

[Episode 9- A Conversation between Alison Day & Amanda Shackelford Transcript]

(Shackelford) How are you?

(Day) Hello Amanda.

(Shackelford) Here we are again.

(Day) Here we are--

(Shackelford) Sitting in--

(Day) It's a Thursday night...here in the music building, in a recording studio.

(Shackelford) It's quite interesting being on this end of campus.

(Day) Yeah, not something we're exactly used to. Actually, I come over here every Tuesday night for band, so...it's a little familiar.

(Shackelford) I used to come over here to bring the kid that I babysat to her choir classes because she was in elementary school, so I've been--it was really cute.

(Day) They had choir over here?

(Shackelford) Yeah, she was in The Cabrillo Youth Choir thing.

(Day) Oh my god! That's so cute!

(Shackelford) Super cute, I know.

(Day) Oh, little nuggets.

(Shackelford) Okay, so (speaking softly) what were some of those questions...?

[Day giggles]

(Shackelford) [whispering] Uh, so...what, yeah, I mean....

(Day) When did you first take an interest to math?

(Shackelford) I'd say I first started getting interested in math, maybe like, Algebra 2, it started getting actually somewhat exciting to me. And it was, like, "Wow, I think I'm kind of good at this." [laughs] And then, trig, though, was what really kind of got me interested.

(Day) Yeah.

(Shackelford) When you start getting into trig, you're, finally pushing yourself a little bit more.

(Day) Yeah.

(Shackelford) And, having to understand some material that's a little bit more in depth and less like, "Why am I learning this?" and more like, "Hey, things are being applied," and then you know--

(Day) This is cool.

(Shackelford) --that's like a good feeling, I think, and for people who are interested in science, even from a really young age to finally get to a point where they feel like things are finally being applied--

(Day) Yeah.

(Shackelford) --and you understand why you've been learning stuff. Because, otherwise, when you're in middle school, I feel like you spend so much time being like, "Why do I--

(Day) Yeah, that's the constant question, "Why am I learning this?" [both laugh] Right? I feel like kids always ask that, like, "Why do we have to know this?" And then, finally, at some point... you're like, "Oh!"

(Shackelford) And when I have students--because I tutor middle schoolers, also, and freshman in high school--when they do ask me those questions, you never have a really good answer for them that they will like.

(Day) Yeah.

(Shackelford) To you, it sounds like a great answer, maybe--

(Day) Right.

(Shackelford) But to them, it like you just went--

(Day) Super unsatisfying--

(Shackelford) Yeah.

(Day) --and, like, you're like, "Well, this is going to be something that you like, and something you might want to do in the future, or something you might want to do your job around, or--and they're just not even thinking about that because...

(Shackelford) Yeah.

(Day) ...they're like, "I like doing art--"

(Shackelford) "I like playing outside." Yeah, that's cool.

(Day) Which, honestly, I feel like I should do more of, as an adult--

(Shackelford) Yeah.

(Day) --go outside, do art. I miss that.

(Shackelford) [agreeing] I think that having a balance of the creative side and the, kind of, more logic side, like the right and left brain thing is super important for even someone in science.

(Day) Yeah, no definitely. Yeah, balance in everything, really.

(Shackelford) That was a question on the UC app that I've been working on. It was something along the lines of, what does creativity mean to you and how has it helped you...like with your studies or--I forget exactly how it was worded--

(Day) Yeah.

(Shackelford) How I answered that, I was saying how, when I was in middle school, I kind of got this propaganda from teachers and the school that there's, like, right and left brain. There's like this segregation that they create. And I don't think it's intentional, but, it makes you think, "Oh, if I'm good at music or art, that means I am right-brained, and therefore--

(Day) That's why I'm not good at math.

(Shackelford) --I will not be good at or be interested in science. I should just go with my left art side.

(Day) Right.

(Shackelford) And, it was interesting as I kind of started to gain a little bit more interest and momentum in science, I found myself, like a little bit confused, like, "Oh, but I'm creative, so I can't be successful at sciences."

(Day) How am I going to be a scientist if I want to do art?

(Shackelford) Yeah! I was, like, I don't know, it kind of convinced me that I wasn't, I guess, smart enough for it, or, like I didn't use the right side of my brain for it or something.

(Day) Interesting.

(Shackelford) And when I was applying to center for the arts schools-- as you go into your freshman year of our high school in my hometown, you can apply for all these different centers, and what two of the schools that I applied to were center for the arts and center for math and science--

(Day) Cool!

(Shackelford) --and I did not get into the math and science center but I did get into the arts center. At the time that I was applying, I was, like, "I don't know which one I want to do!" I was, like, totally up in the air about it--

(Day) Yeah.

(Shackelford) --confused. And then, when I got the two letters in the mail, I was like-- I kind of knew right then and there that I wanted to do math and sciences more--

(Day) Yeah.

(Shackelford) --because I wasn't so excited about getting into the art one--

(Day) Right, that told you.

(Shackelford) --as I was about getting into the math and science one.

(Day) Yup, yeah.

(Shackelford) So, yeah, I think that's an interesting thing that the creative side has definitely helped me in my science studies.

(Day) Yeah. And I feel like even like a lot of the science world is being more encompassing of that and doing more research on that, things-- correlations and stuff between creativity and science and those kinds of things. And, there's a new acronym, right, STEAM?

