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Transcript for “How to Publish” series, Episode 10: Submit Your Shit

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All 0:00

[Intro Music]

Welcome to STEMculture/Podcast!

Dani 0:18

Oh, I fucked up! [laughter]

Zach 0:24

Alright, we have an intro.

Dani 0:26

Hello Hello everyone. Today we are Dani

Brooke 0:28

Brooke

Zach 0:29

and Zach.

Brooke 0:31

So today we are at our 10th episode. [cheering] We started chatting about podcast early November 2018. And we started releasing in mid December 2018. So we've been podcasting now for about five months, which is super exciting. And we just want to thank everyone out there all of our listeners, we're really, really happy to be here for you, and really appreciate you guys sticking with us on our little baby adventure that we've had. And we're just really happy to be contributing to the conversation about STEM, and graduate student culture. And we really are committed to changing the culture within STEM and graduate school.

Dani 1:24

Also, we started this podcast thinking the structure of the of the podcast would be having an experienced host teach a less experienced host on a certain subject. But that went out the window

pretty much immediately. Now we focused on sharing our research on a particular subject, sharing our own stories and opening the door for other stories besides our own. We still do a series of three episodes on a particular subject, followed by an inSTEM episode, and those are my particular favorites. Now, we would really, really appreciate it if you are dear listeners could please leave us a review or five star rating on Apple podcasts or your podcatcher of choice.

Leaving a rating takes a second because you just press how many stars you want to give us. And then leaving a review, even as simple as, "I like this podcast" will help people find us and we would really appreciate it a lot.

Zach 2:12

Lastly, on the announcements portion, this will be my last episode for some time, I'm stepping away to graduate. [chuckle] I'm working on my dissertation and a few papers. So I need to focus more on that and leave this to the fine people of STEMculture. It's been a blast working with these guys and I look forward to doing it in the future.

Dani 2:28

Yeah, and we're not letting you leave so [laughter]

So for this episode, today, we're talking about how to get to the point where you're ready to submit your manuscript. And a huge portion of this is about writing. But a fair amount is also about deciding the journal you're going to submit to, how to decide about your co-authors, how to collaborate with your co-authors, maybe the impact factor of the journal, and how much money it is to publish in the journal, among other things. And that's really a lot to think about. And as a graduate student, a lot of this will be based off conversations with your advisor, and based off of how your advisor does these things in particular,

Zach 3:06

This episode goes out to all the graduate students who hit save after every sentence, we know you're pain.

Dani 3:11

Let's talk about writing. Whatever you do, start. Start writing. Whenever whether you think you have something to write about or not, just start. And I know that "just starting" part is not necessarily the easiest thing in the world. But once you do, it's amazing how quickly writing shows you some of the information you don't know and might need to read up on. Or it might show you something about your your data. So part of writing is like oh, well, I probably need a table here. And then you start making the table and you're like, oh, maybe I should have done this first. [laughter] Or you make a figure and you're like oh, I actually should have made this figure first. So it really helps, it can really help you and getting started earlier is going to be better than starting later. So good place to start writing is always the methods because it's often written passive voice and a description of steps you took to get to your results. So it tends to be a bit dry. But because it is a description of steps you took it is fairly easy to just get that down on paper.

Now, the earlier you start writing, the better off you'll be to finish your degree in a timely manner.

And I really suggest to not leave it all until the end. It's a really miserable experience. And I'm staring at Zach right now because that's where he's at. And we're getting the double bird. [Laughter because Zach is flipping Dani off lol]

Zach 4:31

I want to add on top of that, though, it's also very important to work on your lip reviews early. So if you were interested in taking a lot of citations or your field uses a lot of heavy citations, it's best to start taking a catalog of those making proper notes, storing them in some form of citation manager and getting that done early. So you're also not like me in the future and having a sort your life out there digital and physical copies of bullshit. [laughter]

So how do you start writing? Better - how do y'all start writing? [Texas twang]

Dani 5:00

Oh, wow, look at that Texas coming out.

Zach 5:03

Y'all [emphatic]

Dani 5:05

So, I started writing after, regularly, after I formed a writing group with some friends. And that that helped me so much because it was this protected time that allowed me to be in peace, because we would write somewhere else besides my office. And so we could write and peace in have that protected time together.

Brooke 5:30

Hmm, well, I I like to word vomit. Dani loves that when I say this [sarcasm, laughter]

I like to just kind of throw words on a page, even if it's terrible. And I know it's terrible. But it helps to kind of solidify my thoughts, it's like, it helps kind of create the outline, even if they don't use anything that's on that page. At least I'm getting thoughts out there. So I think that's really the biggest hurdle for me. Because once I get into that groove, I start becoming more and more creative.

