

[00:00:00] Bonni Stachowiak: Today on episode number 336 of the *Teaching in Higher Ed* podcast, Matthew Paolucci Callahan joins me to discuss Equity in STEM.

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[00:00:22] Bonni: Hello and welcome to this episode of *Teaching in Higher Ed*. I'm Bonni Stachowiak, and this is the space where we explore the art and science, of being more effective at facilitating learning. We also share ways to improve our productivity approaches, so we can have more peace in our lives and be even more present for our students.

Today I'm joined by Matthew Paolucci Callahan, PhD, Associate Professor of Psychology at Sonoma State, and he's recognized for improving instruction to close equity gaps and promote success for all students. As the inaugural faculty fellow for teaching and learning at SSU's Center for Teaching and Educational Technology, Paolucci Callahan provides development opportunities to all deans and faculty aimed at creating inclusive classrooms, and increasing faculty retention.

He's conducted workshops and presented material to faculty, regarding implicit gender bias and how to modify one's teaching practices, to improve the classroom climate for under-represented STEM students. Over the last 10 years, Paolucci Callahan has dedicated his research lab to focus on transgender and gay prejudice, and the dehumanization of undocumented immigrants. He has invited

many undergraduate students to participate in this research, including DACA students, launching them into several research-intensive graduate programs across the country. Matthew, welcome to *Teaching in Higher Ed*.

[00:02:07] Mathew Paolucci Callahan: Thank you so much for having me.

[00:02:09] Bonni: Let's begin with a word, that at least I find a little hard to unpack. Let's start with rigor. Would you begin by sharing what you think other people often might mean, when they talk about making sure that there's rigor in their teaching and in the student learning?

[00:02:28] Mathew: Well, I first heard the word in graduate school, I didn't remember hearing it when I was a student as an undergrad. In graduate school, it was when I was a teaching assistant, and I remember that the people that I was working under as a teaching assistant said that rigor was very important to them. That their goal was for every test, there should be a normal curve. Usually, it was accompanied with low C as average, and that's what we're going for.

We want the tests to be challenging. I even remember them giving us the tests and saying, "You take it, and your graduate students should get As." Even we struggled with the tests. One thing that I learned is that one, tests were incredibly difficult. Actually, I didn't know it then but I know it now, not really measuring the learning, they were more like a logical reasoning task. Particularly, things like multiple choice, and lo and behold, the mean was a 70. That was considered great news.

That was one way that I heard about it, and I also noticed that when there was an incredible, a rather large workload, people would do this kind of computation of, number of minutes in class versus outside of class and would come up with something like four hours outside of class of work. They would assign that an entire book, along with an article and then, a paper every week, and then, just this enormous amount of work. That's to me, in my view, was what they considered rigor.

Something that I hear a lot about today, and the first thing that I asked people is, "What do you mean by it?" Usually, I hear things like that. That's the way it was

defined to me and the way I think a lot of people try to enact it, but it's not the way that I would approach it.

[00:04:24] Bonni: I think it's helpful to separate this a little bit between what are our values and then, what are the practices which may or may not align with our values? When it comes to rigor, I'm presuming that because you brought that up of like, every class should fall in a normal curve, I'm assuming you don't agree with that. Could you share about your values around something like rigor, and then let's separate out the values from the practice from there?

[00:04:53] Mathew: Yes. My approach is that I think that anybody who wants to learn, if they work hard enough and if the instructor is clear enough, can rise to their highest level. That level may be a C and that's okay, but I don't want to falsely push down, what would have been a higher level if the instructor got out of their own way and made a clearer path to learning. My values are, convey the discipline with respect, measure learning deeply, and be as clear as possible of what success entails. Be reasonable in your goals and wait for the students to rise to meet you. That's the way that I try to think about it.

