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Christopher 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 investigation. And so the cycle continues. Today our guest is Dr.

Jay Banner. The FM Bullard professor in the Department of Geological Sciences in the Jackson School of Geosciences and director of the Environmental Science Institute at the University of Texas at Austin. [00:01:00] His research focuses on climate and hydraulic processes, how they are preserved in the geologic record, and how human activities affect the sustainability of water resources.

Dr. Banner's, K 12 and community engagement initiatives include Hot Science, cool Talks, the Scientist in Residence Program, which partners STEM graduate student researchers with K 12 teachers, and a new project that partners, researchers and community members to address resilience challenges in underserved.

Communities. Jay is a member of UT Austin's Academy of Distinguished Teachers, a recipient of the Friar Centennial Teaching Fellowship Award and the UT System, Regent's Outstanding Teaching Award and a fellow of the Geological Society of America. Jay is also the 2024 recipient of the [00:02:00] Cherry Award for great teaching, an international award housed here at Baylor University, and which includes the recipient spending one semester in residence teaching Baylor undergraduate students.

We are delighted to have Dr. Banner on the show to discuss the impact of having great teachers, learning from your colleagues and teaching outside the classroom.

Jay Banner, thank you so much for joining the show today.

Jay: Oh, you're quite welcome Chris. It's, uh, it's nice to be here. I'm looking forward to, to chatting.

Christopher Richmann: Well, I'm gonna start by stroking your ego, if that's okay. We, you've been, uh, named, uh, the Cherry Award for great teaching here at Baylor, which is a pretty prestigious, uh, award, this national award that Baylor, um, gives for, for great teaching as it says there. And I'm curious what you think that. Award [00:03:00] says about your teaching.

What does it recognize or validate in how you do what you do as a college instructor?

Jay: Thank you, Chris. I, I appreciate you, uh, you acknowledging that that award, it's, it's been pretty amazing, uh, and humbling and everything since receiving it. Uh, just finished semester of teaching at Baylor and it was a great experience. Um, so in terms of, uh, you know, what was you think the award, uh. Or what I think the award recognizes about my teaching.

I wasn't privy to how the award committee made their decision, but I like to think that this award recognizes a few things about my teaching. I think for one, uh, I always try to work to make complex ideas, easy to understand by like breaking them down into some fundamental concepts, right? So such as there's so many earth processes.

Things that I teach about that can be thought of in terms of some just basic laws of physics, whether it's how the [00:04:00] interior of the earth works, uh, and plate tectonics, or how the atmosphere works. Um, there's just some real fundamental concepts there about, you know, hot air rises, hot magma rises. And when things cool they descend.

So just going back to some of those basic laws and, uh, things that everyone's had in their, you know, middle and high school education and then building on those and making them incorporated into more and more complex ideas and then returning to them, uh, multiple times over the course of a semester.

Those are, I think that's one thing that I really strive to do that I think. Uh, resonates with students, uh, based on their feedback. I think another thing about my teaching. Uh, according to students over the years is that I have a passion for the subject that I'm teaching. And I guess I've always thought that was maybe just my nervous energy from speaking in public, which I've kind of always, always had a little bit of a fear about and have learned to kind of [00:05:00] harness that.

So maybe it's just me channelize channeling the fear of public speaking into some energy that maybe makes it seem that I'm passionate, but I also. Yeah, I love the, I love the topics that I teach and I love, uh, connecting students to it and to be able to make them see things sometimes through my eyes of how, how cool things are in terms of understanding how the earth works.

Like, holy cow, you know? And how did, how did they figure that out? That, that this is how this, this works? Um, yeah, maybe, uh, maybe a third thing about my teaching would be. Um, I dunno. I like to use sarcasm in my teaching and references to popular media, uh, uh, that are relevant to the topic and sometimes together.

Um. Sometimes it may not be that relevant to the topic if it makes for a more sarcastic joke. Uh, yes. Obviously sarcasm is something I've been wrestling with my whole [00:06:00] life and I try to hard, I try to harness it to keep student students' attention, uh, going Yeah. But those, those are a few things I think that, um, fit into, uh, maybe me being selected for this award.