Dani 6:05

Yeah, and then word vomiting, or, as I like to call it: free writing, whatever you call it, whatever you like better. That's really a great way to just get over the hurdle of feeling like whatever you put on the page has to be perfect because it does not have to be perfect and it won't be

also Brooke mentioned an outline. And that's really where I start my papers is an outline first because I have really bad organizational skills. So having an outline allows me to first get down kind of the flow of the paper and how I want it and then I can just start filling that outline in outline out so it's a detailed outline, and then eventually that becomes my paper.

Zach 6:44

So I write by taking magnetically printed words on my fridge and just rearranging them until I finally put my paper together [laughter]

and then I write it down [laughter].

I write kind of in a guerilla style, whenever I feel like it, I'll go to a computer and start writing something

Dani 6:59

[Dani makes her version of gorilla whooping noises]

Zach 7:00

I don't feel like it very often.

Dani 7:00

That kind of gorrila?

Zach 7:00

Guerrila. Like warfare.

Dani 7:00

Oh [more gorilla whooping noises from Dani, laughter]

Brooke 7:02

My mind went there too [laughter]

Zach 7:10

Dark surprise tactic. So that's I'm really bad at this, I have set aside writing time but I don't use it I like night, I write at night, I just sit in my office in my apartment and just sit at a computer and start pounding away until something makes sense. The worst part is, is I get a little tired after about two o'clock and then it's just verbal, vomit or nonsense, so I should probably work on that.

So as Dani mentioned, a good way to get started on writing is to form a writing group, these groups are really good at holding you accountable. And also to just get started. So so if you're sitting in a single room staring at each other until somebody doesn't do their job,

Dani 7:46

and then I yell at them.

Zach 7:47

Yup, that's why I left the writing group. [laughter]

Dani 7:50

You did not! You dick [laughter]

Zach 7:53

So how do you start, some people can write on their own steam, good for you.

But if you struggle with this, or struggle with making time team up with other people, and make sure you have somebody who will keep you accountable. Whether that's a writing group, maybe you told us family member or your roommate, like, hey, I've got 12 paragraphs I need to write tonight or I have these three bullet points, I need to get something done within the next few hours.

It's really hard to keep track of all this. So I think scheduling would be also beneficial for that does have somebody who's going to sit there and - not necessarily sit there. I sometimes feel like I'm working on this will you text me in an hour and see what I've done done. Also shame me if I don't do it. I will lie to you. [laughter]

Dani 8:34

Don't feel bad though, if you feel like you have barriers to writing, a lot of people do. Prolifiko is a survey company and they recently did a survey back in 2018. And they published it under the title "The life of a productive scholarly author." And they found that early career blockers or like blockers, barriers to writing tend to be either psychological and technical in nature. mid career blockers or barriers are related to work overload and time management. And then late career blockers are few and far between and don't seem to cause stress. So fuck you.

Brooke 9:08

Yeah. Gross.

Dani 9:11

Now, some of these barriers, the most common one is distractions and interruptions.

Yes, I definitely hear that. The second most frequent is necessary workload. Yes. Hello.

Zach 9:25

Teaching?

Dani 9:26

Then procrastination and then teaching.

Zach 9:30

I think teaching is a necessary workload that kind of gets tossed into there. But that's a personal opinion.

Dani 9:36

And then it kind of goes down from there. I always need to work more, family, lacking motivation, overwhelming- feelings of being overwhelmed, technical barriers, and then etc, etc. Then the last one with the least frequent answers, I have no barriers. Again, gross.

Brooke 9:51

So along the lines of you know, what Dani was just talking about, with the biggest group of people being distracted and having interruptions, I think the most important thing is to know what your distraction is, be really honest with yourself. Don't lie to yourself, and make sure that that's not what's continually interrupting you. So find a quiet room, coffee shop lunch spot, you know, somewhere where you can maybe meet another person so that you have an accountability buddy. And really, you know, stay focused on what your goal is, make sure you you have a clear focus on what you want to accomplish.

Dani 10:38

Yeah, and that leads me straight into talking a bit more about my writing goals, because, or my writing groups. Because in my in our writing groups, we go around and everyone says what their goals are for this session. And I think that helps a lot. Because not only are you saying it out loud and being held accountable by the other people in your writing group, but it helps know, okay, I want him to get 500

words done, and oh, no, you know, the first hour has passed, and I have only got 200 words done, I need to really focus and hammer out those last 300 words. So it can really act to help you reach your goal by keeping track of it throughout the writing group.

