

## **Limed: Teaching with a Twist**

Season 2, Episode 4 – PodCases: Using Podcasts to Enhance Case Study Pedagogy

Matt Wittstein (00:00:11):

You are listening to Limed: Teaching with a Twist, a podcast that plays with pedagogy. If you're listening to this, odds are you at least enjoy podcasts and possibly know that you can learn through listening to them. Well this month Justin Shaffer introduces us to PodCases. And asks us how to enhance his practice of using popular podcasts to provide real world context for case study pedagogy in his anatomy and physiology courses. Our panel of Cara Frankenfeld, Jill McSweeney, and Gianna Smurro share some of their favorite things about podcasts in the classroom and offer tips that might help you get the most out of using podcasts as part of your pedagogy. Enjoy the episode and if you can please rate, review and share our show. I'm Matt Wittstein. Hi Justin, welcome to the show. I'm really excited to have you here and I know we're going to be talking about case study pedagogy using podcasts. But before we get there, would you please introduce yourself to our audience?

Justin Shaffer (00:01:25):

Thanks Matt, so much for having me. I'm really excited to talk to you today and the audience. My name is Justin Shaffer. I'm a teaching professor at the Colorado School of Mines in Golden, Colorado, just west of Denver. I'm in the chemical and biological engineering department as well as the quantitative biosciences and engineering program. I've been a STEM teaching professor for about 11 years now. I do discipline-based education research on course structure and design and efficacy of different components including in-class activities such as active learning and case studies.

Matt Wittstein (00:01:54):

So I know we're going to talk about using podcasts as a means to approach case study work in your courses, but before we get there, can you tell me a little bit about what course you're teaching right now and how you're thinking about implementing this idea in that course?

Justin Shaffer (00:02:08):

Sure thing. I teach a variety of courses on both the biological sciences side and in the chemical and engineering side, but for this story, I'm thinking about anatomy and physiology. So it's a mostly junior, senior level elective course on going through all the organ systems of the human body in a semester. But I try to mix it up and make it as exciting as I can by having real world case studies, clinical examples, quantitative examples, as well as comparative stuff because we can learn a lot from our animal friends about how our bodies work too. And this class, I'll be teaching it this fall, about 70 students enrolled just typical Monday, Wednesday, Friday class, lecture based, no lab unfortunately, although we do have some opportunities for some organ dissections, brain and heart from sheeps, things like that.

Matt Wittstein (00:02:52):

So 70 students in a lecture only class setting, that can be kind of a lot. I'm at a small liberal arts college. So tell me a little bit more about that context and what it's like to teach some of these complicated topics to a larger group of students.

Justin Shaffer (00:03:06):

It's kind of funny. You think 70 is large and it's totally context dependent. I used to teach at UC Irvine. I'd have 440 students for introductory biology, or I like to think of it as 880 eyeballs. So 70 to me is a pretty nice tiny size. However, it still provides challenges much more than a class size of 24, for example. So sometimes in my classes I'll have learning assistants and they'll be an undergraduate who's taken the class before. This fall I do have Berto, he's going to be working with me. And he'll be hopefully attending class and being able to walk around and help me when I'm checking out with the students when they're doing activities, especially on those activity days with dissections or if we're doing physiological measurements, things like that. But otherwise, if it's a typical just regular day, it's just me.

(00:03:49):

I'm a heavy active learning user in the classroom, so I'll do a couple minutes of talking clicker question, a couple minutes talking, drawing activity, students talk to each other, do some other things. So there's a lot of interaction back and forth. One of my prior publications on a human anatomy class, I average about nine clicker questions per 50 minutes. So when you do things like that, you're able to really break up the lecture dynamic. And whether you have 24 or 70 or 400, that's just going to facilitate the students' learning opportunities, which gives them chances to apply what they've learned before class, use it in different contexts in class. And then further scaffold their learning after class, when we look forward towards assessments.

Matt Wittstein (00:04:30):

It sounds like you're really experienced in using some different means of engaged learning techniques, of active learning techniques. Can you share a little bit more about how you experimented with that over your career and how you've gotten to what we'll talk about next is using podcasts as a way to do that.

Justin Shaffer (00:04:46):

And I wouldn't be here without getting my start back in grad school and my postdoc. So first, Susan Keen at UC Davis, she gave me Jo Handelsman blue book *Scientific Teaching*, that showed me that you can apply evidence-based practices to the classroom. Then in my postdoc at University of North Carolina Chapel Hill, I was in the SPIRE program where we got formal training in teaching and how to use evidence-based practices such as active learning in the classroom from Ed Neal. Kelly Hogan from biology took me under her wing and guided me along the way, and Brian Rebar, a lot of other people have helped me out to get where I am. But it was clunky early on because when you first teach, you tend to think about teaching how you were taught.

(00:05:26):

And I graduated from Penn State in '05, chemical engineering. Most of it was lecture-based. So that's how I thought to teach. But then again, you get your eyes open to these new techniques that are based on evidence. And as an engineer and scientist, that really appeals to me. So they start experimenting with different techniques at the time, some more rudimentary clicker software, but then going into the more now sophisticated methodologies that we have today, trying larger scale group work or smaller group work, trying 30-minute activities versus one minute activities.

(00:05:57):

And so over my career of a decade plus now, I've settled on the much more frequent shorter term learning opportunities, and that's what really works for me well. So again, heavy iClicker user in class, doing one to two minute type brief think pair shares or drawing or other types of activities, reporting out interspersed with lecture. And that just fits my style. And when I consult with other faculty with

professional development, I tell them just that same thing. Figure out what fits your style. Just because it's the way I do it doesn't mean it's what's going to work for you. However, you go see someone else teach, you might pick up on some things that do seem to work for you, give them a shot, be confident, see how it goes, assess, evaluate, and then try something different if it doesn't work or stick it in your arsenal if it does work.

Matt Wittstein (00:06:44):

I really appreciate that note of it having to fit your style because I often think about as we're trying to build lifelong learners or whatever our goal for our students are, it's really valuable to have everybody doing it their own way. So our students are experiencing a lot of different methods of teaching and learning. I really appreciate that note. So I want to get to this idea of using podcasts as a means to do case studies and anatomy and physiology. So can you just tell us what you're planning on doing, what that's going to look like as an activity in your classroom?