Christopher Richmann: Well, I really love that you recognize the importance of breaking down complex, uh, concepts into or more readily understood i ideas. That is a problem, at least I find in my own teaching. There's like, it, it always, there's always this potential. Problem lurking. And sometimes we call it the curse of expertise, which is that, you know, the stuff that I'm teaching, I know it so well. Um, and I, and I know it at. Uh, at a kind of an easy abstract level that I forget that when I'm working with this big concept, it's actually a bunch of little things. I, you know, it's always, that's always a temptation to just kind of forget that. So you just voicing that as something, you know,

Jay: See.

Christopher Richmann: to [00:07:00] your teaching strategy, I think is helpful for, for all of us to just kinda be thinking that that way.

Jay: Right on. Good to know.

Christopher Richmann: Now in your development as an instructor, you know, we got the opportunity you, um, on campus both in the selection process for the Cherry Award and when you were, uh, in residence on campus. This last spring, we got the opportunity to hear more about. What kind of made you as a teacher, what your self understanding is as a teacher?

Like who influenced you, um, in your approach to teaching and in your approach to your subject. So I, you know, you've emphasized the impact that both teachers and colleagues have had on your teaching. Can you boil that down for us? What are some big lessons that you feel like you've taken from your own teachers and colleagues when it comes to your craft of teaching?

Jay: Yeah, sure. I, I learned so much from other teachers. You know, there was a point in my, [00:08:00] early on in my career as a scientist, so I'd be attending talks at national meetings and I was, you know, started out really just trying to gain the information. That the speaker was providing, because that would increase my knowledge, my knowledge base for the research that I was engaged in.

But then I found myself starting to pay attention to, well, this is a pretty good presentation. What's making it pretty good? Or, this is, this is not very good. I'm having a hard time understanding what the speaker is, is trying, the information they're trying to deliver. I'm, I'm not getting, I'm not receiving it.

And so I would try to analyze what is it about? How they're going about things, uh, that is making them very effective or not, and how could I incorporate those effective things and avoid the ineffective things? So, uh, I think, I think, I think it's common for a lot of teachers. If I, if I found some, if I kept hearing someone was a really good teacher on our campus, I would go ask 'em if I could just sit in and watch their, watch them teach.

Uh, then in, [00:09:00] uh, then in 2000 we. A colleague and I started this program called Hot Science Cool Talks, which three times a semester on a Friday night, we bring invite a speaker. Most usually a UT speaker, but sometimes from outside. Uh. And we ask them to talk about their cutting edge research, their excitement of scientific discovery, and we work with them to, uh, to make their stuff more accessible.

But we start with people who are really good to begin with. So it's usually not that much tweaking to make what they they are doing and how they're delivering it even more accessible. But I, I find that again, uh, the, I, I. Enjoy this so much, right? It's a lot of work to put all this together. But the reward is working with these speakers and listening to them and seeing how they go about, uh, presenting, uh, their complex research in ways that, you know, that's a wide open audience, right?

We say it's it age eight to 80, right? Everybody's there. So these [00:10:00] are people who are particularly effective at reaching all audiences and. I could pick

out a, a couple of, uh, colleagues, specific colleagues over the years. That have had a big influence on me, and one is, uh, Bob Duca, professor in music here at the University of Texas.

He's a colleague who has had probably more influence on my teaching, uh, than perhaps anyone else in my career. Right. He's just really good at, uh, explaining how to get to the key concepts. And any kind of communication and not get bogged down in delivering, you know, fact after fact. Uh, he's just a really outstanding communicator, sets a great examples for all instructors.

Um, another is, uh, my PhD advisor, Gil Hanson. Uh, Gil had a way of, uh, posing scientific questions. That made you so compelled to want to find the answer through your research. It was just [00:11:00] so motivating in, uh, how he would just couch these questions like, you know what, if we could figure out this, then we would know if we could figure out this from these, the, this outcrop of rocks over here, well then we could figure out how this whole mountain range worked and how it was originated.

