Respondent 10 Interview

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**SUMMARY KEYWORDS**

plant, people, students, important, science, degree, year, question, prac, problem, biggest barriers, understand, curriculum, approach, lectures, understanding, applied, Gary, evolution, masters

**SPEAKERS**

Megan Roberts, Respondent 10

**Megan Roberts 00:00**

Okay, so I'm just going to ask you a couple of questions. And really, I just want your opinion on them. So don't stress too much. I'm really just looking for your opinion.

**Respondent 10 00:05**

Usually I'm full of opinions so, maybe that'll be alright then.

**Megan Roberts 00:07**

There are no right or wrong answers.

**Respondent 10 00:08**

Okay, cool.

**Megan Roberts 00:08**

Okay, so my first question is, is plant blindness or a lack of interest in plants a problem in your institution?

**Respondent 10 00:37**

I think if you are looking at the institution as a whole, then yeah, I think it is a problem. If you're looking at who we specifically come into contact with, then it's not too much of a problem. Just because, you know, everybody's studying plants. So, everybody seems to have a general appreciation for plants. But I do think that plants are undervalued, and people don't really understand them. That well, so yeah, an institution, I think there's a general problem.

**Megan Roberts 01:16**

Okay, and in first year students specifically.

**Respondent 10 01:19**

The problem with that is that I don't deal with first year students. So, I have very little experience with them. But I would think it's also a massive problem. So, I haven't seen it for a couple of years now. But for a few years, probably five or six years ago, all of a sudden, we were getting vet want to be that came over to our degree, which was applied plant, which is applied plant and soil science. So, they didn't actually know that this route existed, and they want it to be a vet and then they moved over to plants. So, in that way, I would think in first year, there's a general lack of awareness of plant-based careers. And specifically, for us, it would be agriculture. And I was chatting to some fourth-year students, probably about two weeks ago, and they also said they weren't really aware of the degree and the option when they came to university. And then from getting some exposure in first year, they then moved over to plant based and agriculture. So, I think in many ways, students coming into first year, just don't understand the career options involved in agriculture, because that's where I'm coming from. But I suspect it would be exactly the same for botanist or typical plant scientists they just are not aware of the options. And you know, how to be an accountant or a lawyer, or chemical engineer, or even a vet, but you're not too sure about what what's available for plant guys. So yeah, I'll also give long answers. I'm sorry about that.

**Megan Roberts 03:00**

Its ok, the longer they are the more useful they are to me.

**Respondent 10 03:04**

It's locked down fatigue, not seeing people and I talk too much.

**Megan Roberts 03:09**

My next question to you is, do you have issues getting students to enroll for your plant science degrees?

**Respondent 10 03:16**

I guess the answer to that, if you put it simply is yes. And our enrollment is very low. It could go up a little bit more definitely. And the perception of our degree from outside is often very strange. And you speak to some of the students who have friends across different faculties. And, you know, they get called gardeners by these guys thinking that you doing a plant-based thing, and you must be a gardener, which is often very far from the truth. And so, they don't really understand what the degree involves. And so, then people don't, don't want to study it. And I think there's also very bad perceptions around agriculture, that you work in a field and you plant stuff which is also incredibly far from the truth. So maybe I can put it this way that there's a complete lack of understanding what the degree actually involves and what the career opportunities are in that specific degree. And I would suspect exactly the same applies to the plant sciences when people are not exposed to it. And so they don't want to study it because they see it as not a good career opportunity, and that they won't earn lots of money, and they'll stick to the traditional path where, are they less likely to get a job, So I think we do have issues and, and we found a couple of years ago, and we went on a massive marketing spree tried to send a lot of the matrics letters, telling them about the degree and exposing first years and we were able to up our numbers a bit so that is really, really important to actually get good information out there so that people understand what the degree is actually about. So, I think what's hurting Plant Sciences is maybe just perceptions and not really understanding what the degrees are all about.

**Megan Roberts 05:20**

Okay, thank you. My next question is, do you think a first-year plant science module should have a narrow approach covering a few concepts in detail, or a broad approach touching on multiple concepts within the field?

