Respondent 7 Interview

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**SUMMARY KEYWORDS**

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**SPEAKERS**

Respondent 7 , Megan Roberts

**Respondent 7 00:00**

Good. I've got a Word document. Well, in fact, the word document that you sent me, I've added some notes to that. So, I'll email it to you, as we done also might still updated as we go.

**Megan Roberts 00:13**

Okay, that would be great. Thank you. Okay, so we're basically just going to go through the questions and just basically have a discussion about it. So, my first question is, is plant blindness or a lack of interest in plants a problem in your institution?

**Respondent 7 00:34**

Yes, it is. And I think this touches on the second question also, the first reason I'd say it's an issue is that we've have low plant science enrollment. I think, even though there are better job opportunities in plant science than in, for example, zoology, you know, we just have this massive discrepancy in the number of students who are majoring in plant science versus, for example, zoology. And then the second answer, the second part would be this, I think this is an issue, because there's low enthusiasm for the botany modules. You know, we often see the enthusiasm develop in a small group of students during the semester. But at the start, it feels like, there's not a lot of enthusiasm from the majority of the class. And I would attribute that to them just not appreciating the importance and the diversity of plants generally.

**Megan Roberts 01:37**

Okay, and can you think of maybe, do you have any potential reasons as to why there's that lack of appreciation?

**Respondent 7 01:49**

I don't think they've been exposed to plant science slash botany, I don't, I don't know what's in the school curriculum. But from what I've heard, it's fairly limited. And as often, if I think back to my high school curriculum, which I know is now not what’s taught, it was all like, you know, this is a chloroplast. This is a, whatever it was not. It wasn't touching on the stuff that's exciting. And it also was taught in a way that wasn't relevant to society, or to conservation or to medicinal use is really just like, plant anatomy, which in a way is, I think, the hardest thing to make it exciting. And yeah, sorry, I forgot what the question was. What's the reason for the lack of enthusiasm?

**Megan Roberts 02:43**

Yeah. Do you have a reason?

**Respondent 7 02:45**

Yeah. And I think I think this the whole thing of just realizing that plants are the foundation for life on Earth, and for plants, drive our economies that drive our societies that, that understanding that appreciation is missing. And just the idea that, you know, being able to once you can identify three or four plants and you start realizing how diverse they are and how many there are around us. That I think gets people excited, and that is lacking.

**Megan Roberts 03:24**

Okay, so my next question is, then do you have issues getting students to enroll for your plant science degrees?

**Respondent 7 03:32**

Yes, we do. Very low enrollment. The dual majors I think, have helped a bit but, for example, in my specific field of ecology, we're expecting to have a lot more zoology plant science dual majors, and we just don't, I think it was like, one last year, and I don't know if there are any this year. I can't think of top my head of any this year. So yeah, it's a big issue.

**Megan Roberts 04:02**

And do you attribute the, you attribute that low enrollment to the lack of interest?

**Respondent 7 04:10**

Yeah, lack of exposure, which leads to lack of interest.

**Megan Roberts 04:16**

Okay. So, my next question is, do you think a first-year plant science module should have a narrow approach that covers a few concepts in detail or a broad approach that touches on multiple concepts within the field? Yeah, so I would argue that maybe we should have a bit of both. And I think that broad approaches are more valuable. But the students have to have the foundations of the narrow approach, the broad approach to make sense. So, there's no point in talking about structure and function because students don't know. You know what a compound leaf is, what trichomes are or something like that. And so, while I would say the broad approach, the students often lack the foundation to, yeah, they need they need also the information that comes from the narrow approach before they can start benefiting from the broad approach. What is it that you like about the broad approach specifically?

**Respondent 7 05:25**

I think as we shift away from memorization-based teaching, you know, the idea that you can find whatever information you need on Wikipedia really or in your textbook, even. The broad approach is teaching more the thinking and the integration of the knowledge rather than just the knowledge itself. Learning that's a far more, valuable skill than memorizing facts that you don't need to actually memorize. And it also helps us to link different fields, different subjects. Yeah.