And it was, uh, just, uh, and not a, in a, in a very low key way. It was, uh. He had a real gift and his students, uh, me being one of them, his graduate students and undergraduate students who worked in his lab were just super motivated and really, uh, I think that's pro probably helped feed my passion for science, uh, and for teaching.

Yeah.

Christopher Richmann: Yeah, you've talked about how, how passion is something that your students recognize in your, in your teaching. And, and there is, you know, not that everything needs to be boiled down to, to research on, on these topics, but there is some research that shows that that passion is somewhat contagious, right?

That, that, you know, if the instructor really does kind of

Jay: Mm-hmm.

Christopher Richmann: that, then [00:12:00] students can kind, kind of catch the fire as it were as well. And I like to think that the same is. Is true, or at least potentially true for curiosity as well. That's kind of what I'm hearing you say from your, from your, uh, own doctoral advisor is just, it's just curiosity, right?

Like, this question opens up this question and opens up this question, and then we'll know this thing that will help us ask the better question for this thing. Right. It is just curiosity. It's exponential.

Jay: Uh, exactly. I think you really nailed it there. Curiosity is something that Yeah. My PhD advisor really instilled in his students. Right. And curiosity in the IS and curiosity fuels passion. Right. And, uh, it, it makes it, it makes it fun. It makes it a puzzle and, you know, you just want to unravel things and see how things work.

It's, it, I feel fortunate in my career to be driven by curiosity and, uh, and a love for what I do. I recognize that, uh, I'm, I'm very lucky in that regard.

Christopher Richmann: I [00:13:00] love also that you've mentioned a an instructor, Bob Duke, uh, a colleague of yours at UT Is an inspiration for you who is not in your field at all, who's just like, I don't know if, I don't know if there's such a thing as an opposite of geosciences, but it would seem to be like music is probably in that arena of whatever's opposite to, uh, to a hard science.

I.

Jay: Yes. So in fact, when we, uh, co-led this program at UT for about 18 years, uh, called Scientists in Residence, and what we did with that program, Bob and I, is we worked with graduate students in the sciences and we partnered them with K 12 teachers in their classrooms and the K 12 students and stem. K 12 teachers.

And so those three stakeholders, the teachers, the grad students, and the K 12 students all all gained something from this, right? The,

Christopher Richmann: Yeah.

Jay: the students got a role model, right? Uh, I, I [00:14:00] could go into these classrooms and, uh, try to engage the students, uh, middle schoolers, but I found when I would go in and just sit in the back and eng gate and, and watch.

How these, uh, scientists and residents, we called these graduate students in the classroom and watched how the students, a lot of times I'd sit at the front, 'cause I wanted to see how the students were responding to the graduate student and they looked at them like, wow, that's someone who's like, uh. You know, close to me in age, right?

They're cool. They, you know, they, the way they're speaking, the way they're dressing, the way they look, they're cool and they're talking about science. And I could tell by the looks in their eyes, or maybe I read too much into it, it's like, wow, I could do that. Right? What an inspiration for a graduate student.

And then the graduate students fed off of that too. The teacher got a, a great, uh. Intent expert in their classroom to help them make their lessons more exciting, more, more real world like, Hey, here's, here comes a [00:15:00] scientist in our classroom. They're teaching us and working in, uh, aspects of what they do every day in the laboratory or in the field.

They're making science like a real living, breathing thing that, that is interesting and fun. Everybody gained, but we were so surprised that the biggest gains. Or from, for the graduate students, these STEM graduate students, that they gained a real appreciation for how important this kind of reaching out to audiences that are not just university students.

Right. And that instilled in them how important it is to be able to communicate effectively. So they came outta this program, uh. Really effective communicators. I can remember one, one way we did this, and this comes back to Bob Duke, who co-led the program with me. He, Bob had the great idea. It was something he had experience with in his teaching is to, uh, have this graduate students when they go in their classroom, record themselves teaching.

Right. [00:16:00] And then we would gather in our graduate seminar on science communication, Bob, I and the, and the dozen or so students that were in the program, right. We'd gather and then the students, we'd have the students take turn playing their video. Right. And then Bob and I would give them feedback, right?