**Respondent 10 05:47**

I'm trying to think about this one. You know, that I suppose is these two schools of thought that could be from this one is that, you know, if you a narrow approach, providing a really good foundation for future years, could be quite good. So, focusing on these principles that will support your degrees going that degree going forward. But I think maybe the other school of thought, in terms of having the more general approach and touching on a few things, and making sure that the students are exposed to a wider range of things could be much more beneficial in terms of making sure that the students see something that they might find interesting, and not everybody's going to find the same thing. Interesting. So having a, maybe a slightly more general approach, could interest more students, but then designing it so carefully, that you still are covering the basics, because, you know, maybe, from my point of view, and I'm not a specialist in education at all, is, you know, that that's like, sort of like a pyramid approach. But as you move up, you are doing much more specialized courses, and therefore it's narrower, and it's more focused and targeted once you've got the students into their degree. So maybe I would in favor of a more general approach, but very carefully, designed so that you still covering some of the basics. And having something that the students can see that, you know, that that the applied nature of some of those, those things so it’s not just, you know, theory and theory and theory, and not understanding the relevance of all that work, and then tying it up together so that there's a nice theme running throughout the course, and peaking the students’ interest in showing that wide range of careers and opportunities available. So, I’m not sure if that helps. But I think a more general approach, but a very carefully designed approach could work wonders for just getting students interested and seeing the wonders of plants rather than a very narrow approach with lots of detail. Where students just get overwhelmed. And think if I... First year for me was a long time ago, but it was very much trying to get, you know, things that would interest you and think "wow, that's very cool." And then wanting to learn more and go further. Otherwise, students just get overwhelmed. There's so much detail that they're just not too interested. Yeah, I think first years have also changed quite a lot since I was there that was like 20 something years ago.

**Megan Roberts 08:37**

You think that by doing it this way, we could potentially help spark interest in plant science and help enrollment results?

**Respondent 10** 08:48

Yeah, I think so. Suppose you know that the target for what we should be doing is getting, you know, creating good graduates that are needed outside of the university, and all sorts of ways. And so we need to up our numbers, because I think, you know, especially for us. There's still lots of job opportunities out there from an agricultural point of view. And but you don't want to exceed that number. So then you become totally irresponsible and you get like 50 students, and you can only find employment for 25. You know, that market. But I think it's important to pique people's interests and to show them that there are other options available, they won't necessarily take but just to help them appreciate the world around them in the wonder of plants, which is very easy for all of us that are lecturing. Because if we Yeah, if we weren't, if we're not interested in what we're doing, then why the hell are we lecturing. So I think sometimes we take that for granted that this is so amazing that everyone should be interested in but I think to expose first year students to the range of opportunities out there by carefully, you know, doing a curriculum and that I don't know that I don't know how to do that. But to show them what’s available because if they're not getting that at school, they're not getting that kind of career advice, in terms of the sciences and the plant sciences from, from career guidance, whatever, at school. And I think that'll be really important and to show how everything fits together as well. Because, you know, the thing that, that I realized very late, towards the end of my PhD was like things I never thought was relevant when I was studying like, oh, why the hell am I, an agricultural scientist and I have to study physics and chemistry this is rubbish. It was my perception as a first year. But I use I've used physics and chemistry so much since then, and, and to try and show the students from, you know, from first year how everything links together, and how important it is to have this understanding of everything. So, from a basic, you know, from just the basics of photosynthesis, because that's, I love photosynthesis with just the basics of photosynthesis, how important it is, for everybody in the world to have photosynthesis happening. So, I can ramble a lot, but I think it will, it will help quite a lot. It's both at the same time, you don't want to give them such a little bit such a broad overview that they actually don't achieve anything at the end of the day. And so, and to sometimes I think, you know, to have a little bit here, a little bit, a little bit here, and don't see the interconnectedness between those different things could also be problematic. So, I think the first-year curriculum is an incredibly hard thing to get right. And I'm very glad that people are doing this, I think, Gary Stafford, I know, Gary well I was I studied with Gary, he's also been pushing quite a lot for this as well. And obviously Angelique has well. And it's, it's really, really good exercise. Because I think often what, what happens with us, all of us is that we're so busy. And when our lectures start, just do the same thing we've always done because it's the easiest thing to do and struggling for time. And to go back and take time and reflect and think carefully about what would be a better way of going at this. Sorry, my dogs. Okay.

