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Limed: Teaching with a Twist

Episode 4 – PowerPointers: Making the Most of Slide Decks

Matt Wittstein (00:00:10):

You are listening to Limed: Teaching With a Twist, a podcast that plays with pedagogy.

(00:00:23):

We've all participated in a learning activity where the slides on the screen didn't exactly facilitate deep learning. Dr. Sarah Morrison-Smith from Hamilton College asks us for advice and general engaged teaching strategies to help her move away from PowerPoint in her computer science classes. The panel pushes back a bit and considers how PowerPoint can be used as an effective tool for teaching and learning, as well as tips for creating a conducive culture for student and new faculty success. Our panel from Elon University includes Jill McSweeney, assistant director of the Center for the Advancement of Teaching and Learning. Scott Spurlock, associate professor of computer science, and Christina Wyatt, senior finance and economic consulting double major and Center for Engaged Learning Student Scholar. We hope our podcast invites conversation about teaching and learning practices and we would love to get your feedback. Reviewing and rating our show wherever you listen to podcasts is a great way to share with us what you think. Thanks for listening and enjoy the episode.

Dhvani Topran (00:01:28):

Hi, and welcome, Sarah. We are so excited that you're here with us today. Thank you for coming on the show, and would you like to introduce yourself and get us started here?

Sarah Morrison-Smith (00:01:37):

I'm Dr. Sarah Morrison Smith. I'm an assistant professor at Hamilton College. I just started in the computer science department and I mostly do human computer interaction type research and classes.

Dhvani Topran (00:01:50):

That's so exciting and congratulations on your new position. So tell us a little bit about what teaching and learning adventure brings you here today on the show.

Sarah Morrison-Smith (00:01:59):

So I'm going to be teaching a class this spring, a CS101, CS for all, and while I have taught 101 before, I taught it very differently at my last institution. And when I started here at Hamilton, I found that people are not as big on PowerPoints as people were where I was taking classes and teaching classes. So what I'm kind of trying to do is move a little bit away from PowerPoints in the classroom while still being engaging. I'm teaching a computer science class that has a lot of non-majors, so I want to make sure that everything is understandable to the non-majors. I already know about live coding and I do live code in my class, so I'm more interested in what other things I can do to be engaging and help students learn these difficult topics without just showing them a whole bunch of PowerPoint slides.

Dhvani Topran (00:03:03):

That's a really interesting idea that you bring up, Sarah, because I have been a part of that generation where we have seen PowerPoints being pushed into the classroom and now you are talking about a new generational shift where you're trying to move away from PowerPoint. So can you tell me a little bit more about what is your motivation to move away from PowerPoint?

Sarah Morrison-Smith (00:03:22):

What had happened is I'm at a new institution, I'm trying to jive with the institution's culture and so I asked one of my colleagues if he could provide me with the materials that he uses for teaching this class. I want to make sure that my class meets Hamilton's expectations and also make sure that I'm still covering all of the same material and that students are getting the same kind of good experience when I teach the class as they're getting it from the excellent teachers here. And he handed me a binder full of notes, no PowerPoint slides, just notes. And in the past I had been teaching all of my classes using PowerPoint. So I was just like, "Oh my goodness, how am I going to do this? How can I make sure that I am on topic, that I'm not forgetting anything that needs to be covered? How can I just present all of this knowledge in this different format?"

Dhvani Topran (00:04:22):

Sarah, can you tell us a little bit more about what the learners in this kind of a classroom look like?

Sarah Morrison-Smith (00:04:28):

It's my understanding that this is going to be a lot of students who aren't really focusing on computer science as a traditional major. Hamilton has open curriculum. We do have students who do concentrations in computer science or literature, geology, or whatever it is that you want to study, and kind of the point is for students who are non-majors to be able to take this class, learn some computer science, and walk away having had a good experience.

Dhvani Topran (00:04:59):

You mentioned that this class is not just computer science students, so it looks like there are a lot of diverse learners coming into the learning environment. So what, according to you, would an engaged classroom look like?

Sarah Morrison-Smith (00:05:12):

I think what I'm looking for is that students are interested enough in the content to be taking notes, to be focused on what I'm saying, not sitting looking at TikTok on their phone under their desk. More interesting than TikTok, I don't know if I can be more interested than TikTok.

Dhvani Topran (00:05:35):

You're setting up a very high bar for yourself over here.

Sarah Morrison-Smith (00:05:41):

Yeah, it's just that... I mean, so I haven't taught at Hamilton yet, but I have taught 101 before and you ended up with what kind of happens in intro classes, where you have students who are maybe doing well and really interested because they're already interested in computer science, and students who are taking this to fulfill some sort of requirement for core or a quantitative thinking type requirement and they're just falling asleep because it's just slide after slide.

Dhvani Topran (00:06:14):

What I hear from your idea and explanation so far, Sarah, is that you do see some value in communicating ideas in PowerPoint, but there are some things about PowerPoint that you want to let go of to bring in the element of engagement. Can you tell us a little bit more about, what are those things about PowerPoint that excite you or have kept that engagement level going so that when we are thinking about alternative, maybe we can make sure that those exciting things are still captured in the ideas that we are presenting to you?

Sarah Morrison-Smith (00:06:46):

So one of the things I really like about PowerPoint is that I can kind of plan out what I'm going to say throughout the class. I don't read a script, but kind of a game plan for everything that we're going to cover. I have reminders as to topics that I need to cover because it's on the slide there. It's really easy to link in videos so I can show them, if I'm doing a lecture in another class on text to speech, I might need to play a video of what text to speech sounds like, or stuff like that. I like that it does facilitate note taking to some degree. One other thing I don't like about it is that students will just read the PowerPoint, and then it'll make sense, and then they think that they then understand and have retained that knowledge, when in reality they just understood it and it doesn't really sink in.

