

Richmann: Welcome to Professors Talk Pedagogy, a podcast from the Academy for Teaching and Learning at Baylor University. I'm your host, Christopher Richmann. Professors Talk Pedagogy presents discussions with great professors about pedagogy, curriculum and learning in order to propel the virtuous cycle of teaching. As we frankly and critically investigate our teaching, we open new lines of inquiry. We engage in conversation with colleagues and we attune to students experiences, all of which not only improves our teaching, but enriches and motivates ongoing investing. And so the cycle continues. Today, our guest is Dr. Mojgan Parizi-Robinson, Senior Lecturer and Director of the Learning Assistance Program in biology at Baylor University. Dr. Parizi-Robinson research focuses on intracellular signaling pathways in wound healing and cancer. In addition to teaching human anatomy lecture and lab courses, she teaches a pedagogy course for biology learning assistance. This year, 2022, Dr. Robinson was the recipient of the Collins outstanding professor award. We are delighted to have Dr. Parizi-Robinson on the show to discuss the role of struggle in learning, flipping her course, teaching undergraduates to help other students learn.

Mojgan Parizi-Robinson, thank you so much for joining the show today. I want to begin by just congratulating you on receiving the Collins outstanding professor award here at Baylor in 2022. And I want to just ask you to reflect on what this reward means to you. What in your own teaching do you think is being recognized and called out by such a such an honor?

Parizi-Robinson: I just want to first say thank you, Christopher for inviting me to this podcast. This my first podcast. I'm so excited.

Richmann: Congratulations.

Parizi-Robinson: This is really inspiring. It's humbling to win this award because I know the rest of the candidates are better than me. They are phenomenal instructors. It's not only humbling, but it in, I get goosebumps thinking about it. It inspires me to do better. It inspires me to reach the students I haven't, and I can't reach everyone. But it sends a strong message that somebody recognizes something small that I, that I did correctly. I really admire all of the rest of the faculty who are candidates every year. They're just amazing colleagues that I look up to. I think what is being recognized is that students are learning how to learn, are starting to learn how to learn. That learning is not just sitting and listening passively. Although the data suggests that—there's actually an article that came out a couple years ago that said, students have the feeling of learning. But when you measure if they're learning by giving them a test, and you measure that against the students who were actively engaged. The second group who were actively engaged in the learning do better, get the assessments. So that is being recognized and perhaps by flipping these lectures that I've worked on for a couple of years. The students are having fun. You're having fun. They are staying awake at 8 AM and yeah, they're not falling asleep. So just, just small things that I think I'm doing right in this, in this journey.

Richmann: You mentioned just now here, flip, flipping a course. What does that mean for you in your I'm assuming that this is your anatomy course, yes?

Parizi-Robinson: Yes. An upper level bio course. It's biology 4432. And it is geared for pre physician assistant students, pre PT, pre-med, pre-dental. It's not for nursing students. So it's really modeled after a gross anatomy course. The students dissect. We have a higher level Bloom's Taxonomy questions. I tell the students you're not here to diagnose because you're not physicians, you're not health care workers, but that is, that is part of your future. So let's think about how we can problem-solve. So let's think

about how we can critically look at questions, because in your future as healthcare workers, you're not really getting paid for what you know, but somebody is paying you for how you use what you know. So the flipping of the course really involves where it involves giving students a certain number of tools that they can use. This includes learning objectives that parallel the questions that they later see in class and on exams are PowerPoint questions that we call them informational, they're just informational PowerPoints. Definitely a homework, so a formative assessment that involves two, maybe three lectures and other handouts. So the students are responsible for learn. Yeah, learning on their own a little bit. They don't have to be experts, but they need to be familiar with the content. Then they come to class, and then their voice is important. But not on a singular level, because I don't want to put anybody on the spot. I don't want to be intimidating. I don't want to make them feel stupid or less than because they're there to learn. They wouldn't be taking the class if they knew everything. They are all there to learn from each other. They are paired with whoever they're sitting by. And then the flipped lecture is a series of questions that they actually, they actually have that file before lecture. They just don't have the answers. So the answers are revealed during the flipped lecture. So let's say they look at a fracture. And then the question is, what nerve would potentially be damaged due to this fracture? Then they have a minute or so to think about the question based on the difficulty level. And the very next slide is the answer, right? So that's how the, the flip lectures are. They're very consistent in that, that they get the tools beforehand. Then they do something during lecture.