Now, I've talked about Pomodoro before, you might be sick of hearing it already. But if not, you can always go back and listen to Episode Five, our work episode. Now Pomodoro comes from Francesco Cirillo, the name comes from the timer that Francesco used which looks like a tomato. So that's why it's called the Pomodoro technique. Now, the idea is that you set a timer for 25 minutes, work on something specific for 25 minutes, you have a goal for that 25 minutes, take a short [clears throat], take a short five minute break and then go again. The suggestion is to do four 25 minutes sessions, after which you can take a longer break like to 20 or 30 minutes before you can start again. And you can have a certain goal of how many Pomodoro sessions you want to get done in a day, for instance. You don't have to do Pomo - Pomodoro all day long, that might be a little bit much. But depending on the task, 25 minutes, maybe too long or too short for you. So for instance, when I'm coding in R I don't really need a Pomodoro session to stay on task, because I'm, I'm diving headfirst into it, and oftentimes cursing it and doing a lot of googling and then eventually figure out how to do it. And I don't really need 25 minutes or an hour timer to keep me on track for that. But for writing, I really like to do 50 minutes sessions, five-zero, minutes sessions with a 10 minute break. And again, that's like I've discussed in the work episode.

Zach 12:36

But this doesn't work for everyone I struggled to write, I'll admit it. I've already admitted it in about six other episodes. So for those that don't like working with other people or get distracted easily, it's often easier just to find another outlet. And this is where Brooke mentioned that finding your happy space is helpful. I can't work in my office because I'm a senior student and have third years and below in there who are constantly "Hey, how do I do this," like, [whispers] "I told you that already, get away from me." [laughter]

But it's really helpful to tell somebody your goals, have them check on you after a set period of time. Dani's suggestion was to sign a contract. I wrote this as sign a legal agreement, which just sounds sketchy. [laughter]

Dani 13:19

But it's another way to be accountable for your goals. So you could actually write something down. I mean, I'm not that type A enough to do that. But

Zach 13:27

I wouldn't listen to it, I'd lose it. [laughter] You can't see but I air quoted and like, "Contract doesn't exist anymore. I don't have to listen to it!"

So you can also use online or Twitter writing groups. For those you can always see, I believe first gen docs does one once per month

Dani 13:43

On Twitter

Zach 13:44

Shut up and writes on Tuesdays. I think there's also one on Tuesdays in the UK is and Tuesdays in North America. That's where they're going to keep you accountable enjoying writing groups in there. The big

takeaway from here is that you should schedule your time and protect it. And this is one of my biggest complaints. Lastly, I like motivational music, I find video game music to be, not necessarily relaxing, especially if a boss comes in the room, but very... therapeutic is not the right word either... very good at keeping you focused. That's what it's designed for. It was there to not be distracting, but also keeping you moving to the space here. And I've been on a Zelda kick for music. So I just listen to that in the background.

There's also like low-fi, hip hop that's available on YouTube, there's always going to be a playlist you can look at that's probably about an hour or longer. And if the uploader is really nice, remove the ads, you don't have to listen about Kia commercials anymore. So bonus. [laughter]

Brooke 14:34
90s alternative is my jam.

Zach 14:36
There you go. If you have Spotify, which this... Spotify does not sponsor us one bit, but Spotify student is \$5 in the last for a year per month. You also get Hulu access with that with limited commercial availability. But if you listen to Spotify enough, you can actually have it auto generate playlists based off your selection of musics. And it's an endless playlist that just keeps going.

Dani 14:56
And our podcast: STEMculture Podcast is on Spotify.

Zach 15:00
Yeah it is. Smooth.

Brooke 15:02
Dang, that was good.

Dani 15:03
Yeah, thank you, thanks.

So how often do y'all think you should get feedback on your writing,

Zach 15:08
I think it should be frequent enough where you're correcting your mistakes before they get to be large, horrible mistakes. So I have an issue where I'll write a whole draft of the paper. But I really should have focused on something else and focused on toni- honing in on one section and making it better. And so I think with that kind of struggle, it's important to get feedback consistently enough that you're actually making improvements versus making too many changes. It's very similar in science, you change one variable, if that affects it you know that was what you changed. That's the problem. You rewrite your whole results and discussion section? You done messed up, where's your control? Figure it out.

