



MAGNA ONLINE SEMINARS

Transcript

Team-Based Learning: Strategies for Getting Started

A Magna Online Seminar was presented on May 6, 2014 by Jim Sibley.

Team-Based Learning: Strategies for Getting Started teaches participants how to:

- Recognize and express how your beliefs about content and your role as an instructor affect your teaching style
- Identify the benefits of establishing a more active, learning-centered classroom
- Describe how to connect with the team-based learning community
- Formulate your own first step to begin transforming your courses to team-based learning

Editor's note:

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Nancy Kern: Hello, and welcome to Magna's online seminar Team-Based Learning: Strategies for Getting Started cosponsored by *Magna Publications* and *The Teaching Professor*. I'm Nancy Kern, and I'll be the moderator today. I'm pleased you could join us.

If you haven't already printed the handouts, select the file you wish to print from the file-share box on the left of your screen, and then click the save-to-my-computer button to download, open, and print it. You may listen to this seminar through your computer, or you may choose to listen through your phone. To do so, dial the number, and use the access code shown in the box at the bottom left of your screen.

And now I'm pleased to introduce Jim Sibley. Jim Sibley is the director of the Centre for Instructional Support at the Faculty of Applied Science at the University of British Columbia in Vancouver, Canada. He's an active member of the Team-Based Learning Collaborative, TBLC, and has served on its board and many TBLC committees. His book, *Getting Started with Team-Based Learning*, will be published in July 2014. Welcome, Jim Sibley.

Jim Sibley: Thank you very much, Nancy. So it's a real pleasure to be here today, and I'm happy that everyone can join me. I've been doing faculty support now for 32 years at the University of British Columbia. For those of you that might not be familiar with UBC, it's a large R1 research institution. We have about 50,000 undergraduate students, so it's a big school. I've worked primarily with the engineering school.

And about 10 years ago, 11 years ago, we were working on improving the quality of teamwork that we were using in our classes. And I was heavily influenced at that point by the cooperative and collaborative learning literature, Johnson and Johnson, if you're familiar with the literature, and we were actually improving what we were doing, and it was getting better. But every once in a while we would have a dysfunctional team that usually took up most of the teachers' time in office hours.

That all changed in the fall of 2003 when I ran into the original *Team-Based Learning* book by Larry Michaelsen, Arletta Bauman Knight, and Dee Fink. As I read the book, there were incredible answers to why we weren't being successful with the things we were doing and some really simple things we could do to make sure that teams were doing things that teams were good at. I kept looking up from reading this book wondering why no one had ever told me about this.

I was so excited by the book I bought a couple of extra copies, and I gave it to two of my team faculty members the day after Christmas of 2003.

They came back in the new year having read the book and redeveloped their courses, their January courses, to use team-based learning. We have not looked back. We're now about 40 courses in using TBL.

The thing I really love is we can look into large classrooms, and now we can just see all sorts of possibilities that we did not think was possible until we ran into team-based learning. I would like to thank everyone that completed the survey before this session. But we are going to move into some poll questions, because only about half of you managed to complete it.

Certain questions were raised in that survey, and I'll make sure that as this presentation proceeds that I'll come to those questions, and I'll try to answer them for you. There will be two times during the presentation where I will stop and ask questions. So if questions come up as we're moving along, type them into the chat area, and I'll have Nancy keep an eye on that, and then when we get to those question times, I'll stop and try to answer your questions. Nancy, can you bring up the first poll question, please?

Nancy Kern:

Yes.

Jim Sibley:

So this is just what kind of institution are you at? The seven people that completed the survey, it was primarily two-year colleges, so it will be interesting to see what we end up with with this poll. So we're seeing mostly research, or two-year colleges, sorry, and universities with primarily a teaching focus, some four-year colleges, and I don't see anyone from the research institutions. Okay. That's helpful. Can you go to the next poll question? And this one I want to understand a little bit more about your experience with group work in the classroom.

Okay. That's great to see that people often are using team activities, or they at least have some experience with team activities. We used team activities in our classes. We've used them for 20 or 25 years here while I've been here, but now we can actually build activities that really, really work well. And the reason it works well is team-based learning gives us some really fundamental framework and structures to hang our course around. Nancy, can you advance it to the next slide?

Nancy Kern:

Mm-hmm.

Jim Sibley:

But one thing I want to do though is any time I talk to faculty about active learning is I do need to talk about the elephant in the room. And the elephant in the room typically is our own belief about what good teaching is. We've, as an academic, come through a system where we have succeeded at the game. We've fallen in love with the content. We've been

lectured at. We've given it back. So we've developed this idea of it worked for us, it must work for other people.

You can also be immersed in a collegial environment. You know, maybe your department believes that lectures are the only way to cover all that content and that activities are just playing with the content and won't let you cover enough of the material for that prerequisite or co-requisite course. This is a really hard one for faculty to come to grips with. What I typically do is I give faculty papers where they inductively need to reason by looking at the results of the paper.

