

MTN Ep 8 Transcript

MTNEpisode8

[00:00:00.12] ERIN HAGAR: Welcome to Moving the Needle, casual conversations about ways, big and small, to impact student learning brought to you by the faculty center for Teaching and learning at the University of Maryland, Baltimore. I'm Erin Hagar, let's move the needle. Hello, everyone and thank you for joining us for this episode of moving the needle.

[00:00:22.62] Today we're talking about team based learning with our guests, Dr. Christina Cestone and Dr. Violet Kulo. Let me introduce you to them now. Dr. Cestone is an educational psychologist who earned her doctorate from UT Austin, where she conducted research on faculty learning communities, instructional methods, and interprofessional education.

[00:00:42.54] She spent more than eight years in medical education, serving as the Associate Dean of assessment and evaluation at Drexel University. Currently, she's the executive director of the Faculty Center for Teaching and learning at the University of Maryland, Baltimore, where she also serves as the program director for the health professions education degrees.

[00:01:01.01] Dr. Violet Kulo earned her EDD in instructional design and technology from Lehigh University. Before joining the health professions education faculty at UMB, Violet worked at the Johns Hopkins School of Medicine for nine years, where she oversaw curriculum mapping, medical student assessment, and program evaluation for the pre-clinical curriculum. Her research interests include instructional design, learner engagement, and student assessment.

[00:01:27.05] Team based learning is a really interesting instructional strategy and I'm so excited to share it with you today. It was developed in the 1970s by Larry Michelson at the University of Oklahoma. Who noticed that as his classes got bigger, the students seem to get less engaged. So he designed a very robust sequence of learning events that facilitates collaborative problem solving. For those of you who might be processing a little bit of trauma around doing group work, you're going to learn how this strategy brilliantly tackles the challenges of student preparedness and social loafing through what's called this readiness assurance process.

[00:02:02.00] In our conversation today, you're going to hear some acronyms thrown around that I want to clarify before we begin. The IRAT is the Individual Readiness Assurance Test and the GRAT is the Group Readiness Assurance Test. You'll learn all about how these work in the flow of team based learning during our conversation. So let's get to it. Let's start by having you tell us a little bit about yourselves. How did each of you land in the world of Health Professions education? And Christina, let's start with you.

[00:02:32.19] CHRISTINA CESTONE: Good morning, Erin. It's great to be with you today. I guess I came to health professions education, a very circuitous route. In that, most educational psychologists are trained to really go into colleges of education and be traditional faculty roles, but I was fortunate enough to have some seminal experiences where I design health care interprofessional cases for a group of students who were in pharmacy, social work, nursing, and medicine. And I think my interest was piqued at that time, over a decade ago.

[00:03:16.11] And so at that stage, then I really thought this was something that I would stick with and be the educator in the room full of clinical folks and be able to bring that perspective to their training trajectory. So that's really how I got involved.

[00:03:35.78] ERIN HAGAR: Oh, that's great. Thank you. Violet, how about you?

[00:03:38.78] VIOLET KULO: Good morning, Erin. Thank you so much for chatting with us today. So my background is in instructional design. And I was a high school teacher before I went to graduate school. And just like Christina, I was planning to teach in a college of education after graduate school. Then I happened to see a job opening at the Hopkins School of Medicine that caught my interest. So Hopkins had just gone through a curriculum revision and they were expanding their newly formed medical education office and I saw an opportunity to make an impact in medical education.

[00:04:10.25] And I was at the inaugural instructional design at Hopkins working with faculty designing active learning environments and I was also responsible for the student assessment and conducting program evaluation in their preclinical curriculum. So I realized that there was a lot more need for faculty development around cost design using various instructional strategies and designing different types of assessments.

[00:04:39.87] I was also collaborating with faculty on conducting medical education research. So I enjoyed doing all these things. And my desire for teaching came back. So I now became interested in teaching in a formal program in health professions education to help faculty to advance their teaching assessment and research skills.

[00:05:01.73] ERIN HAGAR: Oh, that's wonderful. I think those circuitous routes are some of the best ways to land in interesting places. So I'm so glad that worked out for both of you and that's what brought us here today, which is great. So we're here today to dive into this instructional strategy called team based learning. And it might sound familiar, it might be familiar to many of our listeners but for those for whom it's new, Christina, would you mind giving us a bird's eye view about what we're talking about when we talk about team based learning or TBO as we might mention it here today?