Justin Shaffer (00:07:16):

Sure. So first, just a little bit about case studies in general. So these are ways to teach with stories. And so these were really pioneered by Clyde Herreid at the University of Buffalo and Nancy Schiller and their team, they have a center called the National Center for Case Studies Teaching in the Sciences. It's now part of the NSTA, but they have, I believe now about a thousand or more case studies across STEM and as well as non-ST stem disciplines where you can infuse against storytelling into your lessons. And as we know as humans, we connect with stories. That's why we love movies and books and songs and everything. We really make these connections and that can facilitate student engagement, student interest, and therefore student learning. There's hundreds of papers published on case studies now and their efficacy in terms of promoting critical thinking, analysis skills, debate skills, evaluative thinking, all sorts of things.

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So I've been doing case studies myself for a number of years. I've published several in that national center database. And these are what are based off of images. They're based off maybe a short video, but they're more traditional in that respect. Some are paper and pencil, some are PowerPoint based. We call them clicker case studies, and I use them a bunch in all my classes, honestly, not just anatomy and physiology. However, I find them, the biological sciences are a little bit easier to use them in because there's so many examples of the world around us. Whether it's a medical disorder or an environmental event or a really cool animal that you can bring as a story to tell your students while they're learning. So the idea for podcases then is that, well, I've been listening to podcasts since 2005 when I think iTunes first came out.

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I love listening to podcasts because it's usually something to learn, right? It's a really cool way, and it doesn't have to be a really dry technical podcast. It can just be an interview with somebody and you learn something new. Or it could be a comedy one just let you let loose for a little bit and think about something different. Either way it's fun. It feels like you have some friends in the car with you. So through listening to podcasts I often would find, "Oh, this guest this person has is just so fascinating and so interesting, and they're talking about this disease I've never heard of." Well, that'd be a really cool connection to an anatomy and physiology class. Or they're talking about this really rare animal they thought was extinct, but it's actually still around. Oh, that'd be a cool thing to put into an introductory biology course.

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So I started really thinking about it, "Okay, well what if I then combine the podcast element with the case study story, fuse the two, and we get pod case." So my plan for this is to have clicker case studies kind of already set up, but I'm going to introduce now the pod case or pod case element. So here's my idea, so I want to have a clip of a podcast, which I'll play at the beginning of the lesson, kind of set it up, give some context. The students get to see a different person and a new guest on the show there, and this might be a podcast they've never heard of. They might be the guest they've never heard of. So we'll set it up with that. Then we'll say, "Okay, well, in order to really understand what this podcast guest is talking about, we need to learn now about X."

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So the example I'm going to lead with here is one I've already developed for this fall's class on homeostasis. And homeostasis is the concept and physiology of basically the body having a set point and then it returns to that set point if it gets too high or too low. So in this pod case that I'm going to use, I have a clip from the Joe Rogan Experience, him interviewing Wim Hoff. He's this really interesting guy that is basically the master of cold. They call him the Iceman. He's done all these things of hiking Mount Kilimanjaro in his shorts, running marathons, barefoot in just a shorts in the Arctic, things like that. And he's also swam under ice. And he also has this somewhat controversial breathing method you might've heard of, but Joe interviews him and they talk about his cold exploits. So then the question is, "Well, how's the human body respond to cold?"

(00:11:18):

In order to answer that, we need to understand homeostatic mechanisms in the body. So then we go through some examples of the actual physiology from their textbook based on what they read before class. And then we come back at the end to bring back that question, "Well, how's your body handle all this cold? You swimming under ice water?" Things like that. Play another clip from the podcast to conclude the lesson. And hopefully at that point, students again have that kind of hook at the beginning. They're engaged throughout the lesson. Now that they've been introduced to a new show, they've been introduced to a new guest, they might want to do some further follow-up reading and listening on their own to stay interested in the topic.

Matt Wittstein (00:11:55):

It's obvious that you've put a lot of work into this homeostasis example, and you've had a lot of practice with your iClickers and using case studies in other ways. What are some of the concerns or challenges you expect to have this coming semester as you try this out?

Justin Shaffer (00:12:10):

The first thing I'm thinking about is in terms of student interest in it in general. So usually on the first day of class, I do an icebreaker. "Where are you from? What's your major? Talk to each other about this." Then I have some kind of fun question. I usually ask, "What's your favorite show on Netflix?" Because everyone has Netflix, let's talk about it this past year. I said instead, "Well, what's your favorite podcast?" And I could tell they weren't as into it. So I'm just curious if the podcasting populace that listens to them is maybe more my generation, not the younger generation yet. So that's one, is just will this be of interest to them to watch a one-minute video clip from a podcast. Or should I just be showing a YouTube video that I find, right? Is there any difference? And these are things that I do want to assess with this too.

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I'm going to have some assessment questions and surveys throughout the course. I don't think I'll be able to measure differences in student learning well with this project. But I do want to get student perception data on PodCases so that I can share this more widely with some evidence on efficacy, at least in terms of student perceptions for other instructors to adopt. So that's one. Just will the students dig it or not? Is kind of one big question. Not so much for myself this fall because I do have several picked, I have about five or six lined up. I want to implement in A and P this fall. But I'm curious for folks listening from other disciplines. So if you're not in the biological sciences, if you're in art history, if you're in law, if you're in psychology or chemistry, is this a technique you might want to use in your classes?

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And if so, are there resources available to you? Are there podcasts out there either devoted to your field or in, again, a super massive popular one like Rogan? Does he have guests on that talk about topics that you could use in your classrooms? So that's another question I'm thinking about there too. And then three is kind of the logistics of this. So I mentioned for this homeostasis example, I going to play a clip at the beginning, play a clip at the end. However, there's a lot of variations of how you could do this. You could have students that listen to the whole show ahead of time. You could assign them to listen to it after and write a brief summary about and how it connects to the physiology, right? So I don't know if the way I'm using it will be the best way, but I'm curious to hear what people might think about implementing podcasts in a course, maybe in a pod case format or slightly different ways.

