

UF Virtual Exchange

Teaching Beyond the Podium Podcast

Alexandra

Hello. My name is Alexandra Bitton-Bailey. And welcome to the "Teaching Beyond the Podium" podcast series. This podcast is on teaching and learning. And our guests here offer their best tips, strategies, innovations, and stories about teaching.

Today's episode is on virtual exchange and our guest is Ginny Greenway.

Ginny Greenway

I'm Ginny Greenway. I'm originally from the UK. And I did my PhD on evolutionary biology studying insects specifically up in Scotland.

Alexandra

Ginny came to the University of Florida when she discovered that Christine Miller shared her enthusiasm and interest in entomology research. But once she got to the University of Florida, Ginny discovered a whole new passion for teaching.

Ginny Greenway

How I got to UF was via a research postdoc with Christine Miller who works in the Department of Entomology here in Gainesville. So I emailed her because her research was really interesting and wasn't really aware of her investment in teaching as well. And so that's something that since I've been here I've really got involved with and really enjoyed.

Alexandra

During her undergraduate studies, Ginny was able to do a research project and that research project allowed her to transition immediately to her graduate studies - and she felt well prepared for that. But not all her friends had such an early and positive experience. That made Ginny realize how invaluable it is for students to start doing research early.

Ginny Greenway

I mean I went from undergraduate to grad school like straight into a PhD. But that was only because I did a research project that actually we all had to do. But it was a six month research project. And obviously, I know from my peers that we all had quite different experiences. And I was just really lucky that mine was great and I was really involved, invested, and given ownership of the project.

So I didn't feel like I was coming in completely cold. But even so, I think if I'd have started two years earlier and been accumulating this experience and having these opportunities earlier, then it's a lot easier, or at least it seems more possible and like something that you could consider.

Alexandra

Despite a smooth transition to her graduate work and early exposure to conducting research, Ginny's teaching experience was quite limited. In fact, as she puts it, it was limited to cookbook labs. But once at UF, Ginny was introduced to a new kind of teaching. She discovered the idea of teaching and helping undergraduate students to actually do research.

Ginny Greenway

It was a bit of a change. When I was doing my PhD, I was doing what they call demonstrating there, which I guess is being a TA. But that was in lab practicals and things like that that were already set up and that basically were kind of cookbook things that you turned up and you helped the students with if they had problems, or if the experiments weren't quite working out, you'd help them with that, or you'd show them where in that dissection like the liver was in a fish or something very kind of specific, whereas when I came here, the course that Christine was teaching is a course based on undergraduate research experience class. And so that was something completely different and I'd never heard of before. And it just seemed like a really cool idea and a way that the students were actually collecting data in the class that we were using for our research.

So there was this research element I was already really comfortable with. But then involving all these undergraduates in it, them collecting the data, and then really highlighting to the students that, yes, this was data we were using and that they were doing science, and that it wasn't just a standard practical, that it was something that we were using and they were contributing to.

Alexandra

Teaching undergraduates to conduct and contribute to actual research was very exciting. Students knew that they were seeing true results simultaneously with their instructors and

contributing to the field. To the students, it felt genuine and authentic. And they sensed that their contributions were valuable and that they had a shared goal with their instructor.

Ginny Greenway

It made them more invested from the start, because they understood that we didn't know what the results were going to be. And when we plotted the graphs at the end of the semester, we'd never seen them before so the whole thing was a surprise. And they could tell that because there were certain things that we had no idea why they were happening. So I think they genuinely understood that they were seeing things at the same time that we were.

Not so much from the international side but when we talk about, OK, here's your data, which you've had to invest in and that we're really invested in because we need to write up, and it will be published at some point but we have to go through all these revisions, and submitting it to journals, maybe being rejected. There's this whole journey that it goes on then. And there's emotions involved in that as well.

Alexandra

So how did helping students conduct research lead to virtual exchange? Well, both Christine and Ginny shared an interest in global research. And both thought that the best thing for their students would be to experience a variety of people and perspectives from the field, which they brought to the classroom through virtual exchange.

Ginny Greenway

I guess it was a couple of things coming together in one. Firstly, Christine was really interested in working with the International Center on one of their course internationalization schemes. And that happened at the same time that I was arriving here. And I guess coming from outside of the US system, even doing research I noticed that there were kind of subtle differences in how people think about things and the approaches they take. So I was already becoming aware of certain, even though they were small, cultural differences in how research is done here versus in Europe. And she was thinking about how to internationalize this course-based undergraduate research experience.

And we thought it would be a really great opportunity for the students to be able to interview researchers who were working in different places around the world because, ideally, we could take all the undergraduates to different labs and they could experience all these different things in France, and Australia, and Nigeria, and wherever else, but the logistics of that would be mind blowing I think. So the next best thing was to try and bring those experiences and those people's voices into the classroom.

