

Appendix G

Participant: Ruth MacKay- BSMAP Lead Mentor

Q1

DN: As just a little introduction question could you tell me about the Black Sea Map Education Project?

RM: Yes, alongside the science strand they wanted to have an education programme. So they wanted to have a 3-year education programme to run alongside it. The overarching aims were to try and inspire some young people in STEM subjects and for those young people to be from deprived backgrounds. So what we tried to do was to fill that brief and recruit young people that wouldn't normally have the opportunity. We tried to use the subject of maritime archaeology to inspire them think about STEM subjects, within not just maritime archaeology but any branch of the sciences. We also wanted them to consider taking those STEM subjects further, for example at university.

Q2

DN: Do you think that the challenge of working on a maritime based project changed how the program is designed?

RM: What do you mean by challenges of maritime? Do you mean the location?

DN: Yes but also the challenges of getting the kids on a boat and the challenges of working with promoting maritime archaeology as part of STEM. How do you feel the fact that it was maritime archaeology influence the project?

RM: I think the fact that it was maritime archaeology, if we go right back to the beginning in think about trying to recruit students, it was a challenge because they didn't know what maritime archaeology was. So I think that was an initial challenge of getting people involved. They went "I don't know what that is so how do I know if I'll be interested in it". We were fortunate in the schools that we went into because we had teachers who could at least get the students to sit down and read something. We could actually say it looks interesting and there is more to this. If we did manage to go in and do a talk in a school then we are able to overcome one of those challenges and they would go this is interesting. So I think the initial hooks that you might get from saying to someone do you want to come and try a medical course or an engineering course what's something that we didn't have. So we had to work a bit harder to get them interested in the first place. But I think once we did it was worth it because quite a few students really did have their horizons broadened by just knowing a little bit more about the maritime archaeology.

Q3

DN: Do you think the stem scholars had any perception of what maritime archaeology was? Do you think that was a hook that we're able to use to bring them in.

RM: Well I think the hook wasn't there at first. Maritime archaeology as a phrase wouldn't have got them in. I think we were able to get them in in other ways which might have been saying we will find a STEM link for you, or saying that it was residential or it's a chance to visit another country. So I think for this particular project it wasn't maritime archaeology that got them, but by the end of it we had really inspired some young people to learn more about that subject. But I don't think it was enough of a hook on its own because I just don't think they knew what it was.

Q4

DN: So would you say that their perception of what it was changed over the course of the project?

RM: Massively. So I would say that for a lot of them it came from nothing, or maybe knowing a bit about archaeology, but they would have had quite stereotyped views of what that was. And I think we might have new change their perspectives because we really got them thinking about the story is that comes from it. The stories from people and the history. We really got them interested in history and the stories above and beyond any of the STEM links that we made.

Q5

DN: Do you think in general that public engagement is a good way of changing the public's perspective on something?

RM: Yes! I can't see any other way of doing it. Because you... There was something on Facebook the other day that it might have been you even posted it. So the scientist goes why aren't people interested in our subject and the grad student says let's do some outreach and the scientist goes what a waste of money! That summed it up to me. I think a lot of research, in whatever field it might be, quite often is done by people who are very passionate about the subject. But they are quite contained in their little bubble and the only way they can get support from the general public or funding bodies or to try and get young people interested is that actually talk about it. To say look this thing is not scary and is not beyond you, it's possible for used to come and be involved in it. But you need to know little bit more about it.

Q6

DN: How do you think the messages that are being delivered when we do engagement work are being received?

RM: I think most of those messages, you are going to have a different response with different individuals. There are people who are open and perhaps the change for them is quite small because they come in quite opening interested in the subject. But also you have people who are totally closed and who don't want to engage and they may well be affected by it but you don't necessarily find that out. So I think it's important when you do public engagement you need to find a way of measuring that change if possible. No one really likes to do surveys but if it is possible to somehow quantify it then it's really important to do that. Then you can change it if you find that we are only actually meeting those people who are engaged. How do I change that?

Q7

DN: What do you think of when you hear the term engagement models?

RM: I don't know I think I'd ask for more information. I imagine that is different ways that you can engage different audiences but I would like to know a bit more.

Q8

DN: Do you think the current pedagogy and theories are being applied to public engagement work in general?

RM: I do but I think that's because I work in public engagement so I see it happening in the moment. I know that as someone who works in public engagement that we use logic models and think about our audiences. We look at the theory of change. I know that it's been done because I work in that field until I know there is an example of good practice. Which is what would look at and look for. I would like to think that organisations who are specifically about public engagement do use those models and that theory. And in my experience they do, but I don't have a wealth of experience of meeting lots of other organisations. But I'd like to think that there's a wealth of information out there and lots of research and lots of learning and understanding that's been done in the last 20 years that was made the understanding of public engagement more important.

Q9

DN: How do you design engagement projects?

RM: We very much try and start with some sort of logic models, so something like the theory of change, where you think about outcomes what you want to get out of the project. And then you almost move backwards and think about how do you get to that stage? What inputs do we need? What outputs will there be? What can we measure along the way and what are outcomes going to be at the end? It's quite important to keep that quite brief and loose and make sure that all the relevant people are involved with it. There is one that were working on at the moment where we have five categories: what will people do? what will people feel? what will people value? what will people understand? and what skills will they gain? So if you start with that and think which of those categories will people have done, then you can start to form the how. The best way is to involve all the

partners, whoever they may be, funding bodies or universities, and work out what everyone wants to get out of it in the end. Then you can think about how to get there.

Q10

DN: How do you find that practicalities so things like, national interest target audiences funding staffing, affect the aims and delivery of public engagement?

