

## Tech in the Field- Process Evaluation

Group 2 10/03/222

| Anonymous Participant Code |
|----------------------------|
| TiFPE D                    |
| TiFPE E                    |
| TiFPE F                    |
| TiFPE G                    |

Interviewer: Yeah so and you won't be down as like your name or anything it's literally like participant A and like that. But it just helps me when I'm listening and transcribing it. So hopefully that's okay and it's not too distracting so thank you for coming on your last day. We should be about half an hour, so don't worry. And so I might kind of scribble, look at notes, whatever. But just we'll just have a chat and mainly it's a chat between yourselves and I'll listen in and I'll ask some things as we go. Erm I've got your consent forms so that's all good, and do you have any questions before we start?

All: Erm don't think so.

Interviewer: So, you're all good. Excellent. So, you have been trialling some technology in the field to address a challenge that learners might experience during fieldwork. And this is the first little mini evaluation, we call it a process evaluation. Which means that your feedback, your user feedback can then be used in some redevelopment. So it's like an iterative development cycle and we can go back over it. Improve, add different things, based on your feedback and ideas. And then it will have a much larger impact test with a larger group to look at how effective it was in addressing the challenge that we were trying to. So that's what we're looking at, and so the first thing is I'd like to just tell me a little bit about some of your field work experiences, this week, tell me about them.

TiFPE E: Mmmm we did a lot of sieving.

TiFPE D: Yeh

<All: Laughter.>

TiFPE D: Hands got numb.

TiFPE F: Yeah they got really cold, when we had to put them in the water.

TiFPE E: So that wasn't great using a phone.

<All: Laughter.>

TiFPE F: But yeh, usually just one person records, so if I'm being lazy. I'm like TiFPE E write this down.

Interviewer: What have you enjoyed this week with your fieldwork?

TiFPE F: Being outside.

TiFPE D: Yeah.

TiFPE G: I've actually really enjoyed the early mornings.

TiFPE F: Yeh, having a full day. I would never do that myself.

TiFPE D: So productive. So productive.

TiFPE E: Yeh I am still deeply sleep deprived. But I mean I feel like I couldn't, I couldn't I could not do that, like for a sustained period of time, but like it still felt nice.

TiFPE D: We also got out this week more than we have out of the rest of our entire degree.

Interviewer: What more out of this week the rest of your entire degree?

TiFPE E: Yeah.

TiFPE D: Yeah, which is nice. We can catch up. It's just fun to do different things. Be on rocky shores, sandy shores.

TiFPE G: I think it was fun how we went to a rocky shore and it was completely different to the rocky shore that we are used to in Newcastle. Which I was actually like so interested in. That I went and I was like; "Wait, this is completely different, that's really cool." And then <External person 5> talked to me about how the currents are different and everything and I just thought it was really cool.

TiFPE E: But even the rocky shores around this this island. The one we did with <External person 2> was different to the one we did with <External person 4>.

TiFPE F: Yeah and just hanging out with everyone was really nice.

TiFPE E: Yeah

TiFPE F: Yeah its speaking to people I've never talked to before.

TiFPE G: Yeh

TiFPE F: Because you'd be in the same group, and you would have to talk ,and it was nice.

TiFPE G: Solidifying friendships and making more friendships.

TiFPE F: Yeah, better way of putting it.

Interviewer: sounds good, what about any lows that you have had this week?

TiFPE F: Yesterday.

TiFPE D: Hmm which day was it? When we were doing <External person 1>'s because we finished like 10 minutes before went to them straight into taxonomy afterwards.

TiFPE G: Yeah I thought mine yesterday was just, I just was so sleep deprived.

TiFPE F: Yeah.

TiFPE G: And then having to spend it doing something after dinner is just a lot to do. The actually going outside at like seven o'clock in the morning and then doing work on that and submitting. It was a stressful assignment and then having to do more work after you meant to be resting is just.

TiFPE E: If you compare it to Uni.

TiFPE F: Say we had a 9am. Like a 7am-9pm. Let alone an assignment we'd be like. "Huh!"

TiFPE E: We'd be like up in arms.