**Megan Roberts 06:09**

Do you think that following a broad approach would potentially help with the interest and the enrollment?

**Respondent 7**

No, I don't think so. I think I mean, so you could argue two ways you could argue that we go with the broad approach, and the students who do the module get super excited later, all their younger friends used to do this module? It's awesome. So that's a potential way it could work. I don't imagine that's really the case. First two modules are kind of set, there's so little choice in what you taking. I think, however, it might be a way that once they're enrolled, once they're taking the module for them to enjoy it more or to see its relevance more, and then potentially to consider switching to a plant science major, or dual major. But, so I wouldn't, I wouldn't forecast massive shifts in you know, who's registering for plant science. At least not initially. But hopefully it would just kind of help them and help them be more excited during the first-year botany module. Yeah. Okay.

**Respondent 7 07:36**

So, maybe to add to that, I think what might convince people to shift across more to plant science degrees, is when they understand the societal relevance and understand the jobs associated with it, I think that would be my guess, we'd have more people responding to that rather than just, you know, whether we having broad, broad teaching or narrow teaching.

**Megan Roberts 08:04**

Okay, so my next question, which of the following concepts Do you think should be incorporated into a first-year plant science module, evolution, pathways and transformations of energy and matter, information flow exchange and storage structure and function systems?

**Respondent 7 08:24**

Because I've got the questions open in front, you don't need to you can just say like, question four or whatever if you want. Okay. Yeah. So (missing audio) provides a framework within which we understand structure and function. So, you know, understanding how plants develop herbivory traits, for example, that kind of fits nicely to structure and function and systems. I think we could argue that all of these concepts are important, and it's maybe just the trade off to decide which one needs attention at first year level in which is given attention at later stages. So, like, one could, I'm sure, like a strong argument that evolution should be incorporated in the first-year module, but equally, there's no reason it can't be incorporated in later years, for example. So, I think it just really comes down to what fits best in that module, all of them need to be taught at some stage. And for me structure function and systems make the most sense. But yeah, they're all important.

**Megan Roberts 09:47**

Is there any one in particular that you would not think should be taught?

Yeah, I don't know that. The information flow, exchange and storage are a little bit fuzzy in my head about what exactly that was. I mean, I remember when I looked at the, whatever it is the vision document, I remember being Okay, that makes sense for plant science. But, like off the top of my head, that's probably the one that I'm a bit like, yeah, I can't remember what it was about and therefore, it's probably not super relevant.

**Megan Roberts**

Okay. So then, next question, question five with the threshold competencies.

**Respondent 7 10:34**

Yeah. So here, again, that all have value. And it's probably just figuring out which fits best to the first-year level. And I'd say that D and E communication and collaboration is not what not well suited for big first year classes. Like I think those work much better at third year level, F and G understanding and interpreting data and quantitative competency, I think are also likely to be challenging for big classes. But they are so essential that I think they would have to be at least touched on. So, for example, in the island, biogeography prac, there they do some interpreting of data. So that you know maybe as much as what they would, there's probably that level is as much as what one could aim to teach them. But yeah, in terms of what should be in I think process of science is important. But I think the sooner they get that, the better. And integrating science with society makes a lot of sense for first year module. But equally, I don't think that C needs so much time since plant science is pretty obviously important. Once the basics are covered, you know, we like it. 10 lectures about the value to science, I think it's like, one lecture, hey, what you eat, all comes from plants, you know, what you breathe, all comes from plants. And, and then that only leaves B, the interdisciplinary nature of science. Which I kind of feel is maybe not super appropriate for the first years but for this module, since it's got the broad scope, it might actually lend itself well to interdisciplinarity. You know, if this was just an anatomy module, then I would say don't worry about it for first year, but since this is going to be the whole scope of plant and soil science in a way, maybe interdisciplinarity is actually really suitable here.

