Transcript of episode 64, The Ethos of Creativity

Emily Kircher-Morris: [00:00:31] Hey there and welcome to episode 64. I'm Emily Kircher-Morris. Today. We're talking about creativity. We'll define it because there are some misconceptions. And we'll talk about how to spawn creativity in your kids or your students, and discuss some connections between neurodiversity and creativity.

Along for the conversation is Todd Kettler from Baylor University. And we've also asked for your input on our social media platforms, so we'll present your thoughts as well. So how can you connect and chime in on the things that we discuss? Well, on Facebook and Instagram, we're Mind Matters Podcast, and you can reach us on Twitter as well. Our handle is @MindMattersPod. Also, you can go to our website and click on 'contact us' to send us a message.

Depending on when you're listening, the SENG, or Supporting Emotional Needs of the Gifted conference is going on the week this episode is released. I'll be presenting on executive functioning in gifted and 2e kids. You can find info about the virtual conference at www.sengifted.org. It starts this Friday, August 7th, and goes through the weekend. Maybe I'll catch you online. Today's guest is...

Todd Kettler: [00:01:45] Uh, Todd Keller. I am a associate professor of Educational Psychology at Baylor University, Baylor's in Waco, Texas. So I'm a part of the school of education faculty.

Emily Kircher-Morris: [00:01:57] Our Todd talk is next.

(break)

Today's guest is Todd Kettler, and today we're talking about the ethos of creativity. Todd, thanks for joining us.

Todd Kettler: [00:02:09] Oh, glad to.

Emily Kircher-Morris: [00:02:10] So you're at Baylor. Tell us what you do there.

Todd Kettler: [00:02:13] My job has me working with, uh, graduate students working on master's degrees, doctoral degrees, but I also work in our teacher education program and preparing teachers with a special focus in gifted education, um, as well as a general education.

Typically the research I work on within research work is a creativity research, critical thinking research, and gifted programming research. Like for instance, I've been studying some policy stuff recently, and those sorts of fun things, teacher training issues related to gifted education and creativity.

Emily Kircher-Morris: [00:02:50] Why don't we start off with you telling me a little bit about how you became interested in creativity as a process and how you define creativity.

Todd Kettler: [00:03:02] Oddly enough I, I think I accidentally stumbled upon creativity. I was working on a master's degree in the early 1990s, so we're talking about like 25, five years ago. And, uh, I had a required course in creativity and I was taking that and things were chugging along pretty well. And, um, I don't think I was expecting it to really captivate me in a, 'you're going to study this for the next 25 years' kind of way. Uh, but, uh, Jane Piirto, uh, who is a Professor Emeritus from Ashland University in Ohio, uh, Jane happened to be coming to Baylor University where I was working on that master's degree and she had lunch with, uh, our class. And, um, for whatever reason, uh, that lunch probably turned the corner for me. And I had, uh, since then a deep interest in this idea of creativity, like, um, you know, what does it mean to think creatively? What does it mean to produce creatively? And it's evolved over time to have a lot of concern about what does it mean to design, uh, creative education, uh, and work with teachers to prepare them to work in creative education? Um, so yeah, I, uh, like I said, it's sort of a stumble upon, uh, and a significant person stepped into the room one day and she, uh, enchanted me in some ways, uh, that I've become interested, and Jane and I remained friends to this day. Uh, and we still sometimes talk about that day we had lunch in, I believe it was 1994.

Emily Kircher-Morris: [00:04:36] It's really interesting how those single events can kind of stand out in our mind and take us off on a different tangent, you know, that we may be weren't expecting. And so for you, that was really pivotal. So tell me, how do you now, after studying it for all these years, how do you define the concept active creativity? What does that term mean to you?

Todd Kettler: [00:04:57] That's a great question, Emily. And, uh, I would, I will admit that my understanding and definition of the term has definitely evolved over time and it is, um, really comes down to the generation of ideas, uh, the generation of possible problems or solutions to problems. It's, uh, uh, insightful moments, uh, in our cognition. I think that that's why creativity is to me, mostly, uh, generation of, uh, ideas, solutions, insights that are in some way, new or novel, uh, yet also appropriate for the context. Uh, so we have this delicate balance. It's one thing to generate a really novel idea, but if it's so novel that it's not applicable to the context, then it's not helpful.