**Megan Roberts 12:33**

Okay, thank you. My next question, I'm going to just post part of the question in the chat box, so that you can read it.

**Respondent 10 12:50**

Okay. Sorry just give me one second, I'm coming back. Come back. Sorry. I can Yes, sir.

**Megan Roberts 13:05**

My next question is, which of the following concepts Do you think should be incorporated into a first-year plant science module? evolution, pathways and transformation of energy and that information flow exchange and storage, structure and functionality systems?

**Respondent 10 13:27**

How many can we choose?

**Megan Roberts 13:29**

Well, you could go through all of them, and then tell me why you think that they would be a good fit.

**Respondent 10 13:42**

Okay. And, yes, structure and function, I think, is really important. And to also link for students to link this is this is what it looked like. And it looks like this, because there’s a specific reason for that. And I suppose structure and function will, will link really well to evolution how things are like they are, because there has been some form of evolution along the way. And then things like, yeah, pathways of transformation of energy and matter is also, yeah, I’ve never heard it put that way and its normally really nice in terms of plants, it's just, it's incredible, how energy is transferred, transformed into matter. So that should be also, then really important you've got the structure you've got the function and how do these pathways then make sure that you're able to actually build something. And then information flow exchange and storage. Also, incredible because, plants, unlike animals are so different, we always give these human characteristics to plants, which they don't have and yet they're able to protect So much about the environment and change, you know, and that would reflect things like exchange and storage as well, and how they can grow. And then systems at the end of the day, which would be probably the last step, and all those things, from individual plants, how does everything fit together so I might not have them the same order. They look good for me and they look, it looks like higher order things that you can link them all together and have this pathway at the end of day. But in every single one, you can find really good examples to show the students the importance of knowing these kinds of things. I think that's also really, really important is that students don't just learn this stuff, it's about the applying it, and understanding it, and the importance of knowing that. I was always frustrated by, you know, learning stuff, why the hell do I have to memorize the stuff it’s much better if I can understand it, try it and see why it's so important to understand that stuff. And I think with all that, all the work that's done in our department, the research that could be really good examples, every single one, to really understand the final end point and how that information is actually used for us to better understand our environment, and the implications of that.

**Megan Roberts 16:28**

And if you had to pick your top two.

**Respondent 10 16:35**

My top two because I am what I am, I think, structure and function and pathways and transformations. Really understanding the makeup of plants and how they function, and then how that the importance of that energy and matter. I know that a lot of people, and it depends on who you speak to as well, because we all have our own pet interests. And things we think, are important, because they are important to us. Lots of people also say evolution, I am one of these few people that actually have never been exposed to a lot of evolution. And we weren't taught that, I did botany first year, in Maritzburg and we didn't do much evolution at all. But if you speak to Kenneth, or you speak to Gary, they will say that that was critical for first year. And it probably is because you consider the diverse backgrounds that the students come from not too sure, you know, how, what how well they were taught that, or, you know, how well they were exposed to it. And then the negative connotations for some people when it comes to evolutions. Could be, sorry, I told you I'd give you long answers, I got to be critical.

**Megan Roberts 17:58**

That's okay. Like I said, the longer the answer, the more I have to work with. That's fine. So, of those, then is there anyone that you think would maybe not be ideal to put into a first-year module?

**Respondent 10 18:13**

It's a difficult one to answer. Because I think that the main the main question, did you go, were you around for Prof, Prof Uno, last year at all or had you not started your masters? Yeah,

**Megan Roberts 18:32**

I was.

**Respondent 10 18:33**

What I, what I really enjoyed about him is that he was less is more. And you don't want to overload them with so much information that, you know, it's just too much. And rather than get them to master the basics, you know, if I think along those lines, then maybe this is too much. It's all relevant. But maybe it's too much. Maybe at the end of the day, I would say because for me if I'm thinking about trying to think about as logically as possible systems is the final step for me. So, then I would think that maybe you would want to not include systems if it means I'm just going to include too much. My worry is that it's not it's not that it's not relevant it’s that You might be just giving students too much and then they're not going to master it. Can you just give me two seconds? I'm just going to try sort out my little Boston.

