



Teaching More and Talking Less: Using Examples During Class

SPEAKERS

Tierney King, Jeremy Rentz

Tierney King 00:00

This is the Faculty Focus Live podcast. I'm your host, Tierney King, and I'm here to bring you inspiration, energy and creative strategies that you can utilize in your every day teaching. This week's episode is sponsored by the Teaching Professor Conference. This year, join us in person in Atlanta to pursue your passion for teaching. All right, today we have Jeremy Rentz with us from Trine University, who will also be presenting at our Teaching Professor Conference in June. So before we dive into what you'll be talking about at the conference, start us off with what is one piece of advice you'd give to someone starting out in their teaching career?

Jeremy Rentz 00:38

First, thank you for having me on the podcast today. And I'd also like to thank the Teaching Professor for having me back as a speaker this year. I've been to eight or nine of these conferences, and they are spectacular. So I'm happy to be a part of this. The piece of advice that I would give to teaching faculty worldwide is very simple. But it might take a little bit of your time. And it is to try to learn from your colleagues as often as you possibly can. And when I say learn from your colleagues, I mean, go visit their classrooms, have them visit your classrooms, take them out for lunch. I'm very lucky, there's a gentleman here that I've eaten lunch with once a week for at least 10 years. We now have a group of three, we eat lunch, at least once a week. And it really does help our teaching. So anything you can do to figure out what the other folks on your campus do, it's really going to help you as an instructor. And then the last bit of this is try to get out of your silos as much as you can. I've been very fortunate as the Director of our Center for Teaching Excellence, that I have relationships with people of every single major in every single department across campus, and they have great ideas that you can bring to your classes. So don't think you just have to figure out what the colleagues in your area do. Try to figure out what your colleagues in every area do. They may have an idea that you never thought about. And you can very easily implemented in your own classes.

Tierney King 02:10

That's great. You know, so often, you know, we don't think we can ask for help or use other other people around us. And it's just it's a good reminder to use those people around us. So your session at the Teaching Professor Conference is called Talk Less ,Teach More. Explain, why you started talking less and kind of how that was the catalyst for this session?

Jeremy Rentz 02:33

So this is a complicated question here, because it's a long drawn out answer. And hopefully, after 15 years, I can narrow this all down to 50 minutes at the Teaching Professor Conference. But I was very lucky early as a teacher, I had many good mentors. And my mother-in-law at the time, she kept saying to me over and over again, the one doing the work is the one doing the learning. It took about five or six years for me to figure out what she was actually saying. But as soon as I learned that the one doing the work is the one doing the learning, I tried to adopt it as much as I possibly could in my own classes. And again, early on in my career, I was very lucky, I did actually do this a little bit at the time 15 years ago. I didn't know what I was doing or why it worked. I got very, very lucky. And over the years, we have figured out different ways to get students to do the work in class. And there are some really powerful reasons why students should be doing the work in class. And one of the things that we're going to try to do with the session is to pull out all of those positive aspects that come from students doing work in class. One of the things that I want to make sure that I highlight in my session is that I have a few good answers, but collectively, as a group, we have many, many good answers. And that's one of the things we're going to try to do this summer is to pull the great answers from the community that does join us for the session. And then over the years, I try to talk less as much as possible. But I like to hear myself talk. I can lecture for 50 minutes. A few years ago, I actually did regional water talks, and I would talk for 75 minutes or so. So I do like to talk and you'll figure that out here in the podcast, possibly. So it has been a challenge for me to find opportunities where I know the students can do the work. And there are a few different ways that we can pull this off. And hopefully we'll explain those in a bit.

Tierney King 04:39

So in your session, you explain how instructors can set up learning scenarios for students that allow them to figure things out on their own, and also at the same time to discover and interact with one another to have this really powerful learning experience. You know, just explain some of your favorite or most used strategies that you implement into your own course to encourage this type of powerful learning experience.

Jeremy Rentz 05:05

I am an environmental engineering professor, so many of my classes have a lot of problems, a lot of math work. So for me, my favorite strategy is to have the students do the example problems in class. I know people don't like to give up their Blackboard, they don't like to give up their whiteboard, they like to be in charge. But I learned very early that when I did the problems on the board, the students just parroted what I did, they just photocopied what I did, they didn't actually pay attention to the problem solving, they didn't actually pay attention to how I was solving the problem. All they did was photocopy my answers, and it didn't lead to much learning. So at this point in my career, I do very, very few examples on the board, less than 5%. And if I am going to do an example on the board, it has very difficult math, or we're merging many difficult concepts together. There are very rare instances when I actually do the problems on the board. Instead, I make sure that I have well developed problems for the students to do in my sophomore classes, fluid mechanics and a few others, the students are doing problems for 30, 40, even 50 minutes - the entire class period. I might talk to introduce a new topic or a new concept, or I might explain what's going to be new for the day. But the remainder of the class, the

