Transcript

[0:01] (music)

Derek Bruff: [0:05] This is Leading Lines. I'm Derek Bruff. I just spent 48 hours at the POD Network conference in Pittsburgh. The POD Network is the professional organization for teaching center people, my people. And it's always invigorating to be a part of the POD Network Conference and to interact with so many people who work with others in higher education to become more effective teachers. Since we started Leading Lines, I always make sure to bring my microphone to POD. And I'm excited to bring you, dear listener, an interview, I conducted while at POD this year. Viji Sathy and Kelly Hogan both work at the University of North Carolina at Chapel Hill, where they not only teach hundreds of students a year, but also support their fellow UNC educators, in a variety of ways. Viji is a teaching associate professor in the department of psychology and neuroscience and special projects assistant to the senior associate dean of undergraduate education. Kelly is a STEM teaching professor in the department of biology and associate dean of the Office of Instructional Innovation.

[1:09] Their work inspiring and equipping educators extends far beyond UNC, however. You may have seen them in The Chronicle of Higher Education, or The New York Times, or The Atlantic, or heard them on the Teaching in Higher Education podcasts with Bonnie's Stachowiak. Viji and Kelly have a way of talking about inclusive teaching strategies that helps faculty in all disciplines make meaningful changes in their teaching. I was glad to steal a little bit of their time at the POD Conference to ask them about the intersection of inclusive teaching in educational technology. (music)

[1:47] Well, thanks for talking with me here at the POD Conference in Pittsburgh. Can you start by saying who you are and kind of what you do at UNC Chapel Hill briefly?

Kelly Hogan: [1:58] Sure. My name is Kelly Hogan, I am a teaching professor of biology at

UNC, Chapel Hill. I'm also the associate dean of instructional innovation for the College of Arts and Sciences.

Viji Sathy: [2:09] My name is Viji Sathy and I am a teaching professor in the department of psychology and neuroscience. And I have position at our office of undergraduate education as a special projects assistant to the senior associate dean.

Derek: [2:23] Sounds good. Here's a question I've been asking lately in some of my interviews. Can you each tell us about a time where you realized either that you were a teacher or that you wanted to be a teacher? And Kelly, I might know what your answer is, given our lunch conversation today.

Kelly: [2:41] Yes, we had a conversation at lunch where I had stated that I knew from a very early age that I was a teacher and wanted to be a teacher because in high school I started teaching piano to young kids, that continued for a while. And then in college, I found myself tutoring chemistry and really loving that. And then as a graduate student I was in a med school program getting my Ph.D. And we only got to TA for five weeks. And I say, "we only got to," and other people thought I was crazy. So I gave up research funding for a semester to go onto a teaching funding track, so that I could TA a class. So I've known for a long time that I really love teaching.

Derek: [3:24] That's great. What about you?

Viji: [3:27] I think the first time I realized it was probably when I TA'd, of course, for the first time. And I enjoyed teaching statistics. And I had gotten really good feedback from the mentor that I was working with about my teaching. And that was the first time I thought, not only do I like the subject, but I actually like helping people through the subject. But probably there were early signs that this might be a good fit for me, in general, because I was thinking about some of my study strategies when I was very young and I was lining all my stuffed animals up and lecturing to them about some of what I learned. And I later realized that that was probably a really good technique for learning.

Derek: [4:06] Really great retrieval practice.

Viji: [4:08] Exactly.

Derek: [4:10] Yeah. Well, the two of you do a lot of work around inclusive teaching. You've written a lot, you've put together a lot of great resources. And so I want to talk about the intersection of inclusive teaching and technology. And I think probably most of our podcast listeners are generally supportive of the idea of inclusive teaching. I find that some faculty, when they get into these conversations, actually don't know much about some of the research around inclusive teaching. And how, you know, what the faculty teaching practices that we adopt and how, what kind of effect they can have on student success or student learning. Could you, could you share a little bit about kind of how you view those connections between the teaching practices we adopt and maybe some of the research on student learning and student success?