And my very favorite paper is Hake's paper from 1998, and it's called Interactive-Engagement versus Traditional Methods: A Six-Thousand-Student Survey of Mechanics Test Data in Introductory Physics Courses. The reason I like this paper is it's physics, which people from the quantitative sciences often are quite uncomfortable when we bring up active learning. And I like the fact that it comes from physics. I like that it's 6,000 students, so it's not a small study. It's a large study.

And what Hake did, it was really interesting. In physics, they have something called the force concept inventory, and it's a tool that was developed primarily to help students uncover misconceptions about how the world around them works. So you give it to students at the beginning of the course, and they could see the gaps in their knowledge with how they thought the world worked. And then as the course proceeded, we could give them a more accurate representation of how the world worked.

Quickly, people realized that it's force concept inventory you could get at the beginning and the end of the course, and we could measure a learning gain. And that's exactly what Hake did in his paper here. He looked at 62 physics courses that used the force concept inventory at the beginning as a pretest and the force concept inventory at the end of a post-test to see the difference in learning gains based on style of teaching.

Fourteen of the courses were straight-ahead lecture courses, didactic, and 48 of the courses used interactive engagement, some form of active learning. When he looked at the results, the active learning courses had two standard deviation improvement-in-learning gains compared to the didactic courses, a really powerful result.

When I give this paper to faculty, they don't want to believe it for a while, but then they start digging through the data, and I often make them work with the data so they inductively begin to believe that active learning isn't just playing with the content, but it's helping the students learn the content. Nancy, can you take us to the next slide?

Nancy Kern: Mm-hmm.

Jim Sibley: So team-based learning has been around since the late '70s. It was developed at the University of Oklahoma business school. It's a flipped classroom model. For the flipped classroom model that is in vogue these days, the students do a little bit of pre-class preparation, which frees up some class time to do something different. The term flipped classroom didn't come around until about the year 2000, so we didn't know TBL was a flipped classroom until the term came around.

One of the nice things that TBL provides is it's got some structures for that pre-class preparation piece, and it also has some structures to design the classroom activities. One of the difficulties, if you go to the flipped classroom literature, is sometimes it's a little bit vague about what exactly we're going to do in class with this additional class time. In a small class setting, the idea typically is the students work on homework-like problems, and the teacher circulates around and coaches and provides feedback.

When we get to a large class setting, that's not scalable. The teacher is a scarce resource. And what TBL gives us is a really coherent framework to design activities that scale really well to larger class settings. I know from looking at the survey results, for the people that completed the survey, that a lot of people have classes between 20 and 80. And one of the things I can say about that that's really great is probably the easiest place to start team-based learning is in the 40- to 60-range of classes.

Bigger than that, you've kind of got crowd control issues, and smaller than that, you sometimes get into group think issues. Nancy, can you head to the next slide? Team-based learning is built on four essential elements, and we are going to look at two of them today, but I want to highlight all four. The first is large, we use large, permanent, strategically formed teams, and when I say strategically formed, that's formed by the instructor.

I had a question from the survey that we conducted that how do you form teams? And what we simply do is we want teams with the maximum diversity so that we might have a team that has someone with work experience, someone with a previous degree, someone that's good at math. Whatever attributes you think you need to spread across each team, we want to make sure they're diverse and that all the teams are of equal strength.

One of the lovely things though when you look into the team formation literature on the strategies for team formation, student-selected teams perform the worst. No big surprise there. Criterion-formed or instructor-formed teams perform the best. The nice news is randomly formed teams

perform just a little bit less, so we don't have to obsess about where every last student goes, because random does work. So that's it, large permanent strategically formed teams is the first essential element.

The next one, and we're going to talk about this more in a few minutes, is getting our students ready, that pre-class preparation and bringing that preparation into class. And team-based learning uses a process called the readiness assurance process. And we'll look at that in more detail in a couple of minutes. Once I have prepared students that come to class, we can do something different with our class time together, and the nice thing about this is you can spend your class time doing higher level activities than just transmitting content.

TBL gives you a framework to design the problems that you work on with students, and it's called the 4S framework. And we're going to talk about that more in a few minutes. The last essential element is around accountability, and there's a whole number of places in TBL where there's accountability. There's accountability to the instructor, and there's accountability to your teammates.

We're not going to talk extensively about that today. We're going to talk about, Nancy, can you go to the next slide? We're going to talk about the center too, this readiness assurance process for getting students ready and that 4S framework for problem solving. Next slide, please. I do want to present a little bit of an analogy so you understand the classroom dynamic that we're trying to set up.

If you imagine the work of a courtroom jury, really complex decisions, transcripts, testimony, evidence. You have two lawyers with opening and closing statements. You have a judge who provides some legal framework for the jury's thinking, really complicated decisions, but we ask them to make what looks like a very simple report, guilty or not.