**Megan Roberts 19:29**

That's okay. No problem.

**Respondent 10 20:09**

Okay, sorry, I'm back. I now have a bag of treats so everything should be alright now.

**Megan Roberts 20:14**

lucky dog.

**Respondent 10 20:17**

I still think she knows if she barks so much gets lots of treats, and she's quite clever. So anyway. Okay.

**Megan Roberts 20:25**

Okay, my next question, I'm also going to post a section of it in the chat. So, there it is my next question. Which of the following threshold competencies Do you think should be incorporated into a first-year plant science module, the process of science, the interdisciplinary nature of science, the integration of science with society, communication, collaboration, understanding and interpreting data and quantitative competencies?

**Respondent 10 20:53**

Okay, let's try this one, um, from, from what I can link, I teach 4th years. And in the final semester of their, of their degree. And some of the things that I see that, you know, it's a little bit concerning when they in fourth year is that things like the process of science, and understanding and interpreting data, they struggle a bit with those things, sometimes you think sheesh is, you know, you guys have had four years, you know, why can't you do that? So, in many ways, you know, you would want them to have a foundation whereby that for the rest of their degree, they can have some ideas. And so, understanding how science works. And I suppose you can incorporate it quite well, with all those things that you have given above those, those what evolution etc., yeah, you know, understanding, you know, the process of science, or how did they find out these things? Well, it's based on, you know, hard evidence and things like that. So, I know, I've been shut down by my colleagues, because I also think that students should have more of the philosophy of science, and they get to a masters and they don't really know that the philosophy and the process of science which is, which is problematic, and I also remember, get it getting a really good lecturer in my fourth year, and also in the final semester, my fourth year, but he gave us really good advice about you know, how to write a good essay. And I mean, thinking to myself, my word, why couldn’t we have heard this earlier, why did no one tell me this much earlier in my degree it would have helped so much, throughout that. So, if I'm looking at my, my experiences, and, and what would have helped me like things like process of science, understand and interpret data, and quantitative competency, would be really, really important in order to help you in the next couple of years, so getting a really good foundation, so that the end of the day, you are much more equipped to deal with, as you know, as the courses are meant to get a little bit harder, and a little bit more in depth. And that becomes really important. And then things like you know, integration of science with society and communication for me also sometimes go a little bit of hand in hand, I try and get my students to understand how important it is for them to be able to communicate with society as a scientist. And, you know, I think COVID has also really shown us how important it is, you know, that link between science and society is critical, because you have people that are spewing all sorts of you know, lies basically about COVID and if you don't have a science background, you can't necessarily understand, you know, why things are false or not. And so, that could also be also really, really important to understand the role of science and society, I suppose that's something that should be done in every single course. But maybe you know, that the foundations at the start should be really about understanding the process of science, understanding interpreting data and quantitative competency from my point of view, the problem with some of those things, you know, understanding interpreting data, probably very, very difficult to do if you have a class of 1000, I don't know what BOT 161 enrollment is like, but I suspect it's frightening. And then you know, to try and help them with those kinds of things can be quite challenging if you've got so many students, because you just a number. But I suppose you can do it quite cleverly, if you are able to support a lot of these topics and with data and explaining how the data was used to reach conclusions and things like it. Yeah, it's sometimes so hard for me to, to think yes, what's most important because all of it is important, but I think, yeah, need to try and target different levels as you move through. And it's a really good process for lots of us who've been teaching for a while now to think about these things much more carefully.

**Megan Roberts 25:41**

Do Would you be able to pick a top two out of those?

**Respondent 10 25:50**

I would, I would say my top two understand and interpret data and process of science.

**Megan Roberts 25:58**

And, and one that you think is maybe not so important to put it a first-year level?

**Respondent 10 26:14**

Now, maybe collaboration that can definitely come later. Sorry, Charlie is just going nuts. Otherwise, I must actually just kick her outside.

**Megan Roberts 26:33**

Don’t worry it’s not a problem.

**Respondent 10 26:46**

Sorry, Megan. I'm really sorry about this.

**Megan Roberts 26:48**

No don’t worry.