RM: Well I guess you'll have to start with money. So the amazing thing about the Black Sea Map was that we had money. We had money for the students to actually get to the university, get to Bulgaria, and work with academics. We couldn't have done that without the money. And we were very fortunate that money came from a charity who valued the knowledge that would be gained by doing the science research and also the experience for young people who wouldn't normally get that experience. It's really hard because I think that's what it always comes back to. You can have all the will in the world and have people who are keen and interested but if they don't have time, which comes from not having money to release them, then that's really really hard.

Q11

DN: How do you evaluate engagement?

RM: I think there are various ways. It could be in the moment, asking someone verbally. You can step it up and have some sort of feedback where people write things down. Perhaps there's a touchscreen where they answer some questions. So you get something quantifiable. Or you go even bigger scale and have some sort of evaluation team that independently looks at what you're doing. I would like to think that the projects that I do involve an element of all three. Certainly, initially talking to people face-to-face can answer a lot. Do you understand this image? I know lots of people don't like filling in feedback forms but I actually think that is a good way to get the quantifiable data. It's important to actually look at and do something with that data. You can evolve the work as you go, and if you need to change it you want that to be based on evidence. But overall it's much nicer to have people who are actually trained in evaluation who can look at the whole holistic model and go right back to your initial plan and say have you met those aims. And if you have, great, because now you have evidence to take to the next funding body, the next boss and say look this model works.

Q12

DN: What do you think makes engagement successful?

RM: On a really base level, I think it comes down to people, oftentimes the person, who is doing the engagement. You can get someone who is passionate and enthusiastic that does way more than the fanciest graphics. If you have a person you can relate to and they can inspire you then that's really important. I think that making it accessible in whatever way, so obviously taking into account accessibility issues. Can people see it? hear it? get to it? that sort of thing. The language that you use... So can people walk up to whatever the

engagement is, with whatever knowledge or science capital they already have, and understand straight away rather than be put off because it's too much. So I would say enthusiasm, accessibility, and I guess you want to have some sort of inspiration in there as well. Keep people wanting to find out more.

Q13

DN: How do you feel your background it helped you prepare to deliver engagement programming?

RM: I think the type of engagement that I do is always about subjects that I'm interested in myself. So why try and make sure that I'm knowledgeable about what I'm talking about. So I think the enthusiasm comes from the fact that I'm interested in so many things. I have done a little bit of science engagement training, when I was at university I did do science engagement modules as part of my course. But pretty much that is all the work that I've done since I left University. I got straight into science engagement, and I say science specifically because that was my background, and all that's all I've done since left 15 years ago. But a lot of that has been on the job, and being interested in passionate about at first.

Q14

DN: Remind me again what your degree was in?

RM: So my degree was in neuroscience, so it's technically a biomedical science degree. But within that there was modules and one of those was on science communication. I actually got my worst mark in that class, my worst mark ever. But I think that was more about scientific writing and thinking about going to write for journals and actually my first job after university was working in a science centre and I never left.

Q15

DN: How do you think public engagement has changed over those last 15 years?

RM: I think quite a lot actually. So I would say again, it's always difficult because it's based on where you are. So I was living in a city, and cities are where things like that happen. There was a University and a Science Centre, so everything was happening in the city. Where I live now is very rural and there are very few opportunities for that happen. But I would say that public engagement has massively increased the general understanding that people have. So when you say that you work in public engagement or the public understanding of science, that's quite clear people understand. I think it has increased the understanding and the value of it has increased as well, and you can see that in terms of the roles within companies. A lot of companies to invest in outreach, as do universities. But then I might be slightly biased because I know more people who work in the field, I'm signed up two more mailing lists and groups. So I know because I have gotten myself more in the field and am more knowledgeable about what there is out there.

Q16

DN: Do you consider yourself a scientist or an educator?

RM: I am an educator.

Q17

DN: Do you think your work is for the benefit of science or the public?

RM: I think they are probably intertwined because the audience I'm particularly interested in is young people. I want to get them interested and not frightened by science. The idea that they might potentially want to be more involved themselves, so they become the future of science. So I don't think you can separate them.

Q18

DN: Why do you believe that we are engaging with the public?

RM: As educators?

DN: As people who deliver public engagement programming.

RM: I think we do it because we see value in it. We see there is value in informing people about the work that is done. And we see an outcome that is a society who isn't afraid of whatever the subject is. And who understand it and are literate and can talk about it and have an opinion on it. It's so important that we share information. What people do with it is up to them but at least we've shared. They can make their own choices.

Q19

DN: Last question. If you could design a public engagement project involving maritime heritage and there were no mitigating issues involving money or where was in the world. You can involve anyone you wanted. What would you design and why?

RM: I'm not a maritime archaeology expert, but the Black Sea Map is pretty much what I would do. To get young people who wouldn't normally have an opportunity out in the field seeing people who have made that subject their life's work. To see them at work and to see them being enthusiastic. I'm thinking about moments like being in the TV room and watching all of the scientists see the shipwrecks for the first time. That moment is totally worth it. And it's just a shame that we only got 16 kids to have that experience. That is exactly it, they have seen people who are passionate about the work they do do it and they have helped them do it. I'm really hoping that they then take that experience away and whatever passion they have for whatever subject, maybe one day they'll be that scientist or that educator. Maybe they will inspire the next generation. So as a non-maritime archaeologist, it's hard for me to find exactly the right way to engage audiences. But as a

non-maritime archaeologist, I was hugely engaged in that moment on the ship. It was magic. I would do that again.

DN: Is there anything else that you want to add?

RM: No, only that I don't think there is an age limit on learning, so even though I am an educator and I'm working for public engagement, I was still able to learn a lot from this project about the subject area and public engagement. I think projects like this are important.