You can imagine if you did your work as a jury, sifted through all that data, came to a decision, rolled it in the courtroom, stated your verdict, guilty, if another jury rose in that same courtroom and said not guilty, you would want to naturally ask the question why. And it's this contrast in thinking, after we make students publicly report, is the dynamic that everything in TBL is setting the students up for. So team-based learning really could be called decision-based learning. Next slide, please.

Now we're going to talk about this process of getting our students ready. And in the flipped classroom model, you'll often hear talk of, you know, the little 12-minute video that students need to watch before they come to class. And the hope is they watch it, but if they don't, it does give the instructor a conundrum when you have some students that are prepared

and some that aren't. TBL provides you a framework for this. Can we have the next slide, please? And it's called the readiness assurance process.

And it's a five-stage process that happens at the beginning of each instructional module. We're going to talk about each one of these steps in more detail in a couple of minutes, but the interesting thing about this process is it takes individual preparation, that initial preparation, and turns it into true team readiness to begin problem solving through this five-stage process.

And the five stages are whatever preparatory materials I give my students, it could be readings, it could be videos, it could be narrated PowerPoints, then there's something called the individual readiness assurance test. We'll talk about it in a couple of minutes. Then we do a team test. There's an appeal process. And then at the very end of that process, the instructor can clarify any troublesome concepts. Can we have the next slide, please?

So that first stage of the readiness assurance process is preparation. We will typically assign our students some readings before the weekend, get them done, come into class Monday morning with them done. We usually use textbook chapters or journal articles in engineering, but newspaper articles, videos, narrated PowerPoints, they all can work. We typically assign 30 to 60 pages of reading for a 2-week module. How much you can assign really depends on the discipline.

It seems like med students can put up with a lot, and we can give them a 100-page reading, and that's okay. The engineering students, not so much. One of the things we discovered a few years in was students seemed to spend a fixed amount of time on the reading. So when we did long readings, they read until they were out of time and stopped. When we switched to shorter readings, they actually do the whole reading, and it seems like they try to understand them.

So I really recommend trying to get their readings as short as you possibly can. And the way we can do that often is provide a reading guide, you know, and it might be pay attention to that figure or read that table, read that section. They will not read the entire chapter. They'll just read the highlights that you bring their attention to.

And I really like using readings, because they're so much easier to produce than a video, and it also clearly shows the students that there's more knowledge than what we're covering in this initial path through the material. So I kind of like that there's this empty mental schema that the students know they'll fill in more when they get to the application activities. Could you go to the next slide, Nancy?

Nancy Kern: Mm-hmm.

Jim Sibley: So after the students have completed that initial reading or narrated PowerPoint, whatever preparatory material, they come into the first class meeting. We give them a multiple choice test, and the test is aimed at the foundational concepts in vocabulary. We try to write at the big picture table of contents kind of level. If you're familiar with Bloom's taxonomy, remember, understand, light application is what we're headed for. And this, we're just trying to get them prepared enough to begin problem solving. This is not everything they need to know at the end of the module.

When I did the interviews for the book that's coming out in July, most people did their readiness assurance test too difficult to begin with. And you can make students pretty mad with this testing before teaching, is the complaint you will hear, so we try to keep that readiness assurance test now as simple in the high level as we possibly can, because we don't want to burn the student good will before we get to the main event, which is those application activities. Can I have the next slide, please?

So this is where the magic really starts to begin in this readiness assurance process. When the students have completed that individual test, the teacher gets some individual accountability. But you still might have unprepared students. In this next step, the team readiness assurance process, the team gets together around one test, and they retake the very same test as a group.

And the really fun thing is we most often use these scratch and win multiple choice testing cards. Basically, you scratch off like a lottery scratcher. You're hoping to find the star that indicates the right answer. And if you look at this card, you can imagine that you're in this team, and I ask, you know, what did you get for question one? Everyone says D. We scratch it off. It's the right answer. We never talk about it again.

We get to the second question, again, ask what people got, and it's split. Some people picked B, and some people picked C. We need to talk about this a little more. And this is where the social learning starts to happen. We kind of negotiate back and forth on which one we're going to scratch, which one we think is correct. And we might scratch off and not find the star. And then we go back to the question, talk about it some more, and finally scratch off and find the star.

And the way that we get students to go back to the question and reengage with the question is we use decremental scoring, four points for the first scratch, two points for the second scratch, one point for the, if you have to scratch three times. These cards are really, really neat. Students absolutely love them. They get almost giggly when they use these things. The other

great thing is some really great group norms naturally happen when these cards are used.

If I'm the opinionated bully who's always wrong, it won't take the team very long scratching off to stop listening to me. And if you're that really bright but quiet student that seems to get every question right, the team will soon discover that and realize that they have to pull you into the conversation to do the best they possibly can. I really love that these group norms come out of the structure of the activity and not some fancy facilitation technique that I need to do. Can I have the next slide, please?