(Shackelford) Hmm?

(Day) They say STEAM.

(Shackelford) Really?

(Day) Science, technology, engineering, arts, and math.

(Shackelford) Oh, interesting!

(Day) So yeah, STEAM is a thing now, it's not just STEM, which I think is cool.

(Shackelford) Wow! It's so cool!

(Day) Yeah, so they've got arts going on now. STEAM is a thing.

(Shackelford) That's awesome!

(Day) So it's definitely coming with time.

But, yeah, I remembered the same thing when I was applying for college, before I decided I was going to go to community college, I was applying to a couple different UCs and then also, I applied to University of the Pacific in Stockton. And all the UCs I applied to, I applied under bioengineering, and then the only school I applied to for music was University of the Pacific because I had gone there for a two-week long music camp and it was super fun and they had a really outstanding music program. And I was just so torn between, like, what do I want to do, that I was like, "I'm just going to apply, and wherever I get in, that where I'm going to go and do that thing, whatever it is. Because I didn't feel like I could even really make that decision.

(Shackelford) Uh huh.

(Day) I was, like, how am I going to do that? How am I going to, like, you know, --I thought I had to choose one or the other. And I kind of realized, you don't really have to at all, you know. And more than anything, I'm kind of realizing, for me now, it's--my interests have kind of taken a turn more towards chemistry, chemical engineering, but I'm doing band on the side, and that's like my hobby, that's my release, right, my relief, and something I look forward to in the day. Which is not to say I don't look forward to all my STEM classes. But it's just something that's, like, more relaxing for me. More, like, emotionally stimulating, whereas my other classes tend to be more, like, logical or mentally intense.

(Shackelford) Exhausting.

(Day) Exhausting, yeah, which band can be exhausting, too, but it's a whole different thing.

(Shackelford) But it can also be grounding, like sound healing. That's a thing, you know, sound healing it is-- can really, really do wonders. Like, have you ever to a sound healing thing before?

(Day) No.No, no.

(Shackelford) Oh my goodness!

(Day) What is sound healing?

(Shackelford) So I've only done it once, and it basically-- you lay down and they have all these cushions and stuff and you're just completely on your back and you--it's kind of like meditation and you have your eyes closed and usually there's like about like 3 to 5 or so people who are like the music people, and they walk around the room, very, very quietly, like, they're supposed to be, like, not even there, really--

(Day) Yeah.

(Shackelford) But they're moving the sound around the room and they're all playing different instruments and they all work together.

(Day) That is so cool!

(shackelford) And the way they bounce off the walls, like the vibrations and everything, you just get all of these--

(Day) Yeah.

(Shackelford) Movements of sounds and stuff. And you get completely immersed in it.

(Day) Yeah, yeah, wow!

(Shackelford) You're just, like--

(Day) Lost in the music and the sounds.

(Shackelford) It's so cool! And they all switch instruments and stuff throughout the whole thing. And you just hear one--

(Day) That's so cool.

(Shackelford) --fade out and a new one come in and it's like this flow of--

(Day) It's just like really stimulating in that audible way.

(Shackelford) Yeah.

(Day) Really nice.

(Shackelford) So you're getting like that, I mean, essentially it's the same type of thing. With maybe a little bit of frustration with your music thing.

(Day) [laughs] Yeah, but even that's fun because it's challenging.

(Shackelford) That's probably...Uh huh.

(Day) It's new and challenging and sight-reading and whatever.

(Shackelford) And we love the challenge.

(Day) Right. We do, yes, we love a good challenge. [both laugh] Speaking of challenging, how are classes mid-semester? Here we are, six weeks left in our term. Yes, it's getting fun.

(Shackelford) Yes, so I'm taking linear algebra this semester, with Damian.

(Day) Oh, yes. [giggles]

(Shackelford) And I--I'm a little lost. It's a weird feeling because I'm not--I find myself having ease with math. I've had ease with math for a long time.

(Day) Yeah.

(Shackelford) And, to be immersed in a whole new language of math. And it being such a hard subject to explain from the teacher's perspective even--

(Day) Yeah, yeah.

(Shackelford) --it's been really an adventure learning about it. And so I got these books on Amazon

(Day) Yeahhhh!

(Shackelford) I ordered them last week and I just got them in yesterday and I'm, like, stoked. I'm like--

(Day) What are they? No, I'm not going to pretend I don't know. I saw it; it's amazing!

[both laugh]

(Shackelford) Well, okay, one of them--

(Day) Tell us about the books, please.

(Shackelford) One of them is like this Manga, like Asian, [falters] Japanese-style Manga teaching book.

(Day) But, it actually teaches you the linear algebra, right, through this artistic representation. STEAM! Can you say STEAM?

(Shackelford) Ah! [Day laughs] Dude, it's so cool because it's a storyline and it's this student who's struggling and this kid who wrote a linear algebra book, quote-unquote. And he's tutoring her. And it's cool because, sometimes she asks questions, and I'm like, "Hey! I have that question!"

(Day) Yes!

(Shackelford) You read my mind!

(Day) You've never felt so relatable to a character in a book ever, right?

[both laugh] You're like, "I literally asked myself that last week."

[Shackelford laughs] This is amazing.