TiFPE D: Like the days have gone quick, but when you come back you hit the wall. I'm tired.

TiFPE F: Yeah. This is just exhaustion and everything I've done, i've enjoyed the assignments it's just the tiredness.

TiFPE G: Yeah.

TiFPE E: Yeah, like yeah even like even things that I was like I didn't like. Like walking home from the football in the pouring rain.

TiFPE D: Oh my god.

**<All: Laughter>**

TiFPE E: It was still funny. Or like fun just because we kind of made it fun. I guess.

TiFPE D: Although it did make my clothes stink in the drying room. Yeah, it's been a really good week actually. I've really enjoyed myself. Not many lows whatsoever.

TiFPE F: I think it's a good amount of time. I think if it kept going on I think there would be more lows.

TiFPE D: I'd end up crying. You've done a lot of crying this week.

TiFPE G: Well no, yeah, ok.

TiFPE E: Quit whilst your ahead.

TiFPE G: I've enjoyed it though, yeah.

Interviewer: Sounds good. And so obviously you have been telling me there and telling each other and I've seen throughout the week those things you have learned. But how would you know that learnings has been taking place during your fieldwork? And how would you normally capture that learning?

TiFPE E: I feel like it's just like especially like what we've been revising today, I feel I'm already able to just recall a lot of those names, where I wouldn't have been able to do that before.

TiFPE F: Just because of the practicals.

TiFPE E: Just because you're just repeating all the time yeah.

TiFPE F: Like on Cullercoats I genuinely didn't know what Fucus vesiculosus was, because I didn't need to.

TiFPE E: But it's also like not just repeating it it's like actually having it in front of you like stumbling across a rock and "Oh look its Fabio."

TiFPE G: I think it was really nice having <External person 2>'s first because you're looking for one specific species then you basically solidify that in your brain. You know we are good with Littorina littorea, and then you learn the difference between that and saxatilis because you're only looking for that one specific one. And then <External person 4>'s was really useful, because you build on it and you branch out and then you're like, "Oh, this is why this is different to the one." The one you already know.

TiFPE E: Like doing things again and again. Yeah I actually, just like is.

TiFPE F: It wasn't like writing lines on a whiteboard it was.

**<All: Laughter>**

TiFPE E: Just like this is why I hated last year, because, like online although we did actually do things a couple of times. We did things online last year that we've done this year it didn't feel like it, because it was just like it was just being talked at and that was it.

TiFPE F: Like that virtual rocky shore. I don't think I learned a single species.

TiFPE E: We gave feedback on those rocky shores and we were all kind of like being nice.

TiFPE F: Because like we couldn't do anything about it. But I still learned nothing.

TiFPE E: But you can see the effort as well.

TiFPE F: Yeah it was a really good replacement, but I still didn't.

TiFPE G: What they could do, that would be better than actually being on the shore.

TiFPE D: I feel I learn so much more when it right in front of you. Like I can pick it up look around

TiFPE F: Yeah.

TiFPE D: That is so much quicker and easier to do than just staring at a photo.

Interviewer: And have you been taking notes during the week or using a field notebook or taking notes during your taxonomy? And kind of what have you been recording and when and how?

TiFPE G: Like for <External person 4>'s, because I told to by <External person 3>; was a really good idea. So ,when she was talking us through the briefing I literally wrote out everything that she was saying on pencil paper because it's the easiest, I think. And which was really, really useful like how to identify species, and then I could just pick it up and go "Okay that's what she said about that." So that was good advice. Well, I thought it was.

TiFPE D: For the taxonomy I just write I write it on paper, it would be better if I had like flashcards with me than paper, just like the key features of the species it's Phylum, Class, species name, common name.

TiFPE F: I do that as well, then, if I can't get it in my head. I'll makeup some stupid way of remembering it.

TiFPE G: Like I know that, hang on.

TiFPE D: *Necora puber*.

TiFPE F: Because it's the devil.

TiFPE G: Devil's like obviously not great, so devil like dead because of *necora* and then *puber* because *pubes*. It's not very nice, obviously, but it is something to remember. Like you've got your Christmas tree song.