[00:05:39.78] CHRISTINA CESTONE: Sure. Sure. Well, team based learning has its roots really in business schools and more traditional undergraduate universities. And it was started to get around this idea of being in a ginormous lecture hall with several hundred students who would just be facing forward and working with the instructor in a passive way. And the instructor wanted to try something different. And so he developed team based learning as a mechanism to engage students, even if they were sitting in a lecture hall so that they would have interaction with one another.

[00:06:24.03] And team based learning is really defined by a sequence of phases that I think we'll talk about a little bit more as we go through this podcast. But essentially, it is a flipped classroom approach, a lot of people refer to it that way. And it begins with advanced preparation by students' preparedness assessments, application of the content to extension exercises, and then the evaluation process.

[00:06:58.57] So the aim is for there to be deep development among the teams in their communication, in their social behaviors with one another, and their ability to give one another earnest feedback. So that's the big picture of TBO, its origin. And obviously there are a lot of

articles. We're not going to go into that today. But there is a deep literature on it. And that's really the high level summary, if you will.

[00:07:28.32] ERIN HAGAR: That's so helpful. Thank you. I think orienting ourselves in that bird's eye view is really helpful. And some folks might be listening to this Violet and think, I do that already, sometimes I put my students into groups and I'll have them discuss a topic or work on a worksheet together in a group during a class session, so are they doing team based learning? How are those things different?

[00:07:53.98] VIOLET KULO: Team-based learning is different from group work. So in group work, you might put students in group at any time and there's no refined structure, but like Christina, mentioned team based learning has a defined sequence and it's repeated over time. But group work you can put students in group work at any time and tell them, discuss this or maybe turn to your peer and do this, I think pair share, but for team based learning you have to follow--

[00:08:24.63] First who form the teams before the class starts then you write the tests, so the individual test and the group test, then you do the application exercises and the peer evaluation. So you repeat these four elements over time, which is not done in group work.

[00:08:45.09] ERIN HAGAR: Sounds much more formal.

[00:08:47.03] VIOLET KULO: Yes, it's more formal.

[00:08:48.83] ERIN HAGAR: OK, great. Well, since you've already touched on that idea of a sequence already, let's go to that. Christina, could you walk us through the sequence of team based learning? What happens before class, during class, after? How it all works.

[00:09:07.22] CHRISTINA CESTONE: Sure. So I think Violet alluded a little bit to this and that there is advance preparation by the faculty because it is more formal than group work, which you can initiate in a classroom at any time really. But TBO would require the instructor to have materials that they want the students to focus on in advance and a mechanism for assigning that work. What we've seen in the last year is many using learning management systems like blackboard or canvas to place materials in advance into a site for students. They would study, read, view those materials.

[00:09:49.70] And then the next stage they would come into the classroom or meet virtually and they would engage in active learning sessions where the very start of the second phase of team based learning is the readiness assurance process. And that consists of an individual test, which the student does on their own and then a group test, which the entire group that the student is assigned to engages in collectively.

[00:10:20.73] So there's some consensus building around the answers to the questions on that readiness test. That allows the instructor to gauge where there are gaps in broad student understanding across the classroom. And points are usually awarded for both of these activities. And then I guess next would be the application phase where there is perhaps clarifications first by the instructor around the pre-work that students got wrong from the readiness process that were clear, that they were misunderstandings, and then the next phase would be a new activity or new exercise where the student would apply what they learn the principles from that pre-work and that readiness process to a new scenario to extend their knowledge and enhance their transfer in understanding what they learned.

[00:11:19.94] And then from there, they can have a number of application activities. They're called four S activities. And Violet will correct me if I'm wrong here. They're specific. They to have a single answer--

[00:11:37.94] VIOLET KULO: They work on the same problem and then they report their answers simultaneously.

[00:11:43.25] CHRISTINA CESTONE: Correct. So there's no like I got this problem and I'm going to answer it this way. And then another group has a different problem and they report out their answer. It's designed where everyone works together at the same exact time, on the same exact problem so that they can all come to response at the same time. And then that's where the interesting part begins.

