Respondent 8 Interview

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**SUMMARY KEYWORDS**

students, plant, module, year, problem, question, crops, university, science, difficult, people, important, practical, experimental, bit, agricultural, motivate, link, terms, second semester

**SPEAKERS**

Megan Roberts, Respondent 8

**Megan Roberts 00:01**

Okay, so what we're going to just do is I'm just going to ask you a couple of questions, we can have a discussion about it, and then that'll be that.

**Respondent 8 00:14**

Okay.

**Megan Roberts 00:15**

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

**Respondent 8 00:27**

Okay, so I've basically from two sides. So, if we look at a little higher up in university, so senior management, so we often have a problem that they will go and they will take a drive through the experimental farm. And there will be crops growing, and so forth. And they will come back and they will tell us, but there's nothing going on the farm, all they see is plants, but there is no activity. So, in their view, if there's not people involved, then the plants don’t matter. So, I feel that in terms of the higher management, there is a problem. But also, if you look at students, specifically, so we are more into agriculture, students know that if they're going to study agriculture, they're going to have to do with plants. So, I think from our students’ side, there is not really plant blindness, it's more that they are uncertain about what will be the job opportunities for them, if they do take something into plants. So, I think that's also maybe things that is of a concern for students that do plant scientists just a normal BSc. It's just the uncertainty of what can you actually do with a job like or a degree with that? And so, I think that's, that's my viewpoint. So yes, they are in the institution as a whole higher up. But if you go lower down to where we actually working with the people that are interested, then I don't think there is really a plant blindness, especially since we are also having most of our students will come from farms in any case, so and they grow up with plants and animals and such.

**Megan Roberts 02:16**

Okay, and in the sort of general student body, do you think that plant blindness is a problem there not specifically that maybe the students that you deal with, but the general student body?

**Respondent 8 02:34**

Yeah, I think so if you, yeah, I don't have too much to do with them. But I suspect that it will be a problem, especially if you think of schoolchildren that they don't know, where certain things come from, it's a clothing from cotton, or whatever the case might be, and sugar from sugar cane. So, I think in that case, yes, I think if you look at the general population probably, there will problem like that.

**Megan Roberts 03:04**

Okay, do you have any particular reason as to why you think that the people higher up would feel the way they do?

**Respondent 8 03:18**

I think it is more to do with management is more to do with making sure that the university is running properly. So that is good income, and so forth. So, and things that doesn't make money is not something that is of interest to them. So, they can see that on experimental farm, for example, they can do a lot more that can bring them high income, and, for example, setting up the future Africa. And that's a good investment for them, because they know that they can generate money from that. And so, in that process, that they hold the specific area, they destroyed some of our facilities, for example, and some of our some of our plantings, so orchids and so on. So that’s just basically to show me that they don't really care about the crops, they don't see the crops as something that's important that it will feed him or that it's basically needed for the future.

**Megan Roberts 04:35**

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

**Respondent 8 04:46**

Yes, but I think it's not to do with this... the plants, it has to do there’s a few things. So first of all, at school level there’s not really good guidance, in terms of counseling to what's the different degrees that you can take at university level. And therefore, and I think they will probably more concentrate on the highest paid and well-known opportunities. So, I think they said lack of introducing this specific plant based and degrees to those students. And then also, there's not a good guidance in terms of what can you actually do with the degree. So, what's the job opportunity. So often, people will say, yes, you have to go back to farm because you have to go plough and plant. And that's not what we are about. So be more about the science of the crops, and how can we manipulate the crop in producing optimally, so more about the chemical reactions, and that sort of things to get the crop growing and producing. So that's the one side, so it's the school level, we have a problem that it's not well represented. And then the next problem is probably the worst one. And that's the parents. And so, if you look at our second-year students, so first year, we probably start with about 20 students, in our second year, we fall to maybe five. And then we pick up again, because its students coming from especially engineering side, so a lot of the farm this, especially the guys that come from the farm, their parents want them to go into a high paid opportunity job like an engineer. And then they don't cope in engineering, and they come back, so the parents have a big influence on what the student will study. And even if there's, the student is not really interested in that specific field, they are forced to do that. And then later on, after two, three years of failing, whatever they are doing, then finally, the parents will agree that they can come over to agriculture or then plant production. So, the parents also they tell the students that, first of all, there's no job opportunities. Your grandfather is a farmer and just look all the problems that he has that sort of thing. So, it's a very bad perspective about what is the degree about, so that's the parents side? And then especially when the learners or the students come to university, they also have a little bit of an uncertainty, and what is this degree about? And also, what is the job opportunities, or even maybe bursary opportunities that are available? So, I think it's more to do with information than actually students don't want to, to do their degrees in plants?