Kelly: [5:02] I think we like to take an approach that every decision you make in a classroom has consequences for different student groups, but to always be asking yourself, who am I leaving out with the structure of my course as it stands or a facilitation technique that I'm using? And when I think about when who I'm leaving out, is there something I can do to bring more structure and more inclusion to what I'm doing? So a standard way of interacting with students is to pose a question to a whole class, and then nobody answers, a few people do. It's the same people. And I've even heard faculty sort of berate the students like, "Come on, why is nobody answering me?" Well you're leaving a lot of people out of that conversation and that learning. So technology is a great place to use classroom response systems that way, now everyone gets a voice.

Derek: [5:58] You shared, I got to see you guys present yesterday in one of the sessions here at POD. And I think you shared some results from your own classroom in terms of how your course grades have changed over time, thanks to adopting some of these structures. Can you share a little bit about that?

Kelly: [6:16] Sure. When I first started teaching, I had no idea who was doing well, who wasn't. You know, you see a grade distribution at the end. But that's about it, and then many years into my teaching, I received data that showed who was receiving certain grades based on race and ethnicity data. And they were really disheartening. From those differences where they were fairly high D, F, and withdrawal rates, but much higher rates for my underrepresented students in the classroom. And from those data, I decided I really need to do something to level the playing field. And I really started to work at what we understood to be important in learning. And not just for some students, but for all students. And to just build that structure into the class for every single person.

[7:11] So thinking about different ways to use technology and include students in the in class face to face time, how to use collaboration in the class time, and mostly to think about the structure of the course, which I think is something a lot of people lose in the conversation of inclusive teaching, which is not news to probably your listeners, but it takes distributed, repeated practice to learn and when it's optional, only some students will do it. And the students I was potentially trying to reach the most, might need that built of accountability into the course. So that was sort of the method of the redesign. Over time, I've gotten much better, because your first few semesters of doing something new generally stink, but even those first few semesters made a big change. And over time, I've seen the achievement gaps lessen. And I've tweaked things so many different ways to just think about how I'm including more students.

Derek: [8:15] And I want to talk about some of those practices, specific practices, in a minute. But Viji, can you say more about this framing around structure? This is something that's really clear when you guys start talking about inclusive teaching, kind of frame it around adding structure to your class. Why do you frame it that way for folks?

Viji: [8:34] That's a great question. I think one of the reasons we frame it that way is because when you don't have structure, just like Kelly said, when you don't have structure, people interpret or make assumptions about how things should work. And, and we talk about this in the article that we wrote. If you're trying to get together a group of people with the intention of them meeting and talking to one another and mingling. If you don't have structure, those who are uncomfortable with mingling won't do it or they will, or they might do it very minimally. But if you actually say your goal is to meet a certain number of people or have an activity where that's forced, and forced in a gentle way, then you're really going to get people engaged. And so thinking about that, applying in the classroom setting, whatever your goals are for students, that there should be some transparency to indicate what, what your goals are for them, but also for them to understand why you're doing what you're doing. Because a lot of what we do with our, with our courses is really this distributed practice. It's doing challenging work during class time. It's, it's hard, it's really difficult work.

[9:35] And it's cognitively, we know, we know students will have challenges with wanting to do it that way because it is a taxing, it's a more taxing way to work through things. So if we provide transparency about why we're doing those things, potentially, we could mitigate some of the negative feelings that they might have about doing that difficult work. But I think in general, the structure for us, it feels like an easier way to, to guide people through this

process of thinking about, why are you doing it this way and bring some intentionality to not only your practices of facilitation, but course design, office hours, any, any level of engagement you have with a student or you're teaching to be thinking about, how can I add structure to this?

Kelly: [10:19] I'll give you an anecdote because it becomes a mindset once you start seeing lack of structure everywhere. Have you ever been to a summer swim meet with kids fifteen and under?

Derek: [10:30] I have not.

Kelly: [10:33] Well, it is an experience, and a hot, long experience with a lot of chaos. And we both have kids that swim. And one day Viji texted me, or called me.

Viji: [10:43] That's right. (laughs)

Kelly: [10:45] She was at a swim meet and she was said, "Oh my gosh, you have to see this amazing structure that they put in place," because we were used to the chaos. So I'll let you explain.

Viji: [10:52] Oh, yeah. So one of the parents had decided the kids were having a hard time staying in line and knowing which groups that were going out to swim. So he had color-coded the benches with duct tape to indicate which lane they would be swimming in. And then he had marked off the benches so that there were spots for every student, in essence making a seating chart on the bench so that students, and I mean so that the kids, the swimmers, knew I'm in heat one, row three or lane three, so they knew to go which number to go to, and it was all, it was very carefully schematic, so that even the people guiding the kids to the lanes. It was just very clear structure for everyone.