**Respondent 10 26:59**

Okay. I'll move away from her.

**Megan Roberts 27:06**

Dogs do make life interesting.

27:08

Oh, she's, she's, she doesn't like other people. She’s a funny little creature, she's barking somewhere else as well. This recording is going to be interesting.

**Megan Roberts 27:25**

I can still hear you so, I guess, looking. Okay.

**Respondent 10 27:27**

Okay. I've tried to put my earphones on so that I'm a little bit clearer. Oh, she's just unbelievable today.

**Megan Roberts 27:40**

It's really not a problem, don’t worry.

**Respondent 10 27:42**

Okay. Let’s carry on then.

**Megan Roberts 27:45**

Okay. My next question is, have you ever heard about vision change before I contacted you?

**Respondent 10 27:57**

About what? Vision change?

**Megan Roberts 27:59**

Vision and change.

**Respondent 10 28:01**

Vision and change? No.

**Megan Roberts 28:04**

Okay, um, thank you. That's fine. So, vision and changes, basically the sort of like concept that we're using to look at remodeling first year curriculum. It's something that we got from Prof Uno, and, yeah, so that's basically what it is. Okay, my next question. What do you think the barriers to changing a first-year curriculum will be?

**Respondent 10 28:42**

Yes, I think the reality of the situation is, in many ways that we many of the lectures are completely overloaded. So just capacity is, is an issue. And so, it's easier to carry on as is, you know, maintaining the status quo than to change. And so, I think probably, in some ways, the actual people are the often the biggest barriers, and just sort of just thinking about myself, like, these big changes require a lot of time a lot of thought, and often we just so busy with our research and post grad students and stuff that we don't give this enough thought. So, I would think people's time is a massive problem. And then just, you know, different people, and I'm not, I don't have a lot to do with the lecturers and plant sciences. We in the same department. We don't, we don't get together that often. But I would think that there are personalities that might be resistant to change as well. It's worked. I think sometimes it's worked for X number of years. Why do we need to change it and then I think that a very dangerous thing? If just because it worked 20 years ago, doesn't mean it's going to work now, unless there's always room for improvement. So, I think those would be the biggest barriers. because it requires humans to be implement it. I think we are the biggest weakness and the whole system. And just, you know, oh sheesh, academics can be very difficult. Some of them are not some of them can be extremely difficult and you spend so much time in your field, that you can become, you can get some people, not everybody, but you can get blinkers on and like this is what is important because it's my field, and it's only thing that's important. I think that’s very, very dangerous. I've seen it, I've seen it in the past and not at UP, but at other places where the biggest barrier to moving forward is because two people didn't like each other. And, and that they only there for a short period of time. So, to be brutally honest, I think the biggest problem with might be personalities.

**Megan Roberts 31:16**

Okay, do you have any suggestions as to how we might overcome these challenges?

**Respondent 10 31:23**

I think I think what's really exciting is that there's lots of young, younger academics around that can make positive contributions to this. I think it's really about selecting the right team to tackle these issues. And, and yeah, having the right person in charge as well. So, you know, having a guy in charge that is able to deal with big personalities and be very democratic in many ways, then, subtlety push things in the right direction. So, you need you need a guy with a broad overview, and, and a lot of patience to drive these things. With the right team, I think it's incredibly possible. And I think, now, just, I know Gary pretty well. So, I think Gary's got a really good, broad perspective on things. And I think someone like Kenneth although Kenneth lectures too much. And Gary's probably also overburdened, they could be the right people, and then just, if everyone's willing to contribute, no matter who they are, then I think it has a good possibility to succeed. And it's actually, you know, it's really exciting, this kind of change and thinking about it very carefully, I think it can make a massive difference to plant sciences, at UP, be it the pure sciences, and in the applied agricultural sciences as well.

**Megan Roberts 32:54**

And lecturers specifically, do you think they'll have any kind of resistance to this change?