Alexandra

How did Christine and Ginny implement virtual exchange? Well, the first time, they simply paired a student with a researcher. And they had very little preparation for the students. But despite that, the students were engaged in the exchange. And the results and feedback from the students were very positive.

Ginny Greenway

So the first time round we basically paired each student with an international researcher and gave them a brief of what we wanted as the end product, and then kind of just let them go. They had a session where we prepared them on how to conduct-- how to conduct an interview, what questions might be useful to get open-ended responses and that kind of thing, and some tips on know being polite and respectful, sending emails in a formal but inviting tone, that kind of thing. And then we let them figure out the scheduling with their interviewee and asked them for transcripts back. And surprisingly, for a class of 30 actually, they all, give or take a couple of days, made it by the deadline. And we got some really interesting responses.

Alexandra

In addition to pairing students with a researcher, during this first try they also had students following a researcher on their adventures abroad through the magic of social media.

Ginny Greenway

The other element that was entirely new was following one of the researchers from the lab who was on fieldwork in South Africa. And so they were out there collecting bugs. And they were blogging each week, and putting out photos, and talking about things that had happened, wildlife they'd seen, some flooding that had happened, just really small but authentic things that the students wouldn't have thought about, things like driving a stick shift, or driving on the other side of the road, or these really small things that unless you go that you don't realize this stuff you have to deal with. So I think that really brought it to life.

Alexandra

Students were a little bit intimidated by having to schedule and interview a researcher that they respected and admired. But ultimately, the interviews left a lasting impression on the students.

Ginny Greenway

They seemed to really enjoy it. So initially, they were quite apprehensive about the interviews. That was the sense I got from them. I think they couldn't quite believe that they just had to go and do it, that we weren't facilitating it more. But we wanted them to each have their individual experience.

And scheduling a Skype interview in and of itself is something that is a valuable skill, because the job interviews and things like that, talking to a stranger via Skype is really helpful. And I mean, I still find it a bit scary so I can understand where they were coming from. But once they'd done it, I think the transcripts we got back were really, really great. And at the end of the semester each semester we have an anonymous focus group. And so during that, we asked what they liked and what they didn't like. And pretty much all of the students raised the interview as like the highlight for the semester.

So that was really encouraging, because it was a high input exercise organizing all of these different people who they could contact and talk to. But I think it paid off, because it did have such a big impact. And a lot of them, I think some of the quotes we got were that these were people that they'd never be able to speak to in their day to day life or have the chance to outside of this facilitated interview. So that was really great to hear.

Alexandra

Once Ginny and Christine had their first run with VE, they refined their process and were able to help students feel more prepared and ask better questions of their interviewees.

Ginny Greenway

So in a later iteration the second time around, we did the interviews just through logistics were done in groups. And so each group was reading a scientific paper. And then they contacted the author who we'd already checked would be happy to be interviewed. And so they could talk specifically about that one paper and ask any questions they had about I didn't quite understand why you did this, or what this statistical thing meant, but also how did you collect the data, what was it like while you're doing fieldwork, what was the general context, the international context that surrounds how that data was collected.

Alexandra

Ginny started out by identifying possible research collaborators. She discovered that people are generally excited and eager to share their research. Then she matched students to researchers in their area of interest. And finally, she helped students prepare for their interview.

Ginny Greenway

I guess we started off with this theme for the course that was the benefits and challenges of international research. So the students were primed with that as something that, at the end of the semester, they would be writing a reflective essay on. So then when it came to the interviews, we found people either through contacts of our own or through our professional networks, some people on, say, science Twitter is a great place to send out that I can appeal for people who'd be interested in being involved just with a Google survey or something like that.

I know Skype A Scientist is a kind of fun thing that people are involved in where you can sign up and you talk to high school students or elementary school students. So this is a little different, but people are very willing to talk about their research. Often the five of us who were co-instructing this course, people we knew who were doing fieldwork or were working abroad. I obviously had an advantage being from outside the US, so I managed to find quite a few people who I'd met through grad school and at conferences and things.

And we tried to get as wide a geographic spread as we could. I think we ended up with interviewees from 12 countries. But it would be great to get even more diverse people involved. And then we had them in a spreadsheet. And we tried to match students with people who were working in the sort of area that they were interested in. So if they were more interested in zoology versus disease prevention or something more human focused, we tried to match them up as best as we could.

So the interviewees have agreed to participate. The students have been paired with them. And we give them then this hour in class where they practice interview techniques and refining the questions they're going to ask so they go into the interview with at least five or so questions that are open ended and should get some decent responses.