(00:07:48):

So I guess the thing is, is that I really want something that will help me keep my class on time, and on track, and cover all the topics and present all that information for students, but also maybe more actively. And then there's one more thing. For this class, we don't have a textbook and I'm used to teaching classes without textbooks where I provide all of the information in PowerPoint so that they have a reference. It would be nice for them to be able to have something to refer back to or maybe something to supplement a textbook if I decide to use a textbook in the future, but is easier to digest than, say, recording the entire lecture, because I've done that before during the pandemic and students are not going to sit through an entire recorded lecture.

Dhvani Topran (00:08:38):

I'm so with you on that, so I'm curious then, Sarah, to know, what are the other technologies that you have used in your classroom and you think have worked well to increase that level of engagement?

Sarah Morrison-Smith (00:08:48):

So the thing that I've done before is I've had little quizzes. Sometimes what I do is I'll do, if let's say you have a true/false question, I'll have three options. Like true, false, I have no idea, but I'm still here. That works pretty well. The tricky thing with that is that I like having something like a poll where you can see most students said this, most students said something else. I know that in the past people have done that a lot with e-clickers, but e-clickers are expensive.

Dhvani Topran (00:09:24):

So what I hear you say, Sarah, is that you want to think about a different strategy other than PowerPoint because you want that engagement level to go up. But in your mind you do not define technology just digitally, you're just looking for a strategy.

Sarah Morrison-Smith (00:09:41):

Yes, I'm looking for strategies. Yeah. That's a really good way to put it. I'm looking for strategies and it may be because I'm a new teacher, so the panelists may have a lot of teaching experience and they can offer things. But yeah, I guess I've stayed away from things that students have to download to some extent just to participate in the class or students have to buy in.

Dhvani Topran (00:10:09):

I think those are some really important equity related issues that you are thinking about right now. So one other thing I want to look back to, can you tell us a little bit about live coding you mentioned earlier and how it is or it is not effective in the classroom for increasing engagement?

Sarah Morrison-Smith (00:10:27):

Live coding is great. Okay. So for those of you who are listening who never taken a computer science class, don't know what live coding is, I would come with some... Let's say we're going to learn something very simple like what a variable is. So I would have, like I type in the variable name and the maybe var if we're using JavaScript, or the type of variable, or whatever, I would literally stand there with my computer up in a programming integrated development environment and type it out. Ask the students, "Do you think this is going to run? What do you think is going to happen?" Run it. See if they were right. "Raise your hand if you think X is going to happen. Raise your hand if you think Y is going to happen." It's really effective. I use it all the time. That's great. The thing is, is that it only teaches you the code part of the computer science, and computer science is more than just writing code. There's a lot that has to do with learning how to problem solve, learning algorithms, learning ethics that are tied to our field, learning applications of computing.

Dhvani Topran (00:11:48):

So Sarah, since you spoke about so many ideas that happen in the classroom, so many things you do with your students, students from different backgrounds, can you tell us a little bit about what are the two or three main learning objectives for a class like this?

Sarah Morrison-Smith (00:12:03):

Yeah. When I teach a class like a 101 class for computer science, there's a few things I'm trying to accomplish. One is thinking, and reasoning, and being able to problem solve. That's probably the number one thing that students need to learn. That kind of comes up with thinking algorithmically, thinking about how you could create a set of instructions for someone else, in this case it would be a computer, to carry out, to solve a problem in a structured kind of manner. That's the number one. Alongside that comes the actual programming part with maybe object oriented programming, or maybe a specific language that they're trying to use.

(00:13:01):

I think this class is using Python, in the past I've taught it with Java. The language itself is not as important because you can learn a language in a weekend if you understand the fundamentals of computing and how to think programically. So that's really the big thing, is being able to problem solve, being able to understand, how can I apply computing to solve real world problems? And then the tools in your toolbox that you need to know to understand how to actually engineer the code to make it do what you want it to do, because there's the two aspects, like figuring out what you want to do and then figuring out how to make it do what you want to do.

Dhvani Topran (00:13:58):

Great. That was really helpful, Sarah. So I think my last question to you is, what do you think will be most helpful for our panelists to think about in the context of the problem that you brought to us today?

Sarah Morrison-Smith (00:14:10):

What I would say is that the most important thing that I'm looking for, what I'm really looking for is suggestions on teaching strategies.

Dhvani Topran (00:14:18):

That was really nice talking to you, Sarah. Thank you so much for being here on the show and I'm excited to hear what our panel has got to say about your unique teaching and learning context.

Sarah Morrison-Smith (00:14:28):

Thank you so much for having me.

Matt Wittstein (00:14:35):

We are here with our panel and I am so excited to talk about Sarah Morrison Smith's computer science classroom. To let you all introduce yourselves I have a quick fire question for you. You can just go around the panel real quick and I want to know, PowerPoint, love it or hate it and why?

Scott Spurlock (00:14:56):

Hey, I'm Scott. I teach in the computer science department here at Elon and I love PowerPoint. I think it's a fantastic tool when used correctly and I've also sat through some really bad PowerPoints, but I think it can be really good.

Jill McSweeney (00:15:10):

Hello, I'm Jill McSweeney. I am the new assistant director at CATL here at Elon University. I also really like PowerPoint. I think it can be a really great tool to support your teaching. I think it's best used not to drive your teaching, but really to enhance it, and particularly when it's paired with some active learning strategies and other pedagogical approaches.

Christina Wyatt (00:15:33):

And lastly, I'm Christina Wyatt. I'm a finance and economic consulting student at Elon University and I too love PowerPoint. I love it for supplementing my learning and also it can be a great resource in place of textbooks, which keeps it cost efficient for us students.

Matt Wittstein (00:15:49):

Wow. So you all will be a little surprised to hear our guest on this episode, Sarah Morrison-Smith at Hamilton College, is starting at a new institution where they want a little bit less PowerPoint. They want us to try out some different types of engaged learning opportunities. We spoke with her to understand what she's trying to get and think about ways to move, maybe just move the meter a little bit away from PowerPoint but not necessarily get rid of it altogether. To give you a brief breakdown, Sarah teaches a course called Computer Science for All, which is geared towards non-majors, non-computer science majors. They work in the Python programming language.

