

## Exploration phase: Student focus group transcript 05/03/22

Anonymous Participant Code
FFG A
FFG B
FFG C
FFG D
FFG E

Interviewer: Oh well, thank you so much guys for giving up your evening, especially as we started so early and yeah I imagine we will be about an hour an hour and 15 so don't worry we won't be here for hours.

Which is good, so I really appreciate it, we are recording it and I might scribble at different points just if something is interesting or not but don't worry I'm just doing my own little notes. So it's going to be a focus group but it's a bit of a different technique it's called a Nominal Group Technique and basically what we're going to try and do is do some individual reflection. And then some sharing and then we'll have some open discussion, as well. So it's a bit of a mix but we'll try and capture it all, as we go so that's our plan. You've all signed the consent form which is fine, does anyone have any questions before we start?

**<Silence, indicating no questions.>**

Interviewer: Okay excellent, so I think you're all kind of aware, but I'll just let you know so my PhD is an education based research project all about fieldwork teaching. So not necessarily about the subject content but kind of how we teach it and, in particular, looking at how we can make it a better experience for you guys and so to address some of the challenges, you might experience in fieldwork and thinking about how we can use technology to support that.

So I've designed some things but I'm quite keen to get feedback on how they work and your ideas that's a really nice opportunity now to kind of capture what you like about fieldwork, what's challenging; and also think about digital fieldwork and technology and virtual. And what you like about those, and what you don't. So those kinds of things, so a bit of a sounding board as such.

Right and so kind of your first individual question for your post-it notes. If you're thinking about digital fieldwork or virtual field work what are some of the defining characteristics, do you think that it should have? Best practice defining characteristics. Record them on your post-it notes.

**<Quiet as participants record individual reflections.>**

Interviewer: You're very good at working in test conditions. Is this what the taxonomy test is going to be like but perhaps slightly more stressful.

**<Quiet as participants record individual reflections.>**

Interviewer: Someone asked can I take the book home tonight, I was like, I was like please don't read the book tonight have time off.

FFG A: I will definitely. My brain is just frazzled.

**<All participants: General chatter.>**

Interviewer: So just to remind you you're thinking about kind of defining characteristics, best practice and all about digital or virtual field work. You've experienced it, but you might have some ideas yourselves.

**<Quiet as participants record individual reflections.>**

**<All: General chatter>**

Interviewer: What we'll do in a moment, once I see the final scribbles. We will just go around and in turn and I'm just going to record up here what you've got on there. Alright? And if yours is identically the same or pretty much at this stage, you can be like yeah that's the same as mine will give it a tick or whatever, but we'll try and get everything up on here. And in the time being so we're going to value everyone's kind of thought, as we go. Right, so you have to watch my terrible board writing and I'm really short so I'm like this half of the board but we'll see. Do you want to go first? Was it FFG B?

FFG B: Yes, so do I just read them out?

Interviewer: Yes.

FFG B: So, there's explanation.

Interviewer: Thank you

FFG B: And diagrams.

FFG B: Pictures and videos of like the site or equipment, kind of thing.

Interviewer: So that was sites and equipment.

FFG B: Yes that kind of thing. Erm.

Interviewer: Thank you.

FFG B: Demonstrator videos.

Interviewer: I apologize if my spelling is bad. Thank you.

FFG B: And then the other thing I put is just like colour and headings and fonts on the explanation stage so like it's not just blocks of writing.

Interviewer: So, colours, fonts. To kind of, did you say break up the writing?

FFG B: Yeah.

Interviewer: To break up text, did you have any more on your post-it?

FFG B: No.

Interviewer: Thank you, thank you FFG B. FFG C do you want to tell us some of yours.

FFG C: Interactive.

Interviewer: Thank you.

FFG C: Always have a lecture present like either if you're doing it in a room, or if it's like online, you can like talk to them ask questions. And they can keep you, like guided because, if it was just me just online, I'm not sure how long my attention would last.

Interviewer: So, you said lecturer present for questions and also for motivation.

FFG C: Yeah it was like keep you on the straight and narrow or whatever. And I think doing it in groups is quite beneficial.

Interviewer: Thank you. So, group work in the virtual world.

FFG C: And then potentially just have an outline first so you really know what you are doing.

Interviewer: Any more on yours?

FFG C: No.

Interviewer: FFG A, yeh?

FFG A: Yeah so I put like the same as FFG B like pictures and diagrams but I put clear pictures and diagrams because I feel like sometimes it can be not very clear. I also put like a list of equipment, you would need.

Interviewer: So an equipment list. Lovely, thank you for that.

FFG A: And then I put like something else to indicate what it would be like if you are there. So like the weather or something.

Interviewer: So how should I write that?