**Respondent 10 33:05**

I think, with the right approach, you can get buy in from everybody. And I think as well, making people feel included, can go a long way. So, I think people just want their opinion to be taken into consideration. So, it just means that sometimes, yeah, academics to be we all are like children at times said soft approach that says, okay, that's a great idea. Thank you for it, we appreciate it, and then how to move forward. And I think just by getting the right person in charge, everybody will be willing to make a contribution and try to move it forward. It’s just about I think structuring it the right way so that people don't feel like their opinion doesn't matter. Because otherwise what happens is you put a lot of effort and energy into these things. And then you told Well, sorry, it doesn't really count at all, and then you're not prepared to, to do it again. And I think, you know, making sure that everybody feels included, would go a long way. So just from an agricultural point of view, like we are often we tried to get access to first use a while ago, just to give them some, you know, experience of agriculture because people they just don't know about it, and they don't know what it's all about, and that they see it as just planting plants. And we couldn't get access. And we struggled. And if you know, just including some of the Agric guys, you know at the end, the end user sort of thing is we are the applied guys that use so much applied knowledge to actually generate food. You know, if we are included like that, then you know, it's just an example we'd be super chuffed and it's just, it's just about finding the right people to help, yeah, with the right attitude. And yeah, just trying to be inclusive. It's just wonderful. It really does make people I think want to participate more, that's just from my perspective as well. I think it's, you know, I'm very much in favor of this whole process, I think it's a, it's a wonderful thing to try and do, and it's going to take a lot of effort. But at the end of the day, the rewards could be, could be massive.

**Megan Roberts 35:39**

What do you think could potentially be a good selling angle for us to motivate people to be willing to take part in change?

**Respondent 10 35:52**

I think, yeah. Are you talking about lectures involved?

**Megan Roberts 35:58**

Yeah. All lectures, management, everyone?

**Respondent 10 36:03**

Yeah, I think the key is understanding the benefits. And having, you know, key like, specific, saying, if we do this, the potential outcomes, are XYZ, and I think increasing our numbers, is vital. You know, I know we are sort of alright, in terms of the Applied Plant and Soil Sciences degree, and just getting reasonable numbers, not great. But you know not too bad, but plant sciences, from what I understand the numbers are so low and so you know the immediate benefit of this would be more people interested and perhaps targeting even better students. We faced often with, in agriculture, with that, you don't get the time of the crop. And but yet we often need students, for example, with excellent math’s skills. Now we have that opportunity of attracting and I think, at the end of the day, I remember that my supervisor said to me that the title professor means that you profess your vocation, or your discipline to people, so that's what we actually should be doing, is getting people interested in our discipline, and because it will benefit so many people in the long run. So, I think, you know, that I'm, I'm very much someone for the greater good. And to be involved in this, this pretty much for the greater good. So hopefully, that angle will work. It's not going to work for all people. Because, yeah, academics is a set of funny people sometimes.

**Megan Roberts 37:49**

Okay, thank you. Then my final question to you is, how important do you think hands on practical sessions are for a first-year plant science course?

**Respondent 10 38:05**

Its um, it's easy to answer difficult to implement. I think it's critical. I think that we don't do enough technical in a university degree, and that's, a lot of it now, is a matter of numbers. And so, when I was an undergrad, we had a prac every afternoon, I think I had every second week I had one day off. So, we had hectic pracs, but was because it was smaller. And our botany pracs were, were excellent. And we did a lot of stuff. And it was challenging. And I think it's really, really important to have those hands-on experience. Not that not the same practical as University of Technology, but to actually, you know, have a microscope, look under a microscope, see that structure and function. It's critical. But then at the same time, the logistics become an absolute nightmare. And so I think they might be clever ways of doing it. But I think if you can do it, then you should just so that they can get some experience, I remember chatting checking to some of my, my masters students and they, and I'll be I'll be straight up, they were white kids that came from fairly good schools, and yet, they had never done any experiments at school. They didn't have the equipment or the teacher to do it. So, they hadn't even done simple things. And coming from, I came from a school, okay, it was many years ago, but I came from a school where we were doing small practical write-ups. We had an introduction, materials and methods, results and a discussion, we had to do those things at school. And it just, it helped me enormously at university. So, you get some kids come into in first year, and they don't do any pracs because there is too many of them but they've never done it before, so I think to try to bridge the gap between such diverse schools you need to try and get these guys some kind of practical experience. University is not the place to make up for school deficiencies in an ideal world, but we don't live anywhere near that ideal world at the moment. I think it's important that, I would like to be the logistical person for that.