Richmann: I love what you mentioned about it's not, it's not about learning information. It's about using the information. And that the higher, the higher arenas of Bloom's taxonomy. As much as I love and America loves the show *Jeopardy*, I think it has really spoiled us in terms of a wrong thinking about what it means to be smart, right? Like that. There's just that to be smart is to just have this encyclopedic knowledge and to just spit out correct answer.

Parizi-Robinson: Yes.

Richmann: When that doesn't that doesn't serve any purpose anywhere except on trivia night, right?

Parizi-Robinson: Yes, Christopher. And the thing is that I tell the students you can always look up some information yet, which is the reason or one of the reasons that I don't have a required textbook. I have highly recommended textbook. Okay. And I say you can go to, there are so many resources here. In fact, after the pandemic, during the pandemic, so many medical schools came up with these amazing full on online gross anatomy courses for medical students and they're free to use. And I recommend some textbooks but had to look up information. And part of look part of learning is actually knowing how to look up information.

Richmann: Yeah. Do you have any open access or open education resources on your recommendations list? This is something that Baylor is working on now to sort of increase the adoption of OER.

Parizi-Robinson: Yes, So OER, so I have one atlas. It's a digital atlas called Complete Anatomy. And it was actually not free for the students, so the students had to buy it. But just recently, we now have an institutional access, right? Yeah, yeah. There are other resources. I mean, such a vast difference between now and even as short as maybe four years ago. Go on Google and just do Gross Anatomy Online Course Anatomy courses. The University of Michigan School of Medicine, University of Wisconsin,

University of Chicago, UCLA, Stanford, amazing lab learning, objective lectures, syllabus, PowerPoints and questions.

Richmann: Yeah, that's probably, I mean, you're a STEM person and I'm a humanities person, so I'm, I'm from this side of the table, I'm sort of thinking that's, that's a real advantage of some STEM fields is that the content is so standardized.

Parizi-Robinson: Yes.

Richmann: And part of that is because of professional certifications and things that where the profession needs to recognize rights to content areas. So that really does open you up to so many other a potential information sources. Whereas in the humanities, we are a little bit more locked into like our interpretation of the type and things like that. So we always feel... anytime I'm recommending or assigning like a YouTube video, I watch it and I like wring my hands. I go, Oh, I wish they didn't say it that way, because I don't really agree with that.

Parizi-Robinson: But whereas it's the fracture of the greater tubercle of the humerus is the same in Waco as Michigan, exactly.

Richmann: So let's talk a little bit about that student buy-in piece of this deal. Do you face resistance from students? How do you prepare them for your kind of flipped learning experience?

Parizi-Robinson: So, so I did it slowly, Christopher, so that I did not go from information on lectures one semester to fully, to flipping every lecture the following semester. I remember the first semester that I flipped the lecture. It was the third lecture of the semester. It was the skull lecture. And anyone who's taken anatomy knows that skull is one of the most difficult, notorious, formidable contents of Human Anatomy. The skull has so many holes. And through every hole there's some structure that goes through it. Yeah. So what I did is I gave a short informational lecture during that first flipped lecture. During that first semester, Sure. And I said, okay, we're going to— I'm going to lecture for about 10 minutes. And then we're going to look at a few questions. And I said this is a, this is called the mixed lecture. So I lectured for about 10 minutes than we did five questions. And during that, I got goosebumps, just thinking about it. It was an amazing experience. During those five questions, you could hear everyone talk and almost everyone was on topic because I told them the exam questions are going to be very similar. Yeah, I don't make the exam questions that much harder. Students do well at what they practice, right? And so the, they loved it. And then the following, the following week, I had a fully informational lecture. And then I sent out a Qualtrics survey. Yeah. And I said, you know, five questions. I'm going to give you extra credit. You're going to you're going to finish in like two minutes. What did you like? Almost everyone, like the flipped lecture, no grade attached to it. They get to see questions that they see similar, not identical, but similar difficulty on the exam. Here it's a win-win situation. And if you don't know it during lecture, so what? It's just, I mean, it was amazing. I didn't expect that most students would like it because they were faced with having to do, oh, I gotta look at learning objectives. I've gotta look at this handout. I've got to look at this PowerPoint before I go to lecture, right? I've gotta watch a couple videos. But they have to work harder anyway. We're just changing what that hard work looks like.

