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Transcript for Back to School Series, Season 2 Episode 6: On the Shoulders of Pls

Released November 4, 2019

STEMculture Podcast 0:07

[Intro music]

Moncie 0:21

Welcome to STEMculture Podcast.

Dani 0:23

HIIII!!!! [laughter]

Brooke 0:26

That was so excited! [laughter]

Moncie 0:29

That's Dani. And I'm Moncie. This is the first episode I get to lead since joining the podcast. It's very exciting. Who else do we have here?

Will 0:41

I'm Will [sounds very glum, like Eeyore, laughter]

Dani 0:44

basically Eeyore

Brooke 0:45

that was so Eeyore.

Dani 0:48

I'm Dani, basically Tigger

Brooke 0:50

and this is Brooke, am I Piglet?

Zach 0:56

I'm Zach, who doesn't... I'm I'm the rabbit, let's be honest [laughter]

Moncie 1:07

So I am super excited. I just wanted to share with the audience that I just completed my second open strongman competition ["woooowoo" in celebration]. I got some PRs, pulled some heavy things, loaded some heavy things. And, you know my kind of the beginning of my strength journey, but I'm excited to move on to the next contest prep in January. And I wanted to give everybody else here an opportunity to share anything exciting that has happened to them in the last week: any wins, any goals met?

Dani 1:37

I didn't quit my PhD.

STEMculture Podcast 1:39

Yeah! [celebration]

Zach 1:47

I'm a real loser. I don't know! [laughter]

Brooke 1:53

I'll share kind of a win that I think maybe some people don't think about, but I was able to I really think deeply on the projects that I want to accomplish in my PhD. And I know that sounds kind of, I guess, like not that big of a big of a deal. But I feel like it's really important to think about all the things that you want to accomplish and then how you're going to do that. Because some of the things are not within the realm of my dissertation. They're beyond that, but I think they're just as important. So I was able to kind of map those things out, which this is the first time I've really taken the time to sit down and and map out to the very end. So like I see the light at the end of the tunnel. So I think that was really cool.

STEMculture Podcast 2:40

Nice. That's awesome. Smart girl. Smart lady!

Moncie 2:45

Will? Get any wins, any goals met?

Will 2:51

I put on the same socks this morning.

Dani 2:55

As what?

Will 2:55

on both feet [laughter, celebration]

Brooke 2:59

Yes. Very exciting.

Will 3:02

I don't think I was late to anything today.

STEMculture Podcast 3:04

Yay. That's really good. That's wonderful! So proud!

Dani 3:09

Okay, I thought of something that's like positive but... will are you done yet? I was interrupting you!

Will 3:13

I also finalized the figures for my first publication. [celebration, shouting, woohoo!!]

Brooke 3:16

Yeah, super exciting.

Dani 3:19

That's amazing. You're going to show them to us later, right?

Will 3:21

Yeah.

Zach 3:23

time permitting. [laughter - we're laughing because we're trying to keep the episodes less than an hour long lol]

Dani 3:27

Not on air

Will 3:28

quiet over there, rabbit [laughter]

Dani 3:33

Um, my, my more positive thing is that I've been struggling lately with my mental health. And so this week, or rather, this weekend, I decided that I was going to prioritize me and my goals and like I give my time and efforts towards a lot of other things. And I've canceled all of it except the podcast, so that I can focus on my PhD and my mental health and the podcast. And that's it. And that's a big load off my shoulders and it makes me happy.

Moncie 4:03

That's wonderful.

Dani 4:05

What's that word again? Ha-ppy. [laughter]

Moncie 4:10

Please define

Zach 4:12

happiness.

Dani 4:13

It's a strange word.

Moncie 4:18

So this episode goes out to all of you brave, brave first year graduate students and you bitter 5th years... talking to Dani

Dani 4:27

Yup!

Zach 4:28

Don't forget those bitter sixth years, woop! [laughter, cheering] I'm dead inside!! [more laughter]

Dani 4:39

we love you, Rabbit.