Brooke 15:47
I really like that analogy. Thank you

Dani 15:51
Figure it out. [Letterkenny reference, we're sorry haha]

Brooke 15:53

No, I really like Zach's points, like, stay on track with what maybe you and your PI [advisor] have discussed. And then get back. You know, for the next section, maybe after you've had another discussion or had time to put stuff on paper and then give it back to your PI and make sure you're on the right track so... often, often.

Dani 16:17

Yeah, and that's all of my thoughts as well. So really getting feedback on your drafts as often as possible. But coming up with a plan for the paper with your PI and your co-authors. So that when you're working on it and putting your valuable time into it, you're going down the right path that your PI and your co-author have agreed as the right path for the data.

Zach 16:39

On the topic of that, I think it would be beneficial to- if your PI doesn't, give yourself a deadline. I have this issue where if I don't think it's a pressing matter, even though graduation is a pressing matter, I don't I don't do it. I'm like, oh, nobody's expecting this. They've got other stuff to do. And it also helps that the person who is expecting it does have a lot of other stuff to do. So unless I set that deadline myself, the accountability isn't there.

Dani 17:05

Yeah, that's a really good point to set your own deadlines. And, and really holding yourself accountable to those deadlines. And so that's when it comes into handy again, to be like, "Hey, lab mates, I've set this deadline for myself. So I'm saying it out loud so that y'all can yell at me if I don't meet it."

Zach 17:20

And feedback doesn't always have to come from your advisor.

Brooke 17:22

Hey, yeah, yeah, super good, really good point,

Zach 17:25

You can always ask your lab mates, Dani is one of my collaborators. So I'll be like, "Hey, read my garbage."

Dani 17:29

Yeah [laughter]

Zach 17:31

Here's a takeout menu, how's it look? [laughter]

So with that, it's beneficial to have some other eyes on it, because that's one of the issues I've learned. The paper I'm writing is data I collected two, three years ago. Yeah, it's just I had to wait for some other analysis to come in. And with that, I've looked at this data over and over and over again, it doesn't speak to me anymore. It's Quiet on the Western Front. [laughter] And I just, I look at it and be like, that's a graph and everybody's like, but it's telling you so much like, "It's giving me the silent treatment." [laughter]

Bitter? Either way.

Dani 18:07

No, I think that's a really good point that Zach just made, because I feel like I probably under utilize my own lab mates. But recently, probably in the last year or so my lab mates and I have been making more use of each other for grant applications and abstracts and really starting to let each other read each other's things. And I think part of that is because, you know, our advisor has seven students, I have seven lab mates. And that's a lot of people. And he can't give each of us individual feedback all the time, because he's also doing a bunch of other stuff. So we've started relying on each other. And I think that's actually for the best, because then we can really help each other with - kind of the big picture like, "Hey, this intro was good, but you know, maybe make it more general at the beginning. And it wasn't quite sure where you're going with this or that." And then when it gets to advisor, he'd actually give substantive feedback on it, because it will have been seen by a lot of other people in your lab. And, and I've noticed that it really is a lot easier to give good substantive feedback on something that's in better shape than like a really shitty rough draft where you're just like, "It's shitty. What else can I tell you?"

Brooke 19:15

Yeah. And another thing that I think I know, I've utilized, and I think you've utilized as well, Dani, is, we have a Graduate Writing person. So she comes in Well, it's different, every few years, but they come in and they help just kind of make sure everything flows well, that you're writing in a clear and concise way. And it's it's been invaluable for the things that I've done.

Dani 19:40

Yeah. And it helps a lot to have somebody that's really outside of your own research to read it. Because things that are apparent to you. They'll be like, "You know, you lost me here and here." And you're like, "Oh, I didn't even think about that cuz I've been thinking about this stuff for so long. That's super clear to me, but I didn't write about it well." Yeah, yeah. I think the last thing I'll say about this feedback is, your paper will never be perfect. Get it to 80% get it to good enough. And it's time to submit it. And I will quote Shit Academics Say: "A good manuscript is written, a great one is published a perfect one is neither." And then this is my own Dani-ism fuckin' submit it. Love you.

So let's talk about some other details you might consider when preparing a manuscript, one of the first things you might be thinking about is Impact Factor.

does impact factor matter? And I think it really depends, it depends on I think, largely what your advisor thinks, because they'll be telling you their opinions about impact factor for sure.

But I'll tell you, this, so definitely looks good on a CV if you publish in a journal with the high impact factor for your field. But it doesn't necessarily mean that your article is going to be more highly cited. And this is kind of the issue with impact factor. So Nature, for instance, has an impact factor of 41. And that is supposed to indicate that the average article that gets into nature is going to be cited 41 times. However, that's not what happens. I think the number... Yeah, 75% of articles that get into Nature, are actually getting less than 41 citations. And it's really just a few articles that are getting much more than much more cited than just 41 times.