And so the key to feedback, of course, is if you can do it constructively, it can be very effective. But what are, what are, what are two more? Um, scary things other than, oh, here's two professors. They're gonna, they're gonna be criticizing me, but first and foremost, I'm gonna have to watch myself speak. This is from the student's, graduate students' point of view.

It's like, who wants to watch themselves speak? Right. Probably as if I wind up listening to your podcast, listening to this, I'm, I'm thinking, really? Do I really sound that way? Right. It's just, it's. Those are two very difficult things to do. Speak publicly in front of your peers, and then have experts criticize it.

So the students would, the beginning of the semester was always so interesting because when we do this for the first time, a third of the [00:17:00] way through the semester, once we train the students and they went into the classroom, and then they, uh, they, we would work with them on their lesson plans, how we can make it more effective, how we could break down these complex processes.

And to, right, that graduate students would tend to want to, just like I was when I first became a professor. They just wanna share every bit of knowledge they've gotten during their PhD research, right? Instead, how can we break this down to the thing that will help the students in your class think most effectively, think scientifically, how to be discovery.

Uh, driven kind of scientist. So the first time we would, uh, review their videos, we'd say, okay, who, who wants to go first and show their video? Nobody wanted to go, right? Everybody's like, eh, that's the last thing. That's the last I'll go next week. Right? It's the last thing I want to do. But you know what?

We, we, we do the first one. And the students would see how we, I say we, but particularly Bob and I learned from Bob how to do this effectively to give [00:18:00] feedback that is just so positive and encouraging, yet still effective, right? It's not just saying just very nice things, but to actually talk through it and say, we're all in this together, right?

How could we all make this something better together? Once the students saw that, that's was the name of the game, instead of like. No one wanting to volunteer. All of a sudden now, okay, what's go next? All the hands are up. It's like, oh, do me, do me. Right?

Christopher Richmann: Yeah. Yeah.

Jay: So, yeah, that's, uh, Bob's, uh, you know, the, the enthusiasm, the style, the, the, uh, you know, compassion and, uh, way to treat others with respect.

Uh, you know, these are all things, uh, I, I got much better at from being in this program with Bob.

Christopher Richmann: I get the opportunity at Baylor to, as part of my work at the Academy for teaching and learning to do teaching observations for faculty. You know, they oftentimes, they're just reaching out, [00:19:00] uh, to us and it's sort of a volun, voluntary sort of process. And I mean, I know that I'm always enriched, even if they're reaching out to us.

For, for help and for feedback. I'm always enriched when I see someone else teaching. I'm thinking, oh, they do that thing really well. Like, I could be doing that too. And, and part of what I love about that is I'm almost never doing a teaching observation, uh, in an area where I'm an expertise. It's very, very rare.

Rare. And so, you know, I have this whole. This whole palette of things that I think about that are, at least in the abstract, they are translatable across disciplines. Like certainly there are, there are pedagogical practices that are, that are embedded in our disciplines. You know, like what kind of examples do you use to, you know. Flesh out certain ideas and that kind of thing. But a lot of it is, it's just, you know, the basics of communication or the basis of interpersonal relat relationships or the basics of how [00:20:00] do you, um, how do you, like we started with how do you break a big concept into little, little things like that. So do you find that that kind of approach or thinking about that enters into the way that you're working with the grad graduate students as well?

Jay: Oh, for sure. Yeah, and these would be graduate students in all, all disciplines. So you, you know, you mentioned Bob, he's a music professor, but his, his expertise is sort of, uh, uh, around human learning, how the brain works and how we learn and our cognitive processes. So he has expertise sort of in how the brain works and how we learn.

And so that. It's something that helped bridge from music to science, right? I'm, I'm, uh, simply a geoscientist, but we would have engineers in there and we'd have geographers, we'd have biologists, uh, things that, you know, Bob Norra had particular expertise about. But you know, it's like the, it's just what you're talking about that watching others teach.

And you could tell, even though you're not, not nearly an expert in their subject, you could tell when they're [00:21:00] doing it effectively because you're understanding. Something about a subject you know, very little about. And they're, and they're bringing it to you that way. And so, you know, I think, I think what I'm hearing from you is that you're learning and you take those and you adopt it in your own teaching.