[00:05:40] Bonni: We have our values, and I would suspect that a lot of people who listen to this show would share that with you, the desire that we have to not inadvertently close any doors for students. You've probably heard stories like this, we all have, of the student who was told, maybe they should go work with their hands, because they would be better at working with their hands than-- Just the not so subtle implication that you can't make it here. This idea of weeding out courses where, you look to your left, you look to your right.

That is one thing that brings me hope, that I certainly am not hearing that anywhere near as much as I think when I was in school myself. That includes all different types of institutions from our wonderful community colleges, all the way up to the Ivy Leagues and everything in between. I love that that's changing. I don't know if you're seeing that as well.

[00:06:34] Mathew: I am. I am seeing that changed. An interesting side note is, before I got into psychology, I went to a performing arts college, Boston Conservatory of Music, where I majored in, Voice and Musical Theater. That was the very thing that they said on the first day. Things like nursing, I care little bits of an engineering where I hear things like, doesn't have what it takes. The truth is, there is quite a bit involved in success. You must work hard, you must work hard but what that work entails to be clear to the students.

I think one thing that I think faculty are worried about, they think that the opposite of rigor is grade inflation. They think the opposite of rigor is either grade inflation or an easy A. That also has to be unpacked, because an A could come from ridiculous, I call them low-labor, low-learning assignments. Where it's, give your opinion and give what you feel, and this kind of busy work that everybody gets an A, low-labor, low-learning. As could come from that, but also As could come from a tough essay being revised five times, until it's at the level of that performance, that's rigor.

In my seminar class, at the end of the semester, I usually have out of 25, 15 As, well-earned because those 15 As would submit paper 6 to 7 times. Just like revise and resubmit an article, in fact, I write that on their paper, revise, resubmit. Do you see the difference? That to me, that's rigor. On the face, if they look at the list of grades, others may call that an easy A or grade inflation. I wanted to share one technique with you that will kind of get at this grade inflation, because students actually can smell grade inflation from a mile away.

In one sense, they like it, because grades are a source of anxiety for them, and many of them are thinking to whatever is next, career or grad school.

Part of it is they're comforted but I've been doing this long enough to know that there's still a little bit of resentment. Those low-labor, low-learning or worse, the high-labor, low-learning assignments, which are the busy work where, they spend hours and hours with very little gain. They can smell them right away, so here's what I do. At the end of every test that I give, whether it's a quiz or an assignment, usually, I do

it for my small tests. I give a scale of one to five and say, optional, please rate, the difficulty of this measure.

One, too easy, I could have studied far less and still aced this, or I didn't even have to be in this class and I would have aced this quiz. Too hard, either, wording was that I wasn't able to show what I learned or questions didn't match what I was expected to learn. Just right, whether I studied or not, and that's key, questions were fair and reflected what I wanted to learn. I give that every single time and I've had instructors do it, and they'll tell you right away.

There's been times where I'll get fours and fives and then, I look at the question and I'm like, yes, that's actually a crappy question. That's not well-worded. It makes absolute sense. You can get a pulse on where you are actually with rigor from the students themselves.

[00:10:08] Bonni: I always have much fun with that idea when doing some review prior to exams. That would take place typically over many class sessions. I will often employ some a clicker type of questions, that kind of thing. I will initially wait to show the answers. Sometimes it'll be an exercise where they might talk to someone next to them or in today's context, might talk in a breakout room. It depends on the complexity of the question being asked, but then I'll eventually show the answers and then we start talking through them.

I'm sure you've had this before, [chuckles] as you start talking about them students, I allow them to change the answer. Why would I care? This is for the purposes of review.

It's fun to really dig in there and go, "Well, let's say that you were going to answer A. I don't need you to say if you did or not, but let's say that you were going to make a case for why A is right, even if it's not. How could you do that?" So many times, I end up where go, "Wow, this is a bad question," or "wow, did I ever not really set you up before we did this."

But of course what we know about learning, if we all fail together and it's a no-stakes failure, we're actually going to remember whatever the right answer was. It

was just a fun journey to go on when you do it just to take away the issue of stakes and failure and we can just be in this together.