Moncie 4:40

It's a normal part of the process. [laughter]

So today we're going to be talking about one of the most important relationships that you will have during your time in graduate school, the relationship with your PI. Today we're going to be discussing the importance of that PI/graduate student relationship, tips for how to develop that relationship, meeting with your PI about expectations for your first year, the importance of asking direct questions and having some self reflection. And then we're actually going to talk about what we would do if we could go back in time. So first, I want to read this, quote, the delicate balance of mentoring someone is not creating them in your own image, but giving them the opportunity to create themselves. I think this quote nicely leads us into the main topic of developing a relationship with your PI. And the reason that I do is because there's two sides to it. It's not only how your PI should be how a mentor should be proceeding in a relationship. But it's also how the mentee or the grad student should be proceeding in their part of the relationship. So you're taking the tools that your PI gives you and creating something new and interesting and creative. So your PI is really your academic parent. All of their knowledge and scientific methods will at some point flow through you, starting a new part of a cycle that enriches the next generations and prepares them for the next scientific discovery. So we build off of their achievements which ties into the title of this episode. Keeping in mind the importance of this person to our academic development, I think it is important to acknowledge it's a two way street. If you, we, I don't take some responsibility we're leaving mentoring up to a PI who has probably no training, doesn't know what you need, is not a mind reader. However how they interact with you isn't connected to whether or not they care about you. I think that's an important caveat to not misinterpret PIs treatment of you for dislike, it says more about the fact that they just may not know what to do, especially with the grad student that doesn't fit the mold of their expectations. So if you put the onus on your PI to lead you through grad school, I think you're going to be in a lot of trouble. Now this may not apply to everybody, if you're PI is especially difficult to interact with then this isn't really the episode for you, you're in a tough situation. And if you are in that situation, we'd love to hear from you. Reach out to us on Instagram or Twitter and let us know if you're in that situation of having a difficult PI so we can talk about maybe a future episode about how to navigate a complicated PI/grad student relationship. So I think this relationship building consists of figuring out a roadmap for your relationship and how you're going to work together for the next five to eight years. It took me about seven and a half years to graduate. So I think that's a nice range five to eight years, that's fine. [laughter] So in other words, you're negotiating this working relationship, and it should hopefully satisfy both parties. So when I talk about the things that that you should be thinking about, that you might need from your PI that you should communicate to them it's things like, well, maybe you're the type of person that needs to be daily briefed, you need to go see them in their office every day. Or maybe you're a student that just needs to chat once a month. Or maybe you need lots of positive feedback, or maybe you just need a little bit to get you going. Maybe you need a frequent manuscript review and you struggle with writing. Or maybe you're just one of those people who can just, you know, pound out of paper, and you only need a couple of drafts to be evaluated. So how do you take responsibility for your experience? And how do you navigate developing a relationship with your PI? That's the focus of today's episode.

Will 8:23

I wanted to take a second and talk about mentorship more generally, and then sort of come back to the PI relationship. But I think that, that it's important to sort of lay the foundation in a more general sense because mentorship is a really important thing. It's a really important idea for human beings. So I like to think of it as the most genuine form of education, which means literally leading out and you can think

of it as leading out of the darkness of ignorance. And this is a fundamental human activity. So, you know, people's power is not in their claws or or, or how fast they can run. But it's in their ability to pass information from generation to generation. And that's what mentorship is at the core of. It's the personal and collaborative transmission of knowledge from a person who is an expert and has experienced someone who wants to be an expert and have experience. And, as such, I think, that it is in a really human way the foundation of society. And because it's so, I think, built into us, I think that we're actually probably wired to feel very satisfied by engaging in genuine mentorship. Either as the mentor or as a mentee, I think that you're just set up to know when you have a real, you know, trusted advisor who will help to educate you. And so, in general, I think that it's important for everyone to go out and do both things. Be a mentor to somebody and also find yourself a mentor. And, you know, this involves building trust. This involves, you know, open communication and a lot of other things that we're going to talk about, but just like anything else, the scope of the mentorship is important. So are you, are you teaching or learning how to peel potatoes or are you teaching or learning how to become a scientist? And I think it's clear that the latter is a much broader, impactful and difficult thing to teach or learn because it's so interleaved with every part of who you are as a person, and that's the job of the PI and also the grad student. So, here we are back at PIs. What do you guys think?

Dani 11:31

I think french fries are really important to me emotionally and physically. So. [laughter]

Will 11:37

Yeah, peeling potatoes is a serious job, man.