Following that team test, as the team test is winding up, I'll be circulating around the class, and any teams that have scratched off all four, which indicates they don't, they didn't know what the right answer was, we suggest to them that they can appeal the question. And in each team's folder there's an appeal form, and on that appeal form it's a scholarly written argument they need to construct. We only take it from teams.

And these are the two criteria that you can appeal on, ambiguity in the question or ambiguity in the reading. What's really interesting about this appeals process is the students have to cite some evidence to support their case. And what it does, it actually pushes them back into the reading material right where they had the most difficulty. And you can imagine they might look it up and find out the instructor was, in fact, right, or they might look it up and find out that they have a case. They fill that out.

The instructor collects those and considers them between classes. A couple of nice things about that is that all the . . . conversations are text based, so they're much easier to handle in the classroom. And we only accept appeals from teams, so that individual who's raging away in the corner needs to convince his teammates to create this appeal, so it kind of moderates those behaviors. Can I have the next slide, please?

Well, at the very end, the students have done that individual test, the team test. They've appealed. They probably figured out the answers to most of the questions. You, the instructor, then have an opportunity to provide a very short mini lecture or clarification on whatever topics still remain troublesome. A couple of things that are really good here, the students know that you won't be talking for very long, which they like, and what you'll be talking about they know they don't know, so they'll listen in a slightly different way. I put the diagram of the whiteboard there.

The way we figure out what we need to talk about or what the students want us to talk about at the end of these tests is we just put the numbers for the questions on the board and say, when you bring up your scratch cards, can you put a checkmark beside whatever question you want us to

discuss? Sometimes there'll be no checkmarks, and we just move on to the activities. And sometimes, like the diagram here, there are checkmarks, and we'll talk about one or two of the questions.

What's really great about this process, Nancy, can you go to the next slide? What's really great about this process is it gives you the structure to lean on that takes initial preparation and turns it into true readiness. This typically takes us between 40 and 75 minutes at the start of a module to get through this 5-stage process.

Most of our courses are taught in 50-minute hours, and so we will actually have a readiness assurance test that's a little bit shorter so that we can do the individual, the team, the appeals, and the mini lecture clarification all in one class period. If you have longer class periods, you'll be able to do a more standard length readiness assurance test, which is typically about 20 questions. Nancy, can you go to the next slide, please?

So I want to stop here, and this is your chance, if you have some questions, to type into the chat area, and I'll look at some of the questions that are there. So great question from St. Louis College of Pharmacy. When multiple faculty are using TBL, how do you get them to work together to provide a balance of pre-class preparation for students? So there's a couple of pharmacy schools out there right now that are managing exactly this.

Cal Northstate in Sacramento is a pharmacy school that's 100% team-based learning, and Regis University in Denver is also 100% TBL, another pharmacy school. They're very careful that students don't have multiple readiness assurance tests on the same day, that there's actually space for the students to prepare, do a readiness assurance test, prepare, do a readiness assurance test. So there is some overarching organization to make sure you don't burn your students out.

If we look at a school like Wright State in Dayton, Ohio, they don't do TBL in every course, because they're worried about too much load on the students. They're careful with that. So the next question. So how do we handle an individual student who disagrees with his team and insists that he should be able to submit an individual appeal? We just say, convince your team, let us know. We don't let individuals appeal ever. If they can't convince their team, that's usually the moderation effect that we need.

The next question is where do we get the scratch cards? In the supplemental material, which is the very first file you can download in the file-share there, at the very end, there's a resources page, and there's the ordering information for those cards. Those cards are called IF-AT cards. It stands for immediate feedback and assessment technique. And you can

buy them in 10 questions, 25 questions, 50 questions, A to D, A to E. You buy them in a whole bunch of different keys, and you end up moving your test to line up with where the stars are.

Here's a question from Wisconsin about can you use iclickers for the individual and team assessments? People are doing that, and people, the people that are doing it are very happy with it. They think it works well. They really like that there's real-time statistics they can look at on how the students have done in the questions. So the team assessments, these scratch and win cards are so much fun that I would be more inclined to do the individual with an iclicker and do the team with the scratch cards, because they are so much fun. From Penn State Erie, how do we deal with students who say they're unhappy about teaching themselves?

Now one of the keys to any active learning strategy is selling it to your students. Now we have to spend a little bit of time at the beginning of the course telling them why we think team-based learning is a good idea and selling the educational rationales for helping them become lifelong learners. And there's a whole orientation piece that you can get from the team-based learning website that helps you structure that activity.

The other times in the course, any time we do a readiness assurance test, we want to revisit why we're using TBL, what we hope the students are getting from it. You have to keep selling it. Okay. What can you do about the opinionated bully that's always right? Oh, that's an interesting question. A couple of things you can do with that. I mean, when you look at how a group of students sits in a circle, the opinionated bully will often sit smack dab in the middle of the circle.