(Shackelford) And it's like, even so real to the point that there's one point at the beginning where he's just, like, talking fundamentals, and he said--or she asks a question, something along the lines of, like, "I've never really understood what imaginary numbers are." And he, like,--and I'm like, "Yeah, I don't think, I mean, anyone does."

(Day) I mean, I don't think I have a solid grasp on it, but--

(Shackelford) No, and he's like, "Well, I think some mathematician was like, 'It would be really nice if there was a way to solve this equation. And so he just, like, decided to make the imaginary number.'" And he shows an example of an equation you can use "i" to solve the equation, right? And I'm like, yeah, okay. And then she's like, "Yeah, but what does that really mean?" and he's like, "Well, sometimes, you just have to, like, accept things and let them go." [Day laughs] I'm like, "Yeah!" [both laugh]

(Day) There's truth in that!

(Shackelford) There's so much truth in that. And to even, like, have that, kind of, show up--

(Day) Yeah, that dialogue. That's sometimes just what you have to do.

(Shackelford) Yeah, he's like, "Sometimes people make things up in the math world that works really well in practice and then that's why we use it over and over again, because it shows up and we've developed some accepted way of doing it." And it's like, this is what it's used for, but it doesn't really have any solid meaning why it's there. It just was put there--it was put in place in practice because it was needed.

(Day) It worked, yeah.

(Shackelford) And it worked. And that's a postulate, right?

(Day) Yeah.

(Shackelford) That's something that some mathematician was like, "I'm going to postulate that this will work and I'm going to write this equation down. And I'm going to test it."

(Day) And if we assume this is all true. [laughs]

(Shackelford) Yeah, if we say this is all good and dandy and it works, then by golly--

(Day) I can prove this!

(Shackelford) -it works!

(Day) Yeah, it works, of course, yeah. [both laugh] Exactly.

(Shackelford) Which is, okay, the same thing happened with Schrodinger's equation. Like, I'm learning that in 4D.

(Day) Oh, cool.

(Shackelford) Schrodinger's just did that. He totally just did that. There's no- - it's funny, even Marcus--the book that we're reading out of and other books that I've read about quantum mechanics, and Marcus, all say the same thing he didn't get that equation from anywhere. He just was like, "This seems like it might work. That's just like, write this down and-- [both speaking] -try it out." [both laugh]

(Day) Yes! You know what I like about that? That's-- for me, that's like the brute force method, and sometimes it works, you know? Like, oh, we were taking the student mathematics league test the other day, our math club put on, and, yeah, some of the problems-- I mean, it was a 20-question test but you only have an hour and so you're not expected to finish it all, but I answered four questions, you know

(Shackelford) That's pretty--

(Day) I was, you know, I was good, I was happy with that. I was decently satisfied. But, I know two of them, I just brute-forced my way through it, and I was like, yeah, this works.

(Shackelford) Sometimes that's what you've got to do, right? Especially with something like that it seems like the problems they gave you, sometimes required you to work it out that way.

(Day) Oh, yeah! Just try. Keep trying, yeah. There's beauty in the-- what is it? Stabbing? Just stabbing?

(Shackelford) Trial and error?

(Day) Just trial and error? Yeah. Definitely.

(Shackelford) Dude, I've been trying to learn how to let myself run in circles in science. And mainly this has been the theme with my physics class this semester.

(Day) Okay.

(Shackelford) Because some of the connections that they make, you're like, "for sure." Yeah. [both laugh]

(Day) This is sarcasm, if you can't tell. [both laugh]

(Shackelford) Like, it's obvious to the most casual observers that you would clearly, without a doubt, make this conclusion here. And so I've, like, read the book and I go to lectures, and that's not enough. You try to, like, do the homework problem. And my goal with every homework problem is to not go back and not just look at the notes or the book, and try to drive these things.

(Day) Goodness!

(Shackelford) And I just run in circles! I'm just trying to write down all these relationships. And maybe if I plug that into there and I do this into that. And then make these things equal to each other, I'll get something.

(Day) Yeah!

(Shackelford) And then eventually, I run into a wall where I'm, like, no, this can't be right. And then I'll just erase all of it and start all over again; try it again; and then eventually I'll get somewhere. I'm like, "Hey, that looks familiar. I'm getting somewhere." And then, kind of like, eventually, get somewhere.

(Day) Find some little pieces and put them together. Yup.

(Shackelford) Yeah! And it's really, like, been an adventure because I think so often we don't really have time to allow ourselves to work on something and not have the answer sitting right there in front of us. Like, "Oh, I used this formula here." And or, "I'm going to follow this derivation and I start here and I end here," whatever. And you know what everything-- like, you read everything where that thing is coming from and you don't, like, have the time, really, to, like, try to--

(Day) Sit there and try everything and experiment with your math and be creative with your math in that way. Like, try all these different routes, right? Physics, in this case, but...

(Shackelford) And, I mean, it's totally math, right? [Day laughs] So I go to Marcus and I'm telling him that I'm doing this, that I'm trying this process. Because, what I realize is that, like, in upper division courses and definitely in graduate school, that's largely what it's going to be like.

(Day) Yeah.

(Shackelford) I mean, I need to start thinking for myself is basically the idea there.

(Shackelford) And he's, like, "Yeah, exactly!"

(Day) That's right!

(Shackelford) He's like, "That's what happens to a lot of people when they get to grad school."