FFG A: Like just like maybe like a like a little table. Like if it was on a Canvas page a table that had like the weather, the temperature, the conditions and then like a birds eye view of what it would be like.

Interviewer: Okay, so what would make it more real and I'll put some examples that you said so, what would make it more real. And you said weather.

FFG A: Weather and temperature. It's like a, what do you call it? We did one in first year?

Interviewer: Do you mean a 360 one? Like those images that you can turn and manipulate.

FFG A: Yeh you get an idea of what it is actually meant to be like. Does that make sense?

Interviewer: Yes, so things you can like move. Anything else on your list FFG A?

FFG A: No.

Interviewer: So FFG D yeh?

FFG D: Some of these are kind of a bit loose.

Interviewer: That's fine. No No, they are all great.

FFG D: So immersive qualities.

Interviewer: Thank you.

FFG D: So, you want to feel like you're there, instead of you know looking at your laptop screen.

Interviewer: Ok, so yeh that feeling of being there.

FFG D: Yeh.

Interviewer: Lovely, thank you.

FFG D: Erm, they need to be engaging because like FFG C said, like not many people have three-hour long attention span for just staring at a laptop. Whereas attention span in the field obviously is longer. And then I put that it needs to be interactive. It can't just be like; the virtual shore was good, but to an extent it was just, it was just click on some things to look at some pictures. It needs to kind of do a lot of other things, I thought it was lacking. It didn't have any activities per se.

Interviewer: So some activities to do in that virtual environment, very good, thank you. Anything else on your list?

FFG D: No don't think so.

Interviewer: Right FFG E.

FFG E: So I thought, one of the first things was versatility but in sort of two ways.

Interviewer: Ok.

FFG E: So firstly in the way that the software is able to be used so, whether it be multiple different browsers as an option or different devices as an option yeah tablets, computers. Erm, but then also with regards to how the software could then take different sampling methods and show them. For obviously, different methods will have vastly different approaches. Whether it be size; large scale or small scale. So that should, that should be something, that should be able to be done in the software,

Interviewer: Yes, so versatility to do with software devices and access. And then versatility to do with what is being sampled and the scale of what is being sampled.

FFG E: Yeh

Interviewer: Is that a good summary?

FFG E: Pretty much. And then a lot of stuff I mentioned was very similar, but one thing on the photos. Specifically photos and videos.

Interviewer: yeah.

FFG E: I think an idea like, like a scale at the bottom. Or some kind of idea of measurement would be very useful because a lot of times you can get a photo, but it's hard to get a grasp of what the size is in comparison to how you see in real life.

Interviewer: Okay, so, then we're just going to leave them there and we're going to come back to them and, as we go so leave those on there. I've got more of an, I guess; an open question for you next.

And this time I want you to think about in-field fieldwork so you might reflect on some of your field work at the Dove, those day experiences. Or arriving here, the start of your residential fieldwork as well. Erm so it's an open question, you can jump in, someone can start, it's up to you guys. But it is, what are some of the challenges, but also some of the opportunities of your in-person field work?

FFG C: When you say, like in-person, for us, our challenges. Are you looking at us as like a Covid cohort? Whereas we had online or do you just need a general like the challenges that are like or something like that.

Interviewer: Like yeah, I think you've got to reflect upon the experiences that you have had but imagine coming to this field course here what challenges have you perhaps had? Experienced? And what, what are the opportunities of doing this fieldwork.

FFG B: Do you write this down?

Interviewer: No, no, just you can just chat about it. I'm just a listener now.

FFG E: You touched on something there with the weather and obviously one of the challenges is making sure that you're physically able to do all of the things you need to do. Whether it be making sure you have the right equipment, you're not slipping all over the place, getting wet, hypothermia and so forth.

Erm, but that also provides an opportunity to do something that really, even if you have the most accurate online tool you wouldn't be able to do, which is to physically observe, interact with an organism. Erm and there's a lot to be said for understanding, even the tactile, how things feel. Because, that's something you can't really get otherwise. So that's that's a big opportunity, I think, also certain things like understanding, maybe tidal movements and in the case of what we have done today you know, looking at how even over a few meters, the distribution can change based on water level. And that in sometimes it's hard to read in a snapshot or a still. So, having that observing something over time, I find that's quite a good opportunity.

Interviewer: Thank you touched upon some of the logistical challenges to do with the weather. But also some those opportunities; the, the actual tactile; but the immersive nature, of fieldwork and also that temporal change that would be very difficult to grasp in a different way. Lovely, thank you.

FFG C: So it's actually quite more than like a few people killed organisms accidentally like when they were out. That I feel like maybe there's some sort of way to make people more aware that these are actually like living organisms. Like I don't know they just didn't seem very aware of, like they're actions which is like "Oh Okay, I've killed it." And like "What?"