Derek: [11:30] Yeah, and I would imagine for some of those swimmers, it takes away some of the stress of not knowing am I in the right place? Am I up next? Because none of that actually has to do with swimming, right? It's the kind of lack of, it's the stress from the chaos.

Viji: [11:45] Exactly.

Derek: [11:47] If you can take that off the table, then the kids can just focus on swimming.

Kelly: [11:49] And they added visual cues, which is important in classroom too, right? Because a lot of times we tell students something, but we don't add the accessibility with that visual cue, right? And for a variety of reasons, people aren't paying attention in our class at the same level or their language skills aren't at the same level. So having a visual cue is something that's important, right? And so that was something that was done well for the swim meet, but it's something we can take away for our courses too.

Derek: [12:13] So let's talk about this, and I know you guys have a lot of strategies and approaches that you use to create structure in your classes. We like to focus on educational technology in the podcast. So what are some tools or technologies you use and how do you use them?

Viji: [12:31] So one of the tools that we use, and I think a lot of faculty use is PowerPoint. So using PowerPoint for, or other slide presentation software. But thinking through sort of principles of good design with slides. We've all sat through presentations where there were too many words on a slide, too small or the instructor or the person who's speaking is not using the words that are on the screen. And we know we can only attune to either what they're saying or what we're seeing, and so we focus on one and not both. So thinking about ways in which we can look at, I mean, there's a lot of literature on how to present and what good slides look like, slide design. And part of it is just sure there's, there's artwork, there's those kinds of elements, but part of it is just not putting too many words on a slide and certainly not speaking over them in a way that is contradictory to what students are seeing on the slide. So I think those are, that's low-hanging fruit in terms of things we could be thinking about when we are using tools in the classroom.

Derek: [13:36] And I find that some people feel like if they're speaking and there's words to read that somehow those are complimentary. But my understanding of cognition is that no, they compete with each other. If I'm speaking to you and I have a picture you're looking at, those can compliment each other and not interfere. But yeah, the words on slides is pretty terrible. I find when I'm in a conference session and there's slides like that, I just look at my shoes. (Viji and Kelly laugh) It's better to listen and not, not use my eyeballs at all.

Kelly: [14:05] Another tip we give that usually resonates with faculty is to think about if you're doing active learning in a classroom, to give very clear instructions and use PowerPoint.

PowerPoint is excellent at distributing instruction. We both like to use a certain color box that the students get used to. What's in that colored box is always going to be the active learning instructions. And you can read it to students or not, because we know that they're going to look up at the screen numerous times. And that was something we both discovered very early on, without those instructions, you might have well not designed an activity for the students.

Viji: [14:44] Yeah, and I think to pair along with that, one of the things that we see instructors struggle with is silence in the classroom and giving students time to think, especially before speaking to peers or if we're polling in, for example, everyone wants to rush silence because it feels uncomfortable, especially in a group setting. And so a simple tool that I use is my watch to set a timer and to say, I'm going to, I'm going to give you 30 seconds to think silently on your own and it's just to regulate to make sure that I am keeping that time because my tendency is to want to push through and to get to the next activity as is theirs.

Derek: [15:23] Sure. Sure. And you're and if you're like me, like I think I've waited 30 seconds but it's only been ten seconds, right. Like my perception of the flow of time is different when I'm at the front of the room and it's quiet.

Kelly: [15:35] I'll add another one, which is comes from working with students who have had hearing impairments, to always make sure you put closed captioning on a video you show in class, right? It's a really simple thing to do. But an international student who was struggling with the pace of English language said to me, "thank you so much for putting up closed captioning, it helps me so much in learning."And so we forget that there are so many different student groups that these simple acts can help with. Along those lines, we've also been recognizing that Google and PowerPoint, when you run it off Office 365, now offer live closed captioning.

Derek: [16:16] Really?

Kelly: [16:17] Yeah. It's been bugging us that we haven't been using it. So even just this morning, we finally got in there and we opened it up. And we were like, this is amazing.

Derek: [16:27] So I could deliver the slides and I'll use my computer microphone? And Google or Microsoft will close caption that?