And then we have a little thing that they can read at the start to say to ask permission to record the interview so that they can then transcribe it. And everyone so far has agreed with that. And we check in advance that that's OK just because we need to check that the interview happened. In case there's any issues, we have that recording as well. And then the students transcribe it. And they annotate it and pick out specific quotes that they could use in their essay or that are particularly relevant to the topics, the benefits and the challenges of the research that was done.

Alexandra

The students are graded for the interview process they used and their participation in the interviews. However, the most important aspect of this work for the students is the end of the semester reflection that they submit.

Ginny Greenway

They were graded but it was more of a participation activity in that because they were all fairly high quality and the questions went well. And also you can't really legislate for the interviewee not being for a comfortable or not giving these long answers. Sometimes that wasn't the student's fault. If they had someone who wasn't fully engaging with the questions, then you can't really penalize them for that, because it wasn't the course based on great interview technique.

They get a grade that unless there's a problem, they'll get fairly much full marks for that. But then, yeah, when they reflect on it and synthesize the information they've gathered into their end of semester reflective essay, that's worth a third of their course grade. So that's where it comes into play where we see have they actually thought about the responses they got and how have they fitted it into their experience with the rest of the class and what they've been doing.

Alexandra

The greatest impact to students is that these interviews, as Ginny says, broadens the student's horizons and provides them with a global research perspective. Science is connected to culture, people, and society. And these virtual exchanges bring that to life for the students.

Ginny Greenway

I would say the main and quite simple thing it's done is literally broadened the horizons in which the students are thinking. A lot of the time the feedback we get is that I haven't even thought that this would be a problem, or I hadn't even considered that this would be different outside of the US. And I think that's why virtual exchange is so great in a science context, because I mean the students but often the public think that science is both abstract but also completely quantitative process that's done outside of the realms of the society it happens in.

And we know that's not true, because, you know, politics and things like that are currently having an impact. But I think making the students aware that of course science is happening at UF and we really want them to get involved in it here, but it's also happening outside the US and around the world. And there's a lot of things that are both opportunities but also things that we need to be thinking about carefully and critically.

So the opening statements in a lot of their reflective essays are that they hadn't really realized that this was even something that could be really important, because they literally just haven't really thought about it.

Alexandra

There is no one size fits all model for virtual exchange. Instead, it should be aligned with the course objectives. And that alignment will help determine who, what, when, where kinds of details for the virtual exchange for your course.

Ginny Greenway

I would say, yeah, if you're asking students to have interviews, or to start communicating with people outside of the classroom or virtually, that you want to leave it a couple of weeks so they get more comfortable and they're a bit more clear on what the aims of that exchange are, especially if you want them to get something specific out of the interaction rather than just an open ended sort of discussion.

But also there is benefit in having them do it fairly early on so that they can think about the things that they discussed. And particularly if you want to revisit the virtual exchange, in our class we only had them do the interview once so it was a one time exchange, but obviously they could have more of an ongoing interaction where maybe they don't need to Skype so frequently, but they could have more of a back and forth.

And we could revisit some of the questions at the start at the end and see how their perspectives have changed and they could develop them further. It depends on the activity you're using and the goal of that interaction as to when you want to do it, if you want to do it at the start to get them really thinking, or if you want to save it if it's a one time thing towards the end of the course when the students have more of that perspective and that critical eye.

Alexandra

Planning for implementing virtual exchange gives an opportunity to add in practice. And practice helps ensure that students can be successful. This practice also helps students gain interview skills and confidence before they jump into the actual interview.

Ginny Greenway

I think it was just from a confidence perspective because we were asking them to do something that was a bit into the unknown. And so the fact that they had at least this sheet of paper that they had their questions on, and they got affirmation from us that these were good questions, and that they should, if all goes well, get good responses, I think that helped especially because they were already having to do the scheduling themselves.

I think definitely having a session where the students can talk to each other, make a plan, get organized and you know that they've got organized because they've been doing it in class rather than fully sending them off to try and figure out themselves makes it a lot easier. And also I do feel some responsibility towards the interviewees, because they're doing it as a favor.

Alexandra

Virtual exchange can be quite challenging to organize. And the most difficult aspect to organize any new activity is really the process and protocol planning. But once the process is in place, it can continuously be refined, making it smoother each and every time.

Ginny Greenway

It was fairly difficult to organize, if I'm being honest, especially the first time round where we were developing the protocol and finding these interviewees that we were pairing with each individual student in the class. And finding 30 interviewees was ambitious. And we did manage it. But in future, and actually we have subsequently got the students to do the interviews in groups. And that massively cuts down on the number of people we need to organize and the number of moving parts that are involved, because there's just less interviews involved. And so we have to worry less about the scheduling and making sure that every single person has managed to find a time that works with their interviewee.