(00:16:35):

What she's trying to do in that course is get people interested in computer science, improve their thinking and reasoning and problem solving skills with maybe a little less emphasis on the specific syntax of coding, but they apply those skills across the liberal arts and she wants to think of ways that she can be a little bit more engaging without using PowerPoint as much. So I want to kind of set out this panel with a few workshop goals. One, is just a broad overview of what are some practical new ideas or practices that she can implement. You all kind of said you love PowerPoint, so how can we get her and her colleagues and her students to also love how she's using PowerPoint? Specifically, she's a new faculty member, so she wants maybe some lower prep possibilities.

(00:17:26):

Second, I would love just some discussion of some of those strengths and weaknesses of PowerPoint, especially in science, math heavy types of courses, how that might differ from other types of courses. And then I also think there's an open space of just how to jive with a new culture, like coming into a new classroom, what it's like to learn with a professor you've never had before. Or vice versa, if you're coming to a new job, what it might be like to get your feet under you. So I'd really like to kick off with some of that discussion about some of the strengths and weaknesses of PowerPoint and I want to lean into Christina's experience as a student of, you said you love PowerPoint, do you love everything about PowerPoint? Are there there examples that worked really well? What do you think about a little more detail of why you love PowerPoint?

Christina Wyatt (00:18:18):

Yeah, so I'm a visual learner, and for that, that means like abstract concepts, such as computer science, can sometimes be better visualized within a PowerPoint setting. For instance, I remember I was taking a Python class structured similarly to the class described and we were using binary trees, and for me it was a lot easier to understand them when visualized, rather than when described to me, as it wasn't easy for most people to understand them even visually. Having the diagram in place really helped us to follow from node to node what was happening within that structure.

(00:18:49):

I'll say that sometimes PowerPoints can be used badly. I've seen several instances within my collegiate experience where I wish a PowerPoint had been better utilized, such as I know teachers have used voice notes to just read out their PowerPoint slides and they had all the text on the page, so they were just reading the PowerPoint, standing at the front of the class, and then allowing their voice note to speak for them. But I've also had great instances of PowerPoints used where I just see the structures, the algorithms in place and then we're expected to do all the manual labor, which is maybe breaking down the activity, understanding in more context what we can apply that to and how that is better implemented within our computer science education.

Scott Spurlock (00:19:30):

I guess to build on what Christina's saying, I really like PowerPoint for some things and maybe some computer science concepts can be shown with animations, or diagrams, or pictures of things that would be very hard to draw on a whiteboard maybe in real time. Things like that I think really drive concepts home in a powerful way. I also like it from a teaching perspective, particularly when I was first starting out to keep me organized. So then you have the structure that you're going through and if you get nervous or you lose track of what you're talking about, "Here we are on slide three. Here's the bullet that I want to mention."

(00:20:08):

I would build in, especially when I first started, little animated popups to remind me to ask the class questions. So I'm getting ready to leave the slide and it pops up and says, "So what do you guys think?" Then you can do a little poll right in class with a show of hands or you can have a think, pair, share thing where you get people to discuss amongst themselves a little activity. If you just count on yourself to be a complete idiot in front of a group and then build into PowerPoint the crutches to help you navigate that, it can be super helpful.

Jill McSweeney (00:20:39):

We often think of PowerPoint as synonymous with lecturing, but PowerPoint can be a really great way to facilitate active learning and deep learning where students are doing a lot of activities, engagement, doing a lot of student to student interactions. And I think that's one of the really great things about PowerPoint, is that it can provide additional support for students during the learning process. I also think that if we are thinking about the diverse needs of students, having an additional piece of content can be really useful to support student learning.

(00:21:13):

I really like using my PowerPoint slides as additional course content notes so that they can supplement students going back and really thinking about the material, using boldness, colors to highlight content that I think is really important so that can really trigger that to students, saying, "This is something that should be remembered." I do think that sometimes PowerPoint, and I think Christine and Scott you both alluded to this, really drives what people do. PowerPoint takes over the wheel and kind of people follow along behind it, where really we want to use PowerPoint to support what we're doing in front of the classroom and with the students. I think that's a really important aspect of thinking about the benefits, maybe the cons of PowerPoint as well.

Christina Wyatt (00:21:54):

I'll just add to that a little bit. I feel like a lot of students feel entrapped within the PowerPoint. They see a very distinct organization of code and they're like, "This is the only organization of code." if their teacher doesn't allow them to do that active learning. I think when Scott mentioned the think, pair, share approach, I was very much invigorated by that idea, I suppose, mostly because I think it's great to work with students on developing solutions to a problem, as opposed to seeing the only solution or what we would perceive to be the only solution presented by a professor.

Scott Spurlock (00:22:24):

That's a great point. I think it's easy when you're first getting started to imagine that you're an idiot because you're not coding fluently right out the gate. And when you see this code on a PowerPoint slide, it can be disincentivizing maybe. I like the idea of never staying in PowerPoint very long, maybe framing it and then going back and forth to more hands-on, as Jill was saying, hands-on active learning kinds of things, possibly with a coding example, or possibly with the students coding. But I do think it's important, to Christina's point, to emphasize how hard it is and how mistakes are a natural part of the process. "We're going to fail fast and we're going to fail often." Is my go-to statement on that. So I really like it to mix up the different things as well as PowerPoint.

Christina Wyatt (00:23:07):

Failing fast and failing often is a good method or a good motto to go by. I know I've been teaching myself computer science this summer and my method has been that. And also I think framing it for students not only as, "Failing fast and often.", but also, "You're going to succeed in ways you haven't

anticipated." by setting out projects or end goals. It feels so empowering when you're a student and you accomplish maybe your first coding task. Having that first hurdle to get over is really empowering. So going beyond the PowerPoint, like you said, having active examples where you can take control of your educative journey is a really great opportunity.

