# Inspired Teaching Day Spring 2022: The Science of Curious Adaptation with Keynote Tanya Tarr, Founder of Cultivated Insights Episode 154

# 00:00:00 **Tanya**

# When we close the tabs in our head by closing the stress cycle, it's a form of what I call, active rest. So, we hear a lot about self-care, I want to talk about stuff that involves self-care that is not static. Not self-care, but group care, because there's something very important that happens when we do these things, when we create active rest with each other in a synchronous way,

# 

# 00:00:24 **Christina**

# Hi, I'm Christina Barsi.

# 

# 00:00:25 **Sun**

# And I'm Sun Ezzell, and you're listening to the Magic Mountie Podcast.

# 

# 00:00:29 **Christina**

# Our mission is to find ways to keep your ear to the ground, so to speak - by bringing to you the activities and events you may not have time to attend, the resources on campus you might want to know more about, the interesting things your colleagues are creating, and the many ways we can continue to better help and guide our students.

# 

# 00:00:46 **Sun**

# We bring to you the voices of Mt. SAC, from the classroom to completion-

# 

# 00:00:50 **Speaker 1**

# And I know I'm going to achieve my goals and I know people here are going to help me to do it.

# 

# 00:00:56 **Speaker 2**

# She's a sociology major and she's transferring to Cal Poly, Pamona! Psychology major, English major ...

# 

# 00:01:01 **Sun**

# From transforming part-time into full-time-

# 

# 00:01:03 **Speaker 1**

# I really liked the time that we spent with Julie about how to write a CV and cover letter.

# 

# 00:01:10 **Christina**

# Or just finding time to soak in the campus.

# 

# 00:01:13 **Speaker 1**

# To think of the natural environment around us as a library.

# 

# 00:01:16 **Christina**

# We want to keep you informed and connected to all things Mt. SAC. But most importantly, we want to keep you connected with each other. I'm Christina Barsi, Mt. SAC alumni, and producer of this podcast.

# 

# 00:01:27 **Sun**

# And I'm Sun Ezzell, Learning Assistance Faculty and Professional Learning Academy Coordinator.

# 

# 00:01:32 **Christina**

# And this is the Magic Mountie Podcast.

# 

# 00:01:34 **Christina**

# What does it mean to create a flow state? How about closing a stress cycle? If you missed Inspired Teaching Day presented by the DevEd study team or want to recap of what keynote Tanya Tarr, founder of Cultivated Insights shared on the science of curious adaptation, where she not only answers these questions, but offers some interesting and fun solutions like group gameplay to help us become better functioning facilitators, professors, team players, leaders, problem-solvers, and more - then listen in as Tanya dives into the neuroscience behind our stress, our workflow, and our connection with others.

# 

# 00:02:21 **Martha**

# Welcome to the developmental study team's 21st Inspired Teaching Conference. My name is Martha Hall and I'm a member of the DevEd study team and a math professor here at Mt. SAC. The DevEd study team is a group of faculty, staff, and administrators, interested in helping all students succeed by using, researching, and sharing developmental education principles.

# 

# 00:02:47 **Martha**

# Some of the things we do include hosting community of practice sessions, during which we educate ourselves and others regarding current education research. We plan this annual conference, we design and facilitate professional development workshops. We select the Debbie Boroch Developmental Educator Award, and we participate in activities focused on helping all students succeed.

# 

# 00:03:15 **Martha**

# So, if you're interested in joining our team, please contact me or Sun or Dianne Rowley, and we'll get back to you and give you information on how to do that. As always, but even more so, this year, I'm grateful for opportunities to get inspired so that I can become a better teacher for our students.

# 

# 00:03:36 **Martha**

# Well, I want to introduce you to our keynote speaker, Tanya Tarr. Tanya Tarr is Founder of Cultivated Insights, a corporate learning, and development company. Tanya has been a senior contributor to Forbes since 2016, where she has written about many topics, including leadership, the art of negotiation, and burnout mitigation.

# 

# 00:04:02 **Martha**

# Tanya brings her perspective on how to support curious adaptation during uncertain times through her lenses as a behavioral scientist, a journalist, a leadership strategist, and a woman of color. She has personally recovered from burnout and chronic illness, including beating Type II diabetes. So, she knows how to apply good science on a personal level.