Brooke 21:35

Are you saying it's skewing the data?

Dani 21:37

Yaaaah, it's skewing it.

Brooke 21:39

Boo

Dani 21:41

and the way Impact Factor is calculated is also not really clear. It's calculated by a private company, Thomson Reuter. And it really indicates, again, the average number of citations a journal article is going to get. Now recently, some papers have made the findings that so that 75% of our getting fewer than the 41 for Nature, for instance,

they had a conversation with Thomson Reuter, and Thomson Reuter was actually pretty open to having that conversation. But the problem now is that if Thomson Reuter fixes it, it's going to start- it will immediately pop all of these impact factors down. And they just, you know, just don't know how to deal with that quite yet. So it's part of the conversation. But if you've heard about impact factors, and maybe your advisor hates them, maybe they like them, maybe they see them as a tool. And that's kind of where it's coming from.

Brooke 22:36

So when looking for choosing which journal that you want to publish in, you need to look where other papers that are like yours are being published, number one, and where do people in your field publish? And most importantly, where does your advisor think you should submit? So I think it's really important to try to aim for the best journal that you can think of to put your paper in. But I mean, why not? Right? So like, the worst that they can do is just say, No, and then you submit it somewhere else, or they give you great feedback. And you can make changes and submit it somewhere else as well. So when thinking about what journal, you want to make sure that you understand what the guidelines are for the journal. So it's really important because every journal has different formatting. And some journals have different guidelines, if it's an initial submission, or a revision or resubmit, you know, things like that. So really pay attention to what they say on the journal's website. And then what kind of writing do they accept? Is it original research articles, letters, notes, or you know, some sort of a methods paper. So each journal really has their own theme, you just need to know exactly what that theme is, before you submit.

Zach 24:05

A good guide to this is to look at which journals you're citing a lot from. If you have 40 citations, and five to eight of them are all from a single journal, that's probably your best place to publish. There are also journal finders on the websites that you can find.

Brooke 24:19

very cool

Zach 24:19

ACS does that I know for sure.

Brooke 24:21

Nice.

Dani 24:23

Something else you might want to be considering is what's the turnaround time for the journal? Are they known for getting back really quickly as to whether or not you're accepted, or they sent it off for to review, or they really slow. And my personal story with this is that I knew for this journal I had submitted to several years ago, that the turnaround time was pretty slow, like I should hear back maybe four or five months, well, four months. And then it was six months, and then creeping towards seven months. And I hadn't heard from them. And I thought, I'll just email and you know, if they yell at me, I'll just be like, "Oh, I'm just like a little baby grad student. So I don't know anything!" Which is my fallback. Even though I know a lot. [creepy, self-deprecating laughter]

Zach 25:03

I gotta go. [laughter] You don't need me here anymore.

Dani 25:13

That's okay, that's my secret.

And so I emailed them, and I said, "Hey, you know, I just want to check up, it has been about six months since I turned this in. And I really haven't heard anything, it doesn't even look like it's been moved on to review." And they got back to me. And they're like, "Yeah, so we forgot. So we'll get to this now." And I'm really happy I emailed them when I did. That was really irritating. But if I hadn't known about the turnaround time, I might have let it go on for another couple months.

The other thing I'll say here, too, is that if your paper is languishing at a journal, you can always withdraw it. If it's been too long, and they haven't done anything with it, that is an option.

Zach 25:55

The other thing is to check your junk mail or clutter folder. I had a co-worker who lost a paper for a few weeks because it just sat in clutter and nobody decided to check it. So make sure you either disable that or add the journal publications domain to your account.

If you haven't figured it out yet, academic publishing is really weird. academic publishing is kind of confusing and messed up all at once. In general, authors pay publishers to take their papers, which is kind of outrageous in a sense, because normally, you'd be like, "Oh, well, here's my book, publish it make me money." And in this case, it's kind of flipped or like, "Here's my journal [he means manuscript], please take it."

And even then people who want access to these articles often will have to pay for them. So I'm sure everybody's come across this paywall of like, oh, here's the abstract, that'll be \$50. If you want to read this article,

Brooke 26:45

yeah, actually, I was looking at one last night that was 60, because I was trying to print one from my house. And I wasn't on the university's browser. So...

Zach 26:56

That is ridiculous.

Brooke 26:57

Yeah.