Instructors aren't the only ones who have to carefully organize activities. In fact, it's important for students to learn to organize their time and energy. And virtual exchange can help them develop those skills. There's always a couple of students that don't quite understand the level of organization required. And they see it as an assignment. And so they think, OK, I'm sure if I email the night before, this person will be happy to do the interview the day that the assignment's due. And that happened a couple of times, especially the first time round.

Despite us asking that they CC us on an email to the interviewee a week in advance at least, there were still people who were leaving it to the last minute and only then realized that they had left it too late. And so that happened a couple of times. And I think it's just this transition from the mindset of just doing assignments as part of your course to, OK, no, you're dealing with someone who has a job and is doing something else and is probably busy tomorrow, so you need to actually fit this into their calendar. And just I think realizing that took some students a little longer than others.

Alexandra

Some students struggled with timidity, which made the interview seem daunting. But once they completed the interview, they saw the value and appreciated the opportunity.

Ginny Greenway

Some people mentioned in their interviews and in their effective responses that they were quite shy. And they actually were surprised that it went well. But they did find it more challenging than others. And we did say you're not graded on how good your questions are or how freely you're talking to these people. It's just getting the information out of them that's the important thing. So no one did approach us, but I think we could probably work around it and they could do it by email or some kind of other form of exchange if it was something that they were really uncomfortable with,

Alexandra

Ginny offered some quick tips for getting started with virtual exchange. First, she suggests to have the confidence to try something new, even if it doesn't go right the first time. She also suggests to have a backup plan, something else to do if all else fails.

Ginny Greenway

I think it's quite a daunting prospect from the outside, and especially when I was thinking, OK, I need to organize this interview. And we need to find all these participants and thinking of all the things that could go wrong. A lot of those things didn't go wrong. And they didn't go wrong the second time around either. So part of it is just having the confidence to take the leap and just see how it goes. And as long as you have some infrastructure in place, and some logistical framework, and some checks to make sure that nothing can go too wrong, I think it's worth taking the risk because the rewards pay off.

The other advice would probably be to have some kind of backup plan, because they might well go wrong. You might be Skyping someone as a class-- this has happened to us-- where the connection was just so terrible. And we'd set aside 20 minutes to do the Skype. And it was literally impossible to hear what was going on because I think there was some kind of storm. And yeah.

We tried. And it was becoming clear that it was not going to be a very productive experience. And that's fine. It just means that you need a backup plan where you're like, OK, we're going to call this quits for today. We can revisit this. In the meantime, here's this other activity you can be doing. And I think it's really encouraging that the students don't see that as like a failure on your part. You can emphasize the technical difficulties and the logistic issues of this international communication and that things are still not seamless.

Alexandra

The result is definitely worth the effort. Ginny recalls an interview that left its mark on her students and her.

Ginny Greenway

One of the interviews was with someone who was collecting data on the Ebola outbreak at the time on the ground in the first 20 days. And I think-- I mean I was amazed at reading back the transcript. And it had a massive impact on the students, I think. Because you read it. It's very dry. And it's these were the questionnaires we used. These were the things that we did. Here's some graphs.

But then when you speak to the person who was actually there collecting the data, and hearing about her frustrations, and struggling for funding, and really being so passionate about it but also being brutally honest about what it was like, I think, was really eye opening. Maybe not inspiring in terms of them wanting to get out there and do that now, but inspiring that she was so dedicated to it and really, really cared. And there was a very much human aspect to what she was doing even though it was written up as a scientific manuscript.

Alexandra

Ginny loves to see her students engaged and excited. And virtually exchange can help her achieve this. Most importantly, virtual exchange helps to widen students' perspectives and allows them to see the big picture behind the research.

Ginny Greenway

I guess that it's just been really rewarding for me seeing it from their perspective, the difference that it can make, and the change in perspective that they can have over such a short or a relatively short period of time and just with a few assignments that by the time they get to their reflective essay and by the time we have their anonymous focus groups that they are suddenly expressing these really nuanced opinions and these perspectives that have clearly been influenced by all the different materials that they've come across during the course of the semester.

And I think that's something that they'll take with them whatever they do, whether they go into science or whether they do something completely different. I think having this slightly widened perspective and taking into account that things are very different in different places and that what they've experienced might be what happens in Florida but that they're aware that things are very different elsewhere-- I think that was the most rewarding part for me.

Alexandra

Thank you for listening to this episode of "The Teaching Beyond The Podium" podcast series. We're happy you joined us. And we hope to see you next time for more tips, strategies, and ideas on teaching and learning at the University of Florida.