Just like a little bit more thought for like, look where you're putting things. Like just like don't throw the rock. So even like an awareness thing, like and so more about animals pain or something.

Interviewer: So those kind of ethical dimensions of in-person fieldwork?

FFG C: Yeh, definitely.

Interviewer: The impacts that erm, us as a group of students. Get into that, sure might have had that's kind of a challenge, ultimately, and that opportunity.

FFG A: And I think it's also gives, like if you're there in-person. You're more likely to get the opportunity to gain a passion for the subject you are in. Because if you're going to work in this field in the future you're going to need; if you're going to do well in it; like a passion for what you do. And it is different if you're just staring at a pretty photo online, rather than the actual thing. Like it was the first time this morning like a proper fieldtrip. Like it felt very good after a year of not doing anything like that.

Interviewer: What helps you get that passion from being outside? I know it's really hard to put in words.

FFG A: But, just like just like feeling everything. It's weird to say, but like like if you just like typing on the keyboard and looking at our screens it's different from like your hands in the water, like feeling organisms. When you want to do this and that's what keeps you going instead of just textbooks and stuff.

Interviewer: Helps with motivation as well, so that passion from doing it hands on but also helps with motivation.

FFG A: Hmm

FFG C: And also just with the outside thing, like enjoying actually Millport compared to Cullercoats. That gets a lot more types so having like a higher diversity is more enjoyable going into like maybe a more dynamic site is exciting.

Interviewer: Yeah I heard someone on the coach go, "Like why have we travelled all this way for a shore that looks really similar." Like to be fair it does look quite similar, but until you get there and experience it and then you might see different things and to try to understand why they are different.

FFG C: Yeah I was sceptical that it was gonna be different so I was like, "Why are we going?" But yeah, it's really good.

FFG B: Well, in terms of Covid obviously the difficulty in the covid testing and masks everywhere, and that kind of thing. And I can see masks on the floor. So, it's just like littering. So that's a covid challenge.

FFG D: I find it difficult, in just having like obviously we've had some field experience now, it's still not as much as we would have had. So, it's difficult, it's almost like we are playing catch up. So it's something that has been difficult. But I suppose the positive side is that there's no better place to learn now.

Interviewer: This time, almost seems quite precious in away, I guess. You guys coming away.

<All: Hmm.>

Janine: Do you feel like you feel potentially playing catch up? Do you think does it feels a bit more high stakes perhaps?

FFG D: Yes.

FFG E: Definitely, yes.

FFG C: I think a lot more people probably lack confidence, some will be, because there are not confident people. But some will be because of the experiences of covid and have they just had a normal year they'd be like very confident now and competent.

Interviewer: And what about some of your fieldwork teaching. So, if you think about the kind of teaching aspect. What is challenging about learning during fieldwork and what's good about it? What are the opportunities about learning in the field?

FFG E: Well first thing that came to my mind was you're out in the field it's it's in the word right field. It's a large, generally quite open space and so getting everyone's attention is going to be something that's quite difficult. But as soon as you're on the shore straight away people are looking down, looking for things, so the attention is gone. So trying to yeah, trying to keep everyone's attention for

certain period of time would be quite challenging I think. I mean also it's for teaching, it's management, managing all these people. Slipping, people slipping or people going too far, what extent, time. There's also shores such as like they have to be aware of.

And in the sense being in the field from my experience so far has been very open. It's something not very directive. It's been look, for something or go out look for this thing or do an experiment. It's, it's not been sort of handheld through the process. So, in a sense, it's sort of teach yourself right, but obviously there in the background to answer questions. Um but no one's gonna be able to get to every single person, at every single point that they have a question, so it's it's that balance.

Interviewer: Do you think it's a very different way of learning from how you've had other face to face learning at university and other previous experiences?

FFG E: It's entirely different it's it's all to do again with that tactile aspect, that the sense that you're there. But also in every other sort of teaching format it's it's it's long form but it's it's consistent attention over very specific small things i.e. the words that they're saying, or the things they're writing on the screen or a question that's being answered. As opposed to a statement saying go up to the shore and do this and then you're there doing it there's, there's nothing else. It's you, yourself and the field potentially.

Interviewer: What about anyone else with that kind of learning aspect what's challenging about learning in the field? Or what are some of the opportunities of learning in the field?

FFG C: I think it's a little easier to like recall, seeing that don't feel too, so your live experience compared to just sort like passive listening in a lecture. Even if I am making notes for some reason fieldwork always sticks in my mind more. And I'm not sure if this is really a challenge, but like if there's two lecturers and one of them makes like this massive scary deal of ID and one of them speaking is like "Relax and have fun, but you know, this is what needs to get done." I find that's more productive, I'm not sure if that's what you're asking.