(Day) They're surprised because it's not like, "Here's some information. Eat this material and then--"

(both) "--spit it back out." [laughter]

(Shackelford) Yeah, in grad school, you're finding your own information. You're spitting it out yourself.

(Day) You're writing the books. [laughs] That's cool.

(Shackelford) So that's been my goal with this since semester is to start working on that. I mean, I do it as much as I can and, obviously, I can sometimes, when I've been working on a problem for two hours, I'm like, "Okay, come on, it's time to--"

(Day) Figure something out for real now.

(Shackelford) I'm starting to get frustrated and, you know--

(Day) Probably hungry. [both laugh]

(Shackelford) No, probably not hungry. I'm probably eating popcorn at the same time.

(Day) Right, right. Yeah, that's true. We don't get hungry when we study. Studying is just an excuse to snack.

(Shackelford) Oh my god! If anything, I get fat during the semester. It's terrible. [both laugh] I get behind on exercising.

(Day) You're like, "I'm studying. Oh wow, it took a long time to do that problem. I better eat the little bit of food, take a little mental break--."

(Shackelford) Go for a little walk to the kitchen and back. [both laugh]

(Day) Take a walk to the fridge. [both laugh] It's good, it's good.

(Shackelford) Yes.

(Day) Makes me happy.

(Shackelford) I mean, you know--

(Day) There's nothing more STEM than the STEM kitchen. Let's be real.

(Shackelford) Oh my gosh, we are so fortunate.

(Day) I know.

(Shackelford) We are like the only people on campus who have that.

(Day) Access to a full kitchen. We have a toaster; we've got a microwave; we've got a sink; we've got all these Tupperware--

(Shackelford) A full-size fridge that we can bring our food from home and store in there.

(Day) It's crazy. I mean, it's really cool because a lot of people stay every day from, like, from 8am to 8pm, so, like, yeah, if you want to eat your lunch at some point in the day, it's nice to put in the fridge. It's super nice. But it's, like, amazing because it enables people to do that, you know. And also not spend tons of money on cafeteria food.

(Shackelford) Uh huh, even though the cafeteria man is awesome.

(Day) Yes, love him.

(Shackelford) On Wednesdays, I get to do Cabrillo at 8am and I have tutoring in Mesa from 8 to 9:30. And then, I have modern physics from 9:30 to 11. And then I sit in on 4B, which is Electromagnetism, from 11 to 12:30. And then I sit in on O Chem from 12:30 to 2.

(Day) Yup.

(Shackelford) And then, I have an AGS workshop, or not workshop, AGS meeting, from 4 to 5. And then, the general meeting if I want to go to that is from 5 to 6.

(Day) At that point, we're not wanting to go to that.

(Shackelford) Oh, but wait! It gets better! And then, from 6 to 10, I have CS11--

(Day) Oh my god!

(Shackelford) C++ programming for a 4-hour--

(Day) That's a 4 hour class?

(Shackelford) Yes, every Wednesday.

(Day) Ahh!

(Shackelford) So I'm at Cabrillo on Wednesdays from 8 to 10.

(Day) That's my Tuesday. I'm at Cabrillo from 8 to 9:30. Band gets out a 9:30.

(Shackelford) Oh yeah, you have one of those.

(Day) Which is-- get that half hour.

(Shackelford) Oh yeah, I leave a half an hour before 10, don't get me wrong. [both laugh]

(Day) No, you're not there for a full four-hour class. I wouldn't be either.

(Shackelford) It's rare. I sometimes-- I have stayed a couple times.

(Day) You know a strong motivation for me to go to band is there's a snack right in the middle of it.

(Shackelford) Oh!

(Day) It's beautiful. Again, food.

(Shackelford) Snack time!

(Day) [laughs] One hour of snack--

(Shackelford) They need a snack bell.

(Day) Have a snack time, yes. [laughs] It's pretty beautiful. [both laugh]

(Shackelford) That's awesome.

(Day) It is, it is. Food and math drives my world.

(Shackelford) It's like I want to say that I wish there was food in all of my classes, but then I'd really be fat.

(Day) We would actually--yeah, it would be maybe a little bit of a problem at that point, how often I would be eating. Nom, nom, nom. I already bring food to most of my classes. Like when I sit in on Damian's class, for Math 4, I usually bring breakfast. They laugh at me because I bring a plate from STEM with a pancake and syrup on it. And, like, a knife and a fork. And I sit in the very front of the class where I'm supposed to sit and I cut up my pancake and eat it, and it's grand. But yeah, and then....

(Shackelford) Yeah, you're doing that this semester--

(Day) Yeah.

(Shackelford) You're running the workshop. You're a prep TA.

(Day) Yeah, I'm a prep TA, so--

(Shackelford) What does that include?

(Day) So, before the semester started, in the summer we had a two-week intensive. It's kind of like a little boot camp for students who are going into trig and pre-calc, and who feel like either-- they either feel really challenged by math or they have already attempted Math 4 and were challenged by it and--

(Shackelford) Normal.

(Day) Normal, very normal, yeah. I would say most people feel challenged by--

(Shackelford) One of the hardest math classes I feel like--

(Day) It is! It's super fast paced. And it's just so much information, so--

(Shackelford) Because they have that class broken up into two other classes as a option.