Dani 11:39

Yeah

Will 11:39

You gotta feed people

Dani 11:41

I'm not a man. [laughter]

Moncie 11:48

I love that. I love that you're so philosophical.

Will 11:52

Sorry, you're welcome.

Brooke 11:54

Can I also add it's it's m- it's very Agent Smith, listening to this conversation. I felt very much like I was sitting in the presence of Agent Smith

Dani 12:06

Who's that?

Brooke 12:07

Matrix, from the matrix [Dani: oooh]

Will 12:10

Hugo Weaving! I prefer I prefer Lord Elrond, thank you!

Brooke 12:14

Yes. [laughter]

Well like he really made that part. Yeah amazing. So anyways, moving on [laughter]

Moncie 12:25

I like what you had to say about there being like this like hardwired thing about the feeling good after an interaction with the PI, or a mentor. I think that's that really resonated with me. I think that all the good interactions I've ever had with a mentor always left me with that that really good feeling; a sense of like endorphins flooding you.

Brooke 12:44

Yeah, you walk away really truly excited about what you're doing and not doubting yourself and feeling like okay, I've made the right decision and whatever it is that you were having the discussion about.

Will 12:56

Yes, yeah. So And what about the other side of that, I know for fact that both you guys have been mentors to people in different capacities, too. So do you get a similar feeling when you know that you've made that connection with somebody? And you've, you've helped them get across a threshold or something like that?

Brooke 13:16

Yeah, I think -, I think it's pretty exciting when you're able to have that connection and help somebody in a way that maybe you wished you had been, like somebody had been there for you. I think it's a great, great feeling, you know, to feel like you made a difference in somebody's life in some aspect.

Will 13:41

Absolutely.

Dani 13:42

I also really liked when you mentioned that, you know, mentorship doesn't necessarily have to come only from your PI or your supervisor. There's other people where you can actually go out and get mentorship from someone who is not like your set person, and you could make them your set person... with their consent.[laughter]

Moncie 14:03

make them with their consent, I like that.

Will 14:05

I made Zach mentor me in DnD

Moncie 14:09

it's a work in progress

Will 14:10

he did not consent. [scandalized laughter]

Dani 14:16

Next, we want to move on to some tips. So for everyone on the podcast today, which is literally everybody, what is the most important tip you would recommend to develop a relationship with your PI?

Will 14:28

You go first.

Dani 14:32

Oh... oh... by the way bitch! [this is from Kelly, "Shoes"]

Will 14:36

Your tip is first. [laughter]

Dani 14:41

Okay, so my tip is to stop into your PIs office and just chat with them. It can be about science at first that might be more comfortable, but talk to them about careers, what you want to do in the future. Talk to them about life. That was a big thing for me and my PI is he would often ask me how my weekend went. And that encouraged me to really think about, oh, what did I do with my weekend and he actually wanted to know how it went. So it encouraged me to think about that and have a work life balance. But sometimes, because we built that comfortability with each other, I would then be like, Oh, actually, I had a thought about my PhD about this project about this experiment. And then I was able to, you know, through that conversation, get a bit further along in my PhD as well.

Brooke 15:31

Yeah, I um, so I guess I'll build on that just because Dani and I have the same PI. And I do really like that about our PI is that, you know, he's always said from day one that the most important thing, no matter what, is that he makes time for us as far as like, if something's going on in his office, and I have something that I need to chat with him about. He'll never turn me away. And I think that's really, really great because there's times where you just have this thought that you need to discuss right away. But I think the most important tip that has really helped me is that I know he likes coffee in the morning. And so I think a great time for us to kind of connect about, like, whatever it is that we need to chat about. I make sure I get there in the morning, and I come with my coffee cup. And I'm like, Hey, who needs coffee? And so I've kind of, you know, we figured out that that's a great time for us to chat about all things and brainstorm things and we walk to the little coffee stand, and then we come back and we chat about all the things that we need to a couple times a week. And I think it's a really important time for us to check in because we might not have that time during a lab meeting where we have a full lab, have a lot of things that we need to accomplish in an hour, but that's something I know I can keep whatever communication I need with him during the week is with those coffee walks. So that's, you know, find something that you can connect with your PI about and just keep that connection going.