Interviewer: No no, it's your thoughts these are valid.

FFG C: I feel like that's important.

FFG A: I feel like fieldwork sometimes can be a lot because it's like the amount of organisms that we picked up on Saturday, that it's a lot.

I feel like in a lecture it is a lot of information that you can look back on soon after like memorize it all if you need to all. But coming from the field you don't have that opportunity necessarily to go back again so it's like much more precious to remember it. And it is a lot to remember and I guess it also depends on what kind of learner you are, but if some people do learn better if they just read things and write down. I mean it's, it's always good to have practice in the field, but for education purposes it, it might not be as beneficial to others as it is to some people.

Interviewer: Those aspects of maybe that are more challenging the fact that you can't go back to things, what you're saying there. And sometimes there's a lot to take in, perhaps there's not those reflection or downtime that say that you might have if you have a lecture and then a couple of days, and another lecture, for example. And it's more an intensive block is that, what you're saying?

FFG A: Yes, it's also is really useful to have lecturers on the shore, that's one thing for example. Having <External person 5> show us a diagram of a limpet, but when you have a limpet in front of you and you look at it and have it pointed at. Also, another way to learn, it very much physical instead of just virtual

Interviewer: Added value even though it's the same thing, but actually that one on one has that added value.

FFG D: Fieldwork definitely feels more more, like you know to get fieldwork wrong now you're more high pressured. You guys said it before I know.

Interviewer: Do you think that's because of covid and your reduced time in the field?

FFG D: Erm it would be like a big contributor so.

Interviewer: Why do you feel that it's high stakes? Is it because you only have got the week? Or is it the fact that it's long days? Or something else? What what makes it feel high pressured or high stakes?

FFG C: I can at least say my point, we did a sort of data collection, my group, but it was for like formative report and two out of three of us, including myself went to the lecture you know made notes, you know I'm happy about this, about this kind of thing. Got out there and like did the wrong thing but it's not like I hadn't engaged previously. So, I think it's quite like scary you can have it, be in second year, have it count and like look at a rockpool and think I'm doing this right. And it's it's not like, and like just hearing that and it's just like. "What? Like, how can I have messed this up?" So, I think that's key I think that had we done something like that in first year I would be a lot more switched on I think it's now, it's just a shame, because it counts towards our final year. But yeah I think there's the other thing that stressed me out was was actually a lot of people seem to make that same mistake, like it was a cohort thing. So, it makes you wonder like, "Why our year?" Because I'm sure that doesn't happen normally, I just feel like it shook everyone a little bit.

FFG A: Or if it does happen normally, it's picked up in the first year then corrected.

FFG C: Yeah, yeah exactly I think anyone in second year who is writing a report in the second semester should really be able to get it right.

Interviewer: And we can begin as well now to think about those digital or those virtual field experiences that you've had. And what were some of the challenges of them, but also what were some of the opportunities that those brought to you? Or new opportunities that they could bring to you?

FFG C: The virtual one gave me like I think it was a lot easier to kind of see the difference in zonation because I could just revisit the sites, whenever I wanted and look at whatever I wanted. So it wasn't really like traipsing back and forth, and I didn't have to think about the tide so it's like no time pressure. And, obviously in person you're actually seeing the things, seeing the organisms and obviously things do look different in 3D. So actually if you could use them in conjunction, I actually think that would be the best of both worlds. You get the most out of it if that if maybe you could like look online first, see what you want, make a plan and then go outside.

Interviewer: Just picking up a few things you said there, so it helps you understand what was happenin?

FFG C: Yeah.

Interviewer: What, why was that? Was it because it was put together in that way?

FFG C: I think also because everyone processes like things differently, and like there was no time pressure about the tide, you didn't have to go from the low shore up to the high. You could do like low, high, mid and like just do whatever you want for as long as you wanted. And really just get a

feel for everything and that there was no order for things. Like you could pick where you want it to go so and I liked that.

Interviewer: And you talked there about using it to plan your investigation.

FFG C: Yeah.

Interviewer: That you think that would be useful, almost like a recce.

FFG C: Yeah, obviously not just like looking on Google Earth or whatever, but what we had in first year was high enough detail, and I think they used like drones and they had good pixel resolution there.

Interviewer: Thank you.

FFG A: And then the main challenges for me at least was just lack of interest when it comes to it and I don't think it was necessarily the way that things are put together. It was just the way that like like when when you're told that you should be outside and that you're actually not outside but inside. Like if they would have like scheduled it as like, it's meant to be online it probably would have been like okay. It's a bit disheartening to see what you could be doing, and then sat there behind a screen and you just don't want to do it. And especially for the same duration, that would be if it was a, I think a few of our online practicals last year, were like four hours long, it was the same couple of photos that you just looking through and stuff. It's just, it's just not the same, and it just doesn't get you as a excited or interested and I don't think you do as good as a job as I could have done.