Dani 26:57

yeah. And I'll just say a side note, here, if anyone out there, if you want an article, but it's behind a paywall, and your university (or you're not associated with the university) doesn't have access to it, you can email the corresponding author and nine times out of 10, they will be very happy to just send it to you for free because we can, at request, by request, we can give people copies of our papers, we just can't have them kind of commercially available or like have a link of a PDF on your website or something. But that, but your art, but that particular article. [this is literally what Dani said... she clarifies next time she speaks]

Zach 27:34

That's a copyright violation. Don't do that.

Dani 27:36

Yes, yeah. So if you have a PDF of an article that you've written, and it's behind a paywall, but you have it on your website for free, that's a copyright violation. So you want to be careful about that.

Zach 27:46

Also keep an eye out, if they don't get back to you in a timely manner. It's possible they're on vacation, which good for them. But also take a look and see if they've changed universities. If they put in their university account when they submitted that paper and they've moved, they probably don't have access to that anymore. So see if you can track them down one way or another. Generally, they'll be listed under like ResearchGate, Google Scholar, so you can probably find which institution they're at now.

It is important to note there is a difference between limited access or paywall access and open access. Many journals and now offering open access options and it often costs more to publish in an open access journal. Keep in mind though, that the more open your journal publication is, the more often it will be cited. Those behind a paywall can't be read and cited for useful information.

Brooke 28:27

Yeah, good point. So about kind of coming back to that copyright stuff. Some things to kind of think about, on a kind of a different note is that if you publish any of your chapters before you write your dissertation, you really need to check with the university because there might be copyright issues, if you use that chapter in your dissertation. So check, always check with your university before approaching your dissertation just to make sure everything's on the up and up. And then there's also something called an embargo. And I know that that was something that both Dani and Zach had just recently come across because paper had been accepted but nobody could talk about it for- until it actually was published. And so that's what an embargo is, it means that you can't talk about it online, kind of pub-until, you're -, like push it yourself saying, Hey, I got accepted, that really has to be, yeah, that has to wait until the paper is actually out.

Zach 29:33

Additionally, with that an embargo also covers your dissertation itself. So say you intend to publish chapters from your dissertation into an actual journal, then you have to embargo your dissertation and work out a bit of copyright with that, an embargo normally last 10 to five years, however you select it, and it is restricted access, your university holds it and you are the only person who can access that. And even then they have to clear you for it, if you don't have a copy already, so keep it- a copy of your dissertation handy. And data is not copy written. So while- say you find a really beautiful figure in a

graph, you- or a figure graph or something in a journal, you can ask the author if you can reuse that. If not, as they provided the raw data, you may plot up the graph yourself and use it without any copyright infringement. Additionally, if you yourself publish something, you have the data, just modify it into a prettier a graph, and you're good to go.

Dani 30:24

NOICE. Do I have to publish my dissertation with the university. [Zach indicates yet] But like, I don't want to...

Zach 30:32

you just have to put an embargo on it. [Dani hisses in dislike] And they will not tell you every time you have to renew. [Dani hisses again]

Dani 30:38

I hate it. Okay.

Brooke 30:40

Alright, so now we're going to talk about teamwork. And this really comes down to how you decide on co-authors. So I'm going to ask you both how do you go about choosing co-authors?

Zach 30:54

Whatever my PI says.

Brooke 30:55

Ooh, yeah.

Dani 30:56

Yeah. So right now since we're grad students, I would agree with that. I, I've been trying lately to figure out like, how my advisor is making those decisions, and I've asked him to kind of involve me more in those decisions, so I can learn more about it. And,

I mean, it's really just, it's just up to us, you know,

Zach 31:17

Yup

Dani 31:17

Mainly, his thought is, if we don't just give authorship away, they have to do something to be on the paper. But for him, there's no set rule for what that is.

Zach 31:29

Yeah, I would prefer that they gave some type of contribution when it comes to my own first authorships. But I am aware that there are, I wouldn't say strings attached to research, but in a sense there are that somebody provided you with something, their name goes on the paper. And if not, it might have to be an acknowledgement. And that's a conversation you should have with your advisor. Is this an authorship recommendation? Or is this an acknowledgement?

Brooke 31:53

Right. And I think this is kind of a tricky or sticky subject, because there's really no official rules about this. So you know, you have to really decide who came up with the idea, who did maybe all the lab work or the field work? Who did the writing on the paper, who analyzed the data? And I think there are some guidelines on Google. But really, it's at this point, being little baby graduate students, we really have to kind of let our advisors make those decisions. I mean, I don't necessarily know how to make a decision on a co-author. But that's something we learn along the way.