(Day) Yeah. You can optionally take Math 2 and Math 3, which would take a full year. Or you can take Math 4, which is just a semester. So Math is the trig and pre calculus combined. So it is definitely an intense class. So they run this little intensive two weeks before-- well, actually, yeah, for two weeks before the semester where all the students come in and get to know each other and basically form this really nice community of study groups. And, you know, between the TAs-- there were 6 TAs this semester, so really nice because you have pretty good ratios between all the TAs and students. And we just worked on them. Like, they would do presentations. Worked with them and they would do posters and they did three presentations; every single person did three presentations to the whole class, the whole prep cohort, which is actually two classes.

(Shackelford) That's so good for them.

(Day) Yes! So they got all this experience presenting and they get all this, you know, reminder of what's math right before-- you go into the semester-- because if you go into Math 4 and you haven't brushed up, or it's been a year since you've touched math, which for a lot of students it has been, you know. It's one of those transition classes.

(Shackelford) Sometimes even much longer than that, too.

(Day) A lot of them-- Like 10 years, you know. There were people, yeah, who came to prep and said, "Yeah, I haven't done math in five years," or seven years or whatever. And it's totally cool because they're super excited to do math and that's why they're there, to be sure that they're ready for it, you know.

(Shackelford) Yeah.

(Day) And so it's really awesome because they form these great study groups and I see them all the time outside of class where they're all studying together. And they meet up and do their things, so they have people to talk to. And it's just a really good program. So yeah, we do that before the semester starts, and then we meet with them, the TAs and the

faculty, for prep, which is Damian and Eric Miles. We meet with them every Friday and give them a quiz based on the stuff that they learned during the week so that they can test themselves and see, "Okay, am I where I need to be," right?

(Shackelford) "Am I interested in this material?"

(Day) Yeah, "Do I really get this?" Right?

(Shackelford) That's cool.

(Day) So it's really great because we can really challenge them with these really hard quizzes, and they like the hard quizzes because then they do feel challenged, and it's not for a grade, so they're not worried about it.

(Shackelford) Yeah, they're not scared. [Day agreeing] It kind of takes the load off.

(Day) It totally does, yeah.

(Shackelford) It's really awesome, too, that they kind of get to see the teachers that they work with in a really lax kind of--

(Day) Yeah.

(Shackelford) In Math 4, you're not really immersed so much. I mean, at that point, a lot of-- correct me if I'm wrong, but I feel like a lot of the students in it haven't gotten really immersed in Cabrillo or are fresh out of high school, maybe.

(Day) No. Yeah, definitely; that's the first class I took out of high school, Math 4 and a couple of other classes.

(Shackelford) I think that maybe they're not so used to seeing their teachers as much of friends as we can see them as here at Cabrillo, which I feel like we're all really close.

(Day) Right, yeah.

(Shackelford) I feel like we're all really close. I go get lunch and stuff with my chemistry and physics professors.

(Day) Yeah.

(Shackelford) I can't even take myself seriously calling them professors at this point. [both laugh]

(Day) Which they are; no disrespect there.

(Shackelford) What I mean by that is it's too formal.

(Day) Yeah, exactly.

(Shackelford) They're extremely smart and a mazing in every single way, but they go by their first names. I mean, like, there our friends.

(Day) Yup. Jason. Damian. Chris. Marcus. That's like, all, yeah.

(Shackelford) Yeah, that's all you need: Mark. [both laughing]

(Day) Yeah, Mark. [both laugh] That's a good one. [both laugh] Dave. Oh, I love calling Dave Dave. I'm like, "Yes, Dave." [both laugh]

(Shackelford) Yes, Dave. But, yeah, how would you say it's helped you in running the prep?

(Day) Yeah. It's been really cool. It's kind of given me a little bit of insight of maybe what teaching might be like. And it's definitely strengthened all my math skills, like, extremely well because I did-- I'm doing it this semester. So I did it this semester and I did part time TA last semester. And then I took the class a semester before that. So, basically, I've been seeing Math 4 for a year and a half straight. And--

(Shackelford) Nice.

(Day) -- which is kind of crazy but really cool because every time I go to a lecture, I learn something or a new way to look at something. Or I strengthen another skill, right, and build that base layer again. So, like, you're covering all those holes that again. It's really cool. If there's any holes, you know, you're going back over it.

(Shackelford) You're patching it all up. And Math 4 is such a crucial class for all of your math because it's literally creating the image of everything that calculus and linear algebra represents.

(Day) [laughs] Yup.

(Shackelford) So I think that's just going to be really awesome for you. And I can definitely see you continuing to work with students in math, science--

(Day) Thank you. I do love it. I love it and I love doing-- well, Amanda and I both do SI for chemistry.

(Shackelford) Uh huh.

(Day) Want to tell them a little bit about SI? [laughs]

(Shackelford) SI is called Supplemental Instruction and it is put on through the access program through UCSC. And it's a program that has students who took the class prior are paid to go to the class, sit in on the class, and then prep for a outside-of-class supplemental instruction, right?

(Day) Yeah, a study session is what we casually call it sometimes.

(Shackelford) Yeah, exactly. It's really nice. It's a bonding experience for the students. It's really kind of similar to the prep thing, but it's just through a different program. But, yeah, it's been really crazy to work with that. I mean, it's so different than anything else I've ever done.