**<All: General singing of *Osmundea pinitifida* to the tune of "Oh Christmas tree...">**

TiFPE E: Well, I feel like when we are out actually in the field.

TiFPE D: That came natural though didn't it. Like we were there and it was like *Osmundea pinitifida*.

TiFPE G: And if you try and think of something it's quite difficult, but if it just comes to it, you're like yeah.

TiFPE F: Yeah, like when we are recording stuff in the field. I always use pencil and paper, because you can wear gloves like if you're using your phone you have to take your gloves off and your hands are cold.

TiFPE G: Also it may die.

TiFPE F: And you have to scroll through things, and you don't want to get your gross seaweedy fingers anywhere.

TiFPE E: So, when I was recording on the sediment shore that's when I used it because I wasn't actually doing anything I was just recording.

TiFPE F: So, when you're sieving you are quite busy.

TiFPE E: So, I had my phone out at the same time, and filled out a few of the things.

TiFPE G: And I got my notebook out and we passed it around so everyone's doing something. But everyone doesn't have my phone, or the password for my phone.

TiFPE F: And usually it's just one person collecting the data, recording stuff. So, I wasn't going to do more work.

TiFPE D: So, we could see the options, especially when we were right next to TiFPE E, we could just see it, we didn't need to write it ourselves.

TiFPE E: Yeah I feel like it like, when we were out only one of us, were using the app at one time. I think we weren't all using the app at the same time.

TiFPE G: I think, also it was like to make it better and everything that's how you told us to use different maps if it actually was all on the same map then it'll be easier if you're at the same group to then all having the same thing.

TiFPE D: Feel like this week is a bit different because we were very time constrained this week. Like it was very much like, yeah I wasn't thinking about the APP because I was thinking about the assignments that had to be done and about the test on taxonomy. I feel like maybe like if it was just like a formative field trips, we would use the app a lot more.

TiFPE F: Yeah.

TiFPE D: We would have thought about it more.

Interviewer: So, the things that you were recording in the field, be that, on the app or not in your notes, they were the data that you were being asked to collect by that facilitator.

TiFPE G: That's all I wrote down.

Interviewer: Did you record anything else during the fieldwork?

TiFPE E: Well I did when we were on the sediment shore because I just did. Because I just had it out.

TiFPE F: And when TiFPE E was asking the questions like "How does this make you feel?" I was looking around like, "Yeah I feel quite peaceful here." I wouldn't have thought like that I was just writing data down.

TiFPE E: Yeah so like, but I feel like that was actually the only time that. I didn't do that for any of the other ones when we had <External person 4>'s, and I didn't do it when we had <External person 2>'s.

TiFPE F: Was it just because we hadn't done it yet.

TiFPE G: Erm I took a lot of photos on <External person 2>'s other than the data that we had to collect I would take photos. That's pretty much yeah.

TiFPE E: Actually, on <External person 4>'s I took photos on <External person 4>'s because there was these things like stuck, that we couldn't take back to the lab. So that's why I took pictures, I took a few pictures of all the items we collected on the sediment shore as we had to throw them away. Not like throw them away, but you know put them back. But I didn't do anything else apart from the three other things which was looking at your environment on the sediment shore.

Interviewer: And, have you done any either on this field trip or for any tasks or activities where you've explored kind of the wider significance of the field work that you're doing? So thinking about why it matters? How it connects to some of the other things that you've been doing? Have you done any of those things?

TiFPE E: Well we did that in like MST2204 before because the lectures we have with <External person 5> about like conservation and environmental management and care.

TiFPE G: Those are the ones that go in one ear and out the other.

TiFPE F: I feel like with our practicals they're just for our benefit, not the greater good. Because we don't know anything yet.

TiFPE E: Well for like <External person 5>'s ones right so again they were online and I think a lot of people just ignore them because they are online. So I feel like that's kind of an area in a way that we just haven't really done much of yet. And also, we haven't done like any assignments or anything like much broader than a single experiment or investigation, so I feel like. If we were going to record data based on just kind of like human impacts on things then I can't think of an example where we've done that before. Apart from maybe erm My Library Project, which is.

TiFPE F: But that's your choice.