Jill McSweeney (00:23:41):

You bring up a really great point about pairing it with student learning. So even thinking about how PowerPoint can be a collaborative space for students. I know we've experienced a lot of online technologies and online teaching learning the last two years, and really PowerPoint can be a really great collaborative space for students to brainstorm, share ideas, work together and it can be used so kind of like a whiteboard as well. I also like to use other technologies that kind of allow that collaboration. So Scott, you were saying how you like to bounce around, things like Padlet, Mentimeter, Poll Everywhere are really great things to partner with PowerPoint. And then what I like to do is, at the end of the class, I embed some of that work in the PowerPoint slides so that it becomes, again, another teaching artifact of the course that students can go back to and see the work that they've done and can really be utilized for studying purposes or the application of content later on in the term.

Christina Wyatt (00:24:37):

Especially when used in that format, it's great to have PowerPoint because every student knows how to use it. When it comes to Padlet, I know I personally have never used it, going into computer science, an already scary space, using a new technology, even more scary. So it'll be nice going into PowerPoint, being able to have that place of commonality where we can all work together without any technological difficulties.

Scott Spurlock (00:24:58):

I guess the second approach I have with PowerPoint, the first approach is use it as a framework and embed intentional activities all the way through. The second approach that I sometimes do is have 10 to 15 minutes of solid PowerPoint at the start of class to kind of set the stage, one new skill. And then most of class to a hands-on learning task, maybe a project, that's well scaffolded that students can practice that one new skill. And then that frees up most of the class time to kind of wander around and work with students one-on-one or in groups and that kind of thing and gives them lots of hands-on practice. And if you are using PowerPoint, maybe keep it shrunk down in one way or another.

Matt Wittstein (00:25:38):

I want to go back to something that Christina said, that coding you can sort of feel trapped by what you see on the PowerPoint. And I know that's something I've experienced in my non-coding classes as well. I give students an open answer question and they answer almost word for word the exact thing that was on the PowerPoint slide. Scott, what are some ways that maybe you build in those... I think you mentioned it feeling daunting that students can't just naturally write this beautiful code. How do you start building slowly those little skills, still using PowerPoint or other technology tools, but how do you build those little skills to start getting them to see that they can create their own answers?

Scott Spurlock (00:26:21):

Yeah, that's a great question, and I wish that I knew the answer to it, but I'll tell you some things that I've tried. I like to show a few examples of just, "Here's code, it's perfect and beautiful." And then call out what the differences and similarities are so that students can start to see patterns, which is really

hard when you're first looking at code. And then do an example from scratch where we use those patterns. And I like to start with a group code together kind of an example, and I'll code at the podium maybe and I'll ask students to jump in with ideas and I will code verbatim what they say with a heavy emphasis on doing my best to misunderstand and code the wrong thing. And I think that's really valuable. So you can watch me struggle and our code doesn't work together and we all throw our hands up and say, "Oh my goodness, what should we do?"

(00:27:12):

And it just normalizes the fail fast, fail often, we're all going to screw this up all the time, maybe that's okay. And so then we can figure out how to debug and how to find the patterns that we want to use. I actually had one student who I once called on him and said, "What should we do next?" And he said, "Do you want the answer that will actually work or are you looking for me to make the common mistake so you can talk about it?" I was like, "It's really the second one." And it worked out really well, it was a great example, but it shows the students can see what you're doing there, which is neat. I like to be transparent with the way the teaching and learning go together.

Christina Wyatt (00:27:45):

Although not a teacher, I'll agree with you, Scott. I've heard a lot of those similar principles used within my computer science courses and something that was especially helpful for me was just a little bit different. I come from a background where I'm good at studying languages. When I was in high school I went to Spanish competition, because I was apparently good enough at Spanish to where I learned it pretty fluently. So when I approached computer science, I was hoping to approach it like a language and I remember my teacher said, "Why don't we start with Boolean and we'll break it down into this concept of logic. And logic was really helpful for me to understand because that's a language to understand. It's not me like writing out code script immediately. It's just breaking down an abstract concept into its component parts and then understanding how that functions in terms of the broader scheme of the language, just making it easier for people to understand and then memorize and then maybe understand those patterns from a different perspective too.

Jill McSweeney (00:28:32):

I really like that example, Christina, because you really took your own experience and then you applied it to what you're learning. And I think part of that is creating space in your PowerPoint or your teaching where students do have the opportunity to bring in their own experiences and apply what they're learning in the context of their lived experience. And I think that makes those really important connections and really can help with, if you're teaching students from a variety of different disciplines, different stages in their academic program, it can really help solidify some of the abstract or really difficult concepts that they're trying to navigate through.

Scott Spurlock (00:29:06):

Just to follow up on that, Jill, so one of my colleagues is a huge believer in hands-on materials and she has a wagon, a genuine red wagon, that she loads up with toys and different manipulatives and rolls this thing into class. And I'm like, "What grade are you... Is this kindergarten?" But I think she has a paper, and maybe we can find a link to it, about the kindergarten level coding or something like this that talks about how to use these kind of toys. And I think they are helpful because you can relate to those, right? Like Christina saying, you can relate to that in your experience.

(00:29:41):

So I, for example, I have a pill box that I stole from my 80 year old mother and it has seven little spots in it to put vitamins and things and that's how I introduce arrays in computer science. So I hold up the pill box and I tell a story about my mother and how she doesn't actually take pills, she only takes vitamins and she's super healthy, and we go through these boxes. And it's a perfect metaphor for an array and the array is pre declared with a size, it's not going to change, and we can put things in there, and we can have an index to the day of the week, but that's different than the content of the pills that are stored there. A lot of times something like that helps people grasp the concept before you get to the mean nasty code. Right? Talk about the story first.

Christina Wyatt (00:30:22):

I kind of wish you were my computer science teacher because that sounds really great. But I will say additionally, with lived experiences it's really important to cater to all student types, all background types. And I think being able to bring in very simple pieces to teach them that innovation is at the heart of computer science is possibly the most important piece to me. I am a innovation fellow under Stanford, and what that means is I center design thinking at the core of everything that I do. So I think teaching students early on that it's okay that they fail is very important. I show in the maker hub where I work this video, this TED Talk, to all my new students who come in the maker hub.