[00:12:09.02] So you may have groups that have different answers from one another. And this stimulates that discussion phase. So students may be standing up and reporting out what we thought it was this answer, we thought it was B, and another group says no, it was C, and the instructor is acting as a facilitator in that instance where they have to elicit from the students, well, why do you think that is the answer? What is it about that answer that you felt compelled you to choose it? And then that begins this rich discussion base in the class.

[00:12:50.84] And then finally, the final phase is there may be a brief clarification lecture by the instructor and then a peer evaluation process. Which is often by instructors overlooked or not seemingly important, but this is like the meat of TBO Where students learn to give each other feedback, where there is sort of temperature taking on group process and group functioning, and it helps the professor or the facilitator to understand what kinds of group formation, how the group is functioning over time. Violet, would you want to add anything else to that?

[00:13:33.47] VIOLET KULO: Yes. Yes. I just wanted to reiterate the importance of immediate feedback during the group test. So it's important for students to get feedback to see if they selected an incorrect answer to see why the answer is incorrect. So the students can use immediate feedback assessment technique form, where they scratch off the answer until they get to the correct answer. And if they get the fast answer the first time, they get full credit. And then they can get partial credit if they don't get the answer the first time.

[00:14:10.34] Then also something else is team appeals. Teams can appeal their answer if they can defend the answer they selected using materials from their readings.

[00:14:25.64] ERIN HAGAR: So it sounds like there's readiness assurance process, where students first take an individual test to be accountable to the team that they've done their pre-work and they've done as best they can to understand the material before the group activity even begins, and then the chance to take that same test as a team, really works to mitigate that phenomenon of social loafing. I think lots of students and faculty have maybe some traumatic memories around.

[00:15:01.19] We've all been in groups where you feel like you have to carry the load for the entire group or suffer the consequences in terms of the grade. So that is that why that was designed that way or are there other rationales for having those readiness assurance activities?

[00:15:19.86] VIOLET KULO: So the purpose of the readiness assurance process is not only to motivate students to come to class prepared, but also to give them some several experiences to give feedback to others. And also in terms of social loafing, that can be accounted for by peer

evaluation. So students provide both formative and summative feedback from their teammates about their contributions to the team's success.

[00:15:47.30] So things that they can evaluate others is about preparation, how their peers came prepared, their contributions to the application and exercises and the GRAT and also how they helped others to contribute to the team in general. So I'll pass it over to Christina if she has something to add.

[00:16:11.90] CHRISTINA CESTONE: I think that is exactly right. And the individual readiness assurance test allows students to get credit for what they know and what they took from the pre-work. And so there's a percentage there of I'm accountable for this because I took my test and got 100%, for example.

[00:16:40.44] And so Violet was describing that as teams go through and maybe scratch off the answers in the group process if they're using scratch offs, which are part of this system, if they're doing that in person, then they do lose points if they have to attempt to scratch off for the right answer three times. And so the group loses. So there's that group accountability to don't scratch off until we've reached consensus together.

[00:17:11.10] So I think that there is that social connectedness that evolves or is created over time to the group. And it's not to say that there aren't maladaptive groups or poor functioning groups because that can happen as well. But for the most part, the system is designed to prevent social loafing to the extent possible because it has both individual accountability elements and group accountability elements with the most important piece being as Violet mentioned, the peer feedback.

[00:17:45.98] ERIN HAGAR: Yeah, that's great. So if we could talk a little bit about what some of these applications might look like, especially in a health professions education setting. So I would imagine that when they're taking these readiness assurance tests, individual and group, that's pretty maybe cut and dry black and white information. Just do you understand the basics of the material that you're going to need in order to apply it? But what might some of these application activities look like? What might they be hashing out as a group to come to that group consensus on the one answer? Violet, you want to take that?

[00:18:29.48] VIOLET KULO: In health professions education, the activities might be case vignettes like patient cases, things that students might see in real life. So maybe if it's medical students, they're working with a patient and they see a case so the groups might work on a differential diagnosis to diagnose the patient or also maybe work on a treatment plan. So this works out very well in health professions because students can work on real patient cases that they'll see when they go into clinic.

