

## **Rie Malm Discussion Series Q&A**

These questions were asked in the chat during the discussion series conversation. Not all of them were answered during our time together, but we wanted all attendees to have a chance to have their questions addressed. Please feel free to reach out to our team ([belonginginthefield@gmail.com](mailto:belonginginthefield@gmail.com)) with any more questions or comments!

### **Question 1:**

Wondering how we can explicitly call out a culture of "fieldwork is implicitly good"?

- This can be difficult, as this narrative is so strong and it might feel like you cannot enter the discussion at all. I hope we can find small pockets of safe spaces where we can start discussing it. Also, feel free to reach out to me, if you want to discuss this further.

### **Question 2:**

I'm curious about recommendations you have for good metrics or indices for evaluating scientific identity for students doing field work

- I am not sure we want to 'measure' science identity. For my research, I have used it as an analytical concept to see more nuances in the fieldwork practice. As any concept, this one also has drawbacks and we want to be attentive to not reproduce narratives of what constitutes a science identity.
- From the Belonging in the Field team: We agree that there are many nuances to the concept of science identity. For those who are considering using any kind of measure like this, we recommend reading through [A resource for understanding and evaluating outcomes of undergraduate field experiences](#) (Shortlidge et al., 2021). Using backwards design principles, this resource provides different considerations specific to the field-setting that professional and scholars interested in evaluation of field courses should consider as they design an assessment of their course/program. In addition, we also recommend reading [A tool for designing and studying student-centered undergraduate experiences: The UFERN Model](#) (O'Connell et al., 2022), which is a research-based tool that can support field education educators in how to design and evaluate undergraduate field education experiences.

### **Question 3:**

Do you think the positive culture around field work is partially due to the decline in field work in many disciplines?

- The culture around fieldwork feels quite 'stable' to be honest. We still tell the same stories and have the type of heroes. I hope we can start seeing and telling different stories from the field.

- As we discussed, I think we need to return to the learning goals of what students should learn in the field. Make good assignments, focus on students' independent work, give enough time and interact with all students in the field.

#### **Question 4:**

In your studies and setting, have field studies happened primarily in the Arctic, or do they take place in closer/more familiar settings too?

- Yes, I have done a lot of fieldwork within an hour from the university in temperate climate and with easy access. Along with field trips in different European countries that can be reached by ferry or car.

#### **Question 5:**

Have students with disability been included or commented on feeling excluded on field work?

- I have not observed students with visible disabilities. I have heard many stories about students 'not being up to do fieldwork' and teachers telling stories like 'do you remember that student that could not keep their balance on loose rocks'. I have interviewed a teacher with a physical impairment and their way of doing fieldwork with students.
- From the Belonging in the Field team: There is ongoing work in field education looking at the experiences of students with disabilities. Here are some papers that may be a good place to start: [Case study of inclusive learning communities \(Atchison et al., 2019\)](#), [Effective use of personal assistants on an accessible field trip \(Hendricks et al., 2017\)](#), [Making geoscience fieldwork accessible for students with disabilities \(Stokes et al., 2019\)](#), [Investigation of accessible and inclusive instructional field practices \(Carabajal & Atchison, 2020\)](#), [Safe fieldwork strategies \(Demery & Pipkin, 2021\)](#). Note that our next discussion series speakers will be Dr Anita Marshall and Yesenia Arroyo - two scholars active in this space!

#### **Question 6:**

Do you have any examples of practices in the field that increase inclusion of perspectives?

- In the first session in this discussion series, Alexandra shared resources on how to create belonging in the field. Those might also help create a more inclusive practice. (See [video recording of first session on webpage](#))
- I believe that we have to start with ourselves by looking a bit into what ideas, thoughts and values we carry about fieldwork and performing in the field. One exercise that can be useful to start those reflections and discussion could be [this Social Identity Map](#)

#### **Question 7:**

I'm curious about scales for short and longer term experiences.

- This is interesting, yes. The science programmes I have researched all have fieldwork throughout the degree programme. From one-day field trips to multiple-day independent fieldwork projects. My analysis is that the formats can support different types of learning goals.

#### **Question 8:**

Regarding tacit practices, it may be hard for instructors to even recognize if a practice is tacit in order to open it up. Do you have recommendations for how to engage in recognizing tacit practices and creating spaces for challenging how they are approached and taught?

- I am still developing my thinking on this. I have designed an exercise where I ask teachers to discuss the difference between concepts that feel 'easy' to teach and concepts that students seem to pick up 'quickly'. And what concepts are more 'difficult to teach' and 'difficult to learn' (seen from the teachers perspective). To distinguish between teaching and learning. Which are two very different things but very entangled in the tacit practices. Feel free to contact me, if you want to discuss and develop an exercise for your practice.

#### **Question 9:**

How was your own identity as a field scientist shaped by your experiences and discussions with students? Also interested in how you think some of the tacit practices can be taught or uncovered/explored *before* going out into the field.

- My own identity as a field scientist has undergone many negotiations during this research. I love being in the mountains. I have enjoyed being in the field during my own studies and while doing the fieldwork research. The students I have spent time with in the past years have taught me that there are so many ways to be a student. Every student enters the field with a different set of skills and knowledge, and I have been very impressed with what they have been able to do (or survive) under really tough conditions.
- I definitely think we can uncover some of the tacit knowledge before entering the field. I imagine this could be part of the preparation phase. I have suggested an exercise for teachers above. I believe it could also be part of a discussion with students, e.g. what are your beliefs about doing fieldwork? What do you think one should be able to know and do in the field? What do you enter the field with?

#### **Question 10:**

Do you have examples of tools or exercises for exploration of different experiences of/attitudes to fieldwork? Trying to think about how we can facilitate these discussions.

- There are so many ways of doing this. My experience is that concrete experiences from the field, framed as case studies, are really effective to start thinking about fieldwork experiences. There are also several documentaries from fieldwork that could help start discussions, e.g., Picture A Scientist.

**Question 11:**

What suggestions do you have to change the experience of 'when some of us catch up, the teacher is almost done talking' - could we have multiple instructors at varying pace? Make sure major teaching is done in space where all students are there and make the components where students may spread out more self-contained e.g. with a worksheet that everyone can have?

- I think it is a combination of slowing down, selecting what students should learn in that particular field situation and having concrete exercises in the field. Perhaps exercises that can be solved with different types of data? Asking ourselves, if everyone needs to 'see' everything in the field?

**Question 12:**

I certainly pride myself on my ecological field work capabilities and experiences - and creating a space for both men and women. But in some ways