**Megan Roberts 07:58**

All right, thank you. I didn't realize that your enrollment was so low, especially on a second-year level. And I knew it was low because they're all low, but I didn't realize that it was quite that low.

**Respondent 8 08:15**

So, we do pick. So, from that, first we pick up to again about 10. So, I would say in general, we will end off with about 10 students in the second year 10 in the third and 10 in the fourth year, sometimes we will go up to 20. But that's that is exceptional years for us. And then there's another one that also that limits the number of students that come to us in terms of you all know, you also know that there's agricultural schools, but in agricultural schools, you can still come to university, you can still take the right, do the right choice, and you can come to university. But the problem is again, guidance for those students. So, they will love agriculture, they would like to come to university and do agricultural further. But unfortunately, they are given the wrong advice at school level. So, they take the wrong mathematics, or they just take biology, they don't take the science side, or they do agricultural subjects and not the science subjects. And that all will prevent them from studying further so they have to go to TUT and other places where you don't need a university umm, wats n vrystelling nou in Engels? You know what I mean?

**Megan Roberts 08:34**

Yes, acceptance. Okay, so my next question is, do you think that a first-year plant science module should have a narrow approach covering a few concepts in detail, or a broad approach that touches on multiple concepts within the field

**Respondent 8 10:01**

Okay, so that's what I struggled a bit with, it's quite difficult to answer. So, my feeling is that it might not be this or that. So, it might not be the broad versus you can only do the one and not the other one. So, I think there will have to be a compromise between the two. So, you will definitely need some specifics. Just quickly, also get bookmarking this quickly want to open a document here. And so, for example, you do need certain things in terms of the narrow approach, you can't go without those. But it's not to say that you have to do all of those, and you may not do the others, the more then you may not take any of the broad approaches together with that. And it has to do with that you have to think of what is building up on your subject. So in the second, third and fourth year, what are the students doing, that they need your subject for? So, based on that, I think that will give you guidance into should you go more for the narrow? Or should you also include some of the broader aspects that you need to teach the students?

**Megan Roberts 11:24**

Okay, do you think that your particular area should be should have a place in a first-year plant science module? Do you think that we should have a section teaching crop sciences, pasture sciences agricultural...? That that whole area, do you think that that should be incorporated in some way into a first-year plant science module?

**Respondent 8 11:51**

I think most of it is already in there. It's just the way that you link it. So, I think that, um, I know that Gary and Angelique have spoken a lot about it to us. And the examples they want to use, for example, is things like sugar cane, or some of the medicinal plants or so forth. So, this is all the things that we need, are taught, it's just that the students don't only see how it is linked to the society, how it's linked to their daily activities, or living. And the one thing that I think is not in there is the soil swell site. Because none of the plants can survive without soils and nutrients. I think that's the only thing that if I think that's the part that needs to be included, into a subject on the first year. So no don't need they don't need to do a lot about crops, just as long as they can see where the structure or the transportation of sugars or whatever the case might be, how does that fit into crops that they're going to meet later on in their career, and then also, maybe definitely incorporate something about the soils in nutrition? I think there is water in there. But I think soils and maybe nutrition, especially I think the nutrition came out only a little bit later, I can’t remember now what happens in the second year, but yeah.

**Megan Roberts 13:29**

Okay, thank you. Then 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 transformations of energy and matter? information flow, exchange and storage structure and function, more systems?