(Day) For o-chem, right? Which is kind of a different class than like, pretty much, I would guess you've ever taken. I mean, it's a different-- it's much different than any class I've ever taken, being in it right now.

(Shackelford) Yeah, back to, like, that creative conversation, it's the one class that you take at Cabrillo, in my experience, that creative side of you can really, really, really help.

(Day) Really thrive, yeah. And really, really help you, yeah, for sure.

(Shackelford) I mean--

(Day) If you have pattern recognition, which, I mean, is definitely some creativity and some mathematical, like, you know, whatever, mismatch, or rather, blend. It's so helpful because you just see what's happening. Which I'm not saying I do, but I can--

(Shackelford) But you can see it unfolding, kind of. And you will, though. I know you will. And right now, it doesn't--it's hard to tell really how you're going to feel about it because you're not deep immersed into mechanisms yet, which is really all of the pattern stuff that you end up--

(Day) Coming up soon! [both laugh]

(Shackelford) Coming to a lecture near you next week! [both laugh]

(Shackelford) But, even this stuff, like a second semester is where the passion comes out. Like, oh man, you're just hitting off mechanisms.

(Day) I'm so excited, honestly.

(Shackelford) You're just scratching the surface. And then next semester, you get to deal with all the craziness that is beautiful and-- oh, I love it!

(Day) It makes so excited; I'm so excited! And you're going to do SI next semester, too.

(both) Yay!

(Day) Amanda's the best SI leader. Oh, the best, the best, the best.

(Shackelford) Oh, thank you! [laughs]

(Day) If Amanda wasn't an SI leader, I'm not sure how often I would go to SI, which is a sad story, but she makes you want to be there.

(Shackelford) Yeah, well, I feel like it has definitely helped me in a lot of the same ways that it's helped--

(Day) Oh my gosh, me, too. Doing Chem 1A, I'm like, "I wish I'd known this all when I took the class." Like, oh my gosh, like, for some reason, probably because I've gotten a lot of it back from o-chem and just-- I don't know, time? I'm not sure. It's like everything seems so easy from just a year ago. And I'm like, wow, weird. But I think it's just that, like, you know, I've just wrapped my brain around some of these concepts that I never understood to their deepest meaning. But, it's like, what's the dipole moment? And now I'm like, "Okay, it's in the name. I see it. Dipole. Two poles."

(Shackelford) And that goes along with o-chem, too.

(Day) Yeah, exactly. So it's all reinforcing it. And it's just so cool because it's so great to see the students who come in and are really passionate and really want to learn this stuff. And, like yesterday, I'm supposed to have a two-hour SI session and I stayed three hours because I was just like, "Yeah, let's keep going!"

(Shackelford) If you want to talk about it, we can keep talking about it!

(Day) I can keep talking about chemistry. And they're like, "Are you going?" And I was like, "Uh, no." And they're like, "Okay, cool." And then we kept going.

(Shackelford) Yeah, it's like, I'm here for you.

(Day) Exactly!

(Shackelford) And that's what I told people, too, at the beginning of the semester when I introduced myself. I'm like, "You know what? I'm sitting in STEM; I'm doing my own work. You have a question, come bug me."

(Day) Yeah, exactly.

(Shackelford) And when I say, "Bug me," I mean, please come talk--

(Day) Harass me with questions.

(Shackelford) As in, I'm not, like, scared of you talking to me about whatever you have questions about.

(Day) Yeah, exactly. Again, the STEM kitchen: somebody approached me while I was washing dishes in the STEM kitchen, was like, "Hey, do you have a second, can you help me with this question?" I was like, "Yes, please! Yes, I want to see it! Tell me! Bring it!"

(Shackelford) [laughs] Bring it on!

(Day) It was great! [both laugh] It's great! It's awesome and it's great that you as a student, or me as a student, feel comfortable enough to ask you. And they as students feel comfortable enough to ask me, you know. So it's just like this really nice interaction because we're all students. And so, even like we're sharing the knowledge from, kind of like, from the more experienced on down through next levels or whatever. And it's just like a great, relatable thing.

(Shackelford) Yeah. I think it's a confidence builder for us, especially as females in STEM to be doing this.

(Day) Yeah.

(Shackelford) I think that a lot of the time, something that I've had trouble with is I've had people in my life from old friends in STEM who have told me that I come off as belittling or like I don't...[falters]...I don't know, that I think I'm smarter than people.

(Day) Like condescending?

(Shackelford) Condescending, yeah. So when I went into teaching SI, I was definitely a little bit scared of that.

(Day) Right.

(Shackelford) And I think that it's funny because I talk about something, and I think that it has to do with being a female. I'm passionate about something, and that passion is read as knowing it all.

(Day) Yeah, interesting.

(Shackelford) If I'm trying to lead you and tell you something because I have experience with it and I know what works for me and I'm just trying to tell you what works for me and you can use it or not. But if-- but it can be taken that way I think more so if you're a woman trying to tell something like that, than if a man were to say that.

(Day) Yeah, I agree, it's this idea of, like, oh, a woman comes off as a bitch if she's loud or strong personality, where a man would be praised for being a strong-- having a strong character or a strong opinion.

(Shackelford) Yes, exactly. It's like if a guy tells-- a man tells you that this is the way he would do it, then he's just offering a suggestion.

(Day) Right.