TiFPE E: But yeah we get to pick those. But again again that's not we're not doing anything field were just reading what is online, just an essay we have been doing online

TiFPE D: With the field work normally it's an assignment and if they asked me about something. I do exactly what the assignment tells me. And I don't go, I don't really look beyond that. Yeah.

TiFPE E: Yeah it's like we know microplastics exist, we know oil spills exist, we know. Yeah it's like we know micro plastics exist, we know like sewage pollution is a thing but we've never seen it.

TiFPE F: I feel like when we were on the boat looking for my microplastics in the microscope, I was like "Oh I found one, yay." But then like hang on that's not a good thing.

TiFPE G: I didn't find anything.

TiFPE D: Didn't you?

TiFPE G: No, it was it wasn't our best practical because literally none of us found anything it was just empty.

TiFPE F: That's probably good.

TiFPE G: Yeah they did explain further than that, saying this was a good level. I always feel bad when during experiments and then we use an organism, and it just dies. Like I'm not actually high enough that my research is impacting anything. So I just feel bad that I'm just killing organisms for nothing, and it does feel like it is for nothing.

TiFPE E: Yeah it does.

TiFPE G: Because it's just a student doing it it's not actually like a research that is carried out really really well; and scientific and gets published in everything.

TiFPE E: But at the same time. But at the same time it's like we then would hate it if we would do online because we can't learn or it's harder to learn.

TiFPE G: We do need to do them to then get to the next stage of becoming a researcher, if we want to, but it's just this beginning bit, just feel like we can do it better to make it not as impactful to the environment, because I feel like we get so much from the shore. And I know they get put back. But so many things just died. We picked out the little bivalves they were just shmushed from the sieving. It's like I just killed that because I wanted to collect it and look at it and then put it back.

TiFPE D: A lot of the stuff in the tanks is now dead, which is not good.

TiFPE G: Yeh it just dies.

Interviewer: And I think, potentially, so what you're saying there is actually exploring that as a as a discussion within your group, and you know. Yes, it might still happen because you have you know you're building your your knowledge and your understanding. But maybe exploring that as a topic of discussion and potentially that kind of animal husbandry, ethics.

TiFPE E: That's almost like, I feel like part of the APP that's actually the most useful bit because, like those questions make you think about those things. So, like we wouldn't necessarily think about those things.

TiFPE G: True I didn't think about shmushing bivalves whilst sieving, I just thought about it after i'd sieved and I'd saw all the smushed ones.

TiFPE E: And it's like adding an extra dimension. I didn't use the fieldnotes feature at all, because we were just doing it all on paper.

TiFPE F: we were saying it might be more like a sort of recreational thing.

TiFPE E: like yeah like citizen science

TiFPE F: yeah like what we're focused on assignment it's not really front of my mind.

Interviewer: yeah yeah yeah because you know the data that you're collecting is for that really you know that narrow task.

TiFPE G: and you have to do it in your table or something

Interviewer: yeah yeah yeah so that then thinking about those other things are not at thae forefront of your mind.

TiFPE E: And also if there is like specific mm, like if you did field notes on the app and have them all there. They're not necessarily going to be related or like you wouldn't necessarily be able to relate

them to each other if they're for like for very specific things if that make sense, but if you would like doing it for a much more general reason or like a time series then I feel like it would be better.

Interviewer: And you've talked about taking pictures on your phone when you're out are there any other ways, you might use your mobile during fieldwork? Or any things you might record?

?: Video

Interviewer: Why are you videoing? What are you videoing?

TiFPE E: Not for any scientific reasons.

?: Sorry what was the question again?

Interviewer: No no, so what ways might you use your phone, what might you record using your phone during fieldwork?

TiFPE D: Maybe if I'm like really confused by a species, I haven't done that yet.

TiFPE E: But if you've got like signal, then you can actually do IDs in the field. Because you have your phone.

TiFPE G: I use, like literally my phone goes in my pocket. I'm on the bike. Get off the bike. Then I look at it when I'm back here because Other than if I see something oh that'd be pretty let me get that for later use other than that I don't think to use my phone.

Interviewer: you don't see it as a piece of fieldwork equipment.

TiFPE G: No, which is why.