So, uh, the, uh, the creativity or creative cognition is the ability to generate ideas that have this really nice fit. It's new. Maybe we haven't thought of this idea or this approach before. And it also has the potential to be very useful or solve some problems or see problems in a new way in some field of study.

Emily Kircher-Morris: [00:06:04] Would you say that like as a child or as a student that you were creative?

Todd Kettler: [00:06:10] I probably was, and I probably was in spite of my environment. Um, and I say that because I don't know that I thought of myself that way, but, uh, having the benefit of hindsight, I look back and think there probably were some elements of that, but I wouldn't describe being raised in a home that was necessarily trying to cultivate creativity or a school system of the 1970s and 1980s that was trying to cultivate creativity.

Uh, but like I said, as I reflect and have a better understanding of it, yeah, I do think I had some creative, uh, moments in my childhood. And, uh, probably I found joy in those creative moments. So as I matured into an adult and started looking for the type of life work that I wanted to be engaged in, I was attracted to things that would allow me to have that same feeling again. How can I apply creative thinking in whatever job I do?

Emily Kircher-Morris: [00:07:08] Yeah, it's interesting to think about how those early experiences can influence, you know, that development of creativity. I'm curious, what are some of the factors that you've learned that do influence creativity in individuals? I mean, is it, is it something that's innate? Is it something that can be learned? What, what are the pieces that mold that in somebody?

Todd Kettler: [00:07:32] I'll start with all of the above. Yes. Is it innate in some ways? Yes, it is. And the two primary ways that I think creativity is innate, is it, there's some relationship between cognitive ability and creativity, and personality and creativity. And for the most part, cognitive ability and personality are some traits that most people were born with are very tightly connected to our genetic makeup. Uh, you know, we don't get to choose our personality, it sort of chooses us. And, uh, we, you know, we get some amount of cognitive capacity. And both of those tend to be related to creativity, but not exactly.

So I'll give you an example. What we know is, uh, having average to above average cognitive ability does enhance creative capacity, but there's a limit. Like once you surpass, um, you know, maybe one and a half or two standard deviations above the norm in terms of intelligence, it doesn't necessarily continue to grow the creativity. Uh, but there's like a sweet spot, uh, from average to slightly above average. Personality, one of the, one of the things we've learned about creativity over time is there does tend to be a personality profile, uh, associated with creative people. I don't want to make it sound like personality causes creativity. Sometimes I think creativity could similarly cause personality. So I don't want to infer a cause and effect relationship. But we do tend to know that, uh, there is a personality profile, uh, typically favoring openness to experience more than anything.

And creative people tend to be a little bit lower on conscientiousness. Unless you're a creative scientist. And actually we find creative scientists tend to also have a pretty high levels of conscientiousness.

Emily Kircher-Morris: [00:09:10] So you're referring to the big five personality model there.

Todd Kettler: [00:09:13] Generally. Yes.

Emily Kircher-Morris: [00:09:14] Yeah. And so, so openness to experience and conscientiousness are two of those five factors.

Todd Kettler: [00:09:19] Most people don't necessarily know what that means. What do you mean by openness to experience? And I typically say that openness to experience, uh, implies, um, use of imagination, uh, wonder, uh, inquisitiveness, a willingness to think of things in a new way. We tend to think of openness to experience as, these are people that have the high levels of this trait tend to like vague situations. Uh, so they find vagueness comfortable because it allows them to bring some, uh, structure to the vagueness. Uh, whereas, um, people that aren't open to new experiences aren't as excited about vagueness. They like certainty, so it's this trade that does seem to go nicely with the types of cognition that we expect in, um, creative thinking. And I want to follow up on the other thing that you asked, you said, is it stable? Is it a trait? And I think those two are pretty stable trait, a trait-wise, but I also am deeply convinced that creative capacity is something we can develop. Uh, and when I say, uh, develop, uh, generally I think of it as a set of skills, a type of thinking that we can enhance in students.