[00:11:33] Matthew: Right. Two things happen when that happens. First, the students learn more, especially if it's a well-written test. Students learn more from having taking a test, even if they don't do well than if they hadn't taken that test, that's why we do testing. Then two, the ability to reflect on their own thinking process that metacognition deepens it even more. Then as an instructor, then our role becomes a detective because if 1/2, or 1/4, or 1/3 of them were going to say A and then they say A and they fell it right into the pit of why you put A, then you can tell that they didn't make that discrimination between what you were trying to actually get at. It was probably a point that you didn't emphasize enough. Then you either rewrite the question or reteach it and then give the question again.

[00:12:24] Bonni: We've looked at our values around this and you've shared a practice of how we might, on an ongoing basis, be able to assess our own rigor within the types of assessments that we're doing. Let's look a little bit deeper at practices. So many times we have the values, to begin with, and again, the values of wanting to reach all of our students, not inadvertently introducing bias into what we do, but we miss it. Could you talk about a few ways in which we as faculty can miss that? We have the values of wanting to be inclusive, but we miss it with our practices.

[00:13:04] Matthew: I think that a lot of it is that you don't know the practices. In graduate school, we're not really trained in best practices in teaching and learning. Typically, we do teaching assistance and we learn from those that we're working under. Right now, teaching centers are having their moments in the sun. With this pandemic is you're hearing people over and over again saying, "I had no idea this teaching center was here." For me, I learned these practices at a teaching center at Penn State, which is where I went to grad school, the Schreyer Institute of Teaching and Learning, and Angela Lindsey was my mentor. She began to teach me these.

What I have learned is that that disconnect between the dots and the practices, some of it is just introducing the practices such as lower stakes tests. Just to say, did you know that instead of a midterm and a final, you could break it into tests every four weeks and actually go deeper with the questions than you had in a midterm and a final? Many of them had never known that before.

Then when they do that and they test on smaller chunks of material, maybe moving from mostly multiple-choice to some short answer where there's nowhere for students to hide, then you begin to see increases in performance. That just always happens and two, some of the equity gaps that were there previously begin to evaporate. That technique simply going from high stakes to lower stakes testing and scaffolded assignments is the single most powerful set of practices that I think can reduce equity gaps because I've seen it over and over again in my work with faculty.

[00:14:52] Bonni: When we talk about reducing the stakes, I want to go back to what you said earlier. You didn't say reducing the rigor. You didn't say that you're making it any easier, although I think we might perceive it as easier, but why? Why would we perceive that as easier? To me, you're getting actually closer to what we would hope to measure. What I'm hoping to measure is a gain of knowledge, a gain of skills, and we're going to presume in this discussion that it's the appropriate way to measure the desired knowledge, or skills. That's what we're desiring to do. When we spread things out like that and we lower the stakes, we aren't lowering the total quantity of what we're testing for. In fact, you could even say-

[00:15:39] Matthew: We're increasing it.

[00:15:39] Bonni: -we're raising it. What are we then reducing? How are we getting closer to what we're actually trying to measure?

[00:15:45] Matthew: Well, I think one thing that people misunderstand a lot of it is semantics is people think the word quiz and I think, "Oh, easy." The students will say that too. On the first day, I will say, "Don't just sneak by this word quiz. It's as hard as any test, it's just on smaller amounts of material." Then I'll say, "I am the ghost of

Christmas future. If you don't study for this, you will fail this quiz." Part of it is that, but I can't say we're having six exams because then it will have the reverse effect. Part of it I think is the semantics.

Another thing is I think when people think midterm and final, they think of more comprehensive knowledge of this is almost some end results. I don't know the literature on final exams very well. I think they promise a lot more than they actually deliver. I'm not sure that they really deliver particularly 100-question multiple-choice. I don't really think it's delivering the mastery and the comprehensive knowledge that people think that it's delivering. Because I think by the first beer that they have at the pub afterwards, their knowledge is eroded.