Interviewer: So, do you think that it was useful, but that it was for a different thing? They're not comparable they're not going to, but they'll teach you some skills, but it's not the same skills as such.

FFG A: Yeah

Interviewer: Did you did you feel prepared ultimately to do some of that online work or was that the first time you looked at those type of things?

FFG A: Yeah, they they gave us the materials to do it and look at it and such it's almost like I had a different impression of what it was going to be like. As in they prepared us as as almost as if it was the real thing when they gave us everything that we needed to do. It just wasn't and then it was like uh, this is, this is what actually is.

I don't think, I don't think they could have done a better job of the way they did it. I just think the situation that it was, wasn't like, we were provided with very good resources; they were good; it's just it's just not the real thing.

Interviewer: Any other opportunities or things that you think it'd be really good if that could happen with something digital. In in a dream world almost what would be really good?

FFG E: Go ahead.

FFG C: I don't know how feasible it is but if you could kind of collect your own like digital data. So you can say get a drone, pick an area that you want to assess digitally and then like do that at your desk. I feel like you'd have a lot more interest if you pick somewhere and also you could pick somewhere that actually you can access by foot, if we were allowed to. I feel like that there's a lot of potential to go down that route because that'd be cool.

Interviewer: It's called like hyperlocal almost so you could all be working wherever you are. You do something in your back garden or the local park and then it comes together. There's something there about that still doing fieldwork. But contributing digitally to that thing. So, there's something there.

FFG E: Yeah the thing for me, I found quite useful with some of the digital stuff was you could probably get; depending on how good good quality and again, this is a hypothetical situation. But if you had a very good quality camera or ability to capture detail. You could probably zoom in further than the human eye could. You could get more details out of it if you had the right technology and then that adds into the whole time constraint situation, because if you can then; in two aspects. You could have lower pressure because you're not worried about the time or any environmental conditions, you can also zoom in look at more detail take more time with each individual thing. And even to take screenshots of certain things and then move them expand them, annotate on them. And something, for example, I think it'd be quite useful, as a side to that would be having the ability to look over a longer period of time, say, a time lapse of a day or a week and just see those gradual changes. That you couldn't do if you stood there for four hours, for example.

Interviewer: So potentially a few things I think you're picking up on there about like pace and progress for individuals and having some opportunities with that. But then also the spatial comparisons potentially so you know you've looked at a rocky shore at this location well let's look at a rocky shore elsewhere and those temporal comparisons well let's look like what it's like in winter, for example, or let's look like what it's like six hours later. Something that's not necessarily feasible in in person field work on the budgets that we have but there's some opportunities there for that.

FFG E: Exactly.

FFG D: Another thing with online fieldwork is that the weather is never an issue. Yeah literally just plain when we go out on the rocky shore for the trip to Cullercoats and it's raining nobody wants to be there.

Interviewer: It was this November? When I came out with you guys and it was pretty shocking weather.

FFG D: Nobody and I don't know I had less fun on that day in the rocky shore when it was raining than some of the field trips, like the virtual field trips. Not all of them, some of the virtual field trips are worse than the rainy day at Cullercoats.

FFG E: I don't know if this applies, but even the boat stuff I mean a lot of the times the boats were limited by the fact that you couldn't go out physically. I mean if you're applying it to a general field context then that probably would help as well in that situation you're not allowed to actually you really can't observe it otherwise.

FFG D: Hmm.

Interviewer: Any other final thoughts on kind of challenges and opportunities of any digital fieldwork?

FFG C: It kind of touches upon what FFG E said. Like obviously a camera set, cameras can see a lot better in the dark actually. So if you wanted to do like overnight field work then digitally would be the way to go. But also underwater like, for whatever reason, some people who love marine biology, you know aren't strong swimmers or don't like diving for whatever reason. So it's potentially like

cameras and digital things give them the opportunity to explore otherwise. So, I think that's like a big opportunity.

Interviewer: And maybe different views and so things that would be more challenging or you wouldn't get it all and, and maybe I guess some live data stuff might be interesting and digital environment so live feed from webcams and your trail cams.

FFG E: Yeah.

Interviewer: Not in marine but imagine if you're an ecologist having you know webcams and live trail cams that would be boring if you're setting up in a wood but actually you can watch those that might be an opportunity for more authentic data.

Any other challenges or opportunities for digital fieldwork?

FFG C: Probably, I'm just very tired.

FFG E: No don't think so.

Interviewer: No, no that's okay, so I can ask you to go and back to your kind of post it notes your questions Okay, and really be thinking about those defining characteristics that you've got up there and Just think, do you have any more based on some of our discussions that we've kind of had. If it's anything else springs to mind, actually, that would be quite useful characteristic we haven't kind of looked at that.