(00:30:59):

It's a really beautiful TED Talk that shows the marshmallow challenge where each student is supposed to create a spaghetti structure and on top of the spaghetti is a marshmallow and they're supposed to make the tallest freestanding structure. And what they don't realize is that the marshmallow is a lot heavier than all the spaghetti noodles and it usually ends up collapsing. So it shows the value of innovation and iteration, and that's all of what computer science is about. Sometimes showing that innovative piece can be really empowering to students as they're allowed to make maybe a breaking structure at first, but maybe their second standing structure will be a little bit taller, and that's okay because iteration is valuable, and so and their processes.

Jill McSweeney (00:31:33):

That's an awesome story and I think it really captures the ethos of learning and that sometimes our greatest moments of learning is through our failure. And so creating a space where students feel comfortable to take risks, to be innovative, and be caught if they do fail is really important. And I think that also brings into the aspect of your own teaching and being able to model taking risks and being okay if things don't work and knowing that teaching is such an iterative process and when you're starting out, especially as a new faculty, a graduate student teacher, or any throughout your career is really understanding that teaching is just as much about your own learning as it is about supporting student learning.

(00:32:17):

And I think that's a really important thing to remember, that you can try things. Maybe PowerPoint doesn't work out the first time or maybe you try a new technique, but that's okay, go back, every class is different, every group of student is different, and really try again. And that's the joy of teaching and the magic of it. And if you embrace that and model it for your students, then you create a space where they can do that as well.

Matt Wittstein (00:32:39):

That feels a little bit meta, that we're encouraging opportunities to fail while also accepting that teachers, ourselves as instructors, we need to fail to get better in our process of being good teachers. So

maybe that sage like wisdom is saying, it's okay for anyone to fail. It does make me think of one flag for caution though of, how do we protect our students from, not from the failure itself but from how that failure could be detrimental? How do we make failing safe?

Jill McSweeney (00:33:14):

I think that's a really great question and I think it starts with thinking about the class climate and thinking about how you're creating a space where failing, you don't think of it as yourself and the person and who you are as being a failure, but thinking about encountering a barrier that you're going to solve and get back up and continue to do. And so I think by doing low stakes assessments, creating opportunities to engage in active learning, you're creating moments where students can try and revise. And that's really important because then you're creating that consistency and that understanding that learning is a process that isn't always going to go great and that sometimes you are going to have to kind of pick yourself up, dust yourself off, and get back at it. So I would say from a very kind of course design and pedagogical perspective, think about creating opportunities for students to do, apply in a very low stakes way, and create an environment where they feel safe to do that.

Scott Spurlock (00:34:14):

Well, I'll just echo everything you said, Jill. You're preaching to the choir over here. I agree with setting a climate that normalizes failure. I find myself apologizing to classes at least two or three times a day and that's cool. And then when students give wrong answers, as they often do, you say, "Well, that's wrong, but it's really helpful for the rest of the class because we were all thinking it." And you can talk about why that wrong thing was helpful. And then I tell a lot of stories. I worked in industry for 13 years before I went back and had a crazy idea to become a professor, so I have lots of stories about things that I have screwed up in various high stakes and embarrassing ways. And I think just telling those stories and saying, "Here's the mistake you made, it's not nearly as bad as this mistake I made this other time." It just helps make everything better.

Christina Wyatt (00:35:01):

Having a teacher that definitely embraces failure on their end as well and notices that students are allowed to fail on their end is very helpful. But I will add, saying the relationships that students have among each other is very important within a classroom. So setting that classroom climate beyond just the professor to student relationship is very important. Student to student is also indicative of how students interact with each other, how they're going to answer, who's going to answer in the class.

(00:35:28):

Because I've noticed in certain settings within computer science, students who have backgrounds in it, maybe they took classes in high school, especially for an intro course, they're going to be a lot more inclined to answer as they're going to be met with more correct answers. So students who maybe fall behind or aren't as apt to the concepts might be a little less inclined to answer questions. I think think, pair, share, as we've mentioned before, is a great approach to kind of bettering a classroom climate to make people a little bit more comfortable, understand a little bit more about the students who might have had more of a background in computer science, or less of a background, and create a collaborative cohesive space where people feel comfortable and have more familial climate or environment.

Jill McSweeney (00:36:08):

I love that idea, Christina, that it should be collaborative and not competitive. And I think that sometimes we really lose sense of that, especially when we're thinking about grades and just the culture

of academia where it is quite competitive. I really like that in this idea of think, pair, share or even having students lead discussion so that they can kind of share their wisdom, teach others. Peer teaching is a really great way to not only learn yourself but also learn from others. But I think that idea that it should be collaborative and not competitive, Christina, is a really great kind of philosophy to have in terms of what kind of environment you want to create in your classroom.

Scott Spurlock (00:36:47):

An area that I've been really excited about in the last couple of years is Ungrading. And Ungrading is this new move to de-emphasize numeric grades in the classroom. If you set up the system so that it's maybe more pass/fail, but the pass line could be very rigorous so that it doesn't have to be a student just barely getting by. But having assignments that are pass/fail or graded with a binary grading scheme maybe makes it a little bit easier to hit the mark.

(00:37:16):

And then if you add in the ability to do redos, so if students don't hit the mark then they can just redo it until they master the material, that lowers the level of anxiety, the feeling of, as Christina was saying, maybe some of these students have never seen code before, in fact most of them have never seen code before, but it's okay, right? You can redo assignments till you really understand it, you can catch back up. And then not having those numeric scores, or grading on a scale, or ranking students against each other makes the class climate a lot more conducive to low anxiety, better learning, less of a feeling that so-and-so is going to get in the way of your good grade because maybe there aren't numeric grades.

Christina Wyatt (00:37:54):

I'll add on to that saying that, especially in computer science, it feels more of a male dominated field. So I remember as a woman in computer science, it felt, when I received numeric grades and I had no computer science background prior to my CS one course, it felt that it was a competitive culture. Some of the men in my class would kind of taunt the women with their higher scores and that made a lot of women less inclined to be in those classes. So perpetuating a culture of equity is also very much aligned with the Ungrading culture, I believe. And it allows for maybe a breadth of people to come into this space, which would be definitely welcomed. I think computer science is the future obviously, so having more people with that skillset via whatever methods necessary is very important.