What happens with the lower stakes is one, study time goes up because I will ask them, this is really interesting. With exams, I'll say, "How long did you study," and they'll say two hours for an exam. Then for a quiz, how long did you study? It's always an hour, 45 minutes to an hour. You have two exams and you're studying for two. You're having six quizzes and you're studying for one hour. Look at how much more study time they have. Look at how much more time they have developing mastery.

Then the other thing is adding that rather than know multiple-choice, which tends to be something that's more of like a logical reasoning task for some, short answers allow them to go much deeper where you say, "Apply this theory to the following case study and give new examples." To me, again, that's more rigorous and yes, it's only worth 20 points and you've got six more times to show your knowledge and know if you had a bad day and you're tired, or you have a headache, or you just have to pick up your kid and you bomb this, it's okay. It's okay. You have lots more opportunities.

I think that that's a disconnect for people is they think that that comprehensive high stakes is some milestone when I like to see shorter little hops.

[00:18:19] Bonni: That's another reason why I don't care for final exams because I feel like it's the most distance that we are from actually measuring what we'd like to

measure. Instead, we're measuring things like, how well do you deal with sleep deprivation? What other classes are you taking, which shouldn't be relevant, but then if they all have final exams and they all are just expected very, very high stakes thing, that's going to look different and it shouldn't.

[00:18:47] Matthew: Then it required, which is something I am just blown away by. You must have a final wheelie or you must have something. What I do at the final is I bring in food, they all bring in food, and we sit and we just have a talk as if we're a group of experts just talking about what we've learned. I'll say, "What were your favorite theories? What were the things that you talk about with your friends, your family the most?" We have an intellectual conversation that's ungraded. That's my final.

[00:19:18] Bonni: I tried one approach for a number of years. It's worked really well for me. I start out by thinking about-- and we should all be doing this in terms of our learning outcomes. What do I want them to be able to remember? If it's a skill performed 5 years out, 10 years out, a lifetime of this. I create what I call a not so final, final. Actually, is the first, the same thing with you with whether you call it a quiz or an exam, but it's the first one they would take out of five. It really is that it is the answer to the question of what's coming.

In instructional design, there is a one way of structuring learning called whole part whole, and that really resonates with me, I like to be, "This is the big picture stuff." We're going to get into some of these details, and we're going to end with the big picture. It starts with the whole, but those essential things. I'm both able to give them some foundational knowledge starting out, and then test for it. Also, I with the case of these five exams, I let them drop the lowest score, so it reduces some of the stakes.

Now, I know there are concerns for people when you talk about doing that because, well, what about then you've never measured that learning? Yes, I am. There are other assignments, other assessments, a test is not the only way. In fact, it's generally 20% to 30% of one's grade versus 80%, to 90%, to 100%, so that concern is addressed, but if they earn a 90% or higher on this not so final, final. They can just

take that grade, apply it to that last test, and not need to do the final because you're right, in many institutions we are required to give a final, I already gave it. I just gave it [laughs] at the beginning of the semester, and they did super well.

There'll be some students who are early in their college experience, they need a little bit more help and practice with effective study techniques, and how does the human brain learn.

[00:21:15] Matthew: First, I've loved what you just said about whole part whole because it also conveys what we hope for them in terms of what we mean by learning. Because students I think they're so used to just recall, recall, recall, and memorizing, they'll say, "I forgot this, I forgot this, I forgot this," and I'll say, "No, you didn't learn it. That's okay, let me show you how."

This whole part whole I like because you introduce the big, fuzzy, cloud theory that you're going to teach, and then you go into the nuts and bolts. That's probably going to erode in long term memory, that's okay, but they'll remember that whole. When I think of deep learning, it's not, "What are you going to remember five years from now?" What are you going to remember to apply? You may remember that what is happening at work that's backlash, I learned about that, and then they can look up the details.