# 

# 00:04:27 **Martha**

# Before running Cultivated Insights, Tanya worked for 17 years in political and legislative campaigns across the United States. During that time, she helped public school educators stabilize from burnout, which we all definitely need and double their voting participation.

# 

# 00:04:49 **Martha**

# Tanya also spent part of her career working with military families of deployed soldiers during Operation Iraqi Freedom, and also, worked within counterintelligence. The extensive fieldwork gave her a rich understanding of what beliefs drive people's decisions and how that impacts their behavior. It also taught her what conditions and behaviors build trust and connection in communities and on teams, especially when under enormous stress.

# 

# 00:05:18 **Martha**

# Tanya has a master of science and performance measurement and management from Carnegie Mellon University. She is a certified master trainer, a health coach, a DEI practitioner, and she lives in Austin, Texas.

# 

# 00:05:35 **Martha**

# Recently, Tanya received what she considers her most prestigious compliment - a participant said this in an evaluation: "Tanya's workshops are like watching a fun, live-action PBS show. I wish all professional development was like this." Welcome, Tanya.

# 

# 00:05:54 **Tanya**

# Thank you for having me. Yeah, I enjoy PBS and I also enjoy creating fun, educational moments like I'm sure all of you do every day with your students. And I was talking with Tania Anders right before we started and I was telling her about how, when I worked for public educators here in Texas, that some of our members that I worked for were community college faculty and staff just like you.

# 

# 00:06:18 **Tanya**

# And that folks that serve in that capacity who serve others, hold a very special place in my heart because so much of everything that you do is dedicated to teaching and making higher education accessible. So, I'm incredibly grateful to be here with all of you today.

# 

# 00:06:32 **Tanya**

# I wanted to start with building a virtual campfire together. And so, what we're going to do is we're going to take three breaths together and I'll count it out for us. Then we're going to take a pulse, that's a poll. And then the third thing is I want to be proud together. And by that, I mean, I want us to share something we did in the last week that we're really proud of doing, and we're going to do that on the whiteboard.

# 

# 00:06:51 **Tanya**

# My suggestion is everyone to work at their capacity and their ableness. I'm just going to own also my ableness as an able body person. But my suggestion is to sit up really straight and try to sit up without being assisted by the back of the chair. So, I'm sitting in a chair, but my back's not against the back of the chair.

# 

# 00:07:10 **Tanya**

# So, I'm going to sit up real nice and proud, feet planted on the ground, soles of the feet planted on the ground. And I'm going to count it out, you can follow along or not - up to you.

# 

# 00:07:19 **Tanya**

# But we're going to take a really deep inhale ... 1, 2, 3; exhale ... 3, 2, 1; deep inhale ... 1, 2, 3; exhale ... 3, 2, 1; last time, deep inhale ... 1 , 2 , 3; deep exhale ... 3, 2, 1.

# 

# 00:07:54 **Tanya**

# So, I'm going to talk a lot about the neuroscience and cognitive science of stress mitigation, and deep breathing, believe it or not is a great way to do that. It creates a cognitive transition from whatever we were doing right before now, but it also activates neurotransmitters to tell your brain, okay, let's be alert. And we'll talk more about that in a second.

# 

# 00:08:15 **Tanya**

# So, now, I'm going to put up a poll, what's called a pulse check. So, this lets me know how folks are feeling right now. So, please feel free to mark whichever numbers, how you're showing up to this meeting, how you're feeling. So, 10 is amazing, one is terrible, five is neutral.

# 

# 00:08:35 **Tanya**

# So, we got some nines, some eights and sevens, which is great - some sixes and a five and a four. So, it looks like net positive and some folks are neutral a little bit less than that. So, thank you all for letting me know how you're showing up today.

# 

# 00:08:51 **Tanya**

# So, tell me one thing you did last week that you're of, and you know what, it can be anything. And it might also be something very humble, which is okay: folded my laundry, well done. Alison - got through four midterm exams ... didn't eat junk food (well done), finished my homework for grad school (awesome), submitted a new program to curriculum, proud I ran on a trail with a big elevation game, started cleaning, helped a student find support for their mental health, drinking more water - I love it, these are such great things. Engage with my students, yeah, awesome. Thank you all for sharing. I appreciate all of you doing that.