**Respondent 8 13:56**

So, I think that was one that I also struggled with in this. I think it was also that it's very similar to three that you actually need to think about. Who's the students that are in your class, basically, and what will they need to be able to go on into the second and third of whatever years. And so, for example, in agricultural plant production, human quality, and our product or produce is very important. And so, if you don't have to understand pathways of transformation of energy structure and function systems and that sort of things, it won't be difficult to adapt to agricultural practices like irrigation and fertilization, due to a change in environment change to due to Climate change. So, if you don't have the basics, it will be difficult to, to be able to apply that knowledge. And to make sure that the plant can still function, although the environment might not be the same as it was 30 or 40 years ago. So, yeah, so to answer you, information flow, exchange and storage, I think that can come maybe later on and think that's really needed to be part of the first year. And my feeling is also that it might be part of some of the other first year modules. So, I think there's also a question later on about the, I can’t remember now where it is, but the main thing is that, BOT is not in isolation in the second semester, and you also have genetics and you have ZEN, I think those are the others are probably going to be something like chemistry and so forth. But I think especially in genetics and in ZEN, there can be overlaps. And I think it's very important that in a course like this, that we should also find out for the new BOTs, we also have to need to find out what is actually presented in the other two. So that maybe we don't need to include everything, because some of it is already included already in the first year. But just in another course. So, and it might also be things like, I know a lot of this, the schoolchildren these days have to do a little trial at home. So, I think there are already some things that having come to that school level that that one has to take into consideration that they Okay, we assume they know it. And we just have to refresh the memory, we don't need to go through the whole process again, because as soon as we tell them about something, they probably will start to remember what they were taught at school level. So, I think that's my feeling is that we should just make sure that we don't try to do too much in that first year, because there are other years also that will follow up. And more importantly there are also other subjects. And I'm not sure what they do in MLB 111 in the first semester, and some of the other modules. But I'm sure that some of those aspects can also be included there. And so, from my side, I would say, pathways transformation of energy structure and function systems and that sort of things. And that might be more important for our field of study, while information flow exchange and storage and that sort of things can come a little bit later on.

**Megan Roberts 18:04**

Okay, thank you. And this brings me to my next question. Which of the following threshold competencies Do you think should be incorporated in a first-year plant science module? The process of science, the interdisciplinary nature of science, integration of science with society, communication, collaboration, understanding and interpreting data and quantitative competency?

**Respondent 8 18:37**

Okay. My answers very similar to the others. And it's, again, it's not that some of those competencies should not be taught in the first year. We should rather ask what can be left leave out until later. And, and that's, again, things like process of science. I think that that will be something that they will be seen throughout in the first year. And in the nature, the interdisciplinary nature of science. I think, again, it's not something that you need to instruct them on, you just have to make them aware of it just to maybe a practical something just to show them. What is the How does different subjects link up to what they want to do in the end, let's say, plant medicine or plant science? How does chemistry and that sort of things link up to that? So, I think it's more to do with just showing them links in certain things and integration of science to society. I think that might be one that is a little bit more of importance, because that shows the direct linkage to the daily lives. So, I think students tend to learn more or to remain remember better, if they can see how things fit together? How can it affect themselves? So yes, I think that one is its important communication, collaboration, that sort of things. And I think that definitely later on, they're going to get more and more. And I know in certain of the programs they already have in the second year, they have a, it's a communication module that they do in this, I think it's in the second year in the second semester, if for our specific program, they do it in the fourth year, I have a whole semester of presenting, writing, presenting and presenting and that's communicating their research and collaboration. Yeah, that one is a little bit difficult. So, it's probably a little bit weary about that one, because often students will have a strong student and weakest students in your group. So that can be a little bit of a problematic situation. So again, on first year level I'm not quite sure if it's really necessary to introduce that already. Or to make a big issue of that. And as I said, just introduction can be fine. And understanding and interpretation of data. Quantitative competency, I'm not quite sure what you mean by that one. But let's look at understanding of and interpret data. And again, I feel that the students from school level already they have been introduced to this. And it is not something that we have to re teach. It's just something that we have to give a little bit of attention again, in terms of a practical or just reminding them what it is about and how it can be done. So yeah, so the last one, I'm not quite sure what you mean by quantitative competency.

**Megan Roberts 22:10**

Quantitative competency is, it's very similar to understanding and interpret data. It's basically just being competent in doing statistics, in being able to understand statistics and what it means when you run certain tests on your data.