[00:19:02.65] CHRISTINA CESTONE: Yeah, I think those are great examples and you can even use application exercises that include psychosocial or clinical ethical dilemmas as well because they can be really ripe for good conversation and debate within the groups.

[00:19:24.41] ERIN HAGAR: So they would be reading a case and there would be some details presented or some contextual information and then maybe the question would be something like, what is the best option out of these four? Because at the end of the day, it's still a forced choice that the students are being asked to make in the application activity. Is that right?

[00:19:46.13] VIOLET KULO: Yes, that's correct. So remember all the groups they are working on the same problem and the problem has a specific answer. So if it's a differential diagnosis, they walk through the patient case and they have to come to a specific answer of the diagnosis.

[00:20:05.84] ERIN HAGAR: So this must be interesting from a faculty member's point of view during the actual implementation of the class session. The class probably looks very different than what some faculty might be typically used to seeing or facilitating during class time. So can you talk us through a little bit about what it might look like from the outside and what sort of feelings might come up for a faculty member who is doing this for the first time. Christina, you want to walk us through that?

[00:20:37.90] CHRISTINA CESTONE: Sure. Sure. So Violet has been facilitating an interprofessional team based learning workshop for faculty at UMB. This past, I guess six months, we've had two sessions and we'll have another one coming up. In those workshops we get a lot of questions from faculty about what the experience is really like. And I think there's a tend towards perfectionism. Like I have to design this perfectly for it to work.

[00:21:13.79] And I think what a new faculty member might encounter in those that we've spoken to is a little bit more on the logistical planning of like how does this go, what does this look like in the classroom or lecture hall if that's the space that's being used. And so really thinking through the steps that you're going to engage in when you're in that setup or that classroom setting.

[00:21:42.25] And then I think the second piece is that the assessments themselves have to be built. So a lot of times you have the lecture content, you have the subject matter, you know what the reading is, your slide decks are probably already prepared for a traditional lecture. So it's more of how do I change things up in terms of the order, the logistics. And then if there are no assessments available around the content, developing the assessments.

[00:22:12.61] Violet, that's what I think we heard in some of the workshops and post workshop for those who have been interested in integrating this into their teaching.

[00:22:25.12] VIOLET KULO: Yes, absolutely. That's correct. So it's mostly around the logistics, that's where a lot of the questions come. If the faculty member is doing alone in a large class for the first time, how do I do this?

[00:22:39.46] ERIN HAGAR: I can imagine. And also I can imagine, well, as an instructor, when I first started using active learning techniques, I had to remind myself that I was still teaching even though I may be in a quiet moment and the students are doing a lot of the work. And there are moments where it just felt a little strange. If somebody walked in right now and saw me just walking around and checking on students and the students really doing the bulk of the work, will they still think that I'm teaching? Have you come across this with TBO?

[00:23:12.01] CHRISTINA CESTONE: Yes. I think that is a really important observation, Erin. That faculty do feel a little bit less like the sage on the stage, which is a common phrase that we hear, and a little bit more of a facilitator on the side or a guide on the side. But that isn't intentional. That is the purpose of the instructor. Because just coming in and not really seeing where people's prior knowledge is on a subject may cause the instructor to inadvertently overlook people who don't have a good grasp of the material, and for those who do have a good grasp of the material, perhaps they become bored.

[00:23:58.12] And so this calibration as facilitator helps allow students to work with one another and to provide some of that scaffolding and differences in prior knowledge, but then also for the faculty to really hear the students verbalize what they don't understand. And we know from the research evidence that things like self explanation assessment and retrieval practice in the IRAT process or the GRAT process, the readiness process, are really critical for effective learning.

[00:24:38.26] ERIN HAGAR: That's great. So why do each of you think this is-- So particularly useful. This strategy is so useful in health professions. You said it started in the business world and that it started primarily an undergraduate, so in your experience working with health professions educators, what have they told you about its applicability, its usefulness? How is it being received in this world of health professions? Violet you want to start?

[00:25:09.67] VIOLET KULO: Yeah, sure. So in the health professions, it's being received well because it mimics what happens in real life, the interprofessional team. So it help work together interprofessional teams in their clinics, in their work experiences. So also working on patient cases and clinical vignettes, that's how also makes it work well in health professions.