Richmann: Yep. Yep. The order of it? Yes. Yes.

Parizi-Robinson: And they leave the classroom knowing how to answer questions, looking at the stem of the question, and then going and I empower them with good design your own question. Yes. And all of a sudden they're coming up. They're sending me questions that I'm like, can we steal this for my tests? I think this is great.

Richmann: Yeah. Yeah. Some instructors do actually funnel that into the actual exams and, and, and the students just love it when they see their own question on an exam or I just it's amazing.

Parizi-Robinson: Yeah.

Richmann: So with all of the caveats and qualifications that we know about talking about student evaluations like end-of-course evaluation. Now, what difference has this made? How have you seen your new approach, your flipped approach, sort of represented in the end of semester evaluation, so forth.

Parizi-Robinson: I read most of my evaluations, especially lecture because the lab is, I have lab assistants and it's a little bit more. I'm loosely structured, right? But lectures, I read most of the evaluations. They love the flipped lectures. Now they may not like aspects such as, oh, I wish we had four exams. You're oh, I wish we had a dropped exam, or I wish we had fewer quizzes. It is mostly centered around the number of assessments or the fact that the final exam should not be comprehensive. Regarding the flippe lectures, they almost all really like it because they realize that they have two choices. Either looking at the questions that they may see similar to them on the exam or having informational PowerPoints. And then looking at a question for the first time, it really counts. And I am not about giving them easy questions during flipped lectures because you're, you're not, you're not preparing them for exams. What made me think of the student evaluations pieces? I remember early on in my teaching, which was not that long ago. One of the things that students pretty consistently criticized me for was the exams don't really match well. I didn't have exactly the language for it, but they were saying things like, oh, that it was hard to know what would be on the exam, and that that's the way they frame it. And so what you're doing is much more upfront.

Richmann: And I mean, we talk in teaching and learning literature about like alignment. So you're aligning the assessment more with the actual activity, right?

Parizi-Robinson: So three things and it's it's hard work, but it gets easier as you go through the semester and go through several years. Learning objectives, assessment in class, and then exam, right? And they end up doing better.

Richmann: Well, I had the pleasure of attending your, if you call acceptance lecture, your, your, your, your public lecture, connected to the Collins Award. And one thing I really loved about your presentation is that you're up front with colleagues and students in the audience about your own struggles in learning, especially in graduate school. Why do you think this kind of honesty is important?

Parizi-Robinson: So I think that my transparency and honest helps me teach, that it creates stronger connections with students. That we all put our pants on one leg at a time. And it really doesn't matter who you are. I had my struggles. And if I can learn from my struggles and make a difference in your life, then let me do that. I think that learning is an attribute of our personalities and I cannot hang my personal life outside of the lecture room and walk in. Yeah, that I bring all of that with me. All of that is my experience. And that helps me teach better. That's number one. And number two is that my

struggles were with gross anatomy specifically because it was 400 students and I was intimidated. Yeah, I was up against students who are going to be future orthopedic surgeons and go to dermatology and ophthalmology. And let me tell you those are the three cartels. Residency. And I was like, I'm going to fail. There's no one to ask a question. There's no one to help me. And I found active learning with my own PhD advisor, who was a cell biologist, but taught embryology to the medical school.

Richmann: Apart from that lecture class.

Parizi-Robinson: Yes, apart from it in lab. He taught me not just gross anatomy, but how to teach gross anatomy. We were doing active learning long before it probably had a term. He was doing small groups with me and the three of us. So beforehand, so 397 were pre-health, and then there were three graduate students. And I thought for sure, I'm going to fail graduate school because I'm going to fail gross anatomy. I ended up with an A, but it was because how Dr. Thomisak I taught gross anatomy to the three of us. Small, just conversation. After conversation. I would walk in the lab and I was doing an experiment and he would say, Okay, tell me about this nerve. Yep. And I'm like, What do you mean? Give me a story.