And as I do, as I've explained, I do, I, I think a bottom line here is that, you know, all teachers are very effective, the effective teachers. Are effective thieves. Right. We steal I good ideas from each other because Right. None of this is of course, copyrighted or, or anything like that. If someone's, someone's a really effective communicator, right?

That's there for all the world to see. Yeah. Now if you steal there, if you steal there, it's lame, sarcastic jokes, you know, that's, that's copyright infringement.

Christopher Richmann: maybe you wanna

Jay: luckily,

Christopher Richmann: for that?

Jay: my mine are so lame. No one steals from me. I'm safe.

Christopher Richmann: key right there.

Jay: That's right.

Christopher Richmann: Uh, well, I'd love to pick up that thread a little bit more too, about teaching [00:22:00] across different contexts. This is something that I think about, uh, quite a bit. 'cause I do, I do teaching not only in. Uh, in my own classes with, you know, enrolled matriculated students who are paying tuition and who need a grade at the end. But as someone who works in the Center for Teaching and learning, I do a lot of what you might call like informal or professional teaching as

Jay: Okay.

Christopher Richmann: also do teaching in, in my church. And I think about what's the, what's similar and what's different across these contexts. The obvious. Similar. Uh, the obvious difference is that when I'm teaching my undergrads or my graduate students who are enrolled students, um, I have to, I, I get to, I get to have to whatever grade them, right?

And so there's that dynamic that's always at play in, in, in that. Um, and because of that, there's. There's clear like assessment expectations that are not always present in those less formal or professional kinds of, of learning. So I'm wondering

Jay: Sure.

Christopher Richmann: about that as when you, because you do so much work in, in teaching in the community [00:23:00] as well, how is that different

than when you're teaching undergrads or graduate students in a, in a university setting?

Jay: Yeah. Yeah, that's that. That's. That's a great question. I surprisingly, I find that what works for one group works for all groups in terms of, you know, breaking down complex concepts into the fundamentals as I talked about earlier, the enthusiasm, right? Um, humor, uh. References to popular media, all the things I talked about earlier to your first question.

I find that they work across all groups. Sure. You have to toggle up and down a little bit depending on what level of, uh, prior education someone has, but having that approach, and I find that, yeah, you're right, the assessment piece is a thing that can be really different. But the way I, I guess the way I approach it is if you're getting them engaged, whatever, whoever the students are, whether you're assessing them or not.

If the more engaged they are, the better they're gonna learn. And so, you [00:24:00] know, the assessment is then just one outcome of the group that you're more carefully monitoring than the other group. But yeah, I find peop people are people, learners are learners, and, uh, what, what works for one, works for all. Um, yeah.

Um, not to, and not to belabor a point too much, but, uh, you know, I find that my, my sarcastic jokes are considered lame by all groups, right? They, they eat. They equally groan at my dad. Everybody groans at a bad dad joke.

Christopher Richmann: Uhhuh. Well, and along those lines too, you've had the opportunity to teach Baylor students as, as part of, um, you know, this award as being the, the Cherry Award recipient. And even though geographically there's not much distance between UT and. And Baylor here. Uh, I assume that there's cultural and contextual differences.

I'm wondering what you, what you learned, uh, you know, did you, did you feel like you [00:25:00] learned about something new about teaching or about how students kind of interact by teaching in a different university setting?

Jay: Um, I think so. I, you know, um, I guess I'm, I wouldn't, I'm not, I wouldn't be, uh, excited to, uh, to. Direct comparisons to student bodies. 'cause I think,

Christopher Richmann: Yeah.

Jay: are, students are students. And I found students at ut, students at Baylor, they're a lot of fun to teach and to engage with. Yeah. Things I found about Baylor students are that, um, you know, if I had to make a, I had to make a comparison, I'd say maybe on average.

They tend to be maybe more conservative in their, in their views, um, than the average UT student. And I think that's just the nature of what's different about the two universities. But at,

Christopher Richmann: Hmm.