And one of my friends who teaches in New Mexico, she will stop the team activity and say, can everyone move a couple of seats to the right, and then we'll restart the activity? And what that often does is it puts that dominator on the periphery of the group, and that helps a little bit with getting the quiet voices back into the center and shutting down that bully. The other thing with the opinionated bully is part of the accountability in team-based learning is around peer evaluation. And so peer evaluation will probably moderate their behavior a little bit.

How do you deal with individuals within a team who expect the stronger members? So peer evaluation is actually an integral part of team-based learning, and without peer evaluation, there are reasons for being prepared and helping my team go away a little bit. So peer evaluation can help. The other thing is because we use permanent teams for the length of the course, team cohesion happens.

And this cohesion, we end up getting both cohesion around the task and social cohesion, and you start to care what your teammates think. And they start to coerce behaviors out of you, so some nice things happen just around that cohesion. The other piece is typically when you think about a stronger member carrying all the weight, you should be looking at what activity you're asking the students to do, because if it's a calculation that the brightest student in the group can do, everyone is going to sit back.

But if it's a complicated decision where diversity of perspective gets us a better decision, that brighter student will come to realize that engaging everyone will get us a better answer. So the quality of problems you build really do matter here. How often in a module do you do the iRAT? So the iRAT, that whole readiness assurance process, is typically done at the start of a module. And for me, a module is about two weeks in length, so I have five or six of them in a semester, and there's an iRAT, tRAT, appeals, mini lecture, that whole process at the beginning of each module.

Then there's a question about how large teams are. We use teams of typically six students, and the reason we use six students is we are in tiered lecture theaters, and the best shape you can get where everyone can see each other is an even number. Four students actually doesn't have enough intellectual horsepower to solve the complicated problems we give them. The TBL literature points at five to seven students as being the range you want to look at.

And this is distinctly different than other forms of cooperative and collaborative learning, the recommendations, because you'll often think that if I get the group that big, won't social loafing, won't someone start to not contribute? And the trick is with the quality and the messiness of the problems we give them. When I did the interviews for my book, I asked people about how large their teams were in their course and how large their teams were when they started TBL.

And a number of people told me that they started with smaller teams. They really didn't quite believe the large teams were a good idea. And in retrospect, they looked back, and whenever they had difficulties, it was always with the larger teams. I'm just going to answer a couple more questions, and then we'll collect this chat. Well, I mean, if I don't get the questions answered in this, I will make sure that they're answered in e-mail and sent to everyone.

And do the tRATs count in the student's grade? Yes, typically, in our TBL courses, the team-based learning component is about 25% of the course grade, 10% for all the iRAT tests, 10% for all the tRAT tests, the team readiness assurance tests, and 5% for peer evaluation. The other 75%

comes from very typical things like midterms and finals and individual projects.

So I'm going to move on there. Nancy, can you bring up the next slide? So I want to talk about this 4S problem solving framework. Nancy, can you put up the next slide, please? One more. There we are. So this framework, it's a really unique framework. Larry Michaelsen developed this in the late '70s at the Oklahoma business school. And back then, it was the 3S framework, which stands for same problem, specific choice, and simultaneous report.

In the late '80s, we added a significant problem. And what we want to give students are significant relevant messy problems. One of the interesting things we found at engineering is the students, when we give them messy problems, really quickly become good problem solvers. And the very first year we were using this, we kept underestimating the students' abilities, and we would give them what we thought were very hard problems, and they got fairly good fairly quickly.

So we want to give them a significant problem. We want to give every team the same problem. And the reason we do that is we want the teams to actually care about the decisions other teams make. If we give every team a different problem, my motivation for listening to your answer decreases. We give everybody the same problem. We ask them to make a specific choice. These kind of look like multiple choice questions, but what we're actually trying to do is build options that the students need to discriminate between.

So it might be a social work scenario with what kind of intervention will you have to protect the child? They all might be reasonable choices, but there's one that's better, and so we make a specific choice. And then we have them simultaneously report it. Nancy, you can go to the next slide. And this is what we're trying to create in the classroom. Students work through a problem, they make a decision, and then they publicly commit to the decision, and it's often just by holding up a lettered card.

And it's really interesting as a faculty member, because you get to look out and see students thinking. And it's not something that you typically get to see. And students can see contrast between different teams thinking, you know, and this is a very easy conversation to facilitate. One of the questions about, was about losing control of discussions that somebody submitted in the survey.

This gives you a really easy way to facilitate why did you pick A, why did you pick B, why didn't you pick C? It actually turns into a fairly simple process to facilitate. We will want to plan this discussion so we're clear on

what points we want the students to address and make sure that they're all touched on during the discussion, but they're actually pretty simple facilitations, because we can see student thinking. Can I have the next slide? The one after this, one more, there. Oh, sorry, back one.

So just as an example to show you that same question, specific choice, this comes from medicine, and this would be a typical question template where we provide some kind of patient scenario, patient presenting at the ER, and then we could ask them a whole variety of things. You know, what's the first thing you do? What's the first test you could order? What's the worst thing you could do?