Will 17:14

Find your own coffee walk.

Brooke 17:15

That's right. Find your own coffee walk.

Will 17:18

Yeah, my my tip is, is, I don't know if it's the number one most important thing but but it certainly fits in with what Brooke and Dani were talking about, which is, you know, building building a human relationship with your PI. That's not just a scientific relationship. And one thing that you might try to do is sort of like fun stuff outside of science. If if they have the time and interest and you do so maybe find an appropriate common interest like golfing or fishing or tipping back brewski or [laughter]

I think it is a common interest for many people. [laughter] But maybe there's a trivia night at the, you know, at the brew pub that, that you both think would be fun or something like that, but just just make it you know, make it a real, real human relationship and not just an exclusively scientific relationship.

Moncie 17:59

I love that that's a common interest! [laughter]

Dani 18:25

Team building, like that?

STEMculture Podcast 18:27

Yeah. [all agreeing]

Zach 18:28

[whispers] Escape rooms! [laughter] If you're locked in a room together, they have to answer your question. [laughter]

Moncie 18:38

They have to review your manuscript draft right there. [laughter]

Will 18:41

Our PIs literally have nightmares about that. [laughter]

Zach 18:44

So do I.

[Awkward silence as we all stare at Zach to go next] Oh, me. Okay. So, my big suggestion is to be kind of the non Newtonian mentee, which is you're you're, you're very fluid when you need to be. But when pressure is applied, you become rigid and firm about what you need to do. So my big thing is scheduling issues with my PI. Time management is not anybody's forte in my lab. And so with that, if somebody says I'm not available at that time or they miss a meeting, then my immediate response is, okay, when are we meeting? Let's get that in your calendar. Let's block that now. And so you have to be rigid in that terminology, or that that state of mind in "I will meet with you. We're going to figure this out." And the flexibility comes from maneuvering your schedule, but I also think a really good thing is like my PI loves data. If I promise data of some form, he'll probably meet with me [laughter] So as long as you're you're being productive, you could probably get their attention.

Brooke 19:44

You found his coffee walk.

Zach 19:47

You like Excel sheets, I got Excel [laughter]

Will 19:51

Hey mang, \$5 \$5 for 4 excel sheets [laughter]

Zach 19:55

You want to see chromatogram? I've got chromatograms, man! [laughter]

Will 20:00

You ain't gonna find data cheaper than my data. [laughter]

Zach 20:04

You gotta be his street pharmacist of data.

Will 20:07

So building on that, again, because we all build on everything and everyone says, You can also be flexible in terms of thinking about the work that you're doing together. So, you know, your knowledge and your expertise and your PIs may not be the same. And so one thing you can do is just be very conscious about, about when you're talking about your work together, like when it is that you should defer to your expertise and when it is that you should speak up and say, Well, actually, I know about this, and this is the direction we should go. And I think that that will make you feel more valuable in the relationship to demonstrate to your PI that you're an active participant and and also avoid the situation that, you know, you predicted something wasn't going to work and then it doesn't. And you didn't say anything.

Zach 21:07

And if something comes up where the experiment didn't work, it would be best to say I tried this also. Come up with alternatives before you come and present it because nobody wants to hear just bad news. Come in with "Oh, this didn't work. I modified this and tried this. It also wasn't successful. I'm here to ask you for more input on where we should go." And like Will said, we're probably the experts in our fields when it comes to a few things just because I my PI has four students, he doesn't have time to read all the in depth articles and my research topic, so I've probably read 30 or 40 more on one topic than he has. So we're the ones who can say, "Actually, no, that's not accurate anymore. That's 30 year old research. We've moved forward since then."