Viji: [16:35] Yes.

Kelly: [16:36] Live closed caption and it's good.

Derek: [16:37] And it's good, right? Wow, okay.

Kelly: [16:40] So I think I might start using that in the future semesters and certainly on presentations. I don't see any reason- it just it makes your slides a little bit smaller, but it puts it at the bottom, but it doesn't cover up anything on your slide.

Derek: [16:53] Ok, wow. Well, yeah, that's helpful. And it sounds like not much more work, right? Like you're just adding this extra layer for those students who might benefit from it for, for a variety of reasons.

Kelly: [17:07] And the important point about adding structure is it doesn't harm the folks that don't need it, but it vastly improves the learning experience for the students that do need it, who aren't going to speak up and tell you they need it, or don't realize they need at until it's there.

Viji: [17:18] And I think also too, we tend to think that only certain students have that issue and then we will minimize because it's only one or two people that might have a hearing issue. But actually, the English as a Second Language or, you know, there's a lot of different reasons and it can be as simple as that I've sat in sessions where the person next to me is rustling or having a conversation with, you know, and, and then I can't hear the speaker anymore. So really just even activity nearby might keep it so that I can't hear. But having a mic and using one is very helpful.

Kelly: [17:49] Even I've been watching the Great British Bake Off. And it's English and I still need the closed captioning. (laughs)

Derek: [17:57] So other technologies that you guys use for adding structure?

Viji: [18:01] So this sounds really simple, but the slide advancer. I mean, I go to every class with a slide advancer so that I'm not standing behind, usually, I'm short, so if you are at a podium, basically the computer would cover half my face, if I stood there. They're not built for petite people. So having an opportunity to actually be out in the room with a lapel mic,

just having the chance to actually get out and have interactions, not be tethered to the podium.

Derek: [18:29] And to be out among the students if that's going to be helpful for engaging them and establishing some rapport.

Kelly: [18:38] Obviously, some kind of classroom response system is necessary and absolutely necessary.

Derek: [18:44] I mean, that's near and dear to my heart.

Kelly: [18:45] And we probably don't need to have a whole conversation about all the things that classroom response systems do, but it makes the class so much more accessible for everybody, in addition to giving us, live, real-time data to stop and say. I find myself saying all of the time "not good enough, not good enough. Sixty percent, fifty percent, that's not good enough" We're gonna do another problem, or you're gonna talk to each other, or we'll keep explaining until we get there. And that's inclusion.

Derek: [19:14] Yeah, this is one of the things that I think has occurred to me lately is that there's a whole set of practices around inclusive teaching that I would have framed ten years ago as kind of student-centered instruction. It's just being aware of who your students are as learners, that they are all different, right? But that also we, we know some things about how people learn in general. And when you start to tap into these things and build them into your instructional practice, all those students benefit from these activities.

[19:48] Tell me. So at the session I came to yesterday, you guys were sharing a new tool that you've helped to develop at UNC Chapel Hill, this Course Analytics Dashboard. Can you say a little bit about what that tool is and frankly, how on earth you got it approved?

Viji: [20:07] (laughs) So yes, the tool's called My Course Analytics Dashboard or MCAD. And it took many years to actually get this dashboard off the ground and a lot of conversations with many different campus units. The data are owned by one unit. They, there's lots of different units who have a stake and when information is released. So it was not, it was not smooth or quick, but actually, probably the fastest thing was building the dashboard once all the approvals were in place. So that, that's nice that there are technologies that make it easy once everything is housed in the same place and you have those approvals. But the tool

allows faculty, individual faculty, to look at their course data, as well as the demographics of courses they've recently taught. And allow them to ask questions like, what percentage of my students are first-generation college students? What percentage of my students are Pell eligible? As well as, what is the grade distribution for my first-generation students versus my non first-generation students? And what kind of differences am I seeing from semester to semester, course to course? So I can track longitudinally some, maybe I've made some changes to my teaching and I want to see if that's had an impact on certain subgroups. I might be able to answer that with this tool with a lot, of course, a lot of caveats about the fact that every semester we have a slightly different group of students. So there are some limitations. But the idea is that we really wanted to give faculty another tool to be reflective about their teaching and to think about how they might address diversity and inclusion in how they teach their courses.