**Respondent 8 22:30**

Yeah, you see, I think for those two, that the things that can come a little bit later, because I think initially, there’s so much that they need to just get to reminded about first of all in the first year, and that, in any case, the third and for the BSc in the third year, the BSc Agric in the fourth year, they will in any case, have to do it. And so, they will have them all get introduced to it later on. So, it's probably not necessary to do it in the first year already. One can just again, give an example. And leave it at that.

**Megan Roberts 23:15**

Okay, and if you had to pick your top two that you think are probably most important, what would they be?

**Respondent 8 23:23**

And I would say integration of science with society. And yeah, and maybe umm... interdisciplinary nature of science.

**Megan Roberts 23:41**

Okay, and one or two that you think should definitely be left out of the first-year syllabus.

**Respondent 8 23:49**

Okay. I think the last two the understanding and quantitative competency.

**Megan Roberts 23:57**

Okay, thank you. So that answers question six as well. All right, so my next question. And have you ever heard about vision and change before this?

**Respondent 8 24:13**

Yeah, and you also know that Prof Uno was here last year? And I also think attended that workshop, so yes.

**Megan Roberts 24:23**

Do you think it's a good or a suitable way of going about recurriculating the module?

**Respondent 8 24:33**

Yeah, I think it's, it's a difficult one for us to, to understand and to follow at first, but as soon as you get a little bit more exposed to it, and you understand the terminology, and what they actually want to do with it, yes, then it becomes much easier and it also makes sense to do it that way.

**Megan Roberts 25:05**

Okay, thank you. So, my next question, what do you think the barriers to changing a first-year curriculum will be?

**Respondent 8 25:23**

As I've said, for previous question, the main thing is a lot of new information, especially for us who has been teaching for 20 years plus. So, we've still been doing it the same way. So, we were used to certain terminology that has been used now suddenly, there’s... So, every time, so every year, basically, there's new terminology. Now, there's another set of terminology and concepts that you have to get your head around. And so, I think that's the main thing is that it's the unknown, that makes it difficult. It's not something that we do on a daily basis. So, it takes also time to actually think about these things and actually put it into practice in the end. And so that's the one thing that I would like to say, and then the other thing is, will it still be relevant later on. So, as I've said, it changes. So, if you've been to university long enough, I think goes in cycles. So, something will be very important when one Rector is at, at the steer, and then that person goes away, and then it goes down again, they then it, we go to a new, a new way of thinking, and then that person suddenly Gets a bright idea and we do something else. And then think 15 years later, then we go back to what the person 10 - 15 years back has told us. So that's one thing that makes it difficult to change. And because you know that what you do today will change tomorrow. And we'll be back in three that three weeks’ time. So that's, that's one of the things that makes it difficult at university. We know that things come and go and come back. So, it's if you change something, you have to re redo it, in any case, later on so that's one of the things. And so yeah, so change in itself. It's difficult, and will it change into three years? Again? So, what what's the problem then? And then the other thing is, coming back to more the curriculum side is what's what I'm going to introduce now in the new bot? Will it still be relevant for the courses that are the modules that follow up on it? Will, they give enough information, that I can just refer back to bot 161. And the students know exactly what's going on? Or are they going to leave something out now. And now I have to incorporate it suddenly in my module and take extra time to spend on something that I assumed they had already done in the in BOT. And yeah, so that's some of the things and then also, we don't want to do too much in BOT 161. So, we don't want to include everything. And then students, in any case, have so little time to spend with each specific aspect. That, that it's not really working for anybody. So yeah, I know, I'm not answering your question very clearly to what you want to want to know. But yeah, some of the things are just changes, especially with the university, since we know what happens in university. So that makes it difficult for us to change the whole time. And then also, basically, how will this fit in with other modules? Would it still be able to support other modules?

**Megan Roberts 29:36**

Okay, thank you. My next question is then what kind of resistance Do you foresee would lecturers have if this change is being introduced?

