Transcription

[00:00] [music]

Derek Bruff: [00:05] Welcome to "Leading Lines," a podcast on educational technology from Vanderbilt University. I'm your host, Derek Bruff, Director of the Vanderbilt Center for Teaching.

[00:13] We're back. The Leading Lines summer break is over. I'm happy to kick off our fall season with a fun and inspirational interview with Bryan Dewsbury, Assistant Professor of Biological Sciences at the University of Rhode Island.

[00:25] I met Bryan through Isis Artze-Vega, who directs the Teaching Center at Florida International University, where Bryan earned his PhD. She spoke highly of his interests in inclusive teaching and his integration of technology in and out of the classroom.

[00:38] It wasn't until after I interviewed him that I learned he's working on a scholarly writing project with my Center for Teaching colleague, Cynthia Brame. She has great things to say about him, too. I think you'll understand why after you listen to our interview.

[00:51] He's incredibly passionate about student success and he uses technology in ways that are fully supportive of his pedagogical goals. His approach to teaching introductory biology isn't the typical one. I'm glad to have him share his story here on the podcast.

[01:04] [music]

Derek: [01:08] Well, Bryan, thanks for talking with me today. I'm glad to get to know you and your teaching a little bit more. Can you give me a little context for your teaching? What are the courses that you teach? Who are the students? What does it look like?

Bryan Dewsbury: [01:19] I teach four courses. I teach in the fall. I teach an introductory biology class. That's a relatively high enrollment, 140 students. Then I was teaching an honors section to that in which is a smaller, 40 students.

[01:34] In the spring, I teach a grad class on course design in STEM. I also teach a seminar class or upper division undergraduates on problem-solving of social problems.

Derek: [01:50] A range of students actually, right, from…

Bryan: [01:52] Quite a big range, yes. [laughs]

Derek: [01:55] Beginning bio majors all the way up to grad students.

Bryan: [01:58] Right.

Derek: [02:00] Let's talk about your intro course, your big course. What are the goals that you have for that course, both for yourself as a teacher and for your students?

Bryan: [02:12] Oh, wow. How long is this podcast again?

[02:14] [laughter]

Bryan: [02:17] Well, it's a good question because in our field, as you know, we're big on terms, like learning outcomes and goals. They have to be written in this very particular way.

[02:28] I do get a sense of your question's a bit more general. Like what do I hope the students broadly define walk out the door, after spending three months in that classroom?

[02:41] I use that language intentionally, because very much when I think about designing a course, any course, I am not so much thinking about what I want them to know or not even so much what I want them to do. I'm actually thinking about who I want them to be as people.

[02:57] Everything we do in the course, whether it's technology or not technology, ties back to the kind of individual, I think, collectively we can really help be a part of a functional democracy. That includes myself.

[03:12] That means that when I interact with students, when I meet a new crop of freshmen or grad students or whatever the case may be, I grow in the process. I learn from their stories. I learn about the human experience and the diversity of it. I learn about different ways in which we shall engage in material.

[03:28] In that paradigm, biology as a subject matter really is secondary. It's important, but it's secondary. They will go on and be wonderful professionals of different types.

[03:43] In this ever-changing globalized world, engaging with content is a skill that they will have to retain for the rest of their lives and that content mayor may not be biology. That's sort of one small thing, a part of a really interesting thing.

[03:59] I know that was a bit of a paragraph-y answer, but that is, essentially, how I think about what my goals are, for them to be good, honest citizens who can help advance the common good.

Derek: [04:13] That's ambitious.

Bryan: [04:16] Mm-hmm, but in three months you can do it.

[04:21] [laughter]

Derek: [04:21] Right, right. Tell me some of the ways that plays out in your interactions with students in your classroom.

Bryan: [04:28] Well, the interaction has to start before they get to the classroom. The interaction begins with a lot of self-reflection and me owning up to things I could do better, biases that I may have, understandings about the social contexts of learning that I need to brush up on, the changing ways in which education is delivered and implemented.

[04:54] I have to learn a lot about the new crop of students coming in, so that means look through institutional research and getting some kind of background data. I send them my own surveys through our learning management system to get some additional broader interest information and some background information.

[05:12] Then, once we are face to face then we can engage in other things that could help

enhance that relationship. I have them write reflective essays about themselves, that's private, meaning between myself and them. I use a lot of small-group work to give them opportunities to get to know each other and constructively engage in problem-solving activities.