students are working on problems. We will start with something basic, you know, we have a new concept, we don't want to overwhelm them, we'll move to something that's a little more intermediate. And then there's always a more advanced problem. And sometimes not every student is going to get through all of the problems we have for the day. But we want to make sure we have that advanced problem there for the students that are ahead of the curve that do work ahead. We want to make sure that every student is doing work for the entire class period. I don't want anybody sitting there twiddling their thumbs. And I really don't want someone to get up at the end or near the end of class to disrupt others. So I really try to make sure that people have work to do for the entire class period. And then one of the reasons that I really liked this strategy is that when they're off doing homework problems on their own, they don't have many resources to help them to actually help them learn. They have resources to help them cheat, but they don't have resources to help them learn. And while they are in the class, they have their neighbors to help them, their neighbors can support them, they can ask them questions, they can make them feel good about themselves, when they don't understand something and their neighbor doesn't understand something, they feel less bad about themselves. And then the other positive that it brings is I can help coach essentially every student in class. I'm very lucky, my class sizes are small, generally 30 or less. I do have a class of 37 this semester, but I can make it around to every individual a few times, or I can make it around to every group that's working on things. I can give them advice. I can answer questions. I can explain little details that they might not be getting themselves. Ultimately, it is a practice session with coaching. And if they fail, not a problem, we will make sure that they get there in the end. And ultimately, this strategy has worked extremely well for my classes that have a ton of math. But I also use the strategy in other classes that don't have so much math. I teach an introduction to environmental engineering class, where essentially every day is new terminology, new words, as environmental engineers, we literally make words up. So there are things that students might never ever see or hear before. And many of the tests don't have any math. So the place that I use this in this class is exam review. I used to do exam reviews at night, but only the A students would show up. And those weren't the kids that needed the help. So I moved the exam reviews to in class to make sure that every student was getting an opportunity to learn. And I have found out over the last few years that this is literally the day that the students actually learn things. As they go through the exam review materials, I do not let them use their notes. I let them use their brain, the brain of the students sitting next to them, the brains of anyone in the classroom, but they can't use their notes. They have to try to pull things from their brain. They have to try to retrieve some things. And then again, I'm there to help them whenever possible. And these strategies have worked tremendous to actually get students to learn the material, whether it's problem solving and math or whether it is other difficult concepts. These strategies have worked really well for me to actually facilitate student learning.

Tierney King 10:00

And then kind of, you know, when you implement this problem solving and these activities during class, what's the feedback from students for you?

Jeremy Rentz 10:08

So the question that I asked students very early in the semester, because my classes run a little differently than others on campus, I asked them very early, have you figured out that you doing the work leads to you learning? And very quickly, three or four weeks is essentially all it takes, they figure out yes, this is what it takes for me to learn the materials. And the students love it, right? They

understand that this is the day that they're going to figure out what they do or don't know, for the test. And it is the strategy that helps them get through most of my classes.

Tierney King 10:45

Perfect. And then kind of lastly, what do you hope the people who are attending your session take away from it and bring it back to their own courses into their own university,

Jeremy Rentz 10:54

There are two things that I want to make sure the conference attendees take away. First, the sense that you're doing something right, the very first Teaching Professor Conference that I went to, I figured out, you know what, I might not be perfect, but I'm doing something well. And my guess is you are doing something where the students are doing the work in class. And we want you to feel proud about that. We want you to be happy about that. And ultimately, we want you to build upon that and expand it further. And the second thing that we would like attendees to get is some confidence or enthusiasm to come back and try something new. We're going to try to pull out as many good strategies as we possibly can from the collective. And hopefully one or two of those ideas resonate with you. And you've got some great things to come back to try next semester. I think talking less and teaching more is a very effective teaching strategy. But it does require a little bit of front-end work for you as the instructor, and we're going to try to help people figure out, this is something they can pull off on their own.

Tierney King 12:06

I want to take some time to share some insight on the Teaching Professor Conference, which you still have time to register for. It's definitely not too late. So there are numerous sessions you can choose to attend that I promise you, you'll find so many resources you can use. From assessment techniques, gamification, diversity, equity and inclusion, faculty support, instructional vitality, student engagement, there's so much to choose from. And not only that, you'll find that you're truly surrounded by people who love to teach, and who share so much in common with you. Although networking isn't a requirement, it's one of those things that happens organically. And I think that's where the true magic of this conference really happens. I'll also be including, in the resources section, The Best of the 2021 Teaching Professor Conference free report. So you can download this and it actually has articles written from our past presenters about their presentations. There's a ton of great information in this. So if you're still debating on whether you should go to this conference, take this as your sign that you should go. It's definitely a once in a lifetime experience. Whether you're driving to work or you just need a 15-minute think session, we hope the Faculty Focus Live podcast will inspire your teaching, and offer ideas that you can integrate into your own course.