(Shackelford) He's just suggesting that you could do it this way. But if I say that, now I'm telling you that my way is the way to do it.

(Day) Sure. Sure, yeah, yeah.

(Shackelford) Right? And so I think that this whole experience has been the best for me because of that and realizing that I just need to do what I know how to do. And people are going to have their opinions. I will learn how to be my best and my most graceful. And that will come with time. For now, I just need to be confident with what I do know and the position that I hold.

(Day) Yeah, definitely.

(Shackelford) That's all I can do. And if afraid to lead, then that's just going to--

(Day) No one will follow.

(Shackelford) No one's going to follow. Yeah, exactly.

(Day) No. Yeah, it's the truth. Yeah, and it's the power in being in being a strong leader, right? Which you are one. You are a very good leader, Amanda.

(Shackelford) Thanks. I think you are, too. [both laugh]

(Shackelford) It's funny that we're both talking to each other because I feel like we are such mirrors of each other. Like, I see so much of myself in you.

(Day) I think so, too.

(Shackelford) And I think you would say the same. I think we strive for a lot of the same things in life. And I think we share a lot of the same views. But I definitely admire your ability to...[falters]...speak out, but, like, gracefully.

(Day) Oh goodness. I don't know if I'm a graceful speaker.

(Shackelford) I think you are definitely are a graceful speaker. You bring awareness to people without making them feel like they before didn't have any. Or are dumb for the opinions that they had before. Like, you just have a way of slipping little subliminal messages into people.

(Day) So I'm sneaky. [laughs]

(Shackelford) I mean, yeah.

(Day) No, I get you. Yeah.

(Shackelford) It's kind of like you're just-- it's just suggestive.

(Day) And that's all I want it to be.

(Shackelford) They can hear it or they can't. Like, there's been comments that you've said to me that's just you being you and you make me think

about what you're saying. And it's not like you're saying that I'm a bad person for feeling the way that I feel, you're just like, "But maybe this."

(Day) Maybe. [both laugh] It's an offering. Yeah, yeah. No, definitely. Thank you. I appreciate that.

(Shackelford) That's really awesome.

(Day) Well, I admire your confidence to just speak out and say what you want to say. Because sometimes I feel like, do I want to say this or do I want that. Sometimes I say things and I'm like, I shouldn't have said that. Or, like, uh.... But I think that's more of a self critical lens, honestly.

(Shackelford) I think we all can work to go one way or the other, right?

(Day) Yeah

(Shackelford) We're all working to find that happy medium in our lives.

(Day) Uh huh [agrees]

(Shackelford) Gosh, isn't, like, having a balance the nicest thing when you do find it, no matter what it is.

(Day) Yeah, what it's for or what aspect of your life it's in. Yeah.

(Shackelford) When you feel extreme on anything, it's like you feel it so much.

(Day) Yeah, much too much. [laughs]

(Shackelford) Uh huh [agrees]

(Day) Yeah. No, definitely.

(Shackelford) It's funny, I used to be so unaware of some of those things, and I'm sure I still am because you know what actually really brings awareness to those things is when you leave your comfort zone and you go to a whole new experience. And then you're like, whoa, I was extreme in that.

(Day) Yeah, yeah.

(Shackelford) And then you're like--

(Day) You're looking back, right? But you're only looking back on yourself from last month or six months ago. Or last semester, whatever, right?

(Shackelford) Well, you could be looking at a whole new-- I mean, I'm specifically thinking about moving to a new place, you know, where you're surrounded by people who think differently than you. And you might think in the current place that you're in, you're a really balanced thinker in all different areas.

(Day) Yeah.

(Shackelford) But that's within the community that you're in, right. But you go to a new community and you might be super extreme. Like we're living in Santa Cruz. Let's say we now go to Georgia or something.

(Day) Yeah, I mean like, what-- you have experience in this, coming from Virginia, right?

(Shackelford) Yeah.

(Day) Was it a little bit of a culture shock moving here? I kind of imagine.

(Shackelford) Yes it was. [both laugh]

(Day) In fact. [both laugh]

(Shackelford) It was. And I'd say that when I lived in Virginia, I saw myself as a liberal, you know.

(Day) Yeah.

(Shackelford) I was on the more open-minded end of the spectrum over there. And then I come out here and I'm like, "Dang, I'm Republican!" [both laugh]

(Day) Okay, wow!

(Shackelford) All of the sudden, I am so--

(Day) Surrounded by free thinkers and--

(Shackelford) Let's all just be nude, it's fine. [both laugh]

(Day) Yes.

(Shackelford) I'm sorry, I'm being an extremist. I'm being extreme right now.

(Day) Stereotypes, but it's all in jokingness.

(Shackelford) Yes, it was a joke. But I mean, I'm just saying that--

(Day) It is a big difference.

(Shackelford) I'm just saying that there are things that I experienced out here that at first were really shocking because you would never see that in Virginia.

(Day) Interesting.

(Shackelford) It's very traditional over there and there are a lot of things that I would hear that didn't have any impact on me because I was so used to it. It was just like, this is the way things are. And I think it's dangerous that people hear or-- people over there don't understand people over here. I'm separating these two places because this is where my experience is-- this could be a comparison of any place in the world.

(Day) Any cultures or bubbles or communities.