Uh, so, uh, every student can grow in his or her creative capacity. I firmly believe that, I've seen that, the research supports that. Is it the case that creative instruction and nurturing of creativity may impact some students more than others? Absolutely. So if you come with the personality profile that's conducive to creativity, then it's likely that the creative instruction is going to have even a better effect for those kids.

Emily Kircher-Morris: [00:11:05] Do you find that when you're working with teachers, do they seem to understand that? That creativity is a skill that can be built? Or do they tend to feel like, you know, that's outside of their realm of what they do?

Todd Kettler: [00:11:19] I'll start with the bad news and the, bad news is, we see, uh, many times teachers have what I call, um, a limited perception of what creativity may, may mean. Uh, so if I, uh, ask a teacher to what, you know, how are you teaching for creativity? They will typically think of what I call ornamental creativity.

I'll tell you real short story that I think highlights this quite nicely. We've got this daughter who is in high school now, but when she was in middle school, I believe it was eighth grade, she had a history project. And I was in the kitchen and we're talking about how her day at school went, and I see this rubric laying on the counter for the history project I knew she was working on. Now I look down the rubric and it gets down to the bottom and it says creativity worth 10 points. So I asked her, I said, well, what are you going to do to get the 10 points for creativity? Like, tell me, tell me about that. She said, dad, you know, if I use some color or maybe like put some border around my display board, maybe cut some photos out, uh, you know, that I could tape on there, I glue onto the, uh, display board, that's how you get the creativity points. And I just wanted to hit my head against the counter.

Because that, I want you to see that that's what ornamental creativity is. It's this perception that being creative in school means that you do normal schoolwork and then you ornament it some way and make it creative. It would be like where you have a reading assignment that says design a new cover for this book. Well, I'm not saying that's a terrible thing to do, but it's not deep cognitive. It's just like art.

Emily Kircher-Morris: [00:12:53] Right.

Todd Kettler: [00:12:53] So we actually have a term for, um, in the book that we wrote with my co-authors in 2018, uh, Creativity in the Classroom, we distinguished, uh, cognitive creativity from ornamental creativity, and how we want to focus on cognitive creativity in our pedagogy. We also have this concept in the research literature which is called arts bias. In the sense that when we ask people about creativity, if their first thoughts are, well creativity has to do with the arts. So if I say, Hey, how can we integrate some creativity into the curriculum? And people think, well, we, you know, we could have students, you know, perform or, or draw or design. I think no, creativity is coming up with a new idea, right? It doesn't have to, you don't have to go to a craft store, uh, to do that. You don't have to have markers. You don't have to have glue. Creativity is the generation of ideas. It's the recognition of new problems. It's having an insight, maybe understanding historical event in a way that we haven't necessarily understood it before. Those insight moments are what I call cognitive creativity. And that's what we want to focus on in an educational setting, more so than, uh, ornamental creativity.

Emily Kircher-Morris: [00:14:02] You know, it's funny that you mentioned that, it reminds me of a story from when I was in school. I think I was a freshmen. And, um, one of the great injustices of my life, we had gifted English classes. That was how we were served for our gifted, you know, um, services was in our English class. And we had, we read Romeo and Juliet and we got the choice. We could choose whatever type of project we wanted to do. And so I chose to read um, the Taming of the Shrew is I think that's the title of it.

Yeah. And, um, do a compare and contrast and really analyze it. And I was drawing conclusions and comparisons and all of these things. And, um, you know, I got it back and I got like a 90% on it because, I don't know why. And I had a friend and who, who made a movie poster for Romeo and Juliet and he got a hundred percent, but he was a very artistic, talented student and he probably did that in about 20 minutes.

And I was so frustrated, but it's interesting, you're talking about that creativity. And I think that, you know, the teacher saw that particular piece and yeah, it was excellent. Right? But the amount of effort and cognitive creativity and, and, you know, analysis that went into the other thing, it's hard to compare the two.

Todd Kettler: [00:15:10] Absolutely.

Emily Kircher-Morris: [00:15:11] You know, it's two different things. It's apples to oranges.