# 

# 00:09:31 **Tanya**

# And the cool thing about when we talk about again, kind of tangentially related to stress and stress mitigation - when we talk about things we've done that create an authentic sense of pride, the science behind that is called self-affirmation.

# 

# 00:09:45 **Tanya**

# And when people do this thing, when they self-affirm themselves, it makes us more open to challenging information, it makes us more open to change, and it helps us squash imposter syndrome and do better in almost all sorts of things. So, it's one of my favorite fields of study. So, that's why we open up our whole thing.

# 

# 00:10:06 **Tanya**

# And really, my background's kind of takes some interesting turn, but the core through line is how do people make choices? How do they make decisions, and how does that impact their behavior?

# 

# 00:10:17 **Tanya**

# So, today, we're going to talk about how to curiously adapt together and why we need active rest. This might have been called something else, but we're not going to talk about the B-word, because I'm kind of burnt out on the whole concept of burnt out, the word burnt out. Like unless it's a burnt ends for barbecue because I am very much carnivore, I don't want to hear about it. You know what I mean?

# 

# 00:10:34 **Tanya**

# So, let's talk about instead, how do we curiously adapt. And why is it important for us to curiously adapt together? Because there's some magic there that we're going to explore as well.

# 

# 00:10:45 **Tanya**

# So, today's agenda, we are going to learn about the different types of stress. There's two key pieces of types of stress that I'm going to be talking about. And then we're going to talk about ways to close the stress cycle reliably.

# 

# 00:10:57 **Tanya**

# My hope is that this is going to help us as individuals do better in maintaining our own personal ecology. But I also think that some of the science here might also help you in the classroom with your students. And so, helping them consistently and safely close the stress cycle is really important, and has, I think really great benefit that sort of goes out into the world.

# 

# 00:11:19 **Tanya**

# So, the other thing we're going to talk about is this concept of active rest, which really comes out of physical training, but it also applies to cognitive tasks and something called the basic rest activity cycle. And then I'm going to talk about something called mirror neurons, which are pretty darn cool. And they're very much connected both to stress management, but also, to learning.

# 

# 00:11:37 **Tanya**

# And then we're going to talk about getting into the flow state, which is another psychological phenomenon that I'm excited to share with all of you.

# 

# 00:11:46 **Tanya**

# Alright. So, learning objectives today: we want to understand the science of stress and again, how do we close it reliably and safely, learn about the 90/20 method - so again, this is the basic rest action cycle. We're going to talk a little bit more about this, and how mirror neurons help us reduce stress and boost cooperation.

# 

# 00:12:02 **Tanya**

# So, it's the neurological infrastructure that certain emotions and also, cognitive functions will travel along. And then why creating a flow state is essential to active rest and stress reduction. And I'm going to talk a little bit about brain stuff too, prefrontal cortex versus other aspects of our brain.

# 

# 00:12:20 **Tanya**

# The goal here though overall is sustainable working. How do we think about, how do we explore new ways of working sustainably and creating better life work design? Not only for ourselves, but for our classrooms and for our colleagues at Mt. San Antonio college.

# 

# 00:12:37 **Tanya**

# So, listen, we're living in the middle of a huge Venn diagram. We got COVID, we've got a work-life where we've been trying to adapt at a rate that really is unforgiving. Sometimes, it's remote working, but how do you remote work? And then also, how do you focus when there's so many overlapping, terrible things happening at once?

# 

# 00:12:56 **Tanya**

# And then we all have our home and private lives which are also impacted, and how do we manage all these different overlapping circles of stress. So, how do we understand it? Because I feel like understanding is the first key part of this.

# 

# 00:13:13 **Tanya**

# First of all, not all stress is the same. So, there's actually two big kind of buckets here to think about. There is eustress, which tends to be quite good. It helps us in performance, in competition, and in challenges. Then there's this thing called distress.

# 

# 00:13:30 **Tanya**

# And I think most of the time when people think about stress, they're thinking about distress. This is like a bear is chasing you or I can't pay my bills, or all the other, whatever. It's like scary and hard to deal with, versus "Oh, this adrenaline's going to help me do better."

# 

# 00:13:47 **Tanya**

# So, eustress is good. Eustress is the anticipation of running a race or giving a big presentation or maybe performing on a stage, or competing with others. Eustress is good. And it helps us take all those neurochemicals that get produced and then use it in a way that is exciting.