[05:36] I have a particular…I don't know. I want to say theatrical style, not to sound [laughs] over the top, but ways in which you could create a classroom climate that's comfortable, warm, and trusting. All these things, no one particular thing, is the way in which you build communities. All these things collectively come together to help create a relationship that I'm looking for.

Derek: [06:06] Well, as you know, this is a technology podcast. Let me go ahead and ask. Given that goal of helping your students become productive, empathic [laughs] citizens and your own goals in building relationships with them, where does technology come in? What are some of the technologies you use in this course? How do you think they lead to the kind of success that you're looking for?

Bryan: [06:33] In a variety of ways… I pause because I really want to make this distinction clear. As a technophile thing…That's a word, right? [laughs]

Derek: [06:42] Yeah.

Bryan: [06:45] I do appreciate the power and the value that technology can play in enhancing the educational experience, where the technology in and of itself is a separate thing to pedagogy, teaching, and the quality of teaching. In other words, to the degree to which the technology can help enhance the outcomes determines the amount of technology I use.

[07:11] There are some classes where, if I can create that sense of community, if I can connect to them without having to invest in courseware, then I do that. Every time the decision is made to have them push at something or involve a piece of technology in the class, it has to be with the clear goal of enhancing a particular outcome.

[07:33] In the case of intro bio, which was your original question, we do have a learning-management system. My textbook of choice right now, on the line…

[07:44] [laughter]

Bryan: [07:45] …does have a pretty robust courseware system that ties to a test back that I like. I work with them over the years to build up that courseware platform to include a lot of dialoguing-type things like forums — fora — and other things that allow for me to contact them before I see them.

[08:10] To link them a little bit more clearly to the learning outcomes of the class, and these are content-based ones, to text it to the content in text. To provide opportunities to give me feedback on how they are responding to different kinds of assessments. To allow me to intervene at critical points before any student gets too lost on a particular topic.

[08:37] To create a sense of anonymity in cases where that's helpful. To give an example, in the 150-student class, I may ask a question. I use what we call immediate feedback assessment. I'll explain something for 10 minutes, 8 minutes and then I'll throw a question out to the class that's a multiple-choice question and explain and such and such, A,B,C,D.

[09:02] 20 percent may choose B, 10 percent choose C, the other 50 percent choose D, but the answer's really E. Then I say, "OK. Well, then maybe something I said didn't quite click. Let's try that again." On that same screen there's actually a little envelope that allows a student, who may not be comfortable, saying to his or her group or maybe out loud that they are completely lost. [laughs]

[09:27] They can send me a message directly, which I can peer at and check my screen. I will either come up to them during class or maybe after class and meet them in privacy and things like that. All these are little things and, like I said before, no one thing is the panacea. It's all of them together that help enhance that idea of trust and collusion.

Derek: [09:53] Just to clarify that last example, the system you're using is the courseware that comes with your textbook…

Bryan: [09:59] Correct.

Derek: [10:00] For that in-class polling feature? The students have…

Bryan: [10:03] Yes. There's a hundred options out there, but [laughs] this is the one I choose.

Derek: [10:09] [laughs] I wrote a book in 2009 on *Teaching with Classroom Response Systems*.

There have only been more systems that have become available since then. This one's to your textbook, which is great. The students have a mobile device out in the classroom to respond to these questions.

[10:28] That's what allows them to send that email. In this case, when you say anonymity, in that case, it's the ability to connect with you around a question or a problem without having to admit that to their peers. It's that level of anonymity. As you said, there are times when that's the helpful form of anonymity.

Bryan: [10:49] Go on.

Derek: [10:49] I was going to ask, can you say more about the intervening that you sometimes do with students to try to spot students who might be headed for some trouble in the course? How does that play out?

Bryan: [11:02] Just to give us some context on that. I find intro bio, I hate to sound all poetic, but to me, intro bio's a really, really special class. It really, really is. For the students that I teach, which is a very traditional public research university, my students are usually 17 to 19 years old.

[11:22] This is a major transition point in their lives. Even for ones who come into my classroom well-prepared, in terms of conventional metrics like SAT scores, ACT scores, and GPAs, I still have to undo a lot of bad habits that they learned in high school on how science works and how metacognition works, how knowing that you know things really work.

[11:51] There's a sense in which [laughs] I would argue that 60 percent of my intro bio class in terms of what we do is really social. It's really engaging a student and teaching them what it means to be confident in doing something. What it means to clearly articulate a scientific thought.