**Respondent 8 30:02**

Okay, yeah, I think just okay. I think one thing that might be I'm not sure if it's a in question eight or nine. But one of the things that can also what do you like to come from these challenges and barriers. And so, before we get to the lectures themselves, the one thing that we also have to take in consideration is, as I've said, there is also other courses presented in the second semester. And that is science based. So, we just have to make sure and find out what are they presenting in that module, so that we can just link to that in BOT 161. So, some of the competencies that you wanted to include maybe already presented in some of those courses? So, I think that will make it easier to answer questions three to six. So, what should be included in what should be left out? And if we have the background of those modules, then we can better answer that. And yeah, okay. So that was what I wanted to say, in terms of how can so resistance from the from the lectures, okay, so if we look in the agricultural side of the department, all the lecturers have been there for at least 10 years, and most of us has been there for 25 years plus. Okay, so you can see that some of them, especially the, the staff members that have a lot of knowledge, are almost close to retirement, and to try and now convince them to take on something new can be difficult. Other thing is that, again, to do with uncertainty, so is this going to work? How's it going to work? And will I be able to fulfill in this new way of teaching, so because it's also not only a new way of thinking, but it's also a little bit of a new way of presenting a module. So also using practicals, to also supplement what you want to say, into the mainstream of the lectures. And so yes, I think it is to do with uncertainty, and unwillingness to maybe change, feeling that it's very late in the years that they don't really want to do this. And they maybe have other responsibilities in terms of research that they thought I would like to concentrate on. So, there's a lot of other things that can also cause people to be resistant to this.

**Megan Roberts 33:16**

Do you have any suggestions as to how we might overcome these, this resistance?

**Respondent 8 33:28**

My answer is I don't know. And I think as soon as people see that it's working. And it is there’s positive response from the students, then people might be keener to come in. And I think that the main problem is the place where it is in the semester. So, semester two, is quite a busy time for most of us. And some of us have two, two modules that we present. We have honors students that we are also supervising. So, they have to finish off now of the projects and that sort of things. So, it's quite a busy time. So, I think one of the ways to try and encourage somebody to take on something like this is to alleviate the pressure on them. And so maybe assisting them with somebody to help them with their other activities that they need to do or maybe a rotate activity so that let's say they're responsible for the honors project, or the coordinator for the for the honors, part to maybe rotate that with somebody else or things like that. So, I don't know, I don't know how one can motivate it is basically, it's easier to rather to tell somebody to do something rather than to ask them nicely. Because they might be a little upset at first. But as soon as they're in the scene, then things usually smooth out. So, no I don't know.

**Megan Roberts 35:25**

Okay, thank you. Do you have any kind of idea of what could potentially be a good selling angle for us to motivate people to want to take part in the change?

**Respondent 8 35:41**

no, I've been thinking about that. But I can't think of anything that will motivate the people. And especially I think, now that we've not seen each other for a very long time. I know that most of us are feeling very negative about the whole year. So, I think it's not to do with maybe the cost itself, but just the situation we are all in. But apart from that last year, it was the same problem. So yeah, so I really, I don't know how one can get motivated. I mean, there's no financial benefit that one can offer that will encourage anybody I won’t, even if they pay me a lot of money, I'm not going to volunteer to do this, for example. So, I don't think money is something that you can use to encourage people to come on board. I think it is just too. And we had a meeting, a teaching learning committee meeting the other day with and Quinton, ag not Quinton, Angelique and Gary were explaining to us, what are they going to do? And but they will, but practicals they’re thinking of, and that made me very positive about the course. So, I think maybe if everybody in the in the department is shown what can be done, then people might be encouraged to come on board. So, at this stage, I think it's only a few people that work on this. I think it's mainly Angelique and Gary that works on it. Maybe Prof. Stein works on it a little bit. I know that Leushanta Mudley, she also assisted a bit at the beginning, but I don't think she's involved too much at this at this stage. So. So there's very few people that actually knows exactly what the vision of Angelique and Gary is at this stage. And I think if they can present it in the way that they did at the teaching learning committee meeting the other day, I think that can maybe convince some people to come on board. I think it's basically marketing the module under the other staff members to show the possibilities that they can even include in their own modules.

**Megan Roberts 38:25**

Do you think that we need to change the module?

**Respondent 8 38:31**

From what it is now?

**Megan Roberts 38:33**

Yeah.