Matt Wittstein (00:14:28):

I'm curious about that too, because when I've used podcasts in class, it's usually listen to this before you come to class and then let's talk about it or let's all listen to it together and then talk about it, very discussion based. So I'm really excited about other ways that you might implement that pedagogy into the classroom and that technology tool. I also want to ask you, how would you describe what your learning outcomes are for this sort of set of activities?

Justin Shaffer (00:14:53):

My anatomy physiology course in general, I have a lot of big picture learning goals for the course around explaining physiological concepts, relating anatomical form with physiological function, being able to predict physiological consequences given a perturbation to the body, things like that. But I also have, you might want to call them softer goals of students being able to relate their anatomical and physiological knowledge to their own daily lives. And so I have a personal health and wellness project they're going to work on this fall as well too.

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Trying to track something they're going to change with an intervention using some kind of physiological or anatomical measurements. So I really want them to be able to take their core biological anatomical physiological knowledge and again, apply it to their daily life. Because hey, we're all humans and we all get sick and we all exercise and go through different changes in life, and it's important to know how to do that. So with the PodCases, we'll be able to introduce students to different things they've not heard of, introduce them to different people they've never heard of from different backgrounds, and see how again, their A and P knowledge can connect to those different real world situations.

Matt Wittstein (00:16:01):

Justin, I think I have a lot to share with our panel and a lot for them to discuss. Just to summarize real quick, I think our primary goals for our panel is to think about how to engage students in this particular

activity. How to maybe persuade them towards auditory learning as opposed to visual learning in some ways. Second is to think about how this might work in other disciplines. And this appeals to my just general curiosity of how a pedagogy can work in a lot of different settings. And then finally, just some tips on some of the logistics. Does that tend to cover what you're hoping to get from our panel?

Justin Shaffer (00:16:34):

That sounds wonderful and I'm really excited to hear what they're thinking about it.

Matt Wittstein (00:16:38):

Awesome, Justin. I cannot wait to talk with our panel and get back and share with you what they say.

Justin Shaffer (00:16:43):

Great. Me too, Matt. I'll look forward to hearing the report here in a few weeks.

Matt Wittstein (00:16:47):

We are here with our panel to discuss Justin's PodCases and I'm really excited. But before we get into that, I want to ask you all what is your favorite podcast and why? And use that to introduce yourself to our audience.

Cara Frankenfeld (00:17:13):

Hi everyone. I am Cara Frankenfeld. I will jump in and say that one of my favorite podcasts is the Atlas Obscura podcast because I really like just getting some things outside of my own area in really small sound bites and bits of information in just a really engaging and entertaining way. And by way of introduction, currently a research faculty member at MaineHealth Institute for Research. However, previously I was a faculty member teaching epidemiology and biostatistics to public health students for the past 14 years. And as part of my teaching, I've been able to experiment with and incorporate different things like case studies and podcasts, but not together. So I'm really excited to have this conversation about how we can integrate these things together.

Gianna Smurro (00:18:03):

Hi, my name's Gianna Smurro and I'm a third year student at Elon University, majoring in journalism and cinema and television arts. And two of my favorite podcasts right now are Ted Talk podcasts, as well as the Psychology of Your 20s podcast, which kind of delves into all the different ways that psychology is relevant in the life of a 20-year-old.

Jill McSweeney (00:18:23):

Well, I definitely have some good podcast recommendations now. My name is Jill McSweeney. I'm an assistant director at the Center for Advancement of Teaching and Learning here at Elon University. And my podcast recommendation right now are my go-to podcast is the Last Podcast on the Left Side Stories. It's a weekly podcast where they just cover weird news, paranormal things. There are two comedians that just kind of banter with each other, and I like to listen to it on Saturday morning with my husband when we go get a coffee with our two dogs in the car. So it's also the atmosphere of where I'm listening to it that I think makes it my favorite podcast.

Matt Wittstein (00:19:03):

And totally appreciate all of those answers for different reasons. I'm personally a fan of Hidden Brain Podcasts because I feel like I'm always super engaged by the story that they're telling, and I feel like almost every single time I've learned something new. So that brings us to our conversation today. We recently talked with Justin Shaffer, who is a teaching professor at the Colorado School of Mines in Chemical and Biomedical Engineering. And he is really interested in using podcasts coupled with case study pedagogy to help his students in his anatomy and physiology courses learn the material.

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And I know that anatomy and physiology can be a dense and challenging course, so I really appreciate this innovative approach that he's bringing to it. One of his goals with bringing podcasts into this is letting students enjoy the storytelling aspect of learning. And hoping that that will lead them to a little bit more curiosity, but also a little bit more application to how the material might relate to things in the outside world. So as we get started, I just want to get a sense of what types of experiences have you all had with using podcasts in teaching and learning contexts, and in what ways were they beneficial. But maybe also the flip side of that, in what ways did they not necessarily check all of the boxes?

Cara Frankenfeld (00:20:23):

There are two different ways that podcasts have really been incorporated in teaching. For one course on environmental health, I had students create a podcast, and so this was a nice exercise. It was actually one of the final exercises of the semester. So they were able to pick the topic that they were really interested in and really delving into. And it was, I think, a beneficial learning experience for them because they had to figure out how to edit. It's the same idea of, "Yeah, you can assign a 25-page paper, but then they don't learn how to edit down and distill down to what's really important." And if you say, "Well, your podcast can't be more than 15 minutes." They have to figure out what's the most important thing. And I felt like that was the thing that in addition to it just being sort of more fun than some of the other things that we might have them do as a final assignment, it gave a lot of flexibility in what they could do the topic on.

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But then also that they had to have this exercise in distilling, and I felt like some of the students' feedback really was around, "Oh, that was the most beneficial part of that." And the other way is I taught a special topics in public health course in which students were responsible for developing content and presenting on content. And they often used podcasts as what they chose because it was something that they found to be incredibly engaging. And a way to, again, do things where they could just be also doing something else at the same time as they're listening to the podcast, but it was still very productive. And so I think that that was really great because they were so engaged with it. One of the things that I had wished I had done at the beginning, at the outset of the class before they did that was have more of a discussion about how do we critically evaluate whether the podcast is providing information in a way that's accessible.