Moncie 21:50

So the tip that I have is actually very specific to the type of advisor that I had during my time getting my PhD. He sort of struggled with personal relationships. It was hard to get him to talk about his family. And I would only talk about my family if it was, you know, sort of like a nuclear disaster or something. And so for that it was a little, it was a little complicated, so I couldn't really connect with him in a more personal way. And so I'm coming at this from just the concept that I needed to be more honest about when I didn't understand something. And part of that- the reason why I didn't always was because he could be a little bit critical, and sometimes condescending. And he would admit later that he was that way and it was trying to work on it towards the end of our relationship, but that was how I was met, and I should have just been okay with taking that intense criticism from him. Maybe I'd go cry later. But if I had been honest with him about my shortcomings, about the things that I wasn't quite understanding or getting from him, a statistical analysis or a method or something, if I had just done that he would have been like you're an idiot, but then he would have helped me so [laughter]

Zach 23:03

And just to echo that- whenever I leave my office or the PIs office after a meeting, I normally am taking notes. And then I'll just say, "Just so we're clear, this is what you're looking for me to do before I come back to the next meeting that to do list is accomplished, or if there's an issue, I'll address that."

STEMculture Podcast 23:19

That's a great idea, yeah,

Zach 23:20

Always have a to do list and something to follow up. I always say thanks for having this meeting. Here's what I'm going to do. I'll get back to you when this is finished.

STEMculture Podcast 23:27

Yeah, that's really great. Yeah.

Brooke 23:30

Yeah. So next, we're going to talk about meeting with your PI and and really understanding what your expectations and their expectations are that first year. I think it's really important to set this up because this really kind of sets the tone of what you know your time during your PhD will be. And I didn't do this,

but I'll explain why. I guess I didn't really have to. But I think first I'm going to say, you know, I think a great way to do this with your PI is that you need a notebook for starting in the lab. And I think this is a good time to break in your new notebook, have a meeting with your PI, and just see what it is that they want from you. Because you're going to have on top of, at least if you're in the US, you're going to have the expectation of taking classes and of teaching. And so in that timeframe, you know, those first couple of years. What are the expectations? Are you supposed to be learning lab work from maybe your lab mates? Or are you supposed to be just focusing on your classes and teaching and kind of getting grips with your first year? So and the reason why I didn't have that discussion with my PI was because I had really amazing lab mates who filled me in on what the expectations were because that's what his expectations were of them. Had I not had that already, I would have, I would have hoped that I would have taken the time to do this with my PI because being a little baby grad student, you don't know. You have no idea what's going on. Like you're just clueless. I think for the first year, I don't think anybody walks in going, I know what I'm doing. At least Twitter tells me that. [laughter] Yeah, but did any of you have that where- I know Dani did because she's the one who guided me on this. But did any of you have, I guess, a time to kind of talk with your PI about what those expectations Or was that something that you really didn't even think about? I'm curious.

Moncie 26:09

I had that experience. I think it was more my advisor taking the lead on that. Okay. Yeah. Yeah. So my PI was actually very good about about telling me what he expected for me my first year. And he was very kind about that my first semester, he was just like, take your classes, get used to, you know, being a grad student, go to seminars, start thinking about you know, start reading about your papers and just relax your first semester (with this not...you're not really relaxing, right? [Brooke: No.]) Or taking a bunch of intense classes - I took some really intense classes, my first semester, and some of them out of the department and the geology department. They were, they were great, but but he was very good about that. And he was very good about keeping me on track for most things until we got kind of closer to the end. And then it was just like, I'm floating in the ether. I don't know what's going on. So that I had to, I had to be the one who really pushed out the final final stage to to get the dissertation written and to get it submitted and to defend. But up until that point, he'd been pretty, he'd been pretty good about that.

Will 27:13

I would say that my advisor and I met a lot in my first semester to plan my dissertation work. And I think that the expectations for for my work and pace and communication were sort of set implicitly, but I have a pretty great advisor who is pretty intentional about setting a good example. And, you know, you know, one thing, one thing he he said to me at one point was, you know, I was like, you know, I sort of felt like I had, I had like, something up, and he sort of said to me, look "Listen, if I'm ever pissed off at you, or I am unhappy with something that you've done, I will tell you." Which sounds simple and like basic, but also in terms of like, you know, I mean, how many people can you 100% say that that's true about in your life? I mean, I've got family members that I am 35 and I walk around going "are they mad at me?" My entire life, I don't know. So I think that's a really exceptional thing. It's very good thing. And, and then, you know, in terms of the the work itself, you know, we've just always really kept up about my progress. And you know, there have been times when he gently told me, "You know, I need you to sort of pick up the pace here on stuff" and and other times when he didn't. So, I think it just, you know, we just jived, man.