**Megan Roberts 40:53**

Do you have any suggestions as to pracs that we could potentially run or skills that you think are particularly important to put into the pracs?

**Respondent 10 41:07**

So, off the top of my head, you know, I mean, something like, like microscope work would be really important for first year students, especially with structure and function to actually, you know, look under a microscope and see things. I remember doing that, first year and we had such great prac demonstrators, like, put up my hand all the time. And then they would come and explain it and draw stuff and say, look for this look for that, just that experience is really important. I’m just trying to think. I'm not sure what else I think it would, would have been one of these things that you give a hang of a lot of thought to would be, you know, it needs to be a practical prac, some kind of hands-on experience as well. And then related to the topics, very carefully. To put that topic into function as well. Off the top of my head, the only thing I can think of is a little bit of microscopy work, which is pretty rubbish, because there should be much more available. But I think this is when you know getting a team together to come up with ideas and looking at especially seeing as we've had such a rough year, how can things also be done cleverly, virtually, to give them a little bit of experience, but then putting some of that into action where I actually use my hands and actually have to look and find and see and yeah, that's not much of a helpful answer.

**Megan Roberts 42:44**

It's, um, it's definitely something to think about.

**Respondent 10 42:49**

Yeah, without a doubt I think, I think there's so many, and COVID has really shown us online teaching is clever ways of doing things. So, you know, don't make them do a prac just because they must do a prac. Make them do something that really fits in with the curriculum, and, and it is targeted to really help them learn. And in many ways, it's targeted to make that top 10% learn because, you know, a lot of kids are not going to care either way. But if you can capture that top 10% or 20%, then sheesh, you've got, then you're really winning, if you can get people excited about plants and excited about a career opportunity out there. Because I think there's so many opportunities in plant-based degrees that are not your typical science things, and people can have really good careers, and in a plant based, yeah, and a plant-based environment and do really well for themselves. But yeah, there's so much variety out there that people are just not aware of.

**Megan Roberts 44:02**

That's very true. Okay, so I don't have any more questions for you. Do you have anything that you would like to add? Or any questions for me?

**Respondent 10 44:15**

Sure. So, is this your Is this your first or second year of your masters?

**Megan Roberts 44:21**

It's my first year of my masters.

**Respondent 10 44:23**

Okay? And then are you going to be involved in this whole process of trying to really design the curriculum or you just documenting it and trying to assist it?

**Megan Roberts 44:35**

I'm trying to assist it. Um, so all of this is going to end up hopefully being helpful to Angelique and Gary. When they, you know, as they're doing it, and then it will also be part of my master's.

**Respondent 10 44:51**

Okay. Are you enjoying it?

**Megan Roberts 44:53**

Very much.

**Respondent 10 44:55**

Okay. So, what was your what were your majors? I gather you were a plant science student?

**Megan Roberts 45:01**

Yes, I was undergrad ecology and I did my Honors in plant science, also under Angelique, my project was the plant blindness project.

**Respondent 10 45:15**

Okay, okay. Yeah. That's great. And if you are working with Angelique and Gary. I think you've got good mentors. It's really, really important to work with good people. And, yeah, hopefully. Are you meeting with Gary? Seeing as he is stuck overseas?

**Megan Roberts 45:38**

I have yes. Yeah.

**Respondent 10 45:41**

That’s awesome hey. So, it's so nice to have a Master's degree with a real tangible outcome, you know, this could be changing things for years and years to come, which is pretty cool.

**Megan Roberts 45:54**

Yes, that's something that's very important to me. That whatever I do mean something. So. Yeah,

**Respondent 10 46:01**

That's awesome. It’s a nice position to be in, it's a very nice position to be in.

**Megan Roberts 46:09**

It is.

**Respondent 10 46:11**

Cool beans.

**Megan Roberts 46:13**

Okay. Well, thank you very, very much for your time, Nicky. I really appreciate it.

**Respondent 10 46:19**

It's not a problem at all. I'm always happy to help with these kinds of things. And also, I learned a lot from being involved in these things as well. That's really important.

**Megan Roberts 46:30**

Yeah. Okay, I'm going to