(Shackelford) Yeah, the worst thing is that they can't experience each other's perspective. That's the thing that separates us ultimately. And in having that thinking, "I don't understand how a person can think like that!" And I hear that all the time.

(Day) Yeah, yeah.

(Shackelford) And I'm like, "Maybe you should try to understand the person and why they think like that." And maybe even walk in their shoes a little bit. Like, maybe move from your hometown and get out of your comfort zone. Go someplace that's completely foreign to you so that you feel like how I felt when I moved out here. "What the heck is going on here?"

(Day) Is everything I've ever known a lie? [laughs]

(Shackelford) And to the people that you're moving to live with, yes--

(Day) Yeah, it is. It is, right. And to you, you're like, "What is truth? What is--"

(Shackelford) And then you start to kind of realize nothing is truth.

(Day) Yeah, it's all your perspective.

(Shackelford) And there's nothing wrong with those people who feel the way they feel or the traditions they were brought up with. Or-- you know, it's just wrong to us because they're not our perspective.

(Day) They're not our traditions.

(Shackelford) We've cultivated, right? And it's not like-- it's hard to make the argument, too, because there's a lot of arguments out here that-- it's like, how could that be a bad thing to think like we think. How could it possibly be seen as a bad thing for there to be more equality. Or like more-- I don't know. They're all like positive buzz words.

(Day) Right.

(Shackelford) And--

(Day) More rights, more (inaudible)

(Shackelford) Like, liberal thinking is all about the more of the positive words. And you go over there and it's like, how could it be a good thing to be more like aggressive or divided? Or not divided, but like-- yeah, divided.

(Day) Interesting.

(Shackelford) And it's like, to people who live there, that is good because it's like what-- the way things are. And it-- I don't know how to say it. It's like...--

(Day) It's hard to talk about. It's hard to verbalize

(Shackelford). It's hard to put it into words, but it's like in some ways like...the ways that it's good is not going to apply to over here.

(Day) Sure.

(Shackelford) Right?

(Day) Or it's not as important to that...whatever, that sector, that area or whatever it is.

(Shackelford) Right. But it could be, like, it could be a good thing for efficiency. Or like it could be a good thing for economically. Or like...this is exactly what we're talking about, you know, with Republican versus Democrat, right? Like, Republicans care about economics and Democrats care about equality, right?

(Day) Right.

(Shackelford) And so, when you get into the language of it all, you're, as a liberal or a Democrat, your argument is always going to sound better.

(Day) Sure.

(Shackelford) But which one makes more sense?

(Day) Could be a harder question to answer.

(Shackelford) It's a harder question to answer. Exactly! That's what I'm getting at, is how-- it's harder to make the argument for the thing that sounds like how could that be a positive thing?

(Day) Sure, yeah.

(Shackelford) Right, because otherwise you sound like in-human when you're trying to make that argument.

(Day) Right.

(Shackelford) Like, you know?

(Day) I see what you're saying, yeah.

(Shackelford) But those people...[falters]...there's nothing wrong with them for feeling that way, it's just different from over here where all we want to hear-- a lot of people, only want to hear the more progressive, the more...[falters]...acceptable--

(Day) Yeah, I mean, they want you to be assimilated a little bit. In a way.

(Shackelford) It's not even that I lean one way or the other. I really don't. I don't have political views necessarily, at all.

(Day) Yeah.

(Shackelford) But what I do have a view on is that it's really good to be able to understand where each side is coming from. In the same way that we don't in Santa Cruz-- I keep saying we and them and stuff, but--

(Day) We're here in the Santa Cruz area.

(Shackelford) I mean, the-- yeah, that's just...I don't know, I don't know how to say anymore.

[both laugh]

(Day) It's politics. That's okay. We're better at talking about math, I swear.
[both laugh] Oh my.

(Shackelford) Yeah. I don't know. I don't know what got me off on that tangent.

(Day) How we started that.

(Shackelford) Yeah. No, there was something, there was a trigger there.

(Day) Oh, we were talking about Virginia and coming from Virginia, but before that, even.

(Shackelford) Yeah. No, there was something there that brought it up. But I forget. But Damian is going to hear it and he's going to laugh his ass off.

(Day) He's going to enjoy it. We'll edit that out, he says. [Shackelford laughs] It's cool. [both laugh]

(Shackelford) We can talk about whatever the fuck we want, right?

(Day) Yeah.

(Shackelford) [laughs]

(Day) Yeah, well....

(Shackelford) What time is it?

(Day) I think it's probably a good time to call this one. What do you think, Amanda?

(Shackelford) [laughs] I can't think of anything else. I think I can talk about my bed.

(Day) Yeah, I think it's time for bed. [Shackelford laughs] It's Thursday night. We're tired. Long week.

(Shackelford) Which is probably why I just rambled about that for so long, because I can't think about anything anymore.

(Day) It's all good. Well, we're going to head out now.

(Shackelford) It was a good talk.

(Day) Good night world.

(Shackelford) Have a fantastic Thursday.

(Day) If it's Thursday where you're listening. [laughs]

(Shackelford) Well, our fantastic Thursday will hopefully be as fantastic as whatever day you're--

(Day) Indeed, your weekday--

(Shackelford) --you're experiencing.

(Day) Yes, currently. Hmm, yes.

(Shackelford) [laughs] That was so terrible.

(Day) Okay, bye!

[Shackelford laughs]