Jill McSweeney (00:38:37):

I love that idea of Ungrading and equity. And I actually taught a pass/fail class the last four years, and I had this conversation with the students about, should this be a class where you're assigned a grade or do you like the pass/fail? And across every iteration, the majority of students really appreciate the pass/fail because it allows them to focus on where their strengths are, where they might be needing some balance or maybe they can't necessarily spend all the time that they need on a specific assignment because they're juggling other demands.

(00:39:13):

Particularly the last two years with caregiving duties, the pandemic, Ungrading has really allowed students to think about where they want to spend time in the course, and in concert with the demands they have outside the course, and really thinking at the forefront of how we're providing a space that supports students thriving, their mental health and wellbeing, and really thinking about can this really be a source of anxiety when we're thinking about grades and really evaluating students and how do we flip that to provide students to be an environment that excels with their strengths as well as compliments the other contextual factors that are happening in their life. And so I really like this idea of

Ungrading, and pass/fail, and challenging this kind of traditional idea of what learning looks like and how we evaluate it and moving away from the numeric grade and more to the process of learning.

Scott Spurlock (00:40:04):

I'll just jump in, Jill, to put in a reference for a book called Ungrading by Susan Blum. And it's an anthology with a bunch of chapters by different actual teachers who credit different versions of this. And I think the phrase ungrading maybe is deceptive, because maybe people hear this and think, "Well, I have to grade so I can't do this. It's not for me." There's lots of flavors. To what extent you might want to deemphasize numeric grades, most places you still have to give a grade at the end, but maybe it doesn't have to take a center stage in the class. It's worth checking out that book and seeing what some other people have done in that space. There's even one chapter by a computer scientist.

Matt Wittstein (00:40:43):

I think one thing I loved about that book that even relates to this particular class is that the variety of examples allowed me to think creatively of ways to use ungrading practices in my own classroom. So maybe that's another way that we can think about it in the context of the class. We're starting to get on a little bit of a talk about things like culture and equity and the diversity within your class. And I think Sarah is going to have a fairly diverse, at least what majors they're coming from. Do y'all have any activities that you like to use or have enjoyed doing to kind of get to know each other in the classroom and start breaking down some of those barriers to create that culture that you want, that's really strong for cultivating really good learners?

Scott Spurlock (00:41:33):

I can give you my day one activity I like for introductory computer science. It's something maybe people have seen as an icebreaker. I generally don't like icebreakers unless they actually relate to the subject matter. So this one is back to back drawing. So I pair everybody up, they sit with their back to each other, one of the pair can see the whiteboard and the other one can't. And then I draw a picture on the whiteboard, and I don't draw very well, so this requires some prep, but I can now draw a passable panda. Don't tell anybody, because that's a secret. So then the one student draws the panda and the other student attempts to guess what it is, but the student with his back to the board isn't allowed to turn around and look and they can't talk to each other.

(00:42:13):

And then this leads into computer science concepts about when you program the computer is a complete idiot and you have to give really precise instructions or it won't do what you want. It almost seems like it's adversarially intentionally trying to tank your objectives. Often it'll seem like your drawing partner is doing the same thing, and then it's important to switch roles so the other person gets a chance to be the lousy artist. But if you do little activities like that and maybe force students into different pairs or different teams, they get to meet everybody and see that, "Oh, most of the people in this class don't know how to code either. And also all of us are bad artists."

Jill McSweeney (00:42:47):

I love that, Scott, that sounds so fun. I think it brings back this idea that learning can be fun. So when we're thinking about kindergarten and that wagon of toys, there are things we can do in a college classroom that is fun and kind of brings light heartness to learning. I really like to focus the student as a human. I think oftentimes students come with their academic identity and sometimes that again leads to the competitiveness. So on the first day I really try to get students to share who they are, where do

they call home? What are things that they like to do locally that can maybe help students who are new to the area?

(00:43:23):

Bring in this informal community environment so that students, when they're engaging in active learning, they feel comfortable. They've developed some of that rapport and those relationships. I've been really fortunate to teach classes on learning so I can have really great questions about draw a classroom or a space that's really facilitated your learning. Think about a poem, or a piece of artwork, or a song that supports kind of your philosophy around learning. And so I try to bring in getting them to think deeply and reflectively about their connection with the content as well at the beginning of the class so that they can share a little bit more about who they are. I get to learn about who they are and then they get to kind of dig into some activities that they can use in their own teaching as well.

Christina Wyatt (00:44:07):

Similar to Scott, when I act as a teacher or a facilitator of sorts, I'm usually in the maker hub. So what I usually do is I give people a tangible project where they can network amongst their peers who they probably haven't been with for very long and teach them about innovation in maybe a different way than they had anticipated. One of the ways I mentioned was the marshmallow challenge, but another way is we make them build a car. So I give them all these pieces that I've created, most of them, to Scott's point, not necessarily the best, they probably are trying to tank their project more so than help it succeed, but they're expected to make a car out of these really flimsy pieces.

(00:44:44):

And it builds a great sense of community and then teaches them about iteration, which can very much speak to the computer science language and the ways in which that functions within my space and how they're going to iterate within my space later. I will say in finance we don't necessarily have icebreaker activities and it's the one thing that I wish we were able to better develop to try to create that more cohesive environment, because I'll say the lack thereof of that cohesive environment really creates that competitive culture and that, especially among a diverse crowd, it can put people at odds. And I think that isn't necessarily fair in certain instances.

Scott Spurlock (00:45:19):

I can throw in another one that's really cool. You have to have a fairly high tolerance for mess, but if you've ever seen this done, it's super cool. So the idea is you ask the students to give you the steps involved in making a peanut butter and jelly sandwich, and you can do this live where you just pull the next step, or you can have people write down, maybe with a partner or a group, the steps of making a peanut butter and jelly sandwich.