That's how we do it. As academics, we remember a theory, and then we look up the assumptions of that theory from an article. Then, they can reinforce their learning that way. I really like that, I'm going to use that.

[00:22:28] Bonni: Yes. I've really found it to be helpful too. You mentioned the word scaffolding too. So much of my own thinking about teaching comes down to that, this idea of what knowledge, skills could be built up before you get to a certain part. There are some people who are critical of this in the sense of, if I can represent their perspective on it, it feels a little bit too calculated.

To me, I think anything taken in an extreme can become-- If you think you can have it perfectly orchestrated [chuckles] everything happens in the right order, and all of that. I think, yes, you could take this too far, but just the idea of having there

be a rhythm of learning, and certain concepts because I think what scaffolding does for some faculty I work with is help them think about what is then less essential.

We think about, "There's 16 chapters in this book, I better cover all the 16." Until we get to the points in our teaching gained enough confidence, and enough skills to be able to go, "I only really need this one thing out of this [chuckles] one chapter," and to be able to break things down.

Also, should it come in the exact order of the books? I'm laughing because I actually redesigned the class that I'm teaching now, and I thought it was going to change the order. They have two books that are assigned, shorter books, and I thought it was going to change the order. I laughed so hard because I went through all this mental work changing the order thinking, "Okay, I'm going to start here," and I ended up going in the exact order, but I still think I'm teaching it more effectively because I did that thought process. I broke it all apart, questioned my assumptions, and it just ended up [chuckles] that they actually did work in an order.

[00:24:07] Matthew: Yes. Then, you went through it at that granular level that they would, and that you hadn't done that in a long time. The other thing that happens with scaffolding is another word comes up that's the rigor word that makes my spidey senses tingle. That's handholding and spoon-feeding. That has to also be unpacked. Breaking into smaller assignments is not handholding or spoon-feeding. Telling them what to write would be handholding and spoon-feeding, but breaking a task into smaller bits is exactly how you train students in mastery.

That's when our students who are our first-gen students really sore because you just say, "Just do this, just the hypothesis. Something you think is true, just meet me there, something you think is true." Great. Now, let's bring it into something empirical. "Go and splash around, then come back and tell me what you did," and then that builds confidence rather than the night before a research proposal is due. It's 5:00 O'clock, they've been working all day, it's a 10-page paper; an intro, method, and results, sit down and do it. Then, lo and behold, students who are our first-gen students are Latino students who may be working more than other students who may have more privilege, who is going to be compromised in that assignment?

[00:25:31] Bonni: One of the areas that you explore is around gender bias and sexism in STEM. Would you tell us what you have uncovered here and ways of, again, reducing that bias that we may carry with us inadvertently?

[00:25:47] Matthew: What we know is that sexism and gender bias are quite widespread in STEM. There's enormous efforts across all of these disciplines to try to mitigate that. But there's really no training at all on these issues for undergraduates in STEM. What ends up happening is that people who are late in their careers are now suddenly going to these gender bias works, these workshops, and the evidence on mandatory diversity training, I'm not sure if you know this, is rather mixed. Sometimes, mandatory diversity training, particularly if it's led by people who really aren't well-trained in the topic can actually have problematic effects.

We also know that students in STEM receive bias from other students. What we want to do in the grant that I just received from the National Science Foundation, is meet students at the undergraduate level, and teach about gender bias and sexual harassment while they are undergraduates. Early in their career, so they can one, spot it when they see it and move much more toward allyship, and have a language for what that bias is. What we're doing is creating training modules that will be infused into undergraduate courses and ethics. Where we say, you know what, ethics is more than just about doing sound science. It's about ethics across fellow scientists.