Todd Kettler: [00:15:13] Absolutely, your project is the perfect example of what we mean by cognitive creativity in schools, where you're going to going to transfer what you've learned from Romeo and Juliet and that analysis to a different text, and come up with some new ideas and new insights.

That's what we mean by creativity, the generation of new ideas, new insights, uh, in some cases it's problem-based, but it's not always problem-based, it's just new insights. Uh, how can I better understand what it means to me be a human? Because I've studied these two, uh, drama texts, Taming of the Shrew and Romeo and Juliet. Those are, that's what

creativity should look like. I'm not completely opposed to movie posters, but that's just not as cognitively, uh, significant as a new compare and contrast.

Emily Kircher-Morris: [00:15:56] I just was offended that I didn't get a hundred percent as well. That was really my problem with it. But looking back, I'm now realizing what really was my, you know, the underlying piece of that, you know, is that, that somehow there's a different mental process that's going on with that.

What about environment? What type of environment allows creativity to blossom?

Todd Kettler: [00:16:16] You're you're absolutely right, environment matters. Environment matters in the home. I think it, it matters in the workplace and it matters in schools. We've got more research on creative environments and business and industry than we do in education. And I'm trying to change that where we can study it in educational settings a little more. Uh, but there's, there's this concept that I like to talk about, uh, that I call, uh, ethos. Uh, the, what are the ethos of creativity? If you, if you think about ethos, it's kinda like this, uh, from the Greek root for ethics.

Uh, so let's think about what are the ethics of schooling. If we're in a, and we're in a school that focuses on the ethos of competitiveness, for instance, that tends to suppress creative thinking by and large. Competitiveness, uh, is not a creative enhancer so much as cooperative, uh, work is. So if you create a cooperative ethos in school, I think you support creativity more.

I also think that, uh, teachers can enhance creativity, uh, by modeling creativity. So if teachers model creative thinking, they can, uh, create an environment where the students see what it looks like to, uh, generate new ideas, new problems, new solutions. I think the other, uh, concept of the environment, and I mentioned this early, which is, um, the way we give assignments in educational settings is oftentimes counter to creative thinking.

And I think sometimes parents are maybe the worst enemy of this. Uh, I'll give you some examples. A good assignment that is going to require kids to think creatively is going to be open-ended. It's going to have some vague characteristics to it. Um, but what I've noticed over time is teachers say, well, I tried to give assignments like that, and then I get these parent complaints. I had parents calling the principal's office saying that I gave an assignment to the students, and I didn't give any clear guidelines on what they're supposed to produce as a response.

And what we know about creative thinking is, whenever we give an exact model of what an answer might look like, or a response might look like, the student's responses will, not surprisingly, uh, mimic that model. Which is not creative, right? That is just mimicking the model that you've been given. Whereas creative responses are going to flourish when there is a set of guidelines that are, uh, that say, all right, here are the boundaries of what the assignment, uh, response would include, uh, but I'm not going to tell you exactly what you should do. Well, that frustrates students, students go home and tell their parents, parents then email the teacher, email the principal. And then the next thing you know, we're in this sort of self-defeating loop of, well, when we're no longer teaching for creativity, we're now

gonna go back to giving very specific guidelines and a model answer, so the students can try to mimic the model answer.

So one of the things that I think we can do to create, to support creative environments, Is to build this sort of campus culture. What I call the ethos of creativity, that says, you know, we're comfortable operating in open-ended, uh, places, because it's in those open-ended, uh, opportunities that students will start to generate ideas and insights.

We just have to grow comfortable with that. And, and I think that takes leadership from, say, an administrator. I think it takes consistency from the teachers, and it takes educating parents because like I said, most parents will say, I'd like my kid to be a good creative thinker, a problem solver, but then they also want to say, I need you to give exact guidelines on what this assignment should include.

And I want parents to see that sometimes that is defeating the purpose. If you give exact guidelines, you are making it more difficult for the students to think creatively.

Emily Kircher-Morris: [00:19:59] I can see how that would be at odds with grading procedure.

Todd Kettler: [00:20:03] Yes. Now that you mentioned grades, that is a, um, I sometimes worry that chasing grades is the greatest enemy to creative thinking.