Zach 32:36

Don't let that decision hinder you from asking.

Brooke 32:38

Yeah, that's a really good point. I like that. So you know, along those lines, use common sense with who's putting in the work and who's contributing.

And don't give away co-authorship, I think that's really important thing. But we also again, don't have control over this because we we are graduate students, but you don't want to just give author or co-authorship to somebody who's maybe not contributing as much. That's kind of unfair to you. So using undergrads on papers, I think there's a lot of PIs that are, you know, there's definitely two groups, some PIs like to have undergrads because then they're contributing and doing a lot of kind of grunt work that grad students don't have to do. But there's a lot of PIs that don't like having gra- or undergraduate students on papers, because it means they're kind of connected to that student the rest of their life, for that paper. So one of my fellow graduate students, what they have come up with is have they contributed some manner, some intellectual contribution. So, you know, once they have contributed somewhere, intellectually, then they feel comfortable with having them on the paper, again, comes down to your advisor.

So there are a lot of benefits with having co-authors that, you know, I think, are really important to think about. So one, you're sharing the writing and other related work. So, you know, maybe all the burden isn't on you. And sometimes it can be a very creative process, and you can build off of each other. So this kind of feeds into another one is you really complementing each other's strengths and weaknesses. Maybe be honest about what your strengths are, and what your weaknesses are. And maybe that's how you, you know, find a co-author. So also, another really great benefit is helping each other with career advancement. And I think this is a really great way to network. So you can build relationships for future collaborations. And along those lines, that's when you know, you can help with career advancement in some manner.

Zach 35:03

This can also apply easily to po- proposal work as well. So whenever you're thinking of writing a paper proposal, find somebody who might have a little sway, I've always been told the story of like, "Oh, well, we're submitting this paper or this proposal." And they'll be like, "Oh, well, it was rejected right off the bat," and like "oh, well, we put this scientist is well known for this research, they didn't even bat an eye on it, it just went through." So make sure they have something to offer for it. And you're just shoving their name on it, and they consent. But how do you guys, or you guys collaborate with-co authors?

Dani 35:35

So again, this is largely up to my advisor. But you know, the people that are on our papers that are at our university, you know, I really like to get their input. At the same time, you know, I work on hormones, Zach, works on contaminants, Farzaneh works on stable isotopes. So a lot of the stuff we

have to talk about and collaborate with each other on is kind of more on the back end of things... like we're chatting with each other, like, "hey, how did you do this? How did you do that?" so that we can understand what we've done. But on the actual paper, there's not... Like, we'll help each other with edits on final products. But there isn't a lot of like, "Hey, I'm going to write the intro and you write the methods," because we all kind of do different methods.

Zach 36:26

Exactly. And Brooke?

Brooke 36:28

I have not written a paper or co-authored with anyone, so I have no,

Dani 36:34

How would you want to collaborate with co-authors?

Brooke 36:37

I think I would really like to have more a lot more work involvement. So probably my first experience with co-authorship, I would love to have somebody who's maybe in the same university as me so that I can really feel like I'm not, I guess guessing, with what my relationship would be with them, I think it would be a really great way to break me in to co-authoring.

Dani 37:08

Yeah, and I think to like, you know, there's a way how I collaborate now, but how I'd like to collaborate in the future, when I'm the one that is inviting people to be co-authors on my papers. I'd really like to have something fairly structured and like, actually have, "hey, like, I would like you to write this part of the intro, and let's work on- you and me, let's work on the methods together. And let's chat on the phone in a month and see where everyone's at." That's how- that's how I'd like to my future collaborations to go. Really purposeful.

Zach 37:43

Purposeful. Driven. Yes, I think one of the big things related to collaborators is, as a graduate student, you have to remember bureaucracies still involved.

Dani 37:52

Yeah

Zach 37:52

Episode Two...?

Dani 37:54

Threee

Zach 37:54

I'm close.

Dani 37:55

Navigating Bureaucracy 101!

Zach 37:59

So when you're doing this, remember that you're low on the totem pole, for now, you'll get up there eventually. But with that case, you have to be professional in contacting a co-author, especially if you're asking something of them. So make sure you're a calm, cool, and collected professional when speaking with them refer to them by their proper name, and always give- or their title, proper title, is what I've always been warned about more than anything, especially with my committee. And also,-

Dani 38:22

That's because we're in the south. [laughter]

Zach 38:26

Yeah. So obviously, there are a lot of answers here. And again, it largely depends on what your advisor wants to do. Generally, it's a good idea to connect with your co-authors often. So they can be involved as as much as they want, or as little as you want, depending on how you feel about your paper.