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And also it doesn't have a particular agenda, or even if it does have an agenda, identifying and recognizing that agenda. So obviously within public health, there's lots of different voices coming from different places, and so some of the topics were around things like vaccine efficacy. And if the podcast is being developed by a pharma company versus being developed by the public health department, there's going to be different aspects that are going to be highlighted and emphasized. And I think having a conversation about that and using podcasts and how to recognize what happens based on who's behind it and who's developing it, I think is a key part of the whole use.

Gianna Smurro (00:22:50):

So my first experience with podcasts was actually in one of my classes in high school. So my sophomore year English teacher made us all participate in an NPR podcast competition where we all had to focus our specific topics on the American education system. So that was honestly my very first time that I had even started listening to podcasts that I even really done the communications backgrounds of putting together a podcast. And that's honestly one of the things that kind of led me down the path to wanting to be a communications major.

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So coming into college, I was very interested in radio and podcasts, and it also pushed me toward broadcast. So just a personal way, the podcast has kind of guided my own learning as it's helped me to find my career path that I would like to go toward. And so it helped me develop all those new sets of skills as well as allowing me to delve in through a different medium, a new topic that I was unfamiliar with. Because it almost gives you the opportunity to workshop and interact with it so that you can have that deeper depth of learning and understanding of a specific topic.

Jill McSweeney (00:23:45):

That's awesome that podcasts were a pathway into where you want to go in terms of your academic career. That's fantastic, Gianna. And I would say my experience is similar to Cara's, in that I used to use podcasts in my course to supplement course texts, trying to provide multiple modalities for students to engage out of course content or out of class time content. And then I found that I wasn't finding what I wanted out there. Either it didn't have that specific topic for the week that I really want students to get in addition to the course textbooks. And so I decided particularly during the pandemic, that one of the things I wanted to do was create a podcast specific for my course. And so I ended up creating a short weekly podcast, and the episodes were between 15 and 20 minutes, and I interviewed folks at my institution and asked them to give examples in their teaching that would supplement some of the themes that we were talking about this week.

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So the course that I was teaching was a university teaching in higher education. And so it was a really great way for students to understand how theory and concepts really came into fruition within the classroom. So what does this look like actually in a classroom where you're teaching students? What are some of the pros and cons? How do you actually engage in some of these really difficult topics around equity, diversity, inclusivity, trauma-informed pedagogy, active learning. And what does it look like across disciplines? So I tried to really reach out to folks that were from a variety of different disciplines to give different perspectives. And so students really enjoyed that, and it was a really great way to reserve class time for discussion rather than having guest speakers come in every week and talk about their teaching. So I found that it allowed me to do different things in person and also allowed me to have students do different things outside of class.

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One of the biggest barriers I found with podcasts was thinking about, and Cara mentioned this too, the accessibility factor. So it takes a lot of work to develop a podcast in editing, recording. But then I really wanted to make sure that I had transcripts and captioning available for students who might be English as additional language students who might not be used to learning through more of an audio pathway. So I wanted to provide supplementary information to increase the multiple modalities of the tool, but that in and of itself create a substantial amount... more work and more time than actually recording, developing and editing. So I think that's one thing to be aware of. And if you're using external podcasts,



do they come with transcripts or captioning as well? So students have multiple options to engage with that kind of material.

Matt Wittstein (00:26:29):

That was a really great overview of some of the different ways y'all have used podcasts. I want to not necessarily shift gears, but I want to go into this sort of case study approach and ask you a similar question. How are case studies beneficial or maybe challenging for student learning in different contexts?

Jill McSweeney (00:26:48):

I'm happy to share my approach, particularly in the context of the podcast. Podcasts really allowed me to have a focus case topic in class that we're talking about, an example. But what I liked most was it allowed me to bring in multiple voices across the different weeks and really allow students to think about how teaching and learning looks in different contexts through different perspectives, but still have that continued thread throughout the podcast of thinking about application. And I think podcasts or case studies in general really allows students to think about something within a very narrow scope.

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But also from a variety of different perspectives that they might not get through a textbook or other course content that would come from one consistent perspective across the curriculum. So I think having that and really creating a way to humanize some of the topics. So hearing from those voices, hearing from the people who might be experiencing it, allows students from my experience, connect with the content in a different way. And I think that really provides a rich experience for students to make those connections, to understand it and practice. And then to also understand how it's impacting people thinking about the topic and the discipline that I'm teaching in how it's impacting the lived experiences of people beyond their own kind of experience. So I really enjoy case studies to provide that human lens to what we're teaching and that applied lens.

Cara Frankenfeld (00:28:15):

I would say that my experience is very similar to that and that part of the reason I would pull in case studies. And I would often use ones from the National Center for case studies teaching and science when I was teaching courses and things like environmental health because there's some things there that align. But when I would pull them in to give that applied perspective, public health, the field that I work in is very applied. I was teaching either undergraduate or master's level of students who were going to go out and be practitioners, not researchers. So being able to have that applied lens I felt was really important. And so when I decided I was going to develop a series of case studies for one of my courses on environmental epidemiology because there wasn't anything that already existed that I needed. And so I delved into the literature and there is numerous ways and types of case studies that can be done.

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And so the ones that I was using were more in the directed and problem-based learning space where it was a fully contained case study that they would work on, not start and stop. But it was like, "Here's the background, now go, here's some readings, here's some other material. Now you're going to work on this in an applied way." So for example, one of the things was to make a recommendation to a public health department about what you would use to evaluate blood lead in a group of children or evaluate lead exposure in a group of children. Would you use blood? Would you use questions? And what would

be the cost associated that? And so it went through in a very stepwise fashion in order to get them to the point where they made a recommendation. And so one of the challenges from that is that sometimes students want a right answer and there isn't always a right answer.

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Oftentimes these are much more narrative and there's more than one possibility like there is in life. There's more than one possibility that you can recommend and having to build to that evidence and do that and build those critical thinking skills. So knowing where the students are and what type of case study works for them I think is really helpful. If they're a bit further into their academic career and that critical thinking can come in there where there isn't one clear right answer that can be very beneficial. Or using if they're a little bit earlier and needing to have like, "Here's the right answer as they're just developing those initial learning what's in the field, what does this mean?" I think there are also case studies that can be developed in that space as well. And so again, I'd love to hear what Gianna thinks from the student perspective of having maybe gone through some case studies.