# 

# 00:14:05 **Tanya**

# Distress is bad. Distress is the predator chasing you. It's a lion about to eat you or you're drowning and you can't get back up to the surface of the water. Distress is really bad.

# 

# 00:14:15 **Tanya**

# So, the issue though, is we live in this world where if we think about level of pressure, when pressure is low or performance is low, we might be really bored. And that might cause a little bit of distress. When pressure is really high and the performance is also ... there's a key indicator there, like the problem is that burnout is when the pressure is high, but our ability to perform is low probably because of external factors we have no control over or things of that nature.

# 

# 00:14:48 **Tanya**

# Optimal performance is where it's a comfortable level of challenge or a stress or strain. That's where we want to stay. But when distress exceeds eustress and the pressure is too high or too low, that's when things go wrong.

# 

# 00:15:01 **Tanya**

# And the other problem is that we've been dealing with all of this stress and distress for a really prolonged time. If it's too long and unmitigated, then we just fall into exhaustion. I think a lot of people are right here right now. I know sometimes I feel like I am.

# 

# 00:15:16 **Tanya**

# We've gotta find ways to reliably move out of the exhaustion zone. People need us and we need to be here. So, distress contributes to exhaustion. Let's figure out how to break down the stress cycle and learn how to close it. So, again, we got here the original stress cycle, there's a bear chasing you. What does that mean?

# 

# 00:15:36 **Tanya**

# Well, that's the stressor. The stressor kicks off physiological response: physiological response - so those are neurochemicals, blood pressure. And that causes you into a process of internalization, which is the emotional aspect of a response to stress. And then you're going to take some action.

# 

# 00:15:54 **Tanya**

# So, a bear is chasing you. So, that creates stress hormones and releases blood to the calves to ready your body to fight or fly. So, this is the sympathetic nervous system. Then you feel feelings of anger or fear, and then you have to deploy an adaptive coping strategy: do I run away or do I fight? We're making that decision.

# 

# 00:16:12 **Tanya**

# Whatever the case may be, the cycle's closed. So, this is how our ancestors evolved to survive. By the way, we inherit it. It doesn't matter even who our ancestors are., this is a part of the human experience. We inherited the cycle. The issue is that in modern society, the stress cycle is often unmitigated. So, let's give us a more relatable situation that hopefully nobody on this call has been chased by bears. I know there are a lot of bears in California, but hopefully, they don't show up on your back porch.

# 

# 00:16:40 **Tanya**

# So, it's the same stress cycle. Stress shows up, physiological response, internalization, and action. You're in a traffic jam, stress hormones are released, but you're inside of your car and you're feeling anxious or you're feeling anger. And so, this is where maladaptive coping strategies show up. This is why people have road rage, because they're trapped in little metal cars and they can't do anything. And maybe they're yelling - by the way, yelling is a good way to close the stress cycle.

# 

# 00:17:06 **Tanya**

# But the biggest issue here and actually it's related to Type II diabetes and metabolic syndrome for some people. This is actually true for me too, because I was very extremely burnt out; is that you don't have a closed stress cycle. So, your body is creating these stress hormones and altering your blood pressure. And actually, what happens physically is that your body makes insulin ready to metabolize because it's thinking you're in a fight even if you're not in a fight. And if that happens for too long of a period of time, that's part of why Type II diabetes can occur.

# 

# 00:17:47 **Tanya**

# But additionally, this unclosed cycle is a problem. And every time a stress cycle is initiated without closing that cycle, it's like opening another tab in a web browser, and then you wonder why the processing of your computer's a little funky because you've got too many tabs open. And then one of those tabs has audio, so like it's playing some sort of music and you can't find the tab and you just want it to shut up. You know what I mean?

# 

# 00:18:09 **Tanya**

# Anyhow, my point is, every time you encounter stress, your brain opens up another tab and it keeps running unless you close the tab, because that taxes your nervous system. This is part of why we're stressed out and exhausted because it's unmitigated and we haven't had time both to close it, and also, to connect in with others. So, we want to close our tabs. We want to close our tabs.

# 

# 00:18:30 **Tanya**

# So, how can we do this reliably? We know that this is the process: there's a stressor, physiological response, internalization that's psychological response, and then we can take action. What's the coping strategy? So, physical exercise and movement really does help. It does.