Now you could make this a multiple choice question, you know, what test would you order first, and it would be, you know, blood test, CAT scan, MRI. Often medical schools will use these small 8 ½ x 11 whiteboards, and students will write their decision on that whiteboard. And the whiteboards are great, because you can't write an essay on the white board. You can only write something small. So the students will hold those whiteboards up as the simultaneous report, and the discussion goes from there, really simple but powerful. Can I have the next slide, please?

So this is the original application activity, the very first one, and this comes from Larry Michaelsen. And he's working with his business students, and the scenario he gave his students was you've been contacted by a new business owner who wants to open a dry cleaning store in Norman, Oklahoma. Where would you locate it? And he said to them, half an hour from now, I want you to come up to this map and put a pin in the map and show me where you've picked.

And really interesting things happen inside the team as they discuss where they want to put this business. Where are other dry cleaning stores in Norman, what are the traffic patterns like, what are the rents like, what are the municipal zoning laws, all sorts of things that they have to sift through to come to a reasonable decision. The moment they put that pin and do that public commit to that position, we're going to be at that asking, well, why did you put it downtown, why did you put it out on the highway, why did you put it by the airport?

And it's in those give and take conversations following that public rapport where the students' learning will dramatically deepen. Can we have the next slide, please? So in the supplemental material, it's in the file-share area there, the second last page has this scenario and the options. We broke it into two slides just to give you a font that you could actually read. I'm going to shut up for a second and let you read this scenario.

So that patient is in distress, wants their pills. The head nurse intervenes, and your choices, and this is a poll question, the head nurse should try to calm the wife down and the patient down, do nothing but continue to try to call the doctor, give the patient the pill and note it in the chart, give the patient the pill and continue calling the doctor, mark the pill as spoiled and leave it with the patient. I'll give you a few minutes or a few seconds to enter.

Okay. Interesting. So about 50% of the people think the nurse should give the pill to the patient, note it, and continue to call the doctor. Another large chunk thinks that they should try to calm the wife and patient down. This is a really interesting case, because what, you end up pitting the legal requirements for a nurse and the charting and the hospital rules against the nursing code of ethics, because the charting requirements and the legal requirements, nurses cannot prescribe medication, but if you look at their code of ethics, they actually have to do the right thing for the patient.

So this is a really difficult decision to make. All I can say is I was actually the patient in this case, and E was what the nurse did. She marked the pill as spoiled and left it with the patient. It's a really interesting, difficult kind of question. It looks like a simple multiple choice question, but it's not. And that's the kind of question that we want to make the students discriminate between these difficult options.

So I've already talked about this a little bit, so my typical TBL modules are two weeks. Lots of schools that use longer class periods will do a whole TBL module in one day. Sometimes the students will get together, and it's, you know, TBL day, and it's a four-hour class where they'll do their readiness assurance test at the beginning and then move into these application activities in the second half.

Those application activities, team-based learning is not a prohibition on lecturing. Many of my instructors still lecture about 50% of the time, but they lecture in smaller amounts and for different reasons. And it's typically that the students are struggling to complete an application activity, and the instructor realizes that there is a gap in their knowledge, so they'll lecture that piece. But this is a very kind of typical layout for the module.

That 1 to 1.5 hours for the readiness assurance test, that's based on a readiness assurance test that's typically about 20 questions for the 1.5 hours, typically 14 questions for the 1 hour. Can I have the next slide, please? So I'm going to go back into the chat area and look at some of the questions. Can you use these strategies in an online format? People have done this online, and there's a couple of really good papers out there on doing it online. Send me an e-mail, and I can send you the links to the papers.

It's a bit more difficult. I know that Sunay Palsole, who I think he's at University of Texas-El Paso, their readiness assurance process takes a whole week in the discussion forums. It's kind of a very different way that it all lays out. But you can imagine that in one of the nursing courses here that's a hybrid course, the students are in a private discussion area discussing their decision that they're going to publicly commit to. Then on Friday night at 5:00 they publicly commit to that position in the public forum.

And then we have some rules about they have to put one post, supporting one post, refuting a certain piece of evidence that has been presented. And it's a way to kind of do that in a hybrid environment. Question. Was there, how do I grade individual students? So an individual student's grade will come from very traditional things, midterms, finals, individual assignments. That's typically about 75% of their grade.

The other 25% will come from your individual readiness assurance test, their team test scores, and the peer evaluation. And why the peer evaluation matters there is the team scores are often a lot higher than the individual scores, and we have to temper them with the peer evaluation to make sure that if you didn't contribute to your team that you are fairly rewarded or penalized for your behavior.

How many 4S activities make up an application cycle? There's no magic number here. Some people will do, they'll lecture for five or ten minutes. They'll do a three- or four-minute application activity. Some people will do every Friday is application activity day. Our shortest is about six minutes. Our longest is about seven hours. So it really varies. And then there's a question on are there resources examples to help construct good 4S problems by discipline? There are. And can you bring up the next slide?