Gianna Smurro (00:30:51):

Yes. And one of my courses, we had gone through a crisis communications case study. So specifically how a company or organization will handle a certain PR incident. We would be given a case study of, I believe Peloton was having issues where kids were getting killed because of the wheels and with accidents and such as that. So our professor was like, "Okay, I want each of you to create a comms plan on how you would deal with this crisis." And so all of us came up with very different ideas of things and ways in which we would handle this. But then we were able to actually evaluate what happened in real life and how they did handle this crisis. And so just being able to learn through real life examples I feel like is a great way to guide your learning. Even just looking at the media on... I took a media law and ethics class where we analyzed Taylor Swift and the rights to her music as well as the Johnny Depp and Amber Heard trial.

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Taking those specific things and kind of integrating it into the classroom I feel like is especially a great way to do in a communications classroom because a lot of it is based in things that are out in the real world that we can analyze, that we can look into. Especially as a journalism major, we look at articles on different news sources all of the time to look at the ways in which articles are crafted and how stories are told. So I feel like it is a great way to take things that are happening in the real world and be able to reflect upon them. Even taking case studies that are kind of based not in real life truth, but in things that could possibly happen to evaluate the certain ways that you can react to certain situations and how you can then apply them into your own studies as well as career path.

Matt Wittstein (00:32:17):

Gianna, did you find anything difficult about working with case studies?

Gianna Smurro (00:32:20):

I think the most difficult part, especially when you're working with ones that are based in truth, is just kind of evaluating what you think should be done and how it should actually be done. Because I feel like sometimes those could be two separate things. Because a lot of things can conflict with the way that you view things such as morals, ethics, but then also taking what you've actually learned in the classroom. So I feel like especially when you're dealing with things based in truth and in real possibility, I

feel like that there's almost a moral battle of, what would you do if you were actually in that real life position.

(00:32:52):

And I feel like as how difficult as that is to be put into sometimes I feel like that is a great reality check for a lot of students because one day we will be out in the world and we will be handed these real life possibilities that we might be the first time someone's ever dealing with them. And so we'll have to come to those things when we arrive at them. So I feel like it's difficult, but I feel like it's also necessary for people to experience that kind of growth so that when there is something that they encounter that they're not familiar with, that they can take the appropriate steps to deal with that.

Matt Wittstein (00:33:22):

That really shoots me back to what Cara said about there not always being a right answer. And honestly, in my teaching, I want students to wrestle with, "Well, what would I actually do?" As opposed to, "What does the textbook say I should do in a certain situation." Because it's not always that clean. So I really appreciate that. I want to think a little bit about the logistics of how Justin might actually implement what we're framing as PodCases in his classroom. And his approach right now is taking a little snippet of a podcast that probably already exists, something that's already out there as opposed to creating his own.

(00:33:58):

Playing it, lecturing or doing a little bit of an activity about what the students just learned, then playing a little bit more and then lecturing and doing a little bit activity. He really likes those sort of short form things. And as an example, he gave the Joe Rogan Experience, has an episode where they talk about Wim Hof, the Iceman who has some special breathing techniques. That he goes and does some underwater really cold situation type of stuff as sort of a entry point to talk about homeostasis, of the ability of the body to adjust and maintain a appropriate level of function. And so with that context, are there other ways we might tweak that logistical approach of play lecture, play activity, play lecture and so on that you think might work better?

Gianna Smurro (00:34:44):

I don't think it's a thing that would necessarily be making it work better, but I know that from what you're saying that he kind of wants to go straight from activity to podcasts and just kind of have it roll. But I feel like a lot of students do an opportunity for reflection. So I feel like that will probably be the biggest barrier that he would kind of face is because a lot of times students will want to talk through things as they're going as a way of just personally understanding and kind of absorbing information. So I feel like that would almost be the biggest barrier to the way in which he would like to structure it. Because I do see how he wants it to flow and how he wants it to go through the course.

(00:35:19):

But I think that might be a little... I think that it might come to a little bit of a stand hold with the students because I feel like the students will want to discuss through. At least from personal experience, if there's something I might not understand specifically rather than having it roll through and kind of feel like it gets left behind, it'd be something I would like to talk about. So whether that will be something that during the lectures he will be kind of over viewing what was previously discussed in the podcast, whether that will be integrated into the discussion parts of the lessons. I feel like it all kind of depends on what he's specifically teaching at that time. And how the podcasts will tie into that specific lesson and the depth in which the podcasts are going.

Jill McSweeney (00:35:57):

I think that's extremely insightful, Gianna. I think going back to the ability to learn through listening. I know when I listen to an audiobook, I oftentimes like to have the physical text around as well just to listen and to be able to read along. And so just thinking about how only audio might impact how students can understand, take in and analyze the information, I think that's a consideration. I also think this is not unsimilar to other approaches where we might show a short video clip in a classroom and supplement that by book, ending it with a short lecture or an activity. I think swapping in podcasts is a great idea, but I think it's missing a little bit about the value and the flexibility of podcasts.

(00:36:44):

So I know in my class when I assigned podcasts, students really responded favorably because it allowed them to do other things while they were listening to it. So they liked to be able to get up and walk around, walk the dog, do the laundry. And I think that's one of the really great things about the flexibility of a podcast. It allows students who might be juggling a bunch of other things to casually listen along and still be learning while they're tackling chores or other activities. And I think that's something that's going to be really beneficial and you might miss by having it in the class. So one of the things that I might recommend and emphasizing what Gianna just said is assign it as something that students listen to in whole and then take small snippets to reinforce the points that you want.

(00:37:30):

So maybe like 30 seconds to a minute and a half where you play that and then have students to discuss it in class. I would also offer prompts with the podcast that I would share, so while you're listening, think about X, Y, and Z. Did you hear this story come through? How do you think that the course content is applied in these cases? So again, prompting students while they're listening to think about what you want them to talk about in class. And I think that's a really great model that that flip classroom will still utilizing that kind of really nice segmented or book-ended approach with lecture, piece of listening, maybe an activity or a lecture.

Cara Frankenfeld (00:38:06):

Yeah, I like all of the things, and I was trying to also think through how to balance that engagement in the classroom versus the preparation ahead of time. And so I'd be really interested and some of the things that I was thinking about and getting everyone else's thoughts on, assigning some of it beforehand. But then as part of that assignment, either assigning the whole podcast beforehand and having students before class, if there's a learning management system, submit two to three questions of things that they're either still confused about. What it made them think about, just some sort of engagement with them that prompts them to then participate fully in it before class. Or having them write those down at the beginning of class, hand them on a piece of paper if there's not a learning management system.