TiFPE E: Which you could almost like so it's like when we've got the light because it's really like accurate locations like when you zoom in, if you could, if there was a feayre where you could like record species and tag where you see them, then in an area you could have like a list of species that you had seen etc, so if you were confused you could look into that or actually.

TiFPE F: And you could compare what you found yourself.

TiFPE E: Yeah yeah.

TiFPE F: That'd be cool.

TiFPE E: and then, but then also if you find a new one, then just add it so you've just got like a list so if someone goes that area or someone else is there like that list will just pop up so you can like ID stuff while you are there. Because then you wouldn't have to worry about killing it by taking it back to the lab because you'd just be doing it whilst you're there used to do that, you wouldn't even have to take it away.

TiFPE D: I also think, using your phone depends on what tasks you do. Like when I was at

TiFPE E: My hands were so cold.

TiFPE D: I literally couldn't use my phone when I was on <External person 1>'s because I couldn't move my hands, and I was like, even if I wanted to, and just it kind of depends what you're doing because i'm <External person 2> I was taking photos and stuff which is fine, but on <External person 1>'s sediment shore I could never do that.

TiFPE G: I feel like I don't think of it as equipment because I use it recreationally as well.

TiFPE F: yeah

TiFPE G: so like if it was like a tiny like our tablets if they were waterproof. I would 100% use that all the time on the shore because i'm able to write on it and do my notes, but have it all in the same place. I do all my lecture notes on my tablet because I can look at it whenever I go.

Whereas paper, I have to use it, because it survives the conditions and it's, I dunno it's easier.

Interviewer: So potentially that using the devices that you've been given, so waterproof, and then collecting data that is digital at point of capture might miss out that step of having paper and then having to type it up ultimately. Would that be useful?

TiFPE G: yeah

TiFPE E: Yeah

TiFPE F: No because my notes are going to be all rough so then it's nice to type it up.

TiFPE E: And also like on paper you can just do whatever you need to do. But then you draw on your tablet.

TiFPE G: Yeah I draw on my tablet all the time.

TiFPE D: It's easier to make mistakes on paper.

Interviewer: So then, thinking about the app and the questions in a bit more detail, were any of the questions, more or less useful in supporting you to connect the fields went to the wider significance of what you were doing.

TiFPE F: I think those like wellbeing ones were because otherwise i'd be stuck in my head like "ahh date let's go." Then it would kind of come out of that.

TiFPE E: all three of those except field notes.

TiFPE G: Like the last fieldwork I did like; what's it called I completely diasscoated that I was actually there I was just doing something the motions, like I didn't actually like take it in.

TiFPE E: I was the same.

TiFPE G: I didn't appreciate it all. Just because trying to

TiFPE D: Yeah

TiFPE G: Barnacle, barnacle barnacle

TiFPE E: Count the snail, move on. It sounds like a weird version of duck duck goose.

All: Laughter

TiFPE D: I found the questions quite humbling actually. I think it was nice, like it was asking me what can I feel. And there was a lot of just numbers on the sheet, but like there is animals and actually I'm on a beautiful coast in Scotland not just on a random sediment shore collecting data. It's very much an introspective, is that a word?

TiFPE E: Yeah

TiFPE D: Well good word.

Interviewer: You felt kind of You mentioned humbling there but did it connect you in any way?

TiFPE F: Not to the fieldwork, but to the place. For me anyway.

TiFPE D: Like kind of because it felt like it mattered, like its weird to explain. Like I'm not just counting numbers for no reason. Im collecting, figuring out abundance of these animals because its important to see.

TiFPE F: Like when you're sifting through the sediment to find a worm, that doesn't mean much.

TiFPE D: Yeah

TiFPE F: But when you're like it's a worm, on a beach with the sea and the mountains like its like a whole environment.

TiFPE D: It does help you understand the point, the immersion.

Interviewer: And then thinking about the APP itself, not just the question is about the design of the APP were there any aspects of that which were more or less useful in helping you to connect the fieldwork to the wider significance of what you're doing?

TiFPE F: It's probably my fault for not going on it as much. But I kind of find it hard to distinguish between the tabs. Like I didn't really know what I was looking for or what the difference was. Like I would have got used to it if I had used it more.