And I'll give you an example of that. Uh, intellectual risk-taking is a personality trait associated with creative thinking. When a, when someone takes an intellectual risk, it's not like jumping out of an airplane, that's a physical risk. An intellectual risk is, we've been studying, let's say we've been studying Billy Budd, Melville's Billy Budd, in uh, in my English class. And typically Billy Budd may be seen as let's say a, the typical response is that Billy Budd is a villain. And what if a student wants to make an argument that well, no, actually I think I can make an argument that Billy Budd's the hero, not the villain. That's an intellectual risk. You're, you're gonna argue a position that maybe the teacher didn't even take when she lectured or explained what was going on in this, uh, narrative by Melville.

Uh, well, if, if the student is afraid of getting a low grade, the student is going to take the most conservative approach to his or her response. Right? So, uh, intellectual risk taking is minimized. The safe thing to do is to say pretty much what the teacher said, cause that's probably going to get me an A, whereas a more creative response would be this willingness to say, you know what? I can see it in a different way and I want to make that argument.

So I think, uh, fear of making a bad grade is one of the things that reduces creative responses. So I don't know the solution to that. Unfortunately, I think grades have become a, they've just become a force that changes the way we develop teaching and learning and student responses.

Emily Kircher-Morris: [00:21:47] How do you feel creativity should fit into general education classroom that gifted ed classroom, you know, special area classes? I mean, I feel like there's ways to pull it in. What are your thoughts?

Todd Kettler: [00:21:59] I'm glad you asked that. I, I firmly believe that creativity is a skill that all students should be developing in school. And the most common way I think I see it referred to as a curricular element now is what we call cross-curricular skills. Cross-curricular skills would include such things as creative thinking, problem solving, critical thinking, collaboration skills, communication skills, the skills that we know are highly valued in our 21st century workplace. Yet they're not limited to any one discipline. So they're called cross-curriculum.

That's how we refer to creativity mostly. The challenge of that is, um, very few people are well trained to implement those cross-curricular skills. Like they may have been, you may be trained as an English teacher, a math teacher, a science teacher, and that didn't necessarily include training in how to help you bring creativity in the classroom.

That's a challenge, but the point is we're trying to get creativity into the general education curriculum. Uh, we we've got some insights in terms of, you know, what proportion of the jobs that these kids are going to inherit are going to require some level of creativity and problem solving? And it is growing year by year.

They, uh, the expectation is, if it doesn't require creative thinking, innovation or problem solving, there is a good chance it's going to be automated. So as we prepare kids for whatever the future workforce is, everybody needs to have the ability to recognize problems, solve problems, generate ideas that, uh, might be, um, help full to solve a problem. Those types of skills are critical for all students.

But at the same time, you would, you, you asked this question, well maybe how does it fit into gifted ed? Cause you know, I've done a lot of work and give to the, uh, in my career. I think of it, it's very similar to differentiation. Creativity's in the general curriculum and then we differentiate and maybe have a more complex problems, uh, expectations for more, uh, in depth solutions, uh, in terms of insights and, uh, problem finding, problem solving, uh, or new ideas. So yes, creativity is in the general ed curriculum, but then we also differentiate those creative expectations for a more advanced curriculum that our gifted students may be involved in.

Emily Kircher-Morris: [00:24:06] What do you find are some of the other benefits for learning creativity? We've talked a little bit about how it can impact in the workplace or other situations, but I'm wondering just on an individual personal level, like some of those social and emotional pieces that creativity might influence or opportunities to explore creativity might influence.

Todd Kettler: [00:24:33] I believe that creativity is associated with happiness. And there are, there is some research that looks at the relationship between creativity and happiness, not only with adults, but with children and students as well. And so there is a slight positive relationship between being creative and being happy. The idea that we're doing creative work brings a, a type of emotional satisfaction, uh, that is different than doing converging work. Meaning that if you're asked to do some math problems that just always come down to one final answer, that doesn't bring the same emotional satisfaction as if you're given a math problem that's very open-ended, that has multiple possible answers, you wrestle with

it for an hour or two, and then you come up with a response that is possible. But we're looking more at the elegance of the solution, not is it right or wrong. And so what we find is there's an emotional satisfaction associated with that type of work versus convergent type of work.