**Megan Roberts 12:41**

And if you had to pick your top two of those, which would they be?

**Respondent 7**

A and C I think, process of science, the integration of science with society.

**Megan Roberts**

Okay, and then I think you did already answer this. But if you had to pick one that should not be picked, or should not be put into a first-year module?

**Respondent 7**

Yeah, both D and E, communication and collaboration, I think we can teach those well for massive class.

**Megan Roberts**

Okay. And then I have a question, six we've already answered. Question seven. Have you ever heard about vision and change before this?

**Respondent 7**

Yes, but that was only from Prof Uno’s visit, that was already within the context of the recurriculation.

**Megan Roberts**

Okay, cool. Do you think it's a good? Or a suitable way to look at changing the module?

**Respondent 7**

Yeah, I think it's suitable. I think there are probably other frameworks that are equally suitable, but it makes sense. And I've got no problems with it.

**Megan Roberts**

Okay.

**Respondent 7 13:55**

I mean, we should probably be applying it beyond one module to the whole degree, but Okay, one at a time.

**Megan Roberts 14:04**

I still have a PhD to do Pete. Okay, um, question eight, the barriers to change?

**Respondent 7 14:13**

Yeah. So, I think that the first barrier is getting the work done, um, so convincing lectures to do the extra work of redesigning the content and identifying if it is like Gary and Angelique that are leading the process, just for the topic specialists to put in the work and they're thinking it's maybe still a challenge. And then for me specifically, giving up direct access to the first years of is a bit of an issue. Mm hmm. In other words, I have to trust my colleagues to represent my field. With the same passion and enthusiasm that I have, in other words, I have to trust that they are going to do the hard work to recruit students into my discipline that I would have done. And obviously, there's a bit of a tradeoff there because yes, is less work for me to do with the first years then, but it also means that ecology as a field has got a less strong voice saying to everyone, this is exciting. Yeah. Be aware of it. So that's a bit of a that's a bit of a challenge. A bit of a hurdle. Yeah.

**Megan Roberts 15:45**

Okay, and do you have any suggestions as to how we might overcome these? Question nine?

**Respondent 7**

You're not really, I think that the obvious one is, we need time to work on the content and to identify the key topics, etc. Just because COVID slowed everything down. You know, we're like, three months behind on everything. Yeah. Yeah. But otherwise, that's kind of it. I think part of it is as soon as the department kind of committed to doing this, then the barriers don't really, then the barriers are just hurdles, we have to get over them. That's not that nothing is going to stop the process. I think that it started. So, it really is just how do we get across the challenges faster? Yeah.

**Megan Roberts**

Okay. And then question 10. Resistance for lecturers specifically?

**Respondent 7 16:47**

Yeah, I think it's I think it's the same answer. Really. I don't, I think we've committed all to the process now. So, it's going to happen. And it's just that it might be slow, because this has been a crazy year, to get all the bits and pieces done that need doing.

**Megan Roberts 17:09**

Okay. And then question 11 a good selling angle?

Yeah, I mean, I think if we need to convince people why to do this, the potential that we will recruit for plant science. But like I've said, I, you know, I think there are other ways that might be more effective, rather than recurriculating. But I think those will hopefully be part of the curricululation, or the idea that students will see the relevance to society, and therefore they'll actually understand more clearly, the employment potential, etc. And otherwise, I guess, the good selling angle is, maybe there'll be less lecturing work in the future, I don't know. And maybe that's where, you know, things like whether it's going to be continuous assessment, or whether it's going to have an exam, etc. You know, that could be kind of a good selling point, if we can argue that there's going to be less work for us. And I know from the last meeting we had, I think Gary was arguing that there'll be less work in the future, even though there's more work immediately now. Yeah. But I mean, I think, again, it's a case of we know that the first module now is a bit outdated. We, I would say that it's fairly obvious that it's not maybe not exciting enough to really grab the attention of the students. And then, you know, the motivation is actually just presenting a better module that attracts more students with this gives them more excitement and enthusiasm for botany.