(00:45:42):

And then you actually do this at the front of the room and you follow those instructions to the letter. So it might say, "Put peanut butter on bread." So you might take the jar of peanut butter and smash it down onto the bread, and you make as big a mess as possible by, obviously they're going to leave out steps, it's not going to be super precise. You may want to put down plastic first, and then you can talk about what are good instructions, what's a recipe. Maybe that's the same thing as an algorithm. And then you can talk about problem solving and the whole deal. So that one's also a good that you can refer back to all semester long.

Matt Wittstein (00:46:15):

I also want to ask, because I know Sarah was curious about it, how do you approach being in sort of a new teaching environment or a new learning environment? I think both of those are very relatable, but how do you get your feet under you and understand what your expectations are while still staying true to who you are and how you've gotten to that position that you're in? And I think, again, I think that could go from the student perspective or the faculty perspective of leading or being the learner.

Jill McSweeney (00:46:49):

This is my fifth day in this current role and my fifth day at Elon, so I am definitely living some of this right now. And I think one of the first things that you have to remember is to be kind to yourself. Just like our students and the competitiveness that we might experience in the classroom, we can impose our own competitiveness on ourselves and thinking that we have to hit the ground running, be correct, have everything under control, know everything, know everyone, when really it's a big change to come into a new institution, to understand a new culture of teaching, a new culture and system of an organization. And you're also learning new people, you're learning new acronyms and ways of being together. And I think giving yourself time, being kind to yourself, and realizing that, especially in the classroom, you don't have to change everything in your teaching.

(00:47:50):

And sometimes that is a recipe for disaster. Sometimes just changing one thing, stepping outside of the box for one class or trying one approach that is different, can be really helpful in creating consistency, grounding you in the comforts of what you know, and not overwhelming you. And it can also provide a really important bridge in for students to try something new. The other thing I would say is listen, ask questions, and be open to learning new things. I think your colleagues are a really great resource and you should meet with people. You should ask them about their own teaching. You should get them to come into your own classroom and give you some feedback. The advice of colleagues and supportive colleagues is really great, and also the advice and support of students. Ask your students how things are going, check in with them, ask them for their own feedback on things that you're trying. I think those are all really great supports that we don't necessarily rely on and can be really helpful in transitioning to a new environment.

Scott Spurlock (00:48:49):

Self compassion is where I would start. Teaching is a really hard job, especially when you're starting, so don't expect to be awesome at it right out of the gate. And don't try to do... When I was starting, I was hearing all about the flipped classroom and all these different buzzwords and I was like, "I don't know how to do any of that. I'm just going to start and do what I can do and then slowly add some stuff in." If you can steal a colleague's version of the course and just teach it 98% the same way, maybe that 2% is where you just, you play a little bit. I can do an experiment in the classroom, what happens when I change this one little thing and try to measure it somehow, see how it works? If everything goes well, you might get a paper out of this, right? But that way you're focused on small scale and not just overwhelmed and throwing spaghetti at the wall.

Christina Wyatt (00:49:34):

Yeah. I want to echo what Jill said, especially about asking your students for feedback. I think it's so important to remember that students ask you for feedback all the time, but you're allowed to ask them for feedback on what you need and on how you can change as a professor. Definitely utilize Google Forms, they are your friends. Ask a few questions about how exams work for them. What is their best

testing structure? What they want to see better within your curriculum, what they don't understand, what they do understand, what they liked, what they didn't like.

Scott Spurlock (00:50:02):

I totally agree with that, Christina. And I like to survey about five times a semester, after each unit kind of say, "Hey, how's it going? What is confusing? What would be helpful in the class if we did differently?" But also bringing in, like if your school has a teaching center, that maybe they have people who come in and observe the class, this idea is horrifying to me. I absolutely do not want someone to come in and watch me teach, preferably not even the students. Sometimes I have a little stage fright. But it's so helpful if you can kind of get over that and think this is these people's jobs. There's no way I'm going to be the worst thing they've ever seen in the classroom. And they can give you feedback, they can give you resources to literature kinds of things, and that can be very helpful.

Jill McSweeney (00:50:42):

Scott, I love that you are advertising for teaching and learning centers. That is fantastic. And they're a great resource, and they are colleagues that can help and provide a really objective and friendly feedback, because sometimes when you're asking for peers in your department, you again, going back to that competitive nature of academia, it might not feel comfortable. And so they provide a really great resource. Like you, Scott, I like to use kind of feedback with students and I try to use the start, stop, continue, which is a really quick way to get students to tell you what you should start doing, what you should stop doing, and what you should continue to do. And it's a really quick way to kind of gain some understanding of kind of how your pedagogy is situated within the course, how students are feeling, and if you need to adapt to their needs.

Matt Wittstein (00:51:28):

I really like the idea of seeking student feedback to understand how well a professor is fitting into the institutional culture. I was thinking more of colleagues I might ask for advice, but students know what their other classes are like and what they enjoy in their other courses. So I think I have lots of information to share with Sarah at this point. I think I've got kind of three broad points that we'll be able to share with her. And I think the big one focused on the PowerPoint is that really just reframing it as a tool that enhances your teaching. So maybe thinking about ways to minimize it and thinking about ways to leverage it as a tool, because it provides an animation or because it allows you to save something for later, but still enriching the course with other hands-on active learning opportunities.

(00:52:21):

My second note is... This one's really broad, is, what's fun? Do that. So kind of going back to yourself and probably leaning into colleagues and students and getting some of that feedback of like, what would actually be a fun way to approach this? And that's probably a great way to think about creating, engaging, active learning types of lessons. And then finally, on that point about getting into a new position or new program, I have multiple points here, I'll have to work on how to frame it simply. But teaching self-kindness that sort of mimics the lesson for the students that failing is okay, it's okay for you, it's okay for them, but also being willing to seek feedback and get help from others, whether that's direct help or indirect through other means.

Jill McSweeney (00:53:08):

I would just like to add, and Christina hit on this in terms of the equity, that PowerPoints can provide a pathway for equity for students being visual organizers, support for note taking, and can be a way to

enhance or reiterate important content that you already have in the course, whether it's reiterating content in the textbook, a video in an activity. So I think that PowerPoint can be really equitable if used correctly to support learning and not just drive the teaching.