The most exciting thing that I'm doing right now with that research is bringing social psychology, which has so much to say around gender bias and sexual harassment, to the students at a young age so that by the time they're in graduate school where they see this all the time, they'll know right away when they're experiencing bias or when somebody else is and how they might be able to intervene when that happens.

[00:27:45] Bonni: I had the opportunity, a long while back, to talk to a couple of the California State University. In some ways, they're your colleagues at the University East Bay. That was Karina Garbesi and Erik Helgren. One of the real inspirations I took away from, they also do some work in reducing gender bias in STEM is, "Yes,

let's equip our students. Let's have these conversations. Let's have a way of talking about these things so we can name them and identify them."

But they also just open up a door to say, "Rather than these things being about getting the highest grade in the class, rather than this being, and I'm going to place a label, rather than this being about ego competition, let's make it about helping you discover things you didn't even realize were out there where you actually can help change the world with the skills that you could gain." They talk about teaching these students how to build these solar kits. They're learning how to circuits work, "How do I do this?" Then they actually go on trips out to indigenous communities, for example, and help teach them how to make the kits.

They actually get to literally see that their learning can transform communities and be a part of it more on a collectivist basis versus an individual basis. I get really excited about that because I have a hard time getting patient. When I was preparing for the episode, one of the examples you have in your overview is being asked to take notes. I know my life is so hard, but I'm like, "Man if I get asked one more time." It's been a while, but you carry it with you, the rage of, "I don't know, I'm in a group of all men, why would you look to me to take notes? Why would you do that?" Again, I don't want to sound like my life is so hard, but those things I have less patience for.

I want it to be like an overwhelming tidal wave, where women and people of color can just see themselves being able to fully show up in ways that don't typically motivate all of them. Like, "Yes, if I can win and conquer." We're right now, as we're recording, in the middle of lots of debate stuff going on. It's like, "I'm tired of the language that gets used." We're fighting. They're not fighting. They're a lot of stuff going on there, but let's not talk about physical violence. Use those words to describe why is that all over the headlines? No, that's not actually physical violence that's occurring. Let's name what it actually is and introduce a vocabulary for what's going on there.

[00:30:19] Mathew: Yes, what you're seeing are masculine role norms seeping into public discourse because masculinity is defined as toughness, masculinity is defined

by winning, masculinity is defined by being competitive, being the best, going to the top, having power, having status, being anything anti-feminine. A man is not like a woman and so we're seeing that language around fight, rise to the top and in science, those qualities are also very much held up.

Even in teamwork, there's an individualist thing. That thing about the note-taking is something-- I asked students in STEM what they experienced, and every woman says that they'd been asked to be note-taker or plan the office Christmas, like lab Christmas party, decorate or these things that's where if it happens enough, they're going to begin to question their worth and so, "Wait, why am I still the note-taker and not the problem solver? I'm also a first-gen college student so maybe I'm not cut out for this." Do you see how this very subtle bias can actually plant little seeds of doubt?

That's why by teaching them, there's this thing it's called sexual spillover. Watch for it and if you don't like it and especially if you're a male, say, "I'll take the notes, I'll do it. I don't mind. In fact, I'd love to plan the lab party." That's how change can happen.

[00:31:43] Bonni: I've actually got, I'm on our organization's COVID team and so the vice-president that I work with on there. He had never even what's the question. He just took notes from the very first meeting and has continued to all this time we've been working together. I'll tell you that speaks volumes to me. It speaks absolute volumes to me that he would, again, just make that assumption. I do take notes at other meetings and I'll tell you, it really helps you focus. I think sometimes we lose sight of the value.

Someone who actually takes good notes is actually really important in documenting those things. It's a lot harder than some of us would make it look, but I have heard far too many young men be like, "Well, I just I'm the visionary. I just have these big ideas and so just the rest of you all could just plan this." ...