# 

# 00:18:46 **Tanya**

# I don't know if you all watch like Instagram or TikTok, but there's this really fun audio meme where it's this like polka song, it's like dah, dah, dah, dah, dah, dah, dah, dah, dah ... and it's always a video of somebody like - and I think it started with someone's grandpa and he was quite grumpy. And then he's got the polka music ... dah, dah., dah, dah, dah, dah ... and so, He's walking and then the caption's always like, "I'm going on my stupid walk for my stupid mental health."

# 

# 00:19:12 **Tanya**

# And I'm not going to lie, I'm kind of obsessed with that video because I find it funny and I'll watch every million version of it, you know. And for me, I found it to be very true. I found that when I went out, walked around my block with my dog, I would feel different, I'd feel better. And it was a way to take a break and close the stress cycle.

# 

# 00:19:31 **Tanya**

# The other thing too is we gotta allow ourselves space and privacy to express emotions: crying, yelling, laughing - all of these emotions, doing in the privacy of our own home or in our soundproof car, whatever it is, it really helps. Yelling actually helps. Yelling is a way to close the stress cycle. Truly, it tells your body to stop producing stress cortisol. But we want to do it in a way that is private and safe.

# 

# 00:19:55 **Tanya**

# If you're angry, write an anger letter on paper in analog (paper and pen). Don't send it, just destroy it. I was actually taught this by my cognitive behavioral therapist, but I also found out recently that Abraham Lincoln used to do this. So, he'd get mad and he'd write anger letters and destroy them. So, I feel like there's a long tradition of using this as an intervention to close a stress cycle.

# 

# 00:20:18 **Tanya**

# Laughter's also of course, really good medicine. You know, what's funny on TikTok. It's always like a tricky thing. You don't want to get too much into the social media rabbit hole, but really taking a moment to try to have that good belly laugh has the same effect as doing the deep breathing exercises that we did all at the beginning because it's called diaphragmatic breathing.

# 

# 00:20:36 **Tanya**

# And that also, again, sends the right signals to your brain and your nervous system that you're not under threat. And then connect with a friend or a coworker or friend for a voice chat - a video chat can be really nice, but there's something uniquely different about connecting by voice. So, text-based communication, unfortunately, sometimes has this ability to be misinterpreted or it comes off as more harsh than it should be or something like this.

# 

# 00:21:03 **Tanya**

# But when we hear the sound of another human being's voice, this is potentially another way to close the stress cycle. There's something that happens emotionally when we connect with each other via voice. It's reassuring, but it also again, helps close the stress cycle. So, these are five tactics.

# 

# 00:21:20 **Tanya**

# When we close the tabs in our head by closing the stress cycle, it's a form of what I call active rest. So, we hear a lot about self-care. I want to talk about stuff that involves self-care that is not static. And in the second part of our time together, we're going to talk about not self-care but group care, because there's something very important that happens when we do these things, when we create active rest with each other in a synchronous way.

# 

# 00:21:45 **Tanya**

# So, active rest is in physical training ... so, I do manage some ... I went through burnout, I managed some chronic health issues and then I also have been practicing Muay Thai kickboxing for the last seven years. And so, there's a lot of things that we do that's very active when we train. If you've done any sort of endurance sport or train for anything, there's the training piece of it, and then there's active rest.

# 

# 00:22:08 **Tanya**

# So, active rest and physical training is low-intensity exercise that follows intense physical training. And examples of that in physical training is like walking, yoga, swimming, things of that nature, low-impact. Active risk is I think more beneficial in some ways to recovery than inactivity or sitting for example, or being in isolation.

# 

# 00:22:30 **Tanya**

# And I'm using this term to denote intentional cognitive recovery: taking breaks. Intentional cognitive recovery is a sciencey way of saying, taking a break or interactive self and group care and reset, the way that we do that. Because we're not machines. We are not machines, we're human beings. We're squishy human beings in a very uncertain world. Active rest helps our brains reset.

# 

# 00:22:51 **Tanya**

# So, the amount of time we spend working really matters. And I think probably all of you know this given what you do for a living; people's attention span is not unbounded. Dr. Nathaniel Kleitman, he was one of the first people to research sleep cycles. And he discovered the basic rest activity cycle. And what his research indicated was that our bodies operate on a cycle of 90 minutes of being active and 20 minutes of being inactive.