Richmann: Yeah.

Parizi-Robinson: He taught me how to frame my lectures in stories. And and it's powerful.

Richmann: That's fantastic. Yeah. Would that we all had such an experience.

Parizi-Robinson: Amazing

Richmann: And I, and I have a theory. I don't know if there's any data to back this up, but the instructors who not only may, may have struggled in their own learning, but have really written that into their own personal narrative, can be some of the best instructors. Because so, for so many of us as folks with a PhD, like we are not our typical student, like we know this thing and we care about it so much more than our students do.

Parizi-Robinson: Yes.

Richmann: And, and the biggest divide is just putting ourselves in that position of to..., maybe I don't... Let's pretend, What would it feel like if I didn't care as much about this as well, or if I didn't have this knowledge and all of the mental constructs that I do. And so if you've had that struggle and kind of written that into your personal narrative, that's an easier place to return to.

Parizi-Robinson: Absolutely. Yeah. I like to feel vulnerable when I'm teaching. It just makes teaching easier, and it makes me enjoy what I do in the class. I love what I do because I feel like the students can, can feel how I am coming across with this information, and they feel that passion. So in their student evaluations, they may complain about the assessments yet, but they almost invariably will say that I'm so passionate about teaching because I just love it.

Richmann: Yeah. Well, what we haven't talked about yet, it was just another distinguishing feature of your courses is the role of learning assistance. For those listeners who maybe just don't even know what that is, can you give us some background of what a learning assistant is and then how this plays in your classes?

Parizi-Robinson: Sure. The learning assistant program was started in around 2003 at the University of Colorado in Boulder. And show that the LA program has three pillars. Number one is that the learning assistant should be a high performing student who has taken, let's just say anatomy at a previous semester, and done well, then they can be in LA for the professor. But at the same time, the first-time LAs have to take a pedagogy course. It so happens that I teach the pedagogy course in our department. So all of the first-time LAs during their first semester take a pedagogy coursework. They learn about how to teach, how to learn, what is Bloom's Taxonomy, how metacognition, how do you know you've learned something, among many other topics, and this is all data-driven. Then they also have a one-hour upper level bio course with the professor for whom they LA. And then they practice doing active learning modules. And it can look different for different classes. It can be clicker questions, it can be a flipped lecture. It can be PowerPoint questions, you know, ten questions followed by answers. So whatever that looks like has to require the LA to go to class and actually interact with your peers during class. Which sets it a little bit different than what the supplemental instructor program is, where the sides meet with the students outside of class, right? And so for my class, I have nine LAs this semester. And what they do is they look at the learning objectives for every lecture to make sure that they align with my flipped lecture. They design the homework questions. They have Zoom office hours. Then they meet in-person with the students. And the LAs have a certain number of students that they're assigned to, and they sit with the students so they don't stand and say, How are you doing? And actually the student says I'm just fine, right? And you?

Richmann: Right. So how, what have you learned in the process of mentoring these, these students to be sort of junior teaching staff, are there any bumps in the road on yes?

Parizi-Robinson: Absolutely. Christopher, I think that many of them, even though all of them either have A's or B's in a previous semester. They're worried that I don't know all of this information sites.

Richman: Yeah.

Parizi-Robinson: To which I answer. You don't have to nobody knows everything. You look it up, but you're there, you're there to guide them to answer the question, right? You know more than they do, because you've taken it. And the data shows that they are more likely to share with you and to learn with you than somebody who's much older. So that slight age difference or no difference is, plays an amazing role on the LAs who are shy. I mean, I have shy students who are like, I'm not good at talking in front of people. Yeah. I'm like, it's okay. We just take baby steps, right? And I said, you know, at some point you're going to have to give a presentation or lecture and you're going to teach. You may not go into teaching, right? But if you're going to be a physician, you're going to teach it or you're going to go to med school, you're going to teach, you're going to teach at some point to a small or large group? Let's start now.