If you visit the Team-Based Learning website, and that's teambasedlearning.org, and you were to join the TBLC, there's a module bank there with a series of module, and that will include objectives, readiness assurance tests, application activities, the readings, you can use those as templates to begin to understand the kinds of things you're going to need to create.

Down the road, I think the first place you want to get yourself to is this teambasedlearning.org website. Lots of resources there, lots of descriptions of all the pieces of team-based learning, and lots of videos from students and instructors about the experience. Also when you're at that site, you can join the Team-Based Learning LISTSERV. It's a free

LISTSERV that I run. It's about 1,000 people. And it's the most helpful educational LISTSERV I've ever seen.

People will post things like this happened in class today, what should I do? And you will get thoughtful responses from numerous people by the end of the day. Even the person that developed TBL, Larry Michaelsen, back in the '70s, is still active on that LISTSERV. I would invite you to come to the next Team-Based Learning conference. We have one every year, and next year is the 14th annual, and it's going to be in St. Petersburg. And this is on your resource sheet as well and also at the teambasedlearning.org site.

It's from March 4th to 7th, and one of the things about the annual conference is the first day is some preconference workshops, and this is your opportunity to take a three-hour introduction to team-based learning and in the afternoon take a three-hour workshop on how to build these application activities. If you can't wait until next March, the Team-Based Learning Collaborative does some regional workshops.

The next one is part of the IAMSE meeting, which is the International Association for Medical Science Educators. The meeting is in Nashville in early June. And on Saturday, June 7th, there's going to be TBL in a day, so you can get yourself to Nashville. In the fall, there's also a one-day workshop on TBL, and it will be at the Dulles Airport Marriott. And so what the Team-Based Learning Collaborative has done is ensure that you can just fly into the airport, get yourself to the airport hotel for the six hours of the workshop, and get what you need. Can I have the next slide, please?

Of course I'm going to peddle my book. This is going to be out in July, and in contrast to the other books, we've really tried to go all the way back to getting started. This takes you from first principles all the way through to advance practice. I had a little bit of a crisis of confidence as I was writing this book. And the way I got over that crisis of confidence was I interviewed 54 people from around the world that used team-based learning, and all through the book our advice is supported by snippets from those interviews.

The last thing, the last piece of recommendation that I'll give you is build a local support network. Don't do this by yourself. Find a like-minded colleague, someone from the teaching and learning center that you can work with, a grad student, a TA, someone to look at your materials before you take them to the students.

Nothing is more uncomfortable than getting the dashed-off readiness assurance test to the classroom and watching it bomb. I now am very

careful about pretesting both the application activities and the readiness assurance tests before the students see them, so get some kind of local support. Next slide, please.

Well, thank you for the time that you spent with me. I really appreciate that. If you have any questions, please feel free to call me. There's my e-mail. We are going to go through the chat log, and I am going to type out answers to all the questions and then share it back with everyone. Thank you so much for spending time with us. Nancy?

Nancy Kern:

Okay. Your campus has received an e-mail evaluation form from us. Please fill it out and tell us what you think of today's program and what programs you'd like to see in the future. Complete information about our upcoming seminars is available at www.magnapubs.com. Thanks again for joining us, and thank you, Jim Sibley, for leading this program. I thought it was fabulous. And have a great day.

Adobe Chat Transcript

St. Louis College of Pharmacy Faculty: When multiple faculty are using TBL, how do you get them to work together to provide a balance of pre-class preparation for students?

St. Louis College of Pharmacy Faculty: how do you handle the individual student who disagrees with his team and insists that he should be able to submit an individual appeal? What reason/rationale do you provide to support that individual appeals are not accepted?

Western Washington University: Where can we get the scratch cards?

Marian University - Wisconsin: Is it possible to do the individual or team assessment using i-clickers?

penn state erie: How do you deal with students who say they are unhappy they have to teach themselves?

Western Washington University: What can you do about the opinionated bully who is always right??

Nova Scotia Community College: How do you deal with individuals within a team who expect the stronger members of the team to carry all the weight?

penn state erie: how often in a module do you do the iRATS?

Texas Woman's University: How large are teams typically?

Texas Woman's University: Do the TRATs count in the students' grade?

ufcon: How do you grade individual students

Eastern New Mexico University: How can you use these strategies in an online format, or with graduate students?

Western Univ of Hlth Sciences: Have you used this in a hybrid course which is mixed online and face to face?

penn state erie: How many 4S activities make up an application cycle?

penn state erie: Are there resources/examples to help construct good 4S problems by discipline?

St. Louis College of Pharmacy Faculty: our students tend to dislike giving peer assessments and oftentimes tend to give all team members high scores out of fear that their peers may down-grade them in retaliation. How do you handle peer assessment?

St. Louis College of Pharmacy Faculty: How many teams within a course/class session is reasonable for one faculty member to handle?