# 

# 00:23:22 **Tanya**

# So, he was researching the sleep cycle, but the same principles can be applied to cognitive tasks. Whether it's what we're doing personally, or even teaching in a classroom.

# 

# 00:23:30 **Tanya**

# There was a famous author named Tony Schwartz. And he actually used this method instead of how he used to do things. And for him, it helped him write a ... usually, it would take him a year to write a book. And when he used this way of planning his work of 90 minutes on and 20 minutes off, sort of like the Pomodoro method, if you're familiar with that - that he actually wrote a book in half the time. It took him six months instead of a year to finish his book.

# 

# 00:23:54 **Tanya**

# So, what happens in those 20 minutes? Right? So, 90 minutes, you're alert, you're doing something, you're focused. And then you drop into the 20 minutes section when you need rest. Now, if you still work, when you're in that 20 minutes where you should be resting, what happens is your sympathetic nervous system clicks on. And when I talk about survival brain, I'm talking about when your sympathetic nervous system takes over. Because that is your survival brain.

# 

# 00:24:22 **Tanya**

# And so, if you're thinking about, well, what are the physical and cognitive signals that I need a break? Well, if you crave any of the following - this is like a list of good things too, by the way: caffeine, sugar, salt, or carbohydrates - if you feel for no reason you're craving those things or if you feel drowsy, sleepy, brain fog, fidgety, or loss of focus - these are all signals that your survival brain just switched on. And why is that a problem? Because you don't have access to your prefrontal cortex, which is your logic center in your brain.

# 

# 00:24:52 **Tanya**

# So, when you don't take a break, here's what happens: your survival brain, again, your sympathetic nervous system, which is the fight or flight function of your executive function, it activates and shuts down that logic center. So, it also elevates adrenaline, neuroadrenaline, and cortisol, these are all stress hormones. Your body is arming itself for a fight.

# 

# 00:25:12 **Tanya**

# So, the issue is we become more reactive and non-strategic, and you might have seen this not only in yourself, but in your students too. We stall out or we procrastinate. We're not able to access our prefrontal cortex, so the student can't learn because their survival has been triggered and we make more mistakes.

# 

# 00:25:31 **Tanya**

# Again, it's nobody's fault. Our bodies evolved this way to survive being chased by bears. But generally speaking, we're not being chased by bears. So, games help create active rest. We want to do these activities that have slightly smaller approximations in terms of their connection to real-life work that we're doing.

# 

# 00:25:52 **Tanya**

# And so, as we talked about this basic rest and activity cycle, trying to find ways to spend that 20 minutes doing something that keeps our brain somewhat involved, but not fully involved. So, spending 20 minutes in active rest through games specifically, it helps us do again, group problem-solving that boosts, hopefully, some creativity and cognitively primes you for solving other tasks.

# 

# 00:26:15 **Tanya**

# So, this is the other behavioral science piece of this. So, we want to create rest, but we want to create rest in ways that don't take us completely out of the work task. So, that's why sometimes like taking a break and then going on social media can kind of be less than helpful. But taking a moment to stand up, stretch, walk around and talk to your colleague or text with your friend or something like that can be a little bit more helpful.

# 

# 00:26:43 **Tanya**

# Synchronous shared activities or experiences create these important mirror neurons where on those neurons travels this feeling of belonging and cooperation. That's how we internalize it. And when we boost a cognitive state of flow, psychological state of flow, that lightens your mental load and dissolves stress, and shuts off our survival brain.

# 

# 00:27:01 **Tanya**

# So, let's get a little bit more into this. There's been a lot of research on stress mitigation. And there was one study that I read about in 2013 where some Swedish cardiologists were trying to understand the connection between singing. They had taken this choir, high school choir in Sweden, and connected them to heart monitors, because they were just trying to figure out if singing lowered people's heart rates.

# 

# 00:27:25 **Tanya**

# They had this unexpected finding. They found that when people sing together, which is a very synchronous activity, that people who are singing, their hearts sync up and beat together within a couple of seconds. Isn't that fascinating? This is what I mean when I say that we as human beings, we are wired for mimicry, that it makes us feel safe and connected and creates a sense of belonging.