Moncie 29:03

Yes, you do.

Will 29:04

We're lucky. I'm lucky in that respect. But I think if if we didn't, then we would probably have to be more intentional, like you're talking about.

Zach 29:15

My addition to this is just in your first year, I would suggest a large literature research database in your own program of choice. But to go through the literature of what the lab has produced over the past few years, be familiar with the techniques and methods. And then if there's something like, "Oh, this is really interesting," that first year is your time to speak with current grad students who've been there longer, really "Hey, when you have a moment, can you train me on this? I'd be really interested. I think this is going to be applicable to my research." And then another great thing is if you're looking for external funding, now's the time to start writing that proposal. And so you can speak with your advisor and say, "Hey, here's my idea for a project. I've been reading the literature there seems to be an empty space here. I want to fill it." And if you're having issues with that then you might speak to them and say, "How can we approach this? What other things should we do? Did you have something else in mind?" And if that's what's presented to you, then you start working on your proposal, you start working with your advisor. And while you're setting up that proposal, your main goal is to write out your aims and objectives. And so you're essentially lining out your dissertation and your research in that first year without actually having to do anything. And this is a great benefit to kind of set your path in front of you within that first year, and then hopefully get some money out of it at the same time.

Brooke 30:28

Yeah, good point.

Dani 30:30

And I've spoken about this a little bit before, but mainly my very first year, I sat down with my advisor, and I said, "Hey, what are your expectations of me? How off- you know, when am I supposed to be in the lab? What am I supposed to do my first year?" All of this, and he said, "Treat this like a job nine to five, but sometimes you'll leave early. Sometimes you'll stay late. It depends on what you're trying to do." But he said, "I never have an expectation of you being here like all the time," which was really great, and I really appreciate it. So

Will 31:00

Yeah, my advisor explicitly told me I didn't have to work weekends.

Dani 31:04

That's lovely.

Will 31:05

I know, I almost cried. [awww, laughter]

Dani 31:09

it's amazing what that kind of explicit conversation can make it feel like so that like him saying that to you and you acknowledging like oh wow, like I don't have to be here on weekends he explicitly said so... must have been fantastical.

Will 31:23

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Brooke 31:42

I highly recommend the poisoners handbook. It is amazing. It highlights the birth of forensic science as we know it today. If you're not into murder, then use your free download for any book of your choice.

Zach 32:02

To download your free audio book today, go to [audible trial.com slash STEMculture](https://audibletrial.com/slash/STEMculture). Again, that's [audible trial.com slash STEMculture](https://audibletrial.com/slash/STEMculture) for your free audio book,

Will 32:12

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Zach 32:18

So in interacting with the PI, it's important to ask direct questions, especially as we mentioned before, whenever you leave a room say, "Is this what you want me to do?" Science is expensive. So if you're wasting some time on an experiment, you're wasting money as well. So always go for those direct questions and never assume anything when you assume you make a dick of you and me, that's not how that goes, but we're keeping it better. [laughter] So we would recommend that you listen to Episode Three and Four of this season, including how to apply for graduate school with a PDF of questions to ask your university program or PI on our website.

Moncie 32:58

So another thing that we think is really important is knowing yourself. For example, are you a conflict avoider? If you are, that means that you may bend or give up the ideas or things that have meaning to you. So not only do you not get what you want or what you need for something, but your PI never actually learns what you need, and your science and your emotional health can suffer. Also, and this is the thing that I'm actually most, I guess passionate about, it's something that I think a lot of people don't think about. But what is the emotional luggage that you're bringing with you to your program? This is an incredibly stressful experience. So it's going to test everything you know about yourself and everything you don't know about yourself. So you're going to discover things about yourself you never knew. You may even discover mental health issues. So for me, I came into grad school already with anxiety and depression and luckily I was already on medication when I started my first year, and I ended up doubling a dose of my of my medication to deal with the intense depression that I was suffering. And I wish I had realized that it was going to be taking a toll on my mental health. I didn't even think about it. Also, this is another thing I didn't think about. But if you've got issues with authority figures, you've got daddy issues,, that's me, [laughter] tendencies towards anxiety and depression, expect all those things to get amplified. So for me, it's authority figures, it's, you know, my dad was not really there. And so all that stuff kind of tied up into my PI who sometimes was not there and who was also an authority figure. So I wish that I had been better prepared emotionally when I first started my program.