Jay: the end of the day, students are students and I found Baylor students to be curious, uh, very respectful, very friendly and [00:26:00] outgoing.

And maybe the thing that. My biggest takeaway from my time there is that the students at Baylor and even the staff and faculty are all very positive, you know, about the place that they're in, and, uh, I've taught and been at a number of universities and I think that's, that's the thing that kind of stands out for me about Baylor.

Christopher Richmann: Yeah. There's, you know, wherever you, wherever you teach, there's always variety within the student body. Right. You know, so,

Jay: Mm-hmm.

Christopher Richmann: don't want to paint with too, with too broad a brush. But then there's also something that's kind of like overlaying, uh, maybe culturally that's, that is, makes a difference I think to some degree with each institution that you might, you might teach at.

Jay: Mm-hmm. Yeah.

Christopher Richmann: And that's just part of, you know, you were talking about prior, you know, assessing the prior knowledge of your, of your audience. That's just part of that process too. Like prior knowledge is j is not just what prerequisites have they, uh, you know, uh, finished before they can [00:27:00] get into this class. But it's also what life experiences, you know, what, what may, you know, may, what may be like. Um, standardized test scores are, they're bringing in, you know, on average those kinds of things. Are they coming from rural backgrounds or more urban backgrounds? All those sorts, sorts of things come into play when we talk about prior knowledge, right?

Jay: Oh, for sure. Yeah. And I, I also, as you may know, enjoy teaching in field settings. 'cause I think, uh, learning is so vivid when you see it in the field. So I could think of field trips I've led, like into caves where we do our research. To try to understand how the inside, you know, of a, of a aquifer works and water resources.

You go into a cave and you could see all of that. And so field trips that I've led, I can remember leading field trips where signed up for it are other professors, grad students, undergraduates, uh, K 12 students, and then just people in the community. We could have all of those together on one trip. So kind of reading, reading the room, right, to try [00:28:00] to try to get a sense of where people's.

Uh, knowledge base is, is, it can be challenging but interesting too. And I think if you're always ready to come back to these basic concepts that help build into more complex ideas, and I think it's, it's kind of audience ready, right? Bulletproof, right. No matter, no matter who's, who's there. I, I find that there are things that resonate, uh, no matter what someone's background is.

Christopher Richmann: And when you've got those very diverse with you on a, on a field experience, are you finding that there's a fair amount of like peer teaching that's happening as well? Because there's different levels of expertise with within the group? I.

Jay: Oh, for sure. Yeah. And if the, if that group includes. You know, graduate students or undergraduates who I'm familiar with, maybe they're part of my research group. I'll really like to, you know, use them as a, you know, we could have a back and forth in posing and [00:29:00] answering questions. If we start off that way, like I'm answering questions and I'm asking and they're answering for example, or, or vice versa, then everyone else sees.

They read the room, they go, oh, okay.

Christopher Richmann: Yeah.

Jay: it's pretty cool to ask a question here, right? That's often the hardest thing sometime is getting students to, uh, feel that, you know. Their questions are worthy questions, right? There's no bad questions really. And so, but it, a lot of times it's hard for, especially someone who comes in and go, ah, I have nothing to do with the University of Texas or Baylor University, but I'm on this field trip with all these people from the university, so, you know, I certainly don't have anything worth contributing.

But once they see that, you know, that there's back and forth and, um, every question is valued that, um. Yeah, that it makes everyone feel like they, they're, they're part of the process.

Christopher Richmann: Yeah, I don't know if you teach any like true like introductory level courses, but this is something that [00:30:00] I've really, really tried to lean into in my. level, uh, church history courses that are basically requirements for the university, that by almost by definition, that means that I'm gonna have students with a really wide range of prior knowledge with these, because there's no prerequisites.

Everyone has to take this course. So some are gonna come in, you know. Like quoting Bible verses left and right and some are be, some are not, you know, not of the faith at all. And so I've really tried to lean into like the peer teaching and asking questions. And it can be difficult with freshmen 'cause they're also still kind of just getting used to college.

But I dunno. Do you teach any introductory level courses?