# 

# 00:27:49 **Tanya**

# So, mirror neurons help us learn faster because there is a sense of connection. But also, because we're trying to mimic what we see. This is the brain circuitry that helps us feel empathy, trust, safety, and belonging. And it's created through these synchronous activities. It boosts cooperation and collaborative problem-solving.

# 

# 00:28:07 **Tanya**

# So, [inaudible] is at USC now, but originally, he was at Stanford when they did the study. And so, they had these young undergrads on campus and they had two groups. They assigned control and treatment group. And in the control group didn't do any synchronous activities. And they had to play a certain type of board game. It was like monopoly.

# 

# 00:28:28 **Tanya**

# The treatment group, they had this group, and both groups didn't know each other. Brand-new undergrads on campus. And in the treatment group, they had the group march around the building. Also, had them sing the Canadian Anthem together. I'm not exactly sure why it was the Canadian, probably because everyone knows the American anthems or the U.S anthem.

# 

# 00:28:47 **Tanya**

# So, anyhow, but that was the intervention. And then, both of these groups played the game together. And so, in this study, what happened was they found that the group that marched together and sang together was much better at cooperating and sharing resources, and making collaborative decisions than the other control group.

# 

# 00:29:09 **Tanya**

# In fact, the treatment group even made decisions that were not as economically advantageous to the individuals, but was more advantageous to the group. So, problem-solving together builds community and it helps our brains work better too.

# 

# 00:29:22 **Tanya**

# So, let's get to the brain aspect of why games actually help. So, what do I mean by flow state? So, in positive psychology, a flow state is being in the zone and it happens when we're engaged in an activity that we really like, we feel fully immersed in and we feel energized, and we feel an energized sense of focus and involvement. And we enjoy the process or the activity.

# 

# 00:29:41 **Tanya**

# Flow state, in some ways, if you practice meditation or you practice an art form, like this has been around for thousands of years. It's not a new thing. But characteristics of the flow state that I think are really important, that are design characteristics that we can look at, are things like the activity is accessible to everybody that's participating and that you feel in control, and that there's a clear sense of direction about what's going on.

# 

# 00:30:08 **Tanya**

# There's a balance between our skill level and the challenge in front of us. It feels very feasible and the task is engaging and requires strong focus just for that moment though. And it gives us a break from external cognitive tasks. And so, when I was reading about flow state and all the good things that it creates, it makes me think of Wordle, why was Wordle so successful?

# 

# 00:30:29 **Tanya**

# Because it was the sync shot logic game that a bunch of us could do. It was relatively accessible, but that little 5 or 10 minutes, however long, it took you to do that game and then you share it with everybody else, was helpful at interrupting various cycles going on that might be creating stress. It gives your brain a break and it will help your brain work better to bottom line this.

# 

# 00:30:51 **Tanya**

# There's something else I wanted to mention. I actually wrote about this on Twitter after I did a very similar lecture like this. I realized that when we're stressed out or anxious, when we're in that open stress cycle, when we feel anger - anger and the fight response can feel really good. It's actually often a maladaptive strategy, a negative strategy to close the stress cycle.

# 

# 00:31:19 **Tanya**

# When you get angry and you activate your survival brain, unless you have been trained a very specific way, your prefrontal cortex will shut off. So, if you've seen this happen, you're in a fast-food restaurant trying to get your burger, someone ahead of you is trying to get their order and the order gets messed up. And then you see this person scream at the cashier, what's happening there is probably that person, that customer, there's a lot of stuff going on in that person's life.

# 

# 00:31:48 **Tanya**

# You have a student that comes in and you can tell from their body language, they're having a bad day. Part of the reason why they're doing this is to help them feel better, because when you're angry and you're screaming, you're closing the stress cycle, but you're also closing off the prefrontal cortex. This is the logic center.

# 

# 00:32:05 **Tanya**

# If you're feeling anxious, you're too much here in this space. If you get angry, it shuts off this part of your brain. And it also is self-righteous, it feels good to the person, even though again, it's causing trauma and fallout around them. So, the cool thing about flow state is that you're helping create a moment where you're getting out of your prefrontal cortex. That's part of the reason why scientists think that when you're in a flow state, that time passes differently, right?

