to attend.
- Tuesday session not useful. Too much. Would rather have seen exactly what she does in a given day/semester. Not sure how this all fits into a class.
- Thank you, Dr. Bender - and Rachel!



**After attending these sessions do you have any additional/new suggestions for future workshops, brown bags, or other activities related to TEAM BASED LEARNING:**

- I think having more hands on time to optimize and critique others ideas would have been helpful and maybe have an activity when other faculty could help evaluate those that want to try TBL.
- It would be helpful to have information on how to assess if and how much the TBL is improving student learning.
- ? Discussion or presentations about how to make the transition from lecture-based to team-based learning?
- Scheduled follow-up discussions will help me stay on task and do the work before class begins, aiding my implementation while gaining valuable feedback from colleagues. This will be an added value.
- I think what we need to do is organize an interest group that meets regularly to share TBL applications, experiences and in general work together to use more TBL.
- It would be great if there was an interest group that could meet regularly to discuss TBL applications in various classes.