(00:38:54):

And I think if there's still just this interest in doing it more as a listen within class, being able to pull in, having the students be able to have some discussion. And this can even work in larger classes by doing things like pair shares, so doing a four-minute snippet and then a pair share about the questions that the same type of thing. "What are the questions? What did you think about that?" Just having them have that five to 10 minute opportunity just to talk with each other just so that everyone has an opportunity to reflect on it before jumping into then either a lecture or an activity. So I think that there's little tweaks that could really just build on either one of those ideas of adding some things outside of class or adding some things in class that allow for some of that engagement.

Jill McSweeney (00:39:40):

So I think that's a really great approach for a lot of classes, even if you're not using podcasts, allowing students to have time to think, to gather their thoughts, to write things down, share with a partner, and then even share it more broadly. I think that's a really great inclusive approach to teaching while also being mindful to folks that they might need a little bit more time to gather the thoughts, to think about things and to feel confident in sharing their ideas. I also think that it allows you to really direct the learning to where you want it to go.

(00:40:12):

So sharing something and say, "Discuss." Students can go, "I can go anywhere with that." I can discuss, "Oh, this person, the voice was reminded me of this person." Or, "Did you see this person in this movie?" And so really guiding the conversation to make sure that if you're using that small snippet, that they're getting the most out of that small snippet and they're getting what you want them to get out of that small snippet. So I think pairing that with some really nice guided questions and time to reflect allows students to really think deeply about what they're listening to and then have the opportunity to share with their classmates.

Cara Frankenfeld (00:40:47):

I wanted to tag on what Jill was just saying about the guided questions because I forgot to emphasize that when she said that before. Because I think that is actually really key and part of it because again, the conversation could go so many different directions. And maybe not in any sense of where an instructor wants it to go. And so having three or four like, "Here talk about these particular things," I think is a good way to start conversations too. Another aspect of that is that if it's a start and stop, having the students shift, if they do multiple pair shares, shifting their pair to another person and having that conversation so they can get those different perspectives also integrated within the class. But I really do also want to emphasize those guided questions because those are really helpful to make sure that the learning stays on track and towards the direction that we want students to go.

Jill McSweeney (00:41:40):

It brings me back to what you mentioned, Cara, in how you utilize podcasts, how you had students really trim down the main ideas. One of the things that I would get students to is think about, "Okay, well what concepts across the course are you seeing discussed in this timeframe?" And so queuing students to also pull out the main points and then connect it back to what they're learning, not just in that week. One of the things I loved about the podcast was it also allowed me to bring in other aspects that I could then nod to. And sometimes even when I was interviewing somebody, I would be like, "Oh yeah, remember we talked about this in week two in the class. What do you think about this?" So really tying those threads for students and making sure you're making explicit and visible the connections throughout the different weeks and the overarching themes and curriculum of the course, which I think is really valuable to students.

Matt Wittstein (00:42:31):

I think as I think through some of this, I have some concerns that some students will love this, but other students really may not like this. Jill, you alluded to the unfamiliarity of learning through primarily listening. We certainly have a lot of YouTube videos that are instructional in nature, and this offers a different approach. I know one of the things that attracts Justin to it is that humanizing piece of telling an actual story to go along with it. I'm curious if you all have ideas of how to get student buy-in, how to

get students to actually really fully engage with this and be excited about this type of learning activity, especially in different contexts.

Cara Frankenfeld (00:43:10):

So one of the things that I think works in terms of student buy-in is to solicit their ideas and have them suggest, like you did at the beginning of this, "What's your favorite podcast?" To get some sense of, one, are they even engaged with podcasts? Is this something they're even interested in? And if they do have some favorite ones, trying to pull some things from there. Just doing that as part of... Knowing that this is going to be part of a course, having the initial outset survey, first day type of conversation so that they still can be integrated later. Obviously early on, getting things prepped, an instructor's going to pick theirs, the ones that they want to use at that point. But being able to incorporate them throughout the semester I think is a helpful way to get some buy-in. And I also hear what you're saying because I think students have such a diversity of how they learn.

(00:44:04):

And so I think one of the things that is part of this conversation is that this is great, but it can't be the only thing. So every week can't be this podcast type of thing. And I don't think Justin wants to go that direction. It sounds like this is just an incorporation, but if there are other listeners who are thinking, "Oh, I could probably do this every week." Students would then get very... it would get monotonous and it would lose some of the benefits of being something different in a different way to learn. So just remembering that students have that diversity of learning and using different types of activities throughout the entire course is beneficial and pulls people in. And is a different way to get buy-in that sense, in that everyone feels engaged in some way, something's working for them in different ways. Yeah, Gianna, as the student perspective, I feel like this question is actually much more targeted to you.

Gianna Smurro (00:44:54):

So I would say that it's very major specific, being a communications major, we're very interested in what is the newest podcast out there, what is the newest means of which they're creating and evolving this new medium. So I really think that as a comm major, when it's in our classes, we're listening, we're engaged because I feel like that's kind of the major in the field that we're going into. So I feel like as a comm major, the buy-in is already kind of there because you're kind of interested in that field. But I do think for other classes, what you were saying, Cara, I think you kind of need to gauge how much students are really interested in podcasts.

(00:45:28):

How much they feel that it would benefit their own learning and their own education. Because I do know in some of my classes that are in comm classes, I might feel that it might not be the most beneficial for my personal learning at that specific point in time. So I think at least for student buy-in, I feel like it needs to be very tailored to the lesson of what is being taught. So I feel like it needs to have a specific benefit that you would not be able to get from a different specific medium. Because I feel like students will get the most out of it when it is the most relevant to what is being talked about and will contribute more than it will be taking away from a specific lesson.