# 

# 00:32:31 **Tanya**

# So, one of the characteristics of flow states, is you lose a sense of time. You feel connected to something else outside of yourself, but you're so engrossed in a positive way in that activity that's creating the flow state that you lose a sense of time. Flow state is the positive adaptive choice you have. It helps you actually get out of your prefrontal cortex without triggering your survival brain. And that's why it's restorative.

# 

# 00:32:57 **Tanya**

# And that's why also when we do this in groups instead of self-care and we think of it as group care, it is helpful in making a more effective learning situation. But it is also helpful in creating some of the relief that can help us mitigate against burnout. So, this is part of the reason why hobbies, like getting a hobby actually can save your life. Because it is a non-pharmacological way of dealing with depression and anxiety.

# 

# 00:33:27 **Tanya**

# You have an activity that pulls you into a flow state. So, you don't have to think of ... it allows you a temporary cognitive escape from life, but it does it in a way that hopefully, is less harmful than other maladaptive strategies. Just like yelling at somebody, some stranger in a McDonald's.

# 

# 00:33:42 **Tanya**

# So, not all stress is the same. Eustress - good; distress - really bad. You can close the stress cycle through action and close your tabs. But try to look for those reliable methods that close the tabs in ways that are really good for you in your personal ecology. And hopefully, the social ecology around us. Consider the BRAC, the basic rest activity cycle, the 90/20 rule for optimal workflow. Notice the physical cognitive signs that you need to break to avoid that survival brain.

# 

# 00:34:10 **Tanya**

# So, what am I craving? Do I have brain fog? How long have I been working? And it can be costly when we don't take breaks. So, mistakes, procrastination sometimes, negative emotions too. That's what I mean by cost.

# 

# 00:34:22 **Tanya**

# Active rest can help create group care, connection, and a state of flow. So, active rest through games can help alleviate stress, boost creativity and collaboration. Games create mirror neurons, which can help us learn, create a sense of belonging, and help groups cooperate and work better together. Even if we don't particularly like each other.

# 

# 00:34:41 **Tanya**

# Flow states give our brains a break without activating survival brain. I really do hope that that is a point that everyone remembers because it's important as we all recover going forward. Games can again create flow state. So, take breaks. Take them seriously and seriously take them.

# 

# 00:34:58 **Sun**

# We kind of have a little bit of a tradition at the end of Inspired Teaching conferences, just to encourage folks to take a minute to reflect on our time together. Though, we just wanted to open it up. If anyone wanted to share any takeaways from today's conference or any ideas of how they might use something that they learned or reminded of somewhere in their life or their work with students.

# 

# 00:35:21 **Lonnie**

# I'll share, this is Lonnie. Thank you very much, Tanya. Very interesting. Earlier you said when you get angry, you start shouting at whoever's that made a mistake. The precentral cortex shuts down, there's no logic. There's a Vietnamese saying and I'll translate it, because you won't understand what the Vietnamese is, but when you eat too much, the food doesn't taste good. And when you're too angry, too upset, then you're not very smart. So, it kind of confirmed what you just said.

# 

# 00:35:56 **Tanya**

# Yes, I agree, Lonnie. And also, I feel like too, in many, many, many cultures, and I would say all of our collective ancestors, they knew something about our biology that now, science is helping us confirm. I just also want to say too, just what a joy it is to spend time with all of you. I really so deeply respect and admire all the work that you do and how you come alongside your students, that's really important.

# 

# 00:36:22 **Sun**

# Thank you so much for joining us today, Tanya, it's great to be able to share space with you, and some of my very favorite colleagues, so good to be here together.

# 

# 00:36:32 **Sun**

# I just want to give a really quick shoutout and thanks for the seed funding for our conference: a shoutout, especially to POD folks, Elda Blount and Brenda Dial for their support of the conference. A shout out to Library and Learning Resources, Dean Romelia Salinas, and Crystal Mejia in the Division Office for your help and support as well.

# 

# 00:36:51 **Sun**

# And if everyone could just like unmute and say a thank you to Tanya Tarr for joining us today, we're so excited.

# 

# 00:36:59 **Audience**

# Thank you.

# 

# 00:37:00 **Tanya**

# Thanks for having me.

# 

# 00:37:06 **Christina**

# Thank you for listening to the Magic Mountie Podcast, and don't forget to share your favorite episodes.

# 