**Megan Roberts**

So, in, in your opinion, do you think that it, the module does need to be recurriculated or at least revamped or redesigned in some way?

**Respondent 7 19:22**

Yeah. And I think having a coherent... So, one of the issues now is that I mean, I haven't sat in on anyone else's lectures. But you know, I look at the way that for example, the medicinal plant science questions are asked and biotech questions are asked, and that's just because they before and after my theme in the module, and it is so different the way that they asked questions, the way that I ask questions, and I think the students must be like, wow, they're doing a different module. Every time there's different expectations there's different content. And I think when we start integrating the content, and maybe integrating is too strong a word, but once there's a clearer story running through the module, once there's a clear connection between the themes, and I help students follow it up, students see what's happening. I think having fewer lecturers will be better for continuity. I think it'll mean the same style of teaching the same standard of teaching, hopefully, across everything. I think we could have addressed all of those within the current form of the module, but we weren't addressing them. So maybe that's one of the benefits of this, is that we're also addressing this idea of it not being five separate themes, but rather five components to one module.

**Megan Roberts 21:04**

Alright, then my last question, question. 12 pracs? How important are they?

**Respondent 7 21:10**

Yeah, I think a hugely important, and not just pracs, but actually, like you've said the hands on pracs. And I know That's ironic, because the prac that I've designed is a totally virtual prac, but it's still at least gets them doing, doing an experiment in a way. And this is this, this is the same thing that you know, Michelle and Kenneth, and I believe about this BOT 251, we have to have hands on practice, we've shifted them from being completely guest lecture pracs, to being more than I think next year will probably be 60% hands on pracs. And I think it's incredibly important, especially for first years might be their only experience. I mean, I still remember from my first year pracs, that's now more than 20 years ago, getting a pineapple and having to figure out what parts were what fruit parts and flower parts and things like that. So, I think that's massively important. And that, in a way really connects us with the plants that we interact with daily understanding what's a leaf, what's a stem, what's a flower, etc. I mean, in my first year pracs we had to draw sketches of everything, which drove me mad, it was, it was very boring and very difficult for me as someone to can’t draw that I do still remember the hands-on aspect of it. And I think that's something that you only get when you're holding, you know, when you're actually doing rather than being told. And I think we've got so many opportunities for hands on practice, it frustrates me that we only have six pracs. In the module. Yeah, I would what I would rather see a weekly prac and less lectures, for example. But yeah, I think the hands on pracs are fantastic and essential, and they need to be part of it.

**Megan Roberts 23:24**

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

**Respondent 7 23:35**

Yeah, so I mean, I know there's been an identification key prac that's been previously used. But I think that's really nice idea. I don't know how efficiently and effectively it was run and I don't know how it was assessed. But I think that's important we do it key prac also in our second year, we can see that the students haven't grasped it from the first year. And that doesn't necessarily mean that the first year prac isn't well run. But it at least means that it's really important because even after the first year one we still need to do it in second year, again to make sure that they grasp it. And we're keen to keep the island biogeography, prac running. Otherwise, I think the pracs to just deal with identifying plant structures, seeing them in real life. I don't know how you assess those in a way that is creative, but I think that's really valuable. And then, of course, we've got the whole Botanical Gardens, we've got the whole experimental farm. So, there's lots of opportunity for students to interact with plants or different growth forms, different sizes different, you know, illustrating all of the different structures or the different types of functions.

**Megan Roberts 24:58**

Okay, Thank you. That's it from me for questions. Do you have anything that you want to add or ask?

**Respondent 7 25:11**

No, I'm all good.

**Megan Roberts 25:13**

Okay, cool. I'm going to stop recording...