[00:32:30] Mathew: No, sit down, sir. Sit down. You can take notes. Small behaviors convey such allyship, especially, even if it's things like being in a meeting and watching and then saying something like, "You know what, I actually want to return

to something Bonni just said that I think people missed because somebody interrupted Bonni and then bulldog." You don't say that, but you see where we know that men interrupt women more than vice versa, we know that men may take credit for women's ideas, and just one or two people monitoring a meeting and just changing the tide of that. "Thanks. You shared that. You've said that. Bonni, what do you think?" That is enough to change that dynamic.

[00:33:15] Bonni: Yes. Absolutely. Well, this is the time in the show where we each get to share our recommendations. I have a lovely one to share today. It was actually from such a long while ago and I wish I would have shared it earlier, but you know how these things go. I got contacted by Leo Kitajima Geefay, and he's from the Menlo School. He shared about this beautiful thing that he did for his students. He's a high school teacher in the Bay area.

At the time when he wrote me, which again was a while back, he was trying to decide what was going to happen with their school in terms of coming back in September and what that all would look like. He said, he watched a couple of episodes and he mentions a few things that he really took away from there. He just wanted to share a video with me that he made of his students working through this transition of going online, but trying to maintain the integrity of what they had originally set out to do as a community of learners.

I'm just going to play a little bit of the video. I would love to play the whole thing. He gave me permission to play it, but I'm going to encourage that you go actually click the link and watch it yourself. I'll play just a little bit of it. He had each of his students share their musical genre preferences, the field that they wanted the music to have any actually composed and worked with them to compose music that they all then performed around individual students' passion that they had for music. I'm just going to play a little bit of it and again, encourage everyone to go have a listen on the show notes.

[00:34:54] Speaker 3: I want my piece to be really fun for the audience and I want them to be able to engage with it. I want my piece to have a really memorable baseline and I also want it to be upbeat.

[music]

[00:36:10] Bonni: Again, I would love to play all of them and I hope everyone has a chance to go take a listen because it's really a beautiful work of art. He did for and with his students. I just want to thank Leo for contacting me. You've been inspiring me ever since you did and I'm so glad to have a chance to share about your tireless work today. Matthew, I'm going to pass it over to you for your recommendations.

[00:36:34] Mathew: My recommendation is that these are really hard times. It's cliché to say that, but we all know that it's perfectly reasonable if productivity is strained, but yet we plow on and we barrel through and we go Zoom to Zoom and the grading, just the switch to remote teaching, I think we're all in collective struggle. What I recommend is take some time to think of some of the top moments of your career, whether it was a talk that you gave that you really felt went well, whether it was a publication you're proud of, whether it was a moment in the classrooms where there was just such rich discussion, whether it was when you were an undergraduate and you first started learning about your discipline and loving it.

Make almost a top-five or a top 10 moments in your career and just sit with them like they're old friends and they'll boost your morale a little bit. That has helped me and I pass that on to you.

[00:37:36] Bonni: Thank you so much for that recommendation. I'm going to spend some time doing that and it's fun to hear from other people too. If any of you want to get in touch and share what you reflected on based on Matthew's recommendation, I'm sure we both would love to hear about that, how you--
[crosstalk]

[00:37:49] Mathew: Absolutely.

[00:37:51] Matthew, thank you so much for being a guest today on *Teaching In Higher Ed*. I'm so appreciative of the California State University for connecting me with you and making this conversation possible.

[00:38:01] Mathew: Oh, it was just a pleasure.

[00:38:06] Bonni: Thanks once again, to Matthew Paolucci Callahan for joining me on today's episode of *Teaching In Higher Ed*. If any of you would like to reference the show notes, you can head on over to teachinginhighered.com/336. You're also welcome to sign up for our semi-regular updates, I say, having missed a few along the way, you can subscribe@teachinginhighered.com slash subscribe. When you do subscribe, you get a free ebook that gives you some tools that will help with both teaching and productivity. Thanks so much for listening and I'll see you next time on *Teaching In Higher Ed*.

[music]

[00:39:06] [END OF AUDIO]

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