[12:09] What it means to engage in constructive problem-solving and having a difference of opinion, and doing that respectfully. What it means to develop a science identity, whatever that may mean. How do you bring in and leverage your own cultural histories and your own sense of being and view of the world into this new vernacular called science, and specifically, intro bio?

[12:37] Those are social things. The content happens in between that or within that, but it's really being with them and facilitating that development process. In intro bio, we rarely generate new knowledge. I don't want to make this sound like indoctrination, but you're working with students to develop an identity process.

[13:07] With that context, when there are struggles, many times -- and my data suggest this -- these struggles have little to do with actual ability to do the work. These struggles have to do with inability to manage time, lack of awareness on what it means to know something, fear of failure, fixed mindsets, low sense of belonging, things like this.

[13:39] In response to that, it is my responsibility to structure my class to be able to detect those things early enough, so that initial assessments aren't predictive [laughs] of eventual failures in the class.

[13:55] I need to find a way to get that information so that I can design an intervention that helps them feel like they belong. That talks about what time management means. That talks about what comprehension means. That has to happen early enough so that that student gets an opportunity to demonstrate the potential that they really have inside.

[14:17] It's intensive. It's aggressive. It's time-consuming, at least at the point in time when it happens, but the payoff is so large, [laughs] that it is worth every second of it. You take some time and you look at your spreadsheet or you look at your grade book. If it's well-designed, you're looking at not just who's not doing well, but what are they not doing well in?

[14:41] Are they doing well on recall, but then struggling on synthesis and apply? Are they not coming to class? [laughs] Are they doing well on individual assignments, but not well on group assignments? Is there some mechanism for accountability within the group?

[14:58] There are so many things to really unpack. When you look at a well-designed assessment structure, it can provide a lot of information about your individual students, but you have to set up the assessment structure for it to be able to provide that information. If it can, in fact, provide that information, then you have a lot with you when you do do that intervention. Does that make sense?

Derek: [15:22] Yeah. Part of our work here at the Center for Teaching is we manage Brightspace, which is our course management system here on campus. The platform has

some really great dashboard-style analytics you can get on your students. You can use it for early warning intervention kind of thing.

[15:44] One of the things that we struggle with sometimes here at Vanderbilt is that so much of our students work is actually not in the system. You actually have to have the students' data in the system in some way. Either they're doing quizzes in the system or you're recording grades in the system.

[15:58] It sounds like you're having their students do enough stuff in your courseware that the courseware itself is generating the kind of analytics that helps you figure out, "Oh, actually, if I look carefully," [laughs] "this student right here is having some struggles here and there."

Bryan: [16:15] Yes and no. Yes, in the sense that the courseware I use right now, which is Modified Mastering Biology by Pearson, is currently working on an early alert system, based on the things that are within the questions that are within the system.

[16:34] The algorithm has been refined. They've had a couple of trial runs. I've pointed out some things I think can give false positives, in terms of who needs help, etc. I am confident they'll get there. Right now I don't think they are. When I say analytics, in my case, I mean Excel.

[16:58] [laughter]

Bryan: [17:01] The many things I use…

Derek: [17:03] Let's be real here. [laughs]

Bryan: [17:04] … I use to assess, knowing what I put into each question and looking at each thing carefully. It is more time-consuming. I definitely am looking forward to whoever has much more skills than I to really take this whole early alert issue bull by the horns and solve it.

[17:29] People like me [laughs] do dream of a day where I could come into my office and have my two big monitors and pull up Derek. Derek wasn't in class two days last week. He did really well on quizzes.

[17:42] He does good on all the application questions but messes up on recall. Yes, it sounds a little creepy, big brother-ish. I think if it's done responsibly, with a clear moral goal in mind, I think it could be really powerful.

Derek: [17:58] You're saying right now, you have to do a lot of the looking yourself.

Bryan: [18:01] Correct.

Derek: [18:01] Looking through the data and finding that…

Bryan: [18:04] Yes.

Derek: [18:03] which makes sense. Honestly, I think that's where we are with the state of the software. There's another piece of that though, you're tracking certain student activities.

[18:16] I guess that's what I'd like to hear a little bit more. How do you get it, the more nuanced student learning behaviors? You can have them take a quiz and you get some auto-graded stuff, but are there things you do to track?

[18:29] Is it knowing the difference between an individual assignment and a group work assignment? How do you tease out some of those metacognitive struggles that students have?