[00:25:39.25] ERIN HAGAR: That's great. Christina, anything you'd want to add on that?

[00:25:41.59] CHRISTINA CESTONE: Yeah, I think I'd also add about giving and receiving feedback. I hate to harp on the peer evaluation piece, but I think that sometimes instructors feel like it's not necessary. And even if you're giving it a small weight in the overall course grade if you're using TBO, I think it's really important to highlight that sometimes students at the early stage of their clinical or health professions training may not be comfortable giving and receiving feedback.

[00:26:14.95] And this starts that practice I think or helps them in that practice. And yes, it may be lower stakes, which is good because there's no massive implication like there would be in a summative environment. It's very much a formative activity. So I think that peer evaluation helps them give feedback to one another and learn about being comfortable with that process, which as we know is very important in health professions throughout their careers, whether they are instructors or learners.

[00:26:54.01] ERIN HAGAR: Yeah. And it seems like since this is a strategy that in a course is repeated over time, students could really see improvement in how they're giving feedback or how they're communicating with their peers. So it's not just a one and done cycle. They really get the chance to experience that again. Is that right?

[00:27:15.13] CHRISTINA CESTONE: Correct. Yes.

[00:27:17.08] ERIN HAGAR: Well, that's great. Well, we're really excited to have the chance to talk about this. For those of you who are interested in learning more about TBO, I would recommend you visit the Faculty Center for Teaching and learning website umaryland.edu/fctl. And there are a lot of resources and references about TBO that you can find there.

[00:27:41.30] But before we go, we like to ask all of our guests to share with us something that they are particularly excited about in the world of education. It does not have to be TBO specific. Just is there's something on the horizon, in the world of education that you think could really move the needle with respect to teaching and learning. Violet, do you want to start?

[00:28:03.98] VIOLET KULO: Yes. Thank you. I'm really excited about a HyFlex. This is not really a new thing per se, but the HyFlex course model. But in the light of what we've gone through for the last 1 and 1/2 years with the pandemic, instructors and students having to go to remote learning, I see that HyFlex course model might be implemented more in classrooms. This is where students take part in online and also face to face classroom.

[00:28:40.43] So students are giving that flexibility to either take 100% of classes online or either 100% in-person or have a mixture of both. So I think that will see that-- and also with the social distancing that classrooms are required to do now, maybe HyFlex course model might be used heavily in future.

[00:29:07.69] ERIN HAGAR: Yeah, that's so interesting. All the ways that COVID is disrupting things and moving us forward and enhancing our creativity, that's great. So HyFlex for you. Christina, what about you? What are you excited about?

[00:29:22.18] CHRISTINA CESTONE: I think what I'm really excited about and I think what we've been talking about at the university system level is the shift towards the HyFlex as Violet mentioned, but at of the root and the foundation of that is this move towards student centeredness in learning, which is going to increase accessibility, it's going to map to the changing learner demographics that we see of our applicants and our matriculants.

[00:29:56.50] And so I feel like the HyFlex is a wonderful example of how that student centeredness is actualized or operationalized in the educational space. And so that's what's exciting to me, is that we're thinking about things that are putting the learner at the center of what their higher education graduate and professional training experience is really about. It's about them and their development on this professional trajectory.

[00:30:30.98] So I think that's what I'm really excited about and how this centeredness towards the student can open up doors for people to enter a space that maybe they didn't think about before.

[00:30:43.93] ERIN HAGAR: That's so great. Well, I just consider myself so lucky to be able to work with both of you and I'm so glad that all of our roots brought us here together in this field and in this hour here today. So thank you so much for taking the time to talk with us.

[00:31:01.75] CHRISTINA CESTONE: Thank you, Erin. This has been a great chat. Thank you.

[00:31:05.47] VIOLET KULO: Thank you, Erin.

[00:31:09.28] ERIN HAGAR: Thank you for joining us today on moving the needle. Visit us at umaryland.edu/fctl to hear additional episodes, leave us feedback, or suggest future topics. We'd love to hear from you.

[00:31:24.10] [UPBEAT MUSIC]