Scott Spurlock (00:53:39):

One thing that was hard for me when I started, and I don't know if this is a computer scientist way of looking at the world, but I really hated to repeat myself. I didn't want to be inefficient or redundant. And it turns out that inefficient and redundant is really helpful for learners, especially diverse learners, where you maybe have the information in the textbook, you have it in the slide, you spoke it out loud, you did it in the activity so that students who learn in one modality or another a little bit better, they're going to get exposed to it the way that works for them.

Jill McSweeney (00:54:08):

And that's really great because we know that repetition is helpful for all learners too. So even if we're just thinking about the diverse learners, really you're practicing things that are going to be useful for all your learners, which I think is really important. And a really great comment, Scott, thinking about how you're targeting to the needs of both diverse students, but also all of your students as well.

Matt Wittstein (00:54:30):

Well, thank you all so much. We have got a lot to share with Sarah. You all have been super helpful.

Dhvani Topran (00:54:38):

Hi, Sarah. It's good to have you back.

Jill McSweeney (00:54:40):

Thanks for having me back.

Dhvani Topran (00:54:42):

So we took your idea to workshop with our panel and we have some exciting things to share with you. Our panel from Elon University included Christina Wyatt, a graduating finance major and Center for Engaged Learning student scholar, Scott Spurlock, a computer science professor, and Jill McSweeney who is just starting as the assistant director for the Center for the Advancement of Teaching and Learning here at Elon. So we have a surprise for you from our panel. The premise of getting away from PowerPoint was very shocking for all of them. And in a hot take, in a quick hot take, they all said that they really loved PowerPoint for different reasons. Scott did put in asterisk on that statement by saying that he has sat through bad presentations as well. And with that idea, we dived deeper into how to use PowerPoint as a tool and not as the thing you do.

(00:55:35):

I think you already view it this way, but the panel made some great points about learning in general and specific ideas around PowerPoint. So getting into the reasons to like PowerPoint revolved around its ability to visually represent ideas and concepts that are otherwise very difficult to draw or create using other means. And finally, it helps to keep you organized in a classroom. So for learners, as pointed out by Christina, PowerPoint can help meet the needs of diverse learners without putting much effort to learn a new tool since everyone is almost always familiar with PowerPoint. And you had mentioned how the slides serve as a resource for students, and our panel really echoed that idea.

(00:56:18):

So they also shared a few tips on how to use your slides effectively. The one tip they emphasized on was to incorporate animations and prompts to remind you to step out of the slides and lecture mode to interact with your learners, spend some time doing hands-on activities, and ask them questions. With presentation technologies advancing the way they are, the prospect of using slides as collaborative tools is also worth trying. Scott brought some coding specific ideas to a brief conversation about making it okay to fail. Sometimes when you see the code that works on the slides, it might be easy for students to think that they aren't very good if they can't make similarly creative and elegant coding just work, but they are beginners and we need to remember that and remind them that.

(00:57:05):

So he really likes to do some instructions activities, where in a joking, loving, and sarcastic manner, he will do exactly what his students suggest. This could be writing code together or even making a peanut butter and jelly sandwich to share the importance of explicit instruction and logic. Moving into the new to teaching world conversation, the panel strongly suggested not expecting yourself to be exceptional from day one, fail and let your learners fail with you and have some fun in the process. That sounded like their mantra throughout the conversation. They emphasized on teaching being an iterative process that becomes more beautiful with feedback and support from colleagues, your learners, and your teaching and learning center. Celebrate small improvements was what I heard each of them say again and again. So since the panel sort of clapped back, "PowerPoint is great." how would you feel about keeping PowerPoint in your classes?

Sarah Morrison-Smith (00:58:05):

So it certainly makes me feel a lot better because I use PowerPoint for many of the reasons that were discussed, specifically to really keep myself organized and serve as a resource and incorporate media and such. So that does make my life a little bit easier. I am really curious to listen in to the panel to hear more about using slides as collaboration tools.

Dhvani Topran (00:58:32):

One thing I can add about using slides as a collaborative space is not using your slides as lecture notes, but using your slides in a more interactive way where you are pausing to, again, step out of lecture, interact with your students, give your student your slides as resources, but not just restricting your slides to that idea. And with Google Slides and Microsoft PowerPoint online version, there are abilities that you have where you can present live and share those with your students to interact with as you are also presenting online. I also want to ask you, Sarah, when we had Christina talk to us in the panel who was a student, she did emphasize on the ease of use and using slides to go back to lecture discussions. So how do you think your students can benefit from you using slides in classroom?

Sarah Morrison-Smith (00:59:23):

The biggest thing that I use slides for that I think really benefits students is by providing them with a resource that they can use to augment a textbook or have something that they can refer back to, have like a reference for studying for midterms or finals. I honestly keep my slides from slides that professors have given me from classes that I took, and sometimes I still use them as a resource because it's faster and easier than digging through a textbook. And then I also have been using, I do a lot of think, pair, share type activities in class, so I use the slides to put up what the question is or what the problem that they're doing so they can refer back to it throughout their think, pair, share sessions that they hopefully stay a little bit more on track.

Dhvani Topran (01:00:17):

I think a lot of what you just said, Sarah, resonates very much with what the panel said about making your slides a supplement to the resources your students are using. Especially Christina did mention about using slides as a replacement for textbooks if they don't exist. And your idea about think, pair, share and using slides to organize your lecture were some things that the panel discussed as well. And I think we are on the right track over here, your slides are not driving your lecture and your instruction. I think that's what the panel kept repeating, that use them to guide your lectures but not drive your lectures. So with that note, thank you so much, Sarah. This was a great conversation and I hope that it was, the idea was as useful for you as it was for our listeners.

Sarah Morrison-Smith (01:01:06):

Thank you so much.

Matt Wittstein (01:01:17):

Limed: Teaching with a Twist was created and developed by Matt Wittstein, associate professor of exercise science. Dhvani Topran is an instructional technologist and serves as a producer for the show. 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. Thank you for listening and please subscribe, rate, review, and share our show to help us keep it zesty.