**Respondent 8 38:35**

I can't tell you because I don't think I've ever did BOT 161 before or if I did do it, it was 30 years ago. So, I can't even remember what was taught in that. And, but, but I like the BOT So for me, I think we did a little bit of, um, structure and all that sort of thing. So yeah, I enjoyed it. But I, the way that we've been introduced to what they want to do with this, I think change is good. Especially the way that they want to do the practicals I think the hands-on practicals will be very nice and very good. Because these days, you can if you wanted to fix your telephone, you Google it, and there's a nice video, and you can watch it. So, I think hands on practicals will basically be the same. Same way. So, you can actually don't see a video but you can actually see and do it yourself. So, I think either way that people these days, can Google everything and they can see how to do it. And doing it themselves is also very nice. We often have practicals where we take students to, let's say, a nursery or to a farmer or to even just going to cotton SA, for example. And there's also always positive response afterwards because they, every time they learn something new, they can speak to people that are in the industry. And they can see what's the opportunities they are. So, I think that hands on practical there’s always a positive result after that.

**Megan Roberts 40:30**

Okay, that sort of leads into my next question, which is, how important do you think hands on practical sessions offer a first-year plant science course?

**Respondent 8 40:42**

I don't think one can go without it. From first year up to fourth year, there's always a positive response, if you do something hands on. And in our, for example, PPK 251, which is in the second year, they will go to experimental farm, and they will calibrate the tractor, a tractor to spray, let's say, insecticides or herbicides. And that's also something very few of them will ever see or do themselves in future, but it's just something new. Or then sometimes we get people that demonstrate some tractors or ploughs or things. And so that's always interesting for the students, and it motivates them a little bit, because they see that it's not only them studying at university is actually application for what they are doing. In in, in, in the in the world in which they live. So, yeah, I think it's definitely something that we can't not do, we should do it.

**Megan Roberts 41:51**

Do you have any suggestions as to pracs you think we could potentially run or skills that are important for first years to know?

**Respondent 8 42:00**

Can you just repeat the dog was barking?

**Megan Roberts 42:05**

Do you have any suggestions as to practice that we could potentially run or skills that you think are particularly important for first years to have?

**Respondent 8 42:22**

Well, I love the experimental farm. So, and there’s, a lot of things that the students can actually experience. It's close. First, for it's close to the university. So, this is the buses that ran to the experimental farm or to a future Africa. Students can walk there; they can take the bicycles and use that to get there. And so, in terms of getting there should be easy enough. And then, yes, this is a lot of opportunities. One can introduced them, as I've said, to maybe linking it to something that I do in class. So, for example, let's say they use cotton as an example to explain structure and the different ways that the how the fibers develop, and that sort of thing then one can take into the form, and you can actually plant some cotton on the farm, and maybe they can harvest and they can see how the fibers are attached to the seeds. And that will make more sense to them. So, there's a lot of things that as soon as one can figure out what you want to do in class, and you figure out what examples you can use in class, one can then something, go and plant something or organize something on experimental form, to then give them a hands-on experience to see how it works. Or even how you get the fibers out of so let's say we have there is definitely thistle on the experimental farm. So how can you get the fibers out of a thistle plant, and all that sort of thing. So, and it's very quick and easy to do and fun. So, yeah, so I think definitely using the experimental farm to maybe produce some of these crops that are going to talk about all to show them maybe germination, but I think that you can do in your in the labs also. But yeah, definitely there are things as soon as we know what is in the main part of the curriculum, we can definitely apply our minds to develop some practicals that can either be done in the botany labs or on the experimental farm are out in the field.

**Megan Roberts 44:54**

Okay, wonderful. Thank you so much. And that's all from me in terms of my questions. Do you have anything that you'd like to add? Or any questions for me?

**Respondent 8 45:07**

No I think All the best to you,

**Megan Roberts 45:11**

Thank you

**Respondent 8 45:12**

This is not the type of research that I'm used to. I know qualitative research is quite difficult for me to always understand and interpret. So, all the best with that. But yeah, so I am very positive about the BOT 161 or the Whatever the code might be in future. And, and I think when we listen to Angelique and Gary the other day, and I would not mind taking that course myself because they make it sound so interesting. So, I think the students will definitely learn more about plants, and I think they will see plants in another light than they currently see it as just know "ag nou moet ek die selle gaan studier en ek moet nou weet wats in die vacuole en al daai goeters", So I think by making it more and more applicable, and showing them how things fit together, I think that will maybe get us more students in the second and third and fourth years.

**Megan Roberts 46:20**

Okay, wonderful. Thank you so much for your time.

**Respondent 8 46:23**

Pleasure.