Dani 34:41

I really like what you said, Moncie, about like, knowing like, what you're coming in with, and I came into this PhD, like having always wanted to do something like this, to be able to dive into the science like this. And so I poured so much of myself into this PhD program and to the point that- it's was really- it became exhausting. And so now I'm kind of extricating myself from quite a few things because I was getting really emotionally invested in my writing projects, to the point where I was taking edits, like, really personally. And I was getting really depressed just about like the whole editing process cuz I was like, man, like, this is not even my paper anymore. And so acknowledging that, okay, I put so much of myself into my PhD, maybe if I actually took a little of myself away from my PhD, I would be able to be a happier individual. And that is what has been happening, which is really lovely.

STEMculture Podcast 35:41

You're setting up some really awesome boundaries.

Will 35:48

It's incredible how much just changing the way you think about something can change your whole perspective. And like the way the same things feel. Yeah, I mean, that that's thing about, you know, taking edits personally, like that's a serious thing that a lot of people struggle with. And you know that if,

if you've got that going into grad school, especially in science, you should be aware of it. You should you should figure that out because that's gonna that's gonna come up and bite you.

Dani 36:22

Yeah. And I think a lot of it too is about like the editing process between you and your advisor and like how you are as a writer vs how they are as a writer.

Brooke 36:22

Yeah

Right, yeah.

Dani 36:29

And like, there's so much that goes into it. I think not everyone has that issue. But, I ended up having that issue of like, I poured my, my heart and soul into this paper for two years and then yeah, [laughter]

Moncie 36:40

It felt personal, the criticism felt personal.

Will 36:42

yeah. And that's your personality, you invest yourself in things. And that's that's laudable. Audible [laughter]

Zach 36:52

episode is brought to you by audible [laughter]

Will 36:59

but You know, your personality is going to interact differently with the process for each person that's listening to this. So, you know, know thyself.

Dani 37:10

Yeah. And and we'll mention too that we have an episode on time management and season one, Episode Five. It's all about work, how you work, time management, things you can try to figure out what works for you. Working styles, that kind of thing. So check that out.

Zach 37:30

So if you could turn back time, what would you guys do different? [Zach, singing Cher song]

Dani 37:46

What was the question? I got very distracted. [laughter]

Zach 37:49

If you could turn back time, what would you do differently in your first year? I'm guessing we're getting that specific.

Dani 37:57

So personally, I would try and learn more from my lab mates, and ask them to, like, let me shadow them around the lab a bit more and learn more about the lab functionality in my first year because I did not learn any of that really until the summer. And then I was like one of the one only ones there in the summer and I had to learn a lot of stuff on my own. Which, when you're in a program, you never want to learn anything on your own, because the whole point of being in the program is that you have people

to learn from. So I wish I had been a little bit better about that. So I guess it's not really about my PI but about the lab, my bad.

Will 38:38

I would have

been more confident in my understanding of the things that I was bringing into the project as things I knew about but, I hesitate to call them expertise, but if I had sort of thrown the anchor a little more definitively about some of the projects that I started. I would have encountered more more success and less failure. But as it was I failed lots of things successfully. [laughter]

Brooke 39:16

Me too.

I failed a lot of things successfully.

Dani 39:21

Failure is really important in grad school.

Brooke 39:23

Hopefully that will bring me to my first paper. [laughter]

Yeah, I think failure is

definitely really important. I think I don't know if I could do anything differently my first year to be honest with you like I think that the reason why I'm where I'm at right now is because of my

epic failures over the last

year. You know, I think it's definitely given me a lot of growth that I wouldn't have had. Had I not done that but but with that being said, I had incredible labmates. I had, well, Dani, who really did guide me through a lot, a lot, a lot. So I can't say I would change much

in that aspect.

I needed to fail. I had great, great lab mates. Have a good mentor. I don't know. Like, I feel really, really lucky to be where I am right now. The space that I'm occupying feels good.

Dani 40:30

Heck, yes, yes.