Jay: I do, yeah. Is one I teach called Sustaining a Planet, which is, uh. One of, uh, the University of Texas's signature courses. This is a set of courses that all undergrads are required to take one of. Yeah. And, uh, it, it, we have people from, you know, 250 students. They cover just about every, all 14 colleges at [00:31:00] the university.

And the course I taught at Ballor Red, uh, it was a very similar course to a hundred students. And they came from many different parts of the university. So yeah, I'm, I'm, I'm well familiar, familiar with, of what you speak of, but I'm curious, Chris, of what are, what are, what's a thing or two that you found to be particularly effective when you have this wide range of backgrounds of students and how you get them?

Uh, all, all engaged to the same extent.

Christopher Richmann: Well, I've taken kind of a. approach to doing group work in my courses. And so they are, they have, in the current iteration of the course, more than half of their grade is based on stuff that they do together as a group, and they share that, that grade. So they're doing quizzes together, they're doing, um, small writing projects together.

They're even taking. Exams together. And so

Jay: Oh.

Christopher Richmann: my intent with that is really just to show them like, I, I believe [00:32:00] you are individually going to learn as you learn together as a group. So I've really tried to lean, lean into that and um, and also that's good for, my classes are not huge, but they tend to be somewhere between like 30 and 60 students.

And so that larger kind of class, um, you know, it makes it easier for more students to talk too when they're working in groups than just having a whole class all the time kind of discussion.

Jay: Sure. No, that's, that's great to hear. I find that a really interesting challenge too in the 250. Uh, class, student class that I teach is how we can make smaller groups during the course of a 50 minute lecture to set aside enough time where there could be meaningful discussion and how they talk with each other than how they share out to the whole class.

Uh, that's something I've been working on for a while. I feel like I'm, I'm always getting better at it, but there's, there's so many, there's so many ways that could [00:33:00] pay benefits, so I, I just keep at it, right? Everyone feels like they're all part of it. And how do you.

Christopher Richmann: Yep.

Jay: It, it, it's great. As opposed to, you know, I, maybe you've heard me talk about my experiences before when I was an undergraduate boy, I, I'd be the one in the 200 student class sitting way at the back of the lecture hall, the very last row, because I don't want to be called on.

'cause I didn't want to engage because I didn't think I had anything worth. Worth saying, and it was, you know, public speaking, all those things, all those barriers were really big and real for me when I started out at college. And it, it affected my learning, it affected my career path. I started out as a chemistry major, so, excuse me, all large classes.

And I felt kind of dissociated from it all.

Christopher Richmann: Hmm.

Jay: And it wasn't necessarily that chemistry teachers at the University of Pennsylvania weren't very good, and therefore, Jay Banner is disillusioned with

chemistry. It's, it was with what Jay Banner's, uh, you know, where he was, uh, in terms of his [00:34:00] life and career at that time, that he was very tentative and, and unengaged And I.

I realized, wow, that's just the opposite of how a classroom should be. Once I be, once I wound up on the other side of the, uh, of the lectern, so to speak, and now I do everything I can to make it an experience where that's the last thing students wanna do to sit at the very back. And maybe one of the reasons is they know if they're sitting at the back, I'm gonna walk up the aisles as I'm lecturing and start engaging everyone.

And no one, no one can escape. The eyes of Texas are upon you. Do not think you can escape them.

Christopher Richmann: Uh, that's good. And that

Jay: But if.

Christopher Richmann: actually one of my most, uh, my most frequent recommendations to faculty when I am, uh, doing teaching observations as well, is to move around the room and to get close to students as you're, it's such a simple thing to say, but you have to develop kind of the muscle for it too.

Jay: Absolutely. Yeah. That's [00:35:00] so important. Yeah. And there's a lot of just kind of simple, fundamental things. And again, I would point back to, uh, my colleague and mentor, uh, Bob Duke about that, about how you engage students in this kind of conversation, even in a, a large, even in a large room. Right. There's some very simple things that once pointed out to you go, oh yeah, that makes so much sense that you know, if you're in a large room and you're just talking to the one student and you're right, right with them, that's very different than when you're kind of standing across the room and talking with them, because now everyone in the room can see who's talking and kind of BA as, as they're talking back and forth.