We also have found creativity to be associated with intrinsic motivation. And in most cases we would like to try it to nurture intrinsic motivation in young people so that they, uh, build the capacity to motivate themselves as they grow from mostly dependent to mostly independent over the course of this educational trajectory.

Creativity thrives in, in motivation theory, meaning that if you're intrinsically motivated, you tend to be more creative in your responses. So I think those are two really positive ways that, uh, have an affective component as well as an academic component. Motivation and, uh, happiness. And I, I'm going to throw in satisfaction as well, uh, in terms of, um, I think it's the reason you can remember the compare and contrast paper or project you did from high school. Because there was a level of satisfaction in doing that that's significantly different than, you know, most of us can't remember a test we took, but we can remember this open ended project, uh, for years, decades even, because it stuck with us, it had an emotional connection. And I think in many ways, making school more creative could also make kids have a more positive response to what they're doing in school.

Emily Kircher-Morris: [00:26:55] You know, as you mentioned that it's like a kind of, you know, see my life flash before my eyes, but I agree. It's like the things that I remember are the pieces that really did have that cognitive creativity involved, or, or just the open-ended piece of it, because it's just so much more interesting and involved, and the accomplishment that's associated with that... I think satisfying. I think that's the perfect word for it. It, it feels complete. Like I found this solution.

Todd Kettler: [00:27:23] Unfortunately, I think so much of what kids do at school doesn't come with a satisfaction element. It's uh, it's almost like they're completing a checklist. Um, and rarely have I completed a checklist that brings deep satisfaction, you know, it's like, did you, you know, you've done your homework, yes. Did you study for your test? Yes. Well, yes, those can lead to completion and good grades, but satisfaction comes from things that have an intrinsic connection.

That, man I really liked this, and I came up with a new idea that I was really satisfied with, and that makes people happy.

Emily Kircher-Morris: [00:27:57] So for parents and teachers, you know, who have kids of all ages, whether they're doing in-person learning or virtual learning, or parents who are homeschooling, whatever their situation might be, what do you find are some just really effective ideas that they could implement, even just on a daily basis, to help support that creative growth for their kids?

Todd Kettler: [00:28:23] I get asked this question periodically. I like to start with, uh, Let's build a healthy and accurate understanding of creativity. Let's think about creativity as something that is ideal-driven. We are going to generate new ideas. We're going to be

imaginative. We're going to wonder, we're going to question. Uh, when we, when we think about creativity in a healthier way... and maybe healthy is not the right word. What I call a more accurate way. Creativity as idea-generation, creativity is problem solving. Creativity is insight. We think of it that way, you're going to find, uh, multiple locations, whether you're a parent in your home, or if you're a teacher teaching face to face or teaching online, where you're going to create moments in the teaching and learning cycle, either as a teacher or as a parent, where kids are expected to generate an idea. Ask them to generate an idea, ask them to share their insights.

That's when we start, uh, enhancing creativity and we start making that a habit that kids think, this is what I'm expected to do. I'm supposed to generate ideas. I'm supposed to have insights. So that's the first thing. Come up with a more productive view of creativity that's not biased by arts. It's not biased by embellishment only, but it is creativity that could be applied to math. It could be creativity applied to science.

The second thing I tell both teachers and parents - get comfortable with ambiguity. We all know people that are absolutely not comfortable with ambiguity. And then we know other people that thrive on ambiguity. And, um, we all fall somewhere in that spectrum, probably. Uh, creativity can flourish where ambiguity is present. Creativity is difficult to find when there are tight guidelines and responses are supposed to be very well in line. I don't know if parents love to hear this, but the truth is, creative kids are not good rule-followers. It's part of the creative personality that they don't like to follow rules.