Richmann: Yeah. So much of learning in any, in any discipline, well, I should say so much of teaching in any discipline, doing it well comes down to helping the students in their thought processes. And so it sounds to me like, especially as you're training them to like ask better questions of their, of their students. Boy, if, if full-time faculty could get a hold of that and just learn that it's not, it's really not a matter of how much I know. What skills do I have to help them develop their thinking process?

Parizi-Robinson: Exactly. And it's all about guiding them to the correct answer. Don't ask, are you doing okay. Or, can I help you? That, those closed questions usually they're faced with I'm doing fine and they

go back. But ask them, So walk me through this process, and what do you thinking about this question? Let's see if we can find the answer. Yeah, they may not know the answer immediately, but they will. And that peer interaction is priceless.

Richmann: Yeah. Something that I learned from, is it Mortensen? David Morton while he was here at Baylor? Yeah. And I know you're a you're a fan. When he give a presentation here, was just the power of "why." And so I, when I observe faculty or graduate instructors, I find myself saying some version of this. Almost every feedback form is, no matter when you ask a student a question, no matter how they answer right or wrong, ask them why they answered that way.

Parizi-Robinson: Yes.

Richmann: Because you're making transparent the thought process. If they answered wrong, you're helping them to see where they're at, where the weak links are, get the answer, right, you're reinforcing the strength in there.

Parizi-Robinson: Yes. In fact, that's an interesting point because when we look at questions in our flipped lecture, if the students say, Oh, the question, the correct answer is B, then the discussion is, will tell me why A, C, D, and E are incorrect? And that is a powerful journey. Learning not only that concept, but what if I change the wording of that question?

Richmann: Yeah. Right.

Parizi-Robinson: So this works on their – e can you deduce information? Can I give you this information? Then? Ask it in a totally different way? Can you still get the right answer, right? Yes. I'm a big fan of David Morton.

Richmann: Yeah. Well, we'll put a link to some of his videos or materials in our show notes here. So in the process of teaching your pedagogy class for the learning assistants, how has this helped you to grow as an instructor, either reading through the pedagogy literature that maybe you hadn't had an opportunity to read through before or just, you know, we all learn better once we have to teach a thing.

Parizi-Robinson: Yes.

Richmann: How has that helped you in your own development?

Parizi-Robinson: Boy, when I first started, I thought, let me, let me look up that word first.

Richmann: The pedagogy..

Parizi-Robinson: Where you go, what the heck, What the heck. At first, I felt like there was a chiasm that I'm teaching pedagogy and then I'm teaching anatomy. And, and it really didn't merge until maybe a couple of semesters later. Yeah, and it was in that time period where I was also thinking about flipping lectures. So what I did and I'm continuing to do, is that I fused elements of pedagogy into anatomy.

Richmann: Yep.

Parizi-Robinson: So frequently I talk to students about how do you learn? What is learning? Show me what good learning looks like. Is it about looking at PowerPoint slides? Is it about re-reading a textbook? Is it highlighting? And the answer to all of those questions is no help. Or it's about assessment. So I talk a lot about what we discuss with the LAs and pedagogy in anatomy. In fact, I have a link and my modules

on Canvas. How to be effective learners, yes. And when you can learn better, it just really changes the entire way that you approach school.

Richmann: Yeah.

Parizi-Robinson: And also changes the way you teach. Teaching and learning, I think are intimately connected, right?

Richmann: And students get, often get a lot of good stuff in like those first year freshman seminar courses like study skills. But the research shows that they have trouble transferring that to actual class. And so whether that's a matter of like the transfer itself is hard because learning is so context-dependent or just because they need it, they need to hear it repeatedly over and over and over. And that highlighting your textbook doesn't help, right? And it's unlearning bad habits and things like that. Because for many of our students, especially at a place like that, selective, like Baylor, students have succeeded in high school with a really bad study habits?

Parizi-Robinson: Yes.

Richmann: They just haven't needed to to really study very hard.

Parizi-Robinson: Yes. Yeah.

Richmann: Putting them into classes. I wish we could all just sort of get in the habit of that.