TiFPE E: Yeh like I wouldn't necessarily say this is to do with connecting with the fieldwork but it was just kind of hard to use in that, this is very specific, let me get it up. Like where you type in your answers, because it is such a tiny box and it just goes across it doesn't go down.

And it wouldn't let you go back to change what you typed and then, once you typed it, you couldn't see it again yeah.

Interviewer: Yeah it was off into the ether.

TiFPE E: and yeah I was like I like part of me like because I do this a lot, where I just forget what i've written halfway through so it's like oh God, am I going to attach these files or something I feel like that's kind of annoying in terms of keeping track of what you've actually written.

Because also you might actually been like if you can go back and read stuff you might have another thought so like, by not being able to see it. I feel like that's a bit restricting.

Interviewer: but by being able to view the things you've put in.

TiFPE E: yeah

Interviewer: Edit them, look at them again maybe connect them join them really add to them, that might be beneficial.

TiFPE E: Yeh that would be good. Mmm there's something else I had to say.

TiFPE F: it logged me out a couple of times

TiFPE D: Yeh it logged me out twice as well. I mean just for sediment, for <External person 1>'s sediment shore. There was too many stuff to press with cold hands.

All: laughter

TiFPE D: To get to it, like if it was less like just the map and the features. I don't know the better way of doing it, if it is possible. But it just felt like a lot to click on especially when I can't feel my hands.

Interviewer: So almost like streamlining it.

TiFPE D: Yeah.

Interviewer: And how could your experience to kind of using technology in the field, you know, be that an app, those type of questions, how could that be improved? You talked about streamlining, but was there anything else?

TiFPE F: Help us ID

TiFPE E: Like that's not the apps fault.

Interviewer: yes oh yeah no but using technology in the field.

TiFPE G: Identification Like like you're in a new place right now, take some notes. You're in this new place, Answer those questions about the space that you're now in, we recognise that you're in a new place.

TiFPE E: Or like a new place that doesn't have any data, so its not like spamming us with notifications. But if you're in a place that's empty of any data and it can be like ooh this space is empty. You should put something.

Interviewer: and obviously I purposefully I wasn't kind of with you when you're using the APP and would it be useful if there was a connection through the person who was facilitating the field work at that point and say you know talk to you about some of the questions had, those small discussions.

TiFPE G: Like you could also have more specific questions in I guess what do you think about this one specific thing that you're actually looking at.

TiFPE E: yeah yes, I guess, all the questions are quite general. If you're doing very different practicals at each place, some of the questions might be more relevant and you might do something where like none of the questions are really relevant so I guess, but the thing is, I guess that could be hard you'd have to you'd have to basically do like different questions for everything.

But then I guess you could like make a feature, so that, like you write the question yourself or there's like a drop down menu of questions so you can pick a question. I don't know why I use my hands so much. Yeah so you could pick a question and, like that is relevant to where you are so that would be like millions of questions, but even if you could just pick a few that you are actually going to answer.

TiFPE D: I mean I personally don't like use technology in the field, I don't know if it's because of the technology we have, I just don't tend to use it, I think I would prefer to pen and paper because.

TiFPE F: You write your notes in pen and paper. And I don't use that I use my laptop, but I don't like it.

TiFPE G: If I had a tablet with a pen like I do in my lecture notes. And write all my lecture notes on my tablet using the electronic pen.

<Someone enters the room>

Interviewer: It's ok <External person 1>. Don't worry, it's very informal. Don't worry.

<External person entering room> Sorry I need to get, I need to just come around.

Interviewer: It's fine.

TiFPE G: So kind of versions of that so I could just whip it out if it was like a notebook and a pen it would be perfect, but I don't actually have that obviously you gave us those bags but I didn't think to bring a massive tablet to the beach.

Interviewer: Yeah yeah.

TiFPE G: And my booklet was already in there.

TiFPE D: yeah yeah yeah but then yeah it's tough to say but I wouldn't use it in the field, so I don't use technology in the classroom. Just me as a no technology person.

TiFPE F: Whereas for me it's because I don't like it outside.