Bryan: [18:41] That's a good question. I think you're actually tapping on a maybe a bigger issue the field of EdTech is going to have.

[18:49] Maybe it's not a problem. Maybe it's the kind of thing where, as I've argued in the past, that as tech gets better, we, who are physically in the classroom, will have to think a bit more carefully on why are we asking students to physically show up. There are parts of the intervention system that are completely human, that is not captured by any spreadsheet, is not captured by any assessment.

[19:22] It's me physically looking at the body language of a student and looking at the eyes sunken in and the shoulders that are drooped, and the people who are staring at me, but are not really staring at me, or people who are nodding me along in class, but I know they actually don't understand it.

[19:40] There are little things that…I know this is a tech podcast, but honestly, there are things that I learned from a piano professor on how to read body language and how to read human beings, how to be so in the moment that you are picking up on all these little micro behaviors that is not present on any spreadsheet I have.

[20:00] When I pick up on those things, those are the students I bring into my office, who I call their cell phone, who I try to make sure they come to office hours, because I want to know the story behind those tired eyes.

[20:12] I want to know the story behind you on time for every day of class. Today, you were 10 minutes late, what's up? You have to be willing to pick up that sort of last mile. It's almost like having a mixed methods approach to your teaching. That component, I think, Derek, is extremely, extremely important. That's the nuance.

Derek: [20:39] I'm curious though. I'm struck. You're fairly young as a faculty member, yourself.

Bryan: [20:43] Thank you.

[20:43] [laughter]

Derek: [20:48] But you have already demonstrated to me in this interview a fair degree of sophistication in your teaching practices, in your knowledge of the literature around student learning.

[21:00] I'm wondering what was part of your journey to get here. Were there elements of your graduate education or other experiences that informs your current practices around teaching? Because I think they are a little exceptional for a junior faculty member.

Bryan: [21:20] There are a few things. To me, the way this works, and I hate to — well, I don't hate to — but I have to get a little philosophical here. When you are 30, which I am, and it is a podcast, they can't see me, so I'll just tell you I am 30.

Derek: [21:37] I'm 41. We'll call that young. We call that young now. [laughs]

Bryan: [21:43] [laughs] What you're doing in your life right now, your sense of identity is

informed by so many things that it's hard to reduce that impact to one particular time period.

[21:57] There were things that happened in grad school. There were things that happened before grad school. I think there were things that happened before grad school, that I only realized once I was actually teaching how much they impacted what I do.

[22:09] I try to summarize a combination of those things. I was a marine ecology grad student. I think I was pretty traditional in terms of you go in and do research. The idea is that you go into a research position in STEM and have your own research program.

[22:31] I was actually actively avoiding the classroom on the advice of people [laughs] that it would take away from research, but the RA funding, we weren't able to work it out, so I had to teach.

[22:47] I was awful. I was pretty bad. I had no training. I'm not making excuses, but I had no training. I reflected on how bad the thing was. It wasn't really a disaster, to be honest. I was very conventional, but I know it could have been better. I remember the second class that I taught, which if you come to my office, I have a picture of them on my wall.

[23:15] I really took time to get to know them. I actually interviewed each one of them, one by one, in my office. I talked to them about their life, why they want to be a doctor, why they chose bio as a major.

[23:27] I learned so much about who they were trying to be, who they thought they were. A new role that the classes that were taken played into that equation. So many misconceptions they had about how science worked. Because we were able to develop that relationship, that's a mess, the teaching experience was just radically different because I learned things about them.

[23:52] Then I designed a curriculum around who they were. I didn't just walk into class and kind of hand them something that was given to me by a head TA, to just make sure they don't blow the lab off and just do this. I think that experience, probably above any other experience I'll talk about, was the most informative thing about what the power of transformative teaching could be.

[24:14] It wasn't about…yes, you want him to do bio, you want him to explain concepts, yada,

yada, yada, but you really wanted them to be happy with who they were, actively engaged in those choices and seeing how being ascribed into that identity could be impactful to a future just society.

[24:37] I think, most importantly, I found that there was a way to take those lofty ideals and operationalize that into actual things you do every day in the classroom. I could extend that to say that, "Yes, I'm a son of a retired pastor." Growing up — I don't practice anymore —

[24:57] But growing up in that environment and the way in which he engaged his congregants, I think I've absorbed some of that style. That whole idea of…the word pastor comes from pastor or farming, meaning that, as a shepherd, you take responsibility for the livelihoods of your sheep.