What was really nice was that you are telling me why these would enhance your fieldwork, which was nice. Thank you.

**<All: general off-topic chatter.>**

Interviewer: Anything else that needs to go on, do you have anything?

FFG B: The only thing that wasn't on there, was realistic conditions like weather conditions.

FFG C: I'm not sure if this is right?

Interviewer: There is no right or wrong, these are your thoughts.

FFG C: I really, I think actually used in conjunction with some practical element, no matter what it is. Even if it's like a different person doing the practical work or like the practical work is going to be a separate step. I really just think there should be some link to actual practical work.

Interviewer: So, what you're saying is it almost doesn't matter what that practical work is, whether that's a group task or the whole class, you on your own.

FFG C: Yeah just because I feel like they really help each other yeah.

FFG A: I put, well it almost depends on the practical, but I think it's very important to put in like you were saying like temporal differences in terms of like if it was assessing over a period of time definitely but in different periods of time what it looks like or even if it's not, or different seasons. So I also just put down interactive again because of the other key thing is in so much gotta kind of always has to be interactive in order to just get the best out of them.

Interviewer: FFG D, anything else?

FFG D: Yeah I just during, actually during the practical includes some elements that test test the person doing them. Because that kind of more because, like I what I would do in online sitting in online practical to sit in last years. I would literally just be like it's an online particle it's irrelevant and I'm just not gonna I'm not, I'm never going to use this. So, if you test, if you test people to make sure that we're staying on it, and not just thinking ahh it's an online practical I'm not even arsed.

Interviewer: So, it's almost that kind of formative kind of a check in are they understanding, are they recognising, are they moving forward.

FFG D: And explaining, whilst they are doing it explain why those tests that you're doing would be important if you are actually doing it.

Interviewer: So that kind of purpose and expectations of what you're doing. That thing. Did you have anything else that you added? <participant name> did you have anything else?

FFG D & FFG E: No not really.

Interviewer: So, we've got this good list of I don't know how many they're not numbered, and I just want you to have a look over this and and see if any needs to be grouped together or are any similar. Basically, do any need elaboration, or I don't quite understand that. Because this is your list, so have a look. Should any be grouped together? Should any need any elaboration? Anyone confused by any?

FFG E: So pictures can be grouped together. So, you got pictures and videos, pictures of equipment, clear pictures. And I mean there's a lot about picture, videos but I mean you could group, a lot of the things involved in that. So listing just pictures and as a sub list, maybe clarity, interactivity and the equipment.

Interviewer: Equipment, clarity and interactivity.

FFG E: So they're all under one roof really.

Interviewer: Okay. And then we also have you have scales on your pictures as well we've got pictures and videos of sites and equipment and then we had scales and clarity with those pictures.

FFG B: There's also the 360 images.

Interviewer: Oh yes we did, so that can all go in there.

FFG C: Okay so we can get rid of like moving because interactive covers that. So, like where you see it says 360 you could just.

FFG A: They're both under immersive qualities perhaps.

FFG E: I'd say immersive and interactive are pretty similar.

Interviewer: Okay, so we can put them together. Should we group them?

FFG D: Yes.

Interviewer: So we've got interactive, more than just clicking activities, and we want some kind of immersive opportunities within those.

FFG A: I think that temporal difference variations could also go into pictures or videos.

FFG C: Or even realistic.

FFG B and FFG A: Yeah.

Interviewer: So, shall we put realistic and temporal road, do you want to put them together.

FFG B: As well as the weather, more real weather.

Interviewer: Hopefully you can still read my writing. Sorry. Get rid of that attractive because that was in that one.

FFG A: If we move equipment list.

Interviewer: Oh yes, that can go in that one, so equipment plus a list. Ok. How is that looking?

FFG E: Pretty good.

Interviewer: Does it look like a list that you are happy with? Do any need any elaboration? Anyone unsure of what some of them were?

FFG D: No

Interviewer: No so we're alright? So, what I'm going to ask you to do is ask you to each vote, okay. So, you're going to vote for your top five okay so individually so number one, your rank one. Is your most important thing, and so forth, so you're going to come up with five, rank of 5 things.

FFG E: Most important in the sense of like defining characteristic.

Interviewer: Like you think it's the most important thing for virtual and digital fieldwork.

FFG E: To be successful.

Interviewer: Yeh

FFG E: Yeh

Interviewer: To be successful and to be a good learning opportunity yeah.

FFG E: Just realized demonstrative videos could also be within pictures.

Interviewer: So, we will leave it as it is. We're on the last task now, we've just got maths to do now.

FFG C: You've saved the worst for last.

**<All: Laughter.>**

FFG C: Do you mind if I take a tiny bit of blue roll.