Ian McVitty: Thanks Jim! I enjoyed it

Algonquin College 2: thanks this was great!

Nova Scotia Community College: Thank you!

Response to Participant Questions about TBL (Chat Logs)

NOTE: I have included my face to face workshop materials in this package. In the F2F workshop, I gave participants 5 minutes to complete the reading....they then complete the Readiness Assurance Test...they then review the Appeals form...and later we do the Application Activities.

St. Louis College of Pharmacy: When multiple faculty are using TBL, how do you get them to work together to provide a balance of pre-class preparation for students?

You want to make sure there is enough coordination so students don't have multiple RATs on the same day. It could be helpful to talk to some of the Pharmacy school that are 100% TBL.

Try

Peter Clapp or Rebecca Moote at Pharmacy at Regis University

William Olfstad at Pharmacy at Cal North State University

Simon Tweddell at Pharmacy at University of Bradford

With their Pharmacy programs being 100% TBL, they must manage this all the time

St. Louis College of Pharmacy Faculty: how do you handle the individual student who disagrees with his team and insists that he should be able to submit an individual appeal? What reason/rationale do you provide to support that individual appeals are not accepted?

Rules are rules. We don't allow individual appeals. We haven't had this issue in over

1000 teams so far. We have had an individual float the idea, but we stood our ground and said NO.

St. Louis College of Pharmacy Faculty: our students tend to dislike giving peer assessments and oftentimes tend to give all team members high scores out of fear that their peers may downgrade them in retaliation. How do you handle peer assessment?

Peer Evaluation can be contentious; especially some institutional and disciplinary cultures can react to it. You need to spend some time selling the importance of feedback in the workplace and that this kind of evaluation can be a valuable learning experience. Just like when you introduce TBL...you need to sell it to the students.

St. Louis College of Pharmacy Faculty: How many teams within a course/class session is reasonable for one faculty member to handle?

We have a single instructor supported by TA's in classes of 200 (32 teams). We use team folders and have student teams send representative to the front of class to pick up materials. The instructor does not want be running around handing out materials. These team folders are essential.

Western Washington University: Where can we get the scratch cards?

Link is in the supplemental material – resources section

episteineducation.com

Western Washington University: What can you do about the opinionated bully who is always right??

Peer evaluation can be useful to temper this behaviour; also if the problems are simple enough for one person to solve...they are too simple for TBL.

Marian University - Wisconsin: Is it possible to do the individual or team assessment using i-clickers?

This is very possible. Some instructor also use the course management system to deliver the iRAT before class. Is this a good idea...I don't know...it is a hotly contested issue in TBL...some people think it is a very bad idea...but the people that are using it seem quite pleased with the results.

Penn State Erie: How do you deal with students who say they are unhappy they have to teach themselves?

Some small subset students will be unhappy no matter what approach you use, the trick to get the majority of students onside. We do this by orienting them to the TBL processes and selling our rationales for using TBL and why we think it is really important for student learning.

Penn State Erie: how often in a module do you do the iRATS?

The Readiness Assurance Process is only conducted at the begin of each module, so 1 iRAT per module.

Penn State Erie: How many 4S activities make up an application cycle?

Varies. Activities can extend from a few minutes to many hours. Activities can be sprinkled into snippets of traditional lecture content. The important thing to remember is that we aim to spend the bulk of class time after the Readiness Assurance Process doing higher level problem-solving activities.

Penn State Erie: Are there resources/examples to help construct good 4S problems by discipline?

I have attached a couple of complete module examples to help you envision the pieces you need to create.

Nova Scotia Community College: How do you deal with individuals within a team who expect the stronger members of the team to carry all the weight?

Peer evaluation will sort some of this out. Also big, complex problems that require everyone to be ready and contribute are key. Because TBL team work is more decision-based than some more product based team...social loafing and slackers are less of an issue.

Texas Woman's University: How large are teams typically?

We recommend teams of 5-7. There is some interesting TBL research that will be published in the next few months show the magic number is 6. Now this might run contrary to your intuition, but TBL teams need to be big to have the intellectual horsepower to solve really messy, complex problems. If you use small, trivial problems that can be solved by one person...all sorts of problem ensue.

Texas Woman's University: Do the TRATs count in the students' grade? UFCON: How do you grade individual students?

A very typical breakdown of grades is 25% for TBL and 75% for other traditional individual measures.

The 25% TBL component typically breaks into 10% for all the iRATs, 10% for all tRATs and 5% for the peer evaluation. If I have 5 modules in my course with an iRAT at the beginning of each module, each iRAT would be worth 2%.

The 75% portion includes things like individual homework, individual assignments, mid-terms and final exams.

Eastern New Mexico University: How can you use these strategies in an online format, or with graduate students? Western University of Health Sciences: Have you used this in a hybrid course which is mixed online and face to face?

I would look at these videos <http://vimeo.com/26639334> and <http://vimeo.com/26639297>