[25:16] None of my students are sheep but you do view the community as we all take responsibility for each other's growth. If they don't do well, I take that on. There was something I could have done differently to make them more excited about it or something I didn't connect to.

[25:34] At the time when I was going through this process, interest in teaching and scholarship of teaching and doing it was still I would say is in its infancy. Very well-meaning people advised me to stop…

[25:48] [laughter]

Bryan: [25:50] and go back to being a real grad student. What I'm very grateful for the support of our Center for Teaching and Learning we had at FIU at that time, the people there, who are still good friends and colleagues of mine.

[26:08] I think without their support, I don't know if I would have been able to navigate… Well, A. develop a skill set, B. have the support, emotional and professional support, to think about teaching in a scholarly way, and develop the kind of portfolio that allows me to do what I do now.

[26:27] In that relationship, you develop the passion, but then you actually learn the skills of what it means to do this in a classroom.

[26:35] There are other things along the way. I was a part of the biology scholar's program, which was run by the American Society for Microbiology, for a few years. I still do a lot of work with them including one of the editors of their journal.

[26:54] At the time, it was a very new community doing what we call discipline-based educational research. I've been a part of that group from the start. It's been a pleasure to see how much I think we've grown as a group to hopefully do better and better work.

Derek: [27:13] Are there other technologies you use in your teaching that we haven't talked about?

Bryan: [27:23] I guess your question before focused on courseware. I talked a lot about Modified Mastering that Pearson uses, but I would say another…I don't know if it's another technology per se because it's still kind of running content around a syllabus through a platform.

[27:40] We have put a lot of time and effort and some resources in the last couple of years into looking at open education resources with the goal in mind to reduce the cost of the experience to students without reducing the quality of the experience.

[27:58] I would say it's been hit and miss. This fall, we'll be using OpenStax Biology for the honors class with Top Hat. We got a lot of time into course design this spring to see how that would look like. We're going to run that this fall and see what it looks like.

Derek: [28:18] The textbook itself is from OpenStax and then the platform is Top Hat, which does in class and out of class student engagement.

Bryan: [28:24] Exactly. That course is also taught in an active learning classroom, which I bet you're familiar with. It's nine tables of five each and outfitted with TVs and the mics. I maximize it. There are times I do feel like, "Do you really need all of this stuff?"

[28:50] [laughter]

Bryan: [28:52] If you cannot really think creatively and turn that 40 student class into almost like a think tank…We really have a lot of fun with case studies and ways in which they could share the wisdom, which I do problems with the whole class and stuff like that. That's been a

major investment and I think we've had a lot of fun.

[29:13] In all honesty, I would say I've yet to hit the ceiling of how much I could probably do in that space. But I've only used it twice, so I expect, as I think about the class more creatively, I expect that to increase. I have to say technology aside, the thing I liked the most about the classroom is that it's flat.

[29:37] That does so much. It forces you…I'm a mover by nature, anyway, but just not having to go upstairs and have them all look at you in this kind of very traditional hierarchical way. It sets the tone from day one. We all are in this space doing this together. That's the free part of it, the cheap part of it.

Derek: [30:03] Let me ask a couple more questions. You mentioned that you do a course for grad students on STEM course design. That connects to a question I had planned to ask you, which is what advice would you offer, maybe a brand new faculty member in the STEM fields, as they think about growing their teaching practices over time…

[30:26] They're interested in inclusive teaching. They're interested in student success. What advice do you give someone who's just getting started in their teaching career?

Bryan: [30:36] That's a tough one. This is not you, Derek. [laughs] I think a lot of times when people ask that question, the knee-jerk response is to give a practical strategy. Say, "Look into clickers", or, "Look into this." As you probably could tell, [laughs] based on my answers to the other questions, I really do view this practice as a responsibility.

[31:10] I think for too long, in STEM in particular, we've taken a very mechanistic approach to it, in that because we have PhDs and we're experts in our discipline, we are therefore qualified to impart that expertise on 17-year-olds, who may or may not think that what a scientist looks like is what we look like.

[31:33] What the research, especially the social science research, has shown us is there's a lot more that goes into that. There's a lot more that goes into identity development, what it means to educate for liberation, and things like that.