Jill McSweeney (00:46:04):

That is awesome recommendations. And I think really spot on to the value of transparency with all of your curriculum and course design choices. So one of the things that I really didn't explicitly say was, this is why podcast is valuable. This is how it's supplementing you're learning in a different way that can't be

done, say through the course text or through a video from YouTube. So being really explicit about the value of it, and that means you really thinking intentionally about what's the purpose of the podcast? Why is this providing pedagogically a benefit to integrate into the course and for students to engage with. I also try to help students think about and develop skills for listening and learning together. And so I offer, you could spend five, 10 minutes listening and put it down and do something else, you could take a couple notes while you're listening.

(00:46:56):

So also helping students build those skills to understand what can they do to support listening and learning together. And how that might look different, say when they're reading a textbook or engaging in course discussion. This is another form of learning and here are some ways to support you in being effective at it. I think the other thing that I mentioned was mentioning that it's a break from all the reading that they're doing. So this is something different that they might not be getting from their other courses, and it's a break from having to be in front of a computer or sitting down and reading a text. It's an option for them to kind of get moving, doing something else as I mentioned before, and something alternative way of learning, which I think really engaged students. Particularly at the time when I really integrate this into my teaching and students who were spending a lot of time in front of a screen. And I think showing and articulating and being transparent, as Gianna mentioned about the benefits of this approach really does help students see the value of it.

Cara Frankenfeld (00:47:56):

One of the things that I was thinking about as Gianna was talking and Jill was talking about this and what had been set up as using this to humanize this, is that major or discipline specific piece of that becomes an important part of how the instructor navigates this as well in addition to the students. So in the field of public health, there are lots of personal narratives that are very humanizing and very interesting and very engaging, but one of the things about public health is its population-based health. And so we have to remember to pull people from that one narrative to the bigger population. And making sure that that part of the whole process is communicated, that a humanized and personal narrative story is really helpful to provide that context. But remembering to say that this is not going to be everybody's context. And how does this fit into the overall bigger discipline, I think is a part of how that is important within different disciplines.

Gianna Smurro (00:48:59):

And I feel like specifically in the field of criminal justice, I feel like there's a lot of true crime type podcasts that different people can pull from. Because I feel like that's probably one of the biggest, most well-known podcast genres. So I feel like as you were expanding upon taking those and applying them to specific majors and case studies, I feel like that's a great way to do it.

Matt Wittstein (00:49:20):

I think I have a lot of advice to share with Justin at this point. So I want to thank you all one more time for sharing your wisdom with the podcast, with our audience. So thank you so much for your time today.

Jill McSweeney (00:49:30):

Thank you, and it was great meeting you, Cara, and chatting with you again, Gianna, you always have such wise and thoughtful pieces of comment and feedback and tips, so thank you so much.

Cara Frankenfeld (00:49:40):

Thank you. It was great being here.

Gianna Smurro (00:49:43):

Thank you.

Matt Wittstein (00:49:58):

Hi, Justin. Welcome back. I'm excited to share with you today what our panel talked about.

Justin Shaffer (00:50:02):

Thanks for having me back, Matt. I'm really looking forward to hear what they thought about the pod case idea.

Matt Wittstein (00:50:07):

We talked with Cara Frankenfeld, an epidemiologist and public health faculty from the Maine Health Institute for Research. Jill McSweeney from Elon Center for the Advancement of Teaching and Learning. And Gianna Smurro an Elon University Junior Cinema and TV, Arts and Journalism major and Center for Engaged Learning, student Scholars studying Work integrated learning. The panel really loved this idea, and I think they're most excited that it really gives you and really any teacher the opportunity to share diverse stories, perspectives, voices, or applications of disciplinary knowledge and skills. So we hope that you'll rise to the challenge of using this idea to expose students to things that their textbook or a YouTube video wouldn't be quite as effective at doing.

(00:50:53):

The panel valued the idea of using podcasts as a different modality from text-based or lecture-based learning, and wanted to stress for you and our audience to continue to explore multiple modalities because we know our students learn in different ways. The point came up that especially if podcasts are new to your students, you might need to take initial steps and intentional steps to prepare students to be good at listening and processing auditory information. Providing the podcast as listening homework with some guided prompts and then listening to small clips broken up by other learning activities in class might enhance this experience, especially early on in a semester. Jill talked about her students really loving podcasts because they could do other things while listening, like a chore or going for a walk. And that's not necessarily possible if it's used as an in-class activity only.

(00:51:45):

So it's just something to think about in how you assign some of this work. For the in-class activity however, they really like the idea of giving some time to reflect and break up the listening in class. Cara recommended if you do small group share type activities to switch up the groups after each clip to diversify the perspective students might be getting. Gianna also shared an example where students created a solution to a case study and then were able to provide a point of comparison to another solution that professionals created, or historically what actually happened. I'm not sure how well that ties into anatomy and physiology, but I love the idea of students being able to test their solution to a problem with someone else's solution. There's a lot of utility in using PodCases.

(00:52:29):

Some of the learning outcomes that you might consider in your context are distilling information. The editing process of creating a podcast really makes you think about what is actually most important.



Evaluating if a source or a narrative has biases or is accessible. Applying thinking beyond the textbook examples and distinguishing between what someone should do versus what is actually pragmatic. So that more applied lens that textbooks sometimes leave out. One idea that came up was thinking about ways to scaffold this type of activity across units. And I know from our previous conversation that you're planning to try this with a few units. So I would love to just put you on the spot and ask you to brainstorm ideas of how you might link your homeostasis podcast activity with a later unit like neurotransmitters.

Justin Shaffer (00:53:16):

Thanks, Matt, again for that summary. That was really awesome to hear their great ideas from the panel, especially getting that student piece more involved. As far as scaffolding the activities across the semester and across concepts, I mean, first of all with anatomy, physiology, homeostasis is just evident everywhere. So conceptually it's pretty easy to incorporate that into nervous system, neurotransmitters, thinking about regulating body temperature and then neurons, how they communicate with each other to allow that to happen, for example. So that's pretty easy. From the activity standpoint though, that's a little bit more challenging, I think, to find a relevant podcast that could tie in to a topic that you really want. So as I've been thinking about this project over the summer or I'm trying to find, "Okay, are there episodes I know of that match certain topics?" And that's where the student engagement could come in.