Derek: [21:46] I know you have, you've had some faculty use the tool, in kind of a pilot mode. How are faculty responding to it? I know it's early days.

Kelly: [21:57] I think one of our early takeaways is just because you build it, doesn't mean they will all scramble to use it. They're not inherently curious about all the things that we're really curious about. So we have recognized that while you can offer it to a large number of faculty and we've now released it actually campus wide, so beyond our pilot. We have to find ways to have the faculty engage around the data. Some faculty just get in there and once they get in there it's just question after question and they're thrilled, but there are many people that don't even take our orientation training. And there are people that take the orientation training and never go into the tool. There are multiple places where we can lose people along the way.

Viji: [22:48] And in the same way that we talk about, just because you make a great resource for your class doesn't mean that all students will take advantage of that resource. And in our classes, if you, if you make a great study guide and you really want all students to engage in it, then it should be a requirement, right? But we don't require that people use this tool, but it is helpful to think about ways in which we could partner with other initiatives around faculty development so that it is something that people at least take a peek at and know is available so that hopefully it does spark some curiosity about their course.

Derek: [23:18] Yeah, because you guys shared some quotes yesterday from a few of the pilot faculty who kind of learned things about their teaching because of this or about their

students. And they were kind of surprised to find out they had this many students from rural counties in North Carolina, for instance, or this many Pell eligible students. And I think, well, you guys talked about the kind of visible differences among students and the invisible differences. And so this tool makes some of those invisible differences a little more visible. I think it's kind of fascinating because we're, you know, on my campus we have gaps in performance across different demographic groups. And it can be hard to have conversations about that if no one gets to see any of the data at all, right? And so at least with your tool, an individual faculty member can see their own data. And certainly, if they're interested, they can start to develop a little more awareness.

Kelly: [24:10] Yeah, and when you think about how I got my start to really changing teaching and learning, it was because those data were personal, right? We already had some statistics nationwide about the gaps in STEM education, but when they're your own course data.

Derek: [24:26] Yeah, well, I remember I've heard Eric Mazur from Harvard give his talk like a dozen times, right? And, and he had the same kind of realization twenty years ago that he saw national data on how poorly students were learning introductory physics. And he thought, well my students are doing great, right? And then he, he did the Forced Concept Inventory and he realized no, he fits the national data to a T. And that's what motivated him to start make some changes.

Kelly: [24:52] Yeah, so we're hoping once some faculty get in there, it will be motivating. But data in itself won't motivate every faculty member. So we have to have lots of different ways for engaging faculty.

Derek: [25:05] Sure. Sure. Well, couple of questions as we kind of wrap up. So on Leading Lines we try to talk about the future of educational technology, not to really predict it, because I think that's a fool's errand, but to maybe shape it a little bit. So if you can imagine what you might like to see from educational technology three, five, seven, years out, what would you want to see educational technology do or be?

Kelly: [25:33] Can we give a few ideas?

Derek: [25:34] Yeah, sure.

Kelly: [25:36] I'll start with a small one while you think. I would love to be able to look out

across my room. Maybe I wear special glasses to be able to see every student name.

Viji: [25:48] That's my idea. (everyone laughs)

Kelly: [25:50] And not just their name, like a little tidbit or had I met with them in office hours. So I try right now really hard, I keep my own records, I have this obsessive spreadsheet after a student comes into my office hours where I try and write what county where they're from or they have five siblings, anything they tell me. And it's so hard when you have so many students or you've taught for so many years. And you've got a lot of students that way, to just remember those details, but that's that personal connection. I've gone through the trouble to have the connection, but I can't remember it.

Viji: [26:22] Yeah, I think some things. There are tools for, you know, for example, the client resource management kind of tools, thinking about how they might work better for us with students and the sort of profiles.

Derek: [26:35] My car insurance guy remembers everything about me. And you're right, he probably has some type of software that helps him do that.

Viji: [26:44] And then pings you when it's an appropriate time to be pinged about something.

Derek: [26:46] He was the first person to wish my wife happy birthday on her birthday, actually. He's on it. Yeah.

Kelly: [26:52] We need to learn from them.