Everyone is sort of part of all of that. And then asking in a, in a very, um, again, positive way, like asking someone else what they thought of the first student's answer, uh, in a way that if you create the culture in the classroom where this is all accepted in part of how the classroom works, then everyone gets used to that.

And then, you know, [00:36:00] things such as cold calling. Right where that was what I was totally afraid of as an undergrad, cold calling becomes something, oh, well this is going to happen. And so I, I will just accept that it's

going to happen. And oh, by the way, the instructor is very nurturing of whoever, uh, he or she is asking a question of right, asking a question, and rather than.

You know, a, a thing to really avoid that I didn't pay attention to early in my career. You ask a question, you don't get the answer you want, right? You're just impatient, right? You're just looking, you know, you shouldn't be looking for someone to just. Say the right answer. 'cause then not a lot of learning happens, right?

There's learning in the struggle. Right? And so how do you, how do you create that and make it in a good natured, very constructive way? There are, there are ways to do that with some forethought going into it. But if you just say. Oh no, that's not what I was looking for. And then you just turn and go look for the next student who, who, who can gimme the right answer, right?

That person feels abandoned, right? There's no, they're not [00:37:00] allowed to struggle. But if instead you're able to ask them, well, if you can't answer that question, let me ask you, you know, that's in your mind. But then you say, well, let me ask you this, and then you go down to, uh, sort of maybe a more fundamental level of understanding, and then you could start building up from there.

So.

Christopher Richmann: Well

Jay: it's, uh, the people who are really good at it seem like they're just naturals. You know, one thing I share with my, the graduate students in terms of whether it's a scientist in residence program or teaching my own graduate students effective communication, um, that's, it's really important to think through how that works and that.

Christopher Richmann: Yeah.

Jay: Um, you've just got to, you, you just gotta take your audience in, into consideration. And also don't look at these people who are, you know, just icons of effective communication and go, oh, well that's, you know, whatever. That's Steve Jobs, right? He's just, he's just really effective or that's. That's, uh, maybe some [00:38:00] politician or some actor, or even just a teacher at the university.

It's like, oh, well, they're just really good at that. I, I wasn't born with that gene, right? Is oftentimes you hear, I'm, that's not something I'm good at. I'm like, no, you couldn't, you couldn't, you couldn't be further from the truth that everyone has the capability of being an effective communicator. Those who are effective are not necessarily based on their DNA.

It's people who really give a rip about being good at it. And put some work into it and a lot of really careful thought about how they're gonna go about doing it and learning from others who are good at it. So yeah, maybe, uh, maybe, maybe, yeah, to, if I sense we're getting towards a finishing note, it would be, you know, anyone who thinks they can't be a good teacher, I would say no.

You can, uh, it's just a matter of the want to and putting the time and effort into, yeah.

Christopher Richmann: Yep. You're speaking my language there. Yes. Uh, I, I love [00:39:00] that. And it's, uh, you know, what we, what we call a growth mindset, right? We, we want a growth mindset, not only for our students, but we want a growth mindset for ourselves as instructors as well. So I really appreciate that. I do think that's a good note to end on.

So, Jay Banner, thank you so much for joining the show and have a great upcoming semester. We'll miss you at Baylor.

Jay: It's coming up quick and it, boy, that semester at Baylor went by so fast, Chris. It was, it was a blur, but it was fun. And, uh, yeah, the semester here starts in a couple of weeks and I know it's gonna feel like in about 20 minutes it's gonna start, it comes up so fast. So I appreciate, uh, taking the time to, to chat with you.

I enjoyed it.

Christopher Richmann: And our thanks again to Dr. J Banner for joining the show today. In this episode's show notes, you'll find a link to one of Dr. Banner's community Engagement Projects , kressel or Community Resilience integrated into an Earth [00:40:00] System science learning ecosystem. If you've enjoyed this or any of our shows, don't forget to subscribe and give us a five star review.

Well, that's our show. Join us next time for Professors Talk Pedagogy.