Zach 40:34

So I would have probably utilized some resources more efficiently in my first year, and also verify what was available for my project. So my first year we didn't even have samples. So for my first year, I literally sat around doing nothing other than cleaning the lab and shadowing my, the graduate student who graduated before me. And so with that, it was a lot of waiting around where I could have been reading more articles, I could have been up front about some stuff, or I could have been doing something else or collaborating with somebody else. I'm learning a lot of new skills, instead of essentially sitting on my ass. So with that, I would look at your resources in your lab, but also at your university. There are some things for example, mental health, your university should offer something in the line of that, look into that look into your insurance. It's available, look at what resources are available for you to use. So that one it reduces stress while you're working, but also might help you in progression to get through in a

timely manner versus six years or more. [laughter, "woo"] I "woo" so I don't cry. One "woo" away from boohoo [laughter]

Brooke 41:43
I thought

of something I wish I would have done differently because I am about to wade through this. Freakin organize my primary literature in a better manner! [laughter, Zach: citation manager!] Yes, yes. But then just even knowing what you have and like making note- better taking- better notation of what it is I actually have

Zach 42:05
there's nothing worse than like I can say this and then I'll cite that article and they're like, but which of the hundred and 30 articles in my library? Was it that I'm trying to think of?

Brooke 42:13
Exactly. Okay, that's my rant

Moncie 42:23
I got I got something and I think that I would have been more needy.

I think I would have gone I think I would have done things more Dani style like, "Hey, we're gonna talk. Let's talk."

"I don't know what's going on. I don't know what I'm doing. I don't know how to put together this, this fish. What does even call it like a fish quadratic sampler thing" and I was supposed to build it myself with wood and hammer and nails. And I'm like, What? I've never done construction. I don't know how to do this. I'm just, you know, like my first one was a complete failure was falling apart and thank goodness I got help later in Alaska, like, I should have just been like, "Hey, dude, I don't know what I'm doing. This is totally jacked up." So things like that I should have, you know, and again, I was concerned about criticism, but I shouldn't have been, I should have been like, totally okay with it, like, please help me, somebody helped me. That's what I wish I would have done differently.

Zach 43:20
You'd be surprised at how things that you've probably used your labmate hasn't learned how to do. Like we do a lot of sampling campaigns in the field. And so that aspect of it is everything must be secured tightly or something will go wrong. Yeah. And there was a moment where I or my PI stopped and just went like, this is how you properly use a ratchet strap so your mass spectrometer doesn't fly out the window. [laughter] So you just have to be careful. Don't be a dick about it, but just explain. Oh, yeah, no, you don't use these. Oh, well, this is how they use it. Also, they are the same thing. You mount the cylinder to the wall with so it's constructed uses just try to get it done. But yeah, there's some times where I'm like, you want me to do what? My first year I literally spent 3D Scanning earwax in a freezer, that was my project. Scanning wax.

Moncie 44:06
Those words don't usually go together

Zach 44:08
They don't. It smelled horrible. [laughter] One time the freezer broke.

Brooke 44:12
I'm pretty sure it's your favorite smell.

Zach 44:18

No.

Dani 44:18

It's whale earwax. A little better maybe?

Zach 44:21

No.

Moncie 44:26

So today, I feel like we had a really good conversation about relationship building with your PI in that first year of graduate school. You got to hear some of our stories and what we would have done differently if we got to redo and some of us here actually did get a redo, which is awesome. I'm glad that they did. You don't always get to do that. Communication and self reflection are so crucial for that PI and grad student relationship. And I hope that you've hopefully picked up some tips from this episode. Things for you to think about. So that hopefully we can save you from unnecessary hardship in conflict. And in the future there will always be some, but some of it you can definitely look out for.

Dani 45:05

Next time will be presenting an inSTEM interview with Miguel Perez on being a Mexican-American first generation scientist.

Brooke 45:12

We are on Twitter, Instagram and Facebook as STEMculture (one word) Podcast - search and you shall find. And when in doubt, visit our website at [STEMculture podcast.com](https://stemculturepodcast.com) for show notes, references and information about all of our guests and contributors.

Zach 45:32

Until next time, don't forget to consensually hug a grad student or at least buy them a coffee, or free range organic fro yo... what the hell is that [laughter]

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