(00:54:01):

If I survey the class, "Hey, do you know of any episodes that tie into this topic? Let's make a lesson about this." So I'm definitely going to do that this fall. But for neurotransmitter specifically, I actually did have one in mind, so that was a fortuitous, you picked that topic. But Amanda Fielding, she's a neuroscience researcher that's been pioneering work on the use of psychoactive substances for treatment of mental health issues such as anxiety and depression, even using LSD to promote cessation of smoking. And she was on an episode of Joe Rogan I listened to over the summer. And I'm going to have that one in the class this fall as well. So again, trying to pick out ones that I know of that match the topic, but surveying the students, I think, or just asking my broader network like, "Hey, do you guys know of any episodes that touch on this certain A and P topic?" That would be a way to find more, that make them tie in a little bit better.

Matt Wittstein (00:54:52):

I had listed off a few potential learning outcomes of the activity that you might consider. But I'd love to hear from your perspective of what are the learning outcomes that you really are honing in on for why you are thinking about podcasts and case studies, these PodCases?

Justin Shaffer (00:55:07):

Yeah, so again, the case study, having that story or narrative to a lesson really helps to increase student engagement and then hopefully promote student learning. The podcast element though, for me, I could use a text source, I could use a video source, but I wanted to capitalize on the growing momentum of podcasts. And if students are not aware of them, although it sounds like according to the panelists, I think maybe a little bit more so than I think of. But if students are not aware of the podcast world, this might expose them as a great way to learn some new things and even just as a source of entertainment. And so with that, that'd be one, exposing them to the format. Two would be able to bring in a diversity of voices and literally voices to the classroom.

(00:55:48):

And again, having a picture of somebody, great to show diversity of people, but actually hearing them talk and hearing a snippet of a conversation, able to show the students what different folks are like in different walks of life and different backgrounds and what they bring. And third would be a way, I think this was that good in the panel, to just bring in a different perspective from the textbook. We can learn about homeostasis from our textbook. I can play Colorado Academy video for them, or we can have someone who's experiencing this in their own life in a really interesting way, have them talk about it. Then we dive into the science and the physiology behind it and bring them back at the end of that narrative story. So it's really more personifying the content at hand. It would be the major overarching goal using this newer technology.

Matt Wittstein (00:56:32):

Now, you teach in an engineering curriculum, and this is typically sort of an elective course in your curriculum for a lot of your students. How do you feel about the idea of just getting better at listening and learning through listening for that population of students?

Justin Shaffer (00:56:47):

Yeah, that's a great point, and I think listening and being able to listen critically is a skill that we sometimes don't practice as... well, any human really, but it maybe students more so because they have just so many things going on. Or as my wife likes to say to me, "You have too many tabs open." You have too many things going on, so you're trying to listen to something while you're trying to write something or research something or do something else, right? But being able to really focus on the listening, and this could be in the form of a different type of assignment while in this pod case idea, I'm just going to be playing these snippets in class for them, but I'll say, "Hey, if you want to listen to this after class, the full two hours, go for it and see what you learn." Ideally, down the road, I'll turn this into a student-centered assignment where they actually have to find a podcast, turn it into a pod case, tying in the A and P content along the way, but that will require critical listening.

(00:57:37):

So I think I would have to provide some training on that to them on how to listen critically. I might need to take that training myself first though, because I'm not the best at this all the time with the multitasking while you're... Because that's the great thing about these, right? You can listen to them while you're doing the dishes or going for a run or whatever else. But if you start to notice yourself, "Hey, I'm not really paying attention to this anymore. How do I refocus myself either to stop what I'm doing and listen or replay it or just now I'm not in the right mindset to actually learn from this? I need to table this. I'm going to pause it. I'm going to put on Taylor Swift instead, I'll come back to this a little bit later."

Matt Wittstein (00:58:12):

So my last question for you before we wrap up is what do you anticipate being the best feedback and the worst feedback that you might get from students after you implement this?

Justin Shaffer (00:58:23):

That's a great question. I'm thinking that the best feedback I would get is, "Hey, I never knew this person existed. I never knew this show existed. I'm going to go start listening now. I'm going to do more research on my own. I'm going to learn more about this person's life and their background and what they do." And that's, again, one of the goals is to diversify the people and voices, people our students

are listening to and know about, expand their horizon. So that'd probably be the best. The worst would be is what's the point of this? Why are you playing this? You're spending too much time on the story element. Why don't you just teach us the content, right? And I get that regardless whether I'm using a podcast or if I'm using a video or if I'm using something else, right? Anytime you bring that story narrative into a class, while the vast majority of students buy in, I feel like they're engaged with it.

(00:59:09):

There's going to be some that say, "Hey, just stand up there and talk." Because you're taking time away from that where you could be delivering content, but that's with the sell and the design of the entire course now, right? You tell your students at the beginning, "Well, I'm designing the course this way because we have ample evidence now, decades of evidence showing that active learning, if student engagement group work is promoting your learning. More than not, I just end up here and talk." And I tell them, "It's just a lot more fun if we do stuff like this rather than me talking the whole time." So that's probably the worst I would get top of mind right now. I'm sure other things will happen, and I'll report back to you.

Matt Wittstein (00:59:43):

Well, Justin, this conversation with you and with our panel has really opened my eyes to a lot of different ways to use podcasts and case studies, so I just want to thank you one more time for bringing this idea to our show.

Justin Shaffer (00:59:54):

Absolutely, Matt, it was a pleasure to talk over this idea with you and to hear the feedback from the panel, and I hope your audience is into this a little bit as well. And if anyone uses these, let me know how it goes.

Matt Wittstein (01:00:15):

Limed: Teaching with a Twist was created and developed by Matt Wittstein, associate professor of exercise science at Elon University. Dhvani Toprani is Elon University's assistant director of learning design and support, and serves as a producer for the show. Jeremiah Timberlake is a class of 2024, computer science and music in the liberal arts double major at Elon University and Summer 2023 intern for Limed. Music for the show was composed and recorded by Kai Mitchell, a class of 2024 music production and recording arts student at Elon University. Limed: Teaching with a Twist is published by and produced in collaboration with the Center for Engaged Learning at Elon University. For more information including show notes and additional engaged learning resources, visit [www.centerforengagedlearning.org](http://www.centerforengagedlearning.org). Thank you for listening, and please subscribe, rate, review, and share our show to help us keep it zesty.

Nolan Schultheis (01:01:19):

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