TiFPE E: I on the other hand, exclusively use technology now I own, this is the first time i've written handwritten notes for ages um so I feel like I know I feel like I probably used it the most while we were out as well.

TiFPE F: That's the thing I didn't even take any notes because we had someone else to record it.

TiFPE E: Like I don't know I did like using it, it's also like this is just my monkey brain. It's fun to use.

And I like doing the like, the reflection thing. Because like whilst we were on the sediment shore it was nie me standing there and calling out to everyone. So how do you feel?

TiFPE D: Because you could feel your hands. I was like crying,

TiFPE E: And I was able to look up and see the mountains. It was so beautiful.

TiFPE G: On the sediment shore, obviously we were in the same group, but I wasn't actually part of their separate group so I was there with my notebook and there was people shouting out to me. I was basically I was doing the recording on my piece of paper. Then people were shouting out actually like this is this data, this is this data. There was like four things that we had to measure and I was getting really stressed trying to write it all down.

That I literally didn't think of anything other than this one piece of paper that I'm on holding right now.

TiFPE E: that's why it was nice out of it.

TiFPE G: so I didn't do any coming out of the actual because I just writing the data point on this paper. That's literally all I was doing, I didn't actually reflect.

Interviewer: And what about you know any of the question. Do you think that any of those could better support you and how might they be changed or adapted?

TiFPE D: To be honest, I can't really remember any other questions, apart from the introspection ones. I think those are the ones that I paid attention to the most. Those are the ones that were something different to just writing down data and stuff.

TiFPE F: Yeah

Interviewer: And were those the ones that got you to think about the kind of knowledge learned, the skills learned and connecting it.

TiFPE D: yeah it was definitely yeah definitely more about those questions does that make you feel about connecting it more.

TiFPE F: Like, what can you see and what does this feel like? Well this is work that doesn't benefit me.

TiFPE E: Like it's almost like extra to the assignment

TiFPE F: Yeah

TiFPE E: Yeah like it could almost be omitted. Because if you've got specific questions you're not gonna want extra ones like to do with fieldwork I mean. So I can remember the connecting to nature questions really well.

TiFPE F: yeah me to.

TiFPE E: because those are the ones that were like, how does the sand make you feel. The textures and stuff like that. And I guess it was just almost like pulling you out for a second just so you can just kind of enjoy it for a bit, and then they go back to what you're doing so those ones were good.

I don't think they need to be changed.

TiFPE G: These ones, the interpreting the environment ones. They are more ones you can do when you are back.

TiFPE D: Yeah.

TiFPE G: So I would be like, oh this is really annoying I don't want to answer this right now I am trying to figure out what I am doing, but I would want to go back, and this is now what I noticed, this is what was actually there. Really reflect on it, rather than doing it whilst you are there.

TiFPE D: Yeh it could be nice. If there was like, when you added a new point. These are the immediate questions to answer; What can you feel? What can you see? Whatever now. And then like save that and then there's like a little flag thing extra like reflect on this. What are the physical or environmental challenges and stuff that you faced. Like probably a bit more indepth, than something that I don't want to do right now, when I'm actually out there. But if it was like paired together, like it would give good more holistic view of the field.

TiFPE G: I didn't check, but is there a way of like going to that data point, and then adding more notes.

Interviewer: Yeah.

And I think you've already talked about this quite a bit, but I guess just finally was there anything missing, or anything you would add or anything that you think actually that doesn't need to be in. So what was missing? Anything that you think should be added?

TiFPE G: If I was to do my data on there, i'd want like a way of like making, A guess like a spreadsheet or a table on there. because the most thing I use when i'm making data writing table, draw a table.

Interviewer: So the opportunities to add quantitative data.

TiFPE G: Yes definitely.

TiFPE E: I don't think we did any not quantitative data.

TiFPE G: No we didn't do nay qualitative.

Interviewer: So everything on the app was qualitative, everything that you collected as part of you assignments was quantitative.

TiFPE F: Yes that's what I found, it was quite like not in line with the assignments.

Interviewer: uhhum

TiFPE D: Yea

TiFPE F: It was still nice.