Interviewer: Yeah that's fine. Is that to blow your nose. Oh dear? Is it not too rough?

FFG C: I'm used to it now. I'm used to being a disaster all day.

FFG A: Anyone want a chocolate bar? Sorry.

Interviewer: No no, help yourself. And they're from Lidl. So, if no one shops in Lidl I can tell you.

FFG A: Fake milky way.

Interviewer: Fake twix and a fake mars bar.

FFG C: I can't eat them, I just love them.

Interviewer: Okay, then do you have your top five ranked. do you have your top five ranked? FFG E you're still ranking, that's fine. You're having snacks don't worry.

<All: General off topic chatter.>

FFG C: I literally can't get over how long today is. Like I don't remember the last time.

FFG E: I thought it was Sunday genuine I thought we'd done two days.

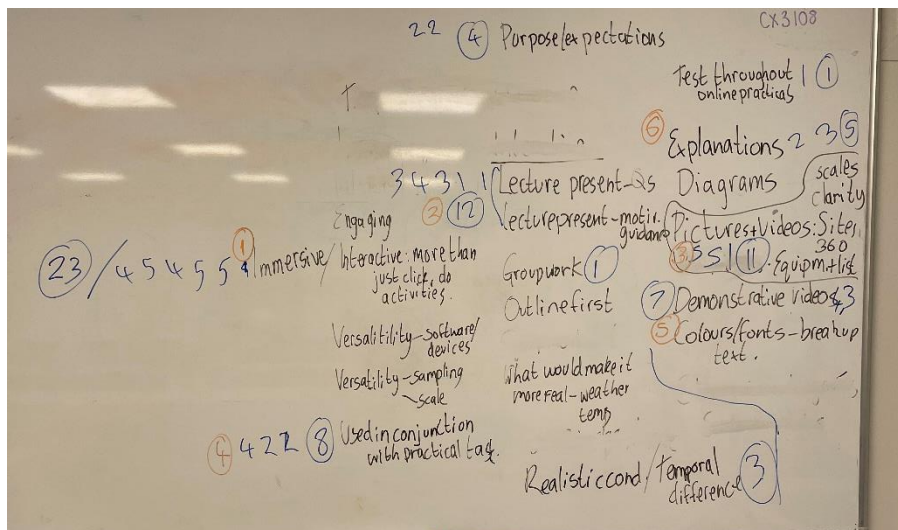
Interviewer: I think when it was was when I said to at dinner to <External person 2> oh look at the time I was like its only 12 hours till we meet again.

<All: General laughter.>

Interviewer: Let me know when you've got your top five everybody. So, this is the maths bit guys, if you have given a rank one that five points okay. If it's a rank 2 its four points and it's a rank three it's three points. If it's a rank four its 2 points. Did I say that twice, I'm tired. If it's a rank 5 its 1 point. Okay? What we're going to go it's just go through this list, and if it is on your list you're going to tell me how many points you gave it all right. That make sense?

<Go through list and participant shared their scores>

<Totalled up scored for each of the defining characteristics>



Interviewer: So, your top priorities was this one as your number one. I should use a different colour pen. So this one was your number one.

Number two was this one, having a lecturer present.

Number three came out as the picture one.

And number four used in conjunction with practical task.

Okay and number five demonstrative videos.

Okay, so that's your top five.

1. Immersive and interactive.
2. Having lecturer present for those questions and to motivate and guide.
3. Pictures & videos. Scales, clarity, sites, 360 & equipment lists.
4. Used in conjunction with some practical activities.
5. Demonstrative videos.

Interviewer: Does anyone's views feel like they haven't been represented in this list? Or do you think this is a representative list of your views?

**<All: General murmur of consensus.>**

Interviewer: Does anyone disagree with the order that it has come out with?

FFG D: No not particularly.

FFG C: No

FFG E: I would just want to clarify my understanding of the pictures and videos. The thing is theoretically you can't really have the immersion without the pictures and video. So, in a sense, in a sense, like while I agree with the priority in this sense, the most important thing is it for it to be immersive. You can't have it being immersive without the actual content that yeah, yeah like that's a bit of an underpinning concept.

Interviewer: Yeah yeah and I think you've got some things that the pictures and video should do, or should have yeah but actually that underpins that kind of a immersive or interactive elements within that. Why is number one, why is that, why is that so important, I guess, to you guys. You've said that's important but why?

FFG A: I felt like if you can try to be more interested in it then you learn more from it. It's just a better experience more enjoyable.

FFG D: This is just I just spent most of last year, every single time after we've done an interactive practical. I don't know about you lot but literally just sat with my housemates moaning about how pathetic it is.