Viji: [26:53] And that's technology working for us. And we need the same thing with students and what we learn when we do this work with inclusion and thinking about our students, what we learn, they just, they want to be, they want to feel like they're part of something and that they belong and that the instructors know them. And when we teach especially these large classes, we obviously want the same things, but we have to, we have to execute in a slightly different way than when we have a smaller classroom and we are guaranteed to know everyone's name, especially if we put a little bit of effort into it. But it's really challenging to know 200 students' names. But if I can look out and I use these folders that hang over the desk which have their students' names, if I can look out and say, "Oh, Joe, what was your

question?" Just using Joe's name. He knows that I am just looking at his folder, but it still feels different because I'm using his name and he's part of the class. You know, just thinking about ways in which we can harness technology to make it feel like it is a place where you belong.

Derek: [27:52] I love that, I love that. So we have one final question we ask all of our guests. We spent a lot of time on the podcast talking about digital educational technology. Do you have any favorite analog educational technologies other than the folder on the desk that has the students' name?

Kelly: [28:10] I think probably the four by six index card.

Derek: [28:14] Yes. Say more.

Kelly: [28:16] Would be my favorite. You can ask students to have this with them as part of their toolkit for coming to class. And then you can ask them to answer a question that maybe you'd like to keep anonymous. Maybe it's to get a discussion started, but there's something about holding a physical card and then asking them to swap it three times and read somebody else's card. It just infuses a little fun into a classroom and breaks up some of the digital learning.

Derek: [28:45] So you and I might swap cards and then you swap with someone else and they swap with someone else? So my card is now three degrees away.

Viji: [28:52] And adds some anonymity.

Derek: [28:54] Yeah, I saw that in your chronicle guide and I hadn't heard of that technique. I like that a lot.

Viji: [29:02] The folder idea is something I'm trying and I've gotten really great feedback from the students. They really enjoy. And it's simply just a file folder hanging over the edge of their desk. And just because I am trying to reuse and recycle, I staple these clear sleeves on the top so that we can just, I can print out the same size, the names and they slip them into the sleeve and so hopefully if they're in good shape at the end of the semester, I can reuse them again, but it's made, it's, it's actually helped me learn the names a little bit better because I'm seeing them now regularly in a place in the classroom.

Derek: [29:37] Again, a retrieval practice.

Viji: [29:40] Right and I mean, I know that the students appreciate that I'm trying and they know that it would be nearly impossible to get everyone's name in a size classroom that I teach in, but they know I care and that I want to try to do a better job of this.

Derek: [29:53] Well thank you, both of you, for talking with me today here at a busy POD conference. Thanks for taking the time and thanks for all the work that you do, sharing what you've found useful in your teaching. And I look forward to hearing more from you. I know you guys have a book in the works. So that's very exciting.

Kelly: [30:10] Thank you.

Viji: [30:11] Thank you. (music)

Derek: [30:14] That was Viji Sathy, teaching associate professor in psychology and neuroscience and Kelly Hogan, STEM teaching professor of biology, both at UNC Chapel Hill. I really appreciate how they connect inclusive teaching with students that they're teaching, and how they thoughtfully choose technologies that support their pedagogy. One technology I forgot to ask them about is photography. It turns out Viji is quite the photographer and she regularly photographs classrooms that use structure and active learning to create inclusive learning communities. She then uses these images to help change the narrative about teaching in higher education, showing other instructors the kinds of inclusive learning experiences they too can create in their classrooms. As a fellow photographer, I was impressed with not only the quality of her pictures, but the way that she uses them in her educational development work. If you'd like to see some of Viji's photographs, see the show notes for a link to her website. You'll also find links to information about Kelly Hogan and the very practical guide to inclusive teaching they wrote for the Chronicle of Higher Education.

[31:19] Viji and Kelly are working on a book on the same topic, which should come out in the next year or two from West Virginia University Press. Given their thoughtfulness and their energy, it's going to be a really fine book. You'll find the show notes for this and every other episode of Leading Lines on our website, leadinglinespod.com. We'd love to hear what you think about our conversation with Viji and Kelly and the ways that you use technology to support inclusive teaching. You can reach us via email at leadinglinespod@vanderbilt.edu, or

on Twitter @leadinglinespod. Leading Lines is produced by the Vanderbilt Center for Teaching, the Jean and Alexander Heard Libraries, and the associate provost for education, development, and technologies. This episode was edited by Rhett McDaniel. Look for new episodes the first and third Monday of each month. I'm your host, Derek Bruff. Thanks for listening. (music)