TiFPE G: If we were talking about like going out to look at say zonation patterns it'd be really useful. Like actually like describing patterns and stuff.

TiFPE F: Yeh and like writing down our observations and stuff, but again do I need to.

TiFPE D: It's all about numbers.

TiFPE F: I feel it would be useful.

TiFPE G: I think on one of them I was with <External person 6> he was like draw, write down this was really sandy. This one quadrat was sandy. So underneath my table I drew a little box and just wrote sandy. So that's an observation,

Interviewer: It's really important.

TiFPE G: That is with your quantitative data.

Interviewer: So its like using that to help analyse some of your anomalies. Some of your data.

TiFPE G: Yeah

Interviewer: It's really powerful.

TiFPE G: So if you could have quantitative and qualitative and the ability to like link them in the app. 100% that would be better and really good as well.

TiFPE D: yeah I don't really know if anything was missing it was more just about just if the app itself is applicable to the tasks that we were doing.

TiFPE E & TiFPE F: Yeah

TiFPE D: yeah I feel like I now have a more, I'd be able to tell you a lot more like what is missing if I was like ready to use it.

TiFPE E: Or like we were using it for like specifically using it for what we were doing.

Interviewer: And then I guess my final thing is, do you have any kind of further questions or any further comments about the APP and how you might use it?

TiFPE D: No, no questions. You seem like a question person. Any questions?

All: laughter

TiFPE G: So I think I am logged in as you I think. I'd probably want to like use it again, just for the fun of it. Like it would get me out of the house and go and do something, and make notes on it. Because it's actually quite a fun thing to do.

TiFPE E: And I think it definitely feels more like like a citizen science kind of APP because it's because it's so sort of general that's the kind of thing, what would be good for general data rather than specific data. So yeah.

TiFPE D: I do see me myself using it more recreationally than professionally.

TiFPE G: Oh yeah same, so there's probably just the mindset of us to practice it and that actually using different piece of equipment than your mobile phone that you do everything on.

TiFPE F: Then again, I wasn't that good at navigating it because I didn't like use it enough.

TiFPE G: Yeah I need to get in the mindset of you actually can use your phone. Like ellie was writing notes on her phone whilst <External person 4> was talking because she wanted the notes, she didn't have the app but that would be really useful. But then she was talking about how she could just feel <External person 4> looking at her being and then just <External person 4> assuming that she was just texting someone and not actually paying attention, so we have been trained that our mobile phones are not good in class, at all.

Yeah that's from secondary school where using them was banned. So actually in my brain it was actually like completely separate.

Interviewer: That mindset of learners and facilitators to make sure that it's the same that it could be used as a fieldwork learning device.

TiFPE G: That, if you if, like <External person 5> said everyone download this APP and use this to make your notes. We all would 100% use it, and we would probably find it really useful. But we just, I dunno have been told otherwise.

TiFPE D: That;s a very good point. I don't think I have ever been told that technology and learning go hand in hand. Ones recreational. One is educational.

TiFPE E: So like that is interesting, because I feel like that might be why I use it a lot. Because in my school we were like allowed to use phones and computers and stuff and we did quite a lot in lessons.

TiFPE F: So like for me laptops have always been separate from phones and it's like "put that in your pocket, use a laptop."

Interviewer: okay that's interesting so TiFPE D you were saying you think that technology was recreational and separate from learning.

TiFPE D: Yeah that's what I think and have been told.

Interviewer: And TiFPE F you were saying that mobile technology tablets

TiFPE F: They're the same things just smaller.

Interviewer: Aren't ok.

TiFPE E: I straight up use phones in lesson.

TiFPE G: I was not allowed. I had the option to use a tablet if I really really wanted to but no one did. So I didn't either. I think, yeag. I guess it's just the way we grow up.

Interviewer: So it's like the permission to do so, but also knowing how and why to use some of those.

TiFPE D: yeah

TiFPE F: yeha

TiFPE G: Yeah I think it goes further back than just now.

TiFPE D: Uhhum

TiFPE F: This is actually really interesting.

TiFPE E: Psychonalaysing. I think it is great.

Interviewer: So I am going to stop the recording So if you did have any questions.