The good news about not liking to follow rules is those people grow up to be innovators and entrepreneurs someday because they decided to play by their own rules. And it's very productive in adulthood. It's not always awesome when you're 14 or, or 9. Uh, so, um, so it's the idea of getting comfortable with ambiguity, getting comfortable with the idea that we're going to follow principles. But we're going to allow principles to drive us to generate ideas and insights in ways that rules might restrict ideas and insights. That fair?

Emily Kircher-Morris: [00:30:57] Absolutely.

Todd Kettler: [00:30:58] Another thing is to celebrate and encourage novelty. Whereas creativity is often associated with, uh, uniqueness or novelty. Uh, and, and encourage people to share ideas that aren't typical. Encourage your kids to think outside the box. Um, those are, while phrases like 'thinking outside the box' sometimes sound very trite, the truth is they're kind of accurate to what it means to think about creativity in a healthy and productive way, whether it's at home or in school.

Um, I also think that modeling creativity works. Some of the things that we found when we look at teachers that tend to be more effective at implementing a creative pedagogy, they tend to have higher levels of self-belief about their own creativity. So teachers who are more creative do a better job of modeling the creative thinking process in their classrooms. So when we can get parents to model creative thinking, and we can get teachers to model creative thinking, we believe that has an impact on students' development.

I think the last piece of advice I would give to parents or teachers is, get comfortable with failure, or change your attitude about failure. Intellectual risk-taking means that you're going to fail occasionally, and creativity is an act of intellectual risk taking. You have to be okay with failure. You've gotta be okay with the idea that boy, I put my solution on the table and it turned out to just not work. We say this all the time, we think, Oh yeah, how did Thomas Edison come up with the light bulb? Well, he failed, you know, 1200 times, and then he was successful once. Right? We say it all the time but do we really deeply internalize it? Do we help kids understand that failure's just learning what didn't work? Failure is an opportunity to say, you know what? I put an idea on the table. I felt good about it. And I'm satisfied that I tried something, even if it didn't work.

And then we have to understand how we, failure becomes a learning opportunity. Well, you know, this didn't work, so maybe next time I'll do it this way and maybe that'll, hopefully that'll work better. Perfectionists probably struggle with creativity because if you have these perfectionist tendencies, you're typically afraid of failure. So we've got to help sort of bridge that gap. That failure's not a problem, as long as we learn from it. And we just keep getting better in our understanding so that we can continue to generate possible solutions.

Emily Kircher-Morris: [00:33:29] Todd, thank you so much for all of your insights today.

Todd Kettler: [00:33:32] Well, I appreciate it, Emily. I like talking about this. Thank you very much.

Emily Kircher-Morris: [00:33:43] When we were working on this episode, we asked our followers on social media and the members of our Facebook group to give us their ideas and examples regarding creativity. Lindsay Lee reminded us that there has to be a baseline of knowledge before that knowledge can be creatively synthesized. Clint Rodriguez also shared about the groundwork that must be laid for creativity to blossom, both a level of knowledge about the problem to be solved, and clear constraints on how to solve the problem within certain boundaries. Jeb Puryear agreed that, although perhaps counterintuitive, boundaries are necessary for creativity, and working within those limits can make a task even more rigorous.

We had lots of examples of creativity that you all see at home and at school. Kids are getting creative during maker time at school, they're launching entrepreneurial projects, they're modifying anything they can get their hands on, from crochet patterns to Nerf guns. They're leaving messes in their wake, and finding creative ways to endure the consequences we attempt to enforce. It doesn't matter if you are a parent or a teacher, there are many ways to build creativity into our daily lives. Albert Einstein said, "we cannot solve our problems with the same thinking we use to create them." So let's find some creative ways to think.

I'm Emily Kircher-Morris, I'll see you next time on Mind Matters.

(music)

Dave Morris: [00:35:45] Dr. Todd Kettler's book, Developing Creativity in the Classroom, can be found by going to www.MindMattersPodcast.com and clicking on the episode 64 page. There are links for you there. And thanks again to Todd Kettler for joining us. Thank you for

your contributions through Facebook and Twitter. If you still haven't, head to www.MindMattersPodcast.com and find links to our various social media pages. For Emily, I'm Dave Morris, the executive producer of Mind Matters. Stay safe, stay healthy, see you next time.

(music)

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