Parizi-Robinson: I think that more instructors should talk about how do you learn; you know, a student comes to you and says, I'm failing and I'm studying every night reading and studying a lot. And my question is, show me, how are you study? Let's study together. So they take me to the short journey of their studying and I look, I have a glimpse now of what that studying looks like. And if it is re-reading and looking at PowerPoints, that is not reading. Are you looking at quiz questions? Here are the links and then they'll ask, where are they? Oh, let's look at Canvas. Yeah, there are these links. All free. Let's look at these quiz questions. Yes, yes, they make you uncomfortable. But being uncomfortable and struggling, it's actually part of learning. You learn better. And I mean, students we, I used to do that if I was looking at something and I thought, oh, I know it made me feel comfortable and warm and fuzzy. And I was like, oh, I know this. To find out that I didn't.

Richmann: Great. It's a yeah, it's it's, it's so much of what like Bob Bjork talks about the desirable, difficult yes. Right? The things that actually make you learn other things that are in the process of it. You don't feel like you're learning because that feeling of mastery elude you by definition, right? You're working on the things that you don't know very well. So it's seen as very frustrating and very counterproductive in the moment.

Parizi-Robinson: Yes. In fact, the chairman of the neuroscience department, Dr. Chuck Weaver, gives a lecture to my pedagogy class. And he talks about desirable difficulties. And then there's that book that...

Richmann: Yeah, we've got that...*Make it Stick*.

Parizi-Robinson: So you want a fantastic boo, yes. So we have excerpts of that for the Las, and then I tell my anatomy students about that. Yeah. So back to your question. I really try to fuse so many of the elements of pedagogy with anatomy, which makes me hopefully teach both of them better. That's the hope, right? That's the hope.

Richmann: So I know you well enough to know that you're always thinking about something new and wanting to try something new in your teaching. So what's on the horizon that you wanted to try to implement, whether with your learning assistance or just in your standard now flipped anatomy courses?

Parizi-Robinson: So I want to have zero DFWs. When a student fails, part of me has failed. I want to reach that student who sits in the back of the class, who doesn't talk to the LA. And the LA has reached out to them several times through email, sat by them. They don't want to talk to me. They don't want to talk to the LA. I want to reach that student. I want to see how I can help him or her to open up, right? Something is happening. And I need to make that connection. It is— that is my goal. To reduce those numbers. To include as many students as possible because, you know, this is what I tell my students: if I can do it, so can you. So can you. One more point that I need to make, and I was thinking about that as I was walking here. Many of my awesome LAs are not the ones who made A's in my class as students. They're the ones who struggled a little bit, then got A's. Or who have struggled a little bit and got a B. It is that perspective that the student who's struggling needs. It's not the one who says, Oh, this stuff is easy. I don't know why you have a problem with that, right?

Richmann: So maybe that's something to foreground in continuing efforts to reach those students, is our LAs, they're not chosen because they came into class knowing this. They said resolutely, they know how to help you struggle, within your struggles too.

Parizi-Robinson: And of course, this LA program is one aspect of it. One way that we can help with diversity, equity and inclusion? Yes. I mean, the LAs are diverse. It's a diverse population. So you have that student who feels different can look at the LA and say, Wow, if she can be in at this peer leadership position, you can as well. Yeah. And that is so empowering.

Richmann: Yeah. Well, and I'm sure you're I mean, this is still new, but, you're getting to that point maybe where you can follow these LA students after graduation. And I think that there's some research. Our former colleague, Michael Moore was doing some work on sort of science efficacy, right, related to that, their sort of their self image of themselves as scientists or potential scientists as a result of being involved in my LA programs.

Parizi-Robinson: We definitely need to look at that. The cohort, yeah, allies who later go to med school, graduate school, and just kinda see what fields they end up in.

Richmann: Yep. Yeah. Fantastic. This is great work up and down all the way, all the way. Mojgan Parizi-Robinson, thank you again for joining the show. And again, congratulations on the Collins award. Well deserved.

Parizi-Robinson: I really appreciate it. Thank you so much.

Richmann: Our thanks again to most gone for Mojgan Parizi-Robinson for speaking with us today. In today's show notes, you'll find links to David Morton's anatomy teaching resources, Bob Bjork's, "desirable difficulties," and a recent article dealing with the difference between feelings of learning and actual learning. That's our show. Thanks for listening and join us next time on Professors Talk Pedagogy.