The one suggestion that's kind of come through is a co-author contract. And this is kind of what Dani was mentioning, like, you take this section, I'll take this section, don't talk about this, or I'll address that, I want your feedback on it. And that's where you've kind of agreed on what portions of the papers are yours. For example, we've sent off samples, they were analyzed using a specific instrument and technique. I didn't know- I have a list of what was done but I didn't learn the exact steps on that. Therefore, I'm not comfortable writing the method portion. But I can tell you about metals and whatever species we're looking at, or anything along that line. So with that, then I could say, "Okay, I've got the discussion, can you write the methods," and honestly, the co- the author on that one probably prefer to do that just so I don't drag their name through the mud, not that I would. But secondary, or secondly, some co-authors can be very hands off, some can be very hands on and it's really dependent on how you've been introduced and how you've interacted with them in the past, just always be professional.

Dani 39:36

Yeah, I'd say, too, with the co-author contracts, some of the things that you can put in there are also co-author- also author order. That might be important. This really varies by, by area of expertise- of research area. So author order might might not matter as much in other areas. So author order, who writes what, also just how involved a co-author wants to be. Cuz some are just like, "You know, I gave you samples and that's kind of all I'm, I'm willing- all the work I'm willing to put in." And that's good to know at the start. Because then you're not pestering them for stuff later when they're like, "Hey, I don't want to be that involved."

Zach 40:16

But at least let them- The most important thing also is at the end, give them a chance to review it.

Dani 40:20

Yeah.

Zach 40:20

Never submit anything without authors con- confirmation on it.

Dani 40:24

Yes. Yeah, very good. So you never want to do that. And the reason is, you don't want to get an email that's like, hey, you're a co author on this paper. And you're like, "What the fuck! No one told me there was a paper and I didn't get a chance to look at it. My name's on this thing, I didn't even approve it. They didn't really have my consent to submit this." And that'll get you in hot water fast.

Brooke 40:44

Consent is important in all things.

Dani 40:45

Yeah, consent is good. Okay, so you've done all that bullshit. And it's finally written, all your co-authors have an opportunity to provide comments and edits and feedback on your paper, and it's ready to submit. Okay, remember, doesn't have to be perfect and again and won't be, do your best to get it to the point where it is good enough. On the day of submission, I would really suggest to set aside an entire day in order to complete the submission because there's always last minute questions and considerations you have to keep in mind. Plus, you will need to write a cover letter. You might not want to leave that to the last day, but I did. [awkward laughter]

And you'll probably need guidance from your advisor on some of the last minute questions like who's the funding sources? Do you want full access- full open access or partial open access and full open access is more expensive. So you need to ask all these questions of your advisor.

Like I mentioned, the cover letter is really important. This is where you tell the editor about your paper, the authors, how it was disseminated in the past. And really make sure to cover your bases here.

Zach 41:53

and explain to them why your paper belongs in their journal.

Dani 41:56

Yeah, and we'll get into that a little bit more in the next episode. Finally, press submit and have a beer.

Brooke 42:03

Yaaaaaaay [Dani making a breathy noise that's supposed to sound like a crowd cheering]

Zach 42:08

In summary, today we talked about how to start writing, the details of writing a scientific article, and collaborating with co-authors.

Brooke 42:15

Thank you so much for listening. Next time we will be talking about reviews, reviewers and rejections, where Will, Moncie, our new guest host, and Dani will be talking about the review process and rejections, followed by answers to questions about the review process from experienced scientist in the STEM fields.

Dani 42:35

We're on Twitter, Instagram and Facebook at STEMculture (one word) podcast, visit our website at STEMculturePodcast.com. I make it so you should definitely go look at it for show notes, references and information about our guests and contributors. Also, please leave us a review or five star rating on Apple podcasts if you don't know how to DM me @STEMculture Podcast, one word on Twitter.

Until next time, don't forget to consensually hug a graduate student, or at least buy them a coffee or quad shot latte with three pumps of caramel syrup.

Zach 43:08

Later and good luck.

Dani 43:10

Don't leave us [laughter from Zach]

Zach 43:11

Byeeeeeee

All 43:11

[Outro Music]

Dani 43:16

[Bloopers] that's where blowup dolls are going, am I riiiiight [burps]

All 43:18

[So much laughter]

Will 43:26

This was a magical recording session.

Transcribed by Dani / <https://otter.ai>