[31:47] I put out context because honestly, [laughs] Derek, I don't want anybody to walk into this profession -- I mean the classroom -- without really committing themselves to

understanding the full history of why that classroom looks the way it does. It takes a while. My wife is a K-12 teacher. They apprentice for a long time before they are given their own classroom. [laughs]

[32:21] Why is it we take freshly minted grad students or postdocs and throw them in a 200-person lecture on Monday morning, and think we're going to get anything else than a disaster? [laughs] I argue that we have to really start thinking about all the things that we need to know to understand what inclusion means.

[32:41] We have to understand the history of STEM education in this country. We have to understand the history of the practice of science itself. You have to understand the history of why equity gaps exist in terms of achievement, and all these kinds of things.

[32:57] You have to understand yourself. [laughs] You have to understand why you do it and what kind of responsibility you have to shape hearts and minds. When you have that full understanding, that is the space within which you should be thinking about curriculum design.

[33:13] You will find that to enhance your outcomes, you may need technology or you may not. The point isn't the technology, the point is the student. [laughs] Sorry for the long answer, but it's been a question I get a lot. I could spend a whole other podcast recommending things I would love for people to start reading and think about.

[33:38] It has to start with a commitment to what does it mean to teach? What does it mean to teach for inclusion? What are the kinds of things I need to understand in order to do that well? [laughs] I could send you a list which you could put in your website maybe.

[33:55] [laughter]

Derek: [33:55] We've got one more question. We ask this at the end of all our interviews. We focus a lot on the podcast on digital educational technology. I'd like to ask, what's one of your favorite analog educational technologies?

Bryan: [34:10] Analog. All right. When we talk about osmosis, I like to introduce that topic by talking about the laws of thermodynamics and how energy works. It's tough because it's the intro bio class and you're trying to provide a basic physics context for it.

[34:38] What I usually do is talk about chemical, potential energy, kinetic energy. I call a student from the class to come to front, and I bring a volleyball with me in class. We bump and we play a game to see who can keep the ball up as much as we can. While we're doing that, I have the class think about how the energy changes.

[35:00] What different kind of energy do you see changing, from chemical to kinetic, heat is lost, etc. One of the reasons I like that is because that's actually one of the early classes when they're still nervous and they're still feeling me out…

Derek: [35:15] [laughs]

Bryan: [35:15] see what kind of professor I'll be. That ends up being a way to break the ice and get them more comfortable. I used to play beach volleyball twice a week in Miami. I have a mini-athletic side. It's analog, simple, but we have a good, fun discussion about it. They get to make fun of me. [laughs]

[35:40] [music]

Derek: [35:40] That's great. I love that story. Thank you, Bryan. This has been really great.

Bryan: [35:43] Yeah, man, my pleasure.

Derek: [35:48] That was Bryan Dewsbury, Assistant Professor of Biological Sciences at the University of Rhode Island. I just love how technology is a tool for Bryan. It's never the focus of his efforts. It's just that he uses whatever tools he can to help his students become more confident, capable citizens and scientists.

[36:04] It's also great to see someone fairly new to faculty life -- he just finished his PhD four years ago -- incorporate into his courses so many evidence-based teaching practices. We have decades of research arguing for active learning instruction, for the value of formative assessment, for the importance of metacognition in learning.

[36:20] Bryan has very quickly adopted an approach to teaching that leverages all this research, and he does it with such passion for students and for their success. In my work at Vanderbilt and elsewhere, I'm often trying to help more experienced faculty take very small steps towards more evidence-based teaching practices.

[36:35] It's really great to see someone who's all in. It speaks to the value of preparing future faculty members while they're still in grad school. If you want to find out more about Bryan and his work, see the show notes for lots of resources, including a great talk Bryan gave at a STEM conference last year and his very recent interview on "Teaching in Higher Ed", Bonni Stachowiak's most excellent podcast.

[36:56] You can find those show notes on our website, leadinglinespod.com, where you will also find past Leading Lines episodes -- we have 40 of them now -- with full transcripts. Over on Twitter, you can find us @leadinglinespod. I'm @derekbruff and Bryan is @BMDewsbury. We would all love to hear how you leverage technology for inclusive teaching and student success.

[37:18] Leading Lines is produced by the Vanderbilt Center for Teaching, the Vanderbilt Institute for Digital Learning, the Office of Scholarly Communication for the Vanderbilt Libraries, and the Associate Provost for Education Development and Technologies. This episode was edited by Rhett McDaniel.

[37:31] Look for new episodes the first and third Monday of each month. I'm your host, Derek Bruff. Thanks for listening.

[37:36] [music]

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