FFG C: Yeh

FFG C: We're doing Google maps yeah and it's the best the lecturers can do and there's nothing they can do about it, but it means, because there wasn't any activities it was literally just sit and look at the picture of a limpet and go it's a limpet. But it's just not engaging at all and it's like just it makes it makes the course just so much less valuable, I think.

FFG C: I also think that being immersive, I think the other best practice, it closer to being like field work, because obviously fieldwork is like a doing a rather than like watching so its immersive its more representative, if that's the right word. But it creates it better, I feel like you get what I mean.

FFG E: Like on that point there's a reason why people have to do lab work, because if you don't do it you're not going to get the feel for it.

FFG C: Yeah.

FFG E: I understand it if you didn't have to do it then just give coursework or an essay or something.

FFG D: It's all, it's almost like if it's not immersive and it's not relevant to real life, it doesn't give you a feeling that you're doing something in real life. I think it's just a waste of time, really, to be honest.

FFG C: And I don't know if they could call it like digital fieldwork anyway, like, I actually think it has to be immersive because otherwise actually are you just watching a lecture.

FFG D: Yeah exactly.

Interviewer: Any of the other ones any reason why those are important. Any points you want to make about any of those?

FFG C: Probably just stuff we've already said such again like a lecturer present stands out so much to me but it's just for the same reasons, to ask for help and to stay on track.

FFG D: FFG E's thing about the videos being important as the underlying things is a really good point.

FFG C: Yeah almost think like you could just move it out, put it in immersive and clunk everything up and put an extra 5<sup>th</sup> thing in, if that makes sense.

Interviewer: So what would be our fifth thing then if we were getting rid, not getting rid sorry. Putting it in the other category.

FFG A & FFG C: Explanations.

FFG D: Yeh because you also have to understand it. It could be engaging but you have no idea of what's going on.

FFG C: Yeah definitely.

Interviewer: And what impact would these have on your kind of outcomes from fieldwork if these were in some of your digital fieldwork? What impact they have on your field work outcomes?

FFG C: It would probably be a lot more productive. It might even be able to like run them for short period of time, because people know what they're doing not just like clicking the buttons trying to pass the time. People get more out of things.

Interviewer: Student satisfaction yeah.

FFG C: Also. it might be easier like for the lectures to run because it'd be more like a two way conversation if we knew what we were doing, we were interacting, I'd feel like we'd have a lot more to say and people did ask questions but probably nowhere near as much as in the field. Just brings you that one step closer.

FFG E: One of the worst things is that awkward silence of, "Any questions?"

FFG C: because you feel bad for them but like no not really.

FFG D: So many so many more questions get asked, even in lectures in in person lectures than online lectures.

FFG E: Yeah.

Interviewer: Why do you think is?

FFG A: Impersonal

FFG C: It doesn't feel real, like sometimes it's really hard for me to look at this, put it in my brain and never actually think about it, like scientifically like sometimes it feels like very abstract that might just be me.

FFG A: No I agree. It's a barrier, you just shut off when you close your laptop just be gone away from it. Feel like I do that. I also just want to engage more.

FFG C: Particularly like if it's new stuff like actually some of the content, like, actually is difficult, so it's not even like in person and it gets even more hard and like abstract and stuff.

FFG A: You ask questions on a zoom call we go sorry, sorry I can't hear you, and you just want to fade away.

**<All: General consensus.>**

Interviewer: Did anyone have anything else they wanted to talk about or discuss or share their opinion based on our topic of fieldwork and digital fieldwork?

All: No

Interviewer: Lovely well, thank you for taking part and being so chatty and sharing your thoughts which is great. Erm so what I'll do is I'll just tell you a little bit about what will happen With this. Erm so I will be testing some approaches basically some digital approaches so designing some and then testing with small groups of students over now and beginning of next academic term. And then based on the feedback from students, then redeveloping them again and so "Oh yeah that's good idea let's include that."; "That's not." So it has student voice throughout and then next year, these kind of four approaches will be kind of put into field courses alongside maybe pre or post or during and and then we'll see the impact that those have on learners. So I'll be using lots of the stuff that you've talked about in the kind of design and the justification of what I've done so I'm trying to justify stuff to lectures and the other students we will be able to share some of the reasons why some of the things might be the way they are.

So thank you, so I will be working on your transcript and then pulling out some of the codes and the things that you've talked about within those as well, so thank you. Do you have any questions for me?

FFG C: Not really relevant, but you're coding, you're not going to be using NVivo are you?

Interviewer: I am going to be using NVivo.

FFG C: Oh god, that's awful.

Interviewer: I've spent a lot of time in NVivo already. I quite like it.

FFG C: Do you?

Interviewer: Yeah yeah.

FFG C: You've got the knack then.

Interviewer: Any other questions. No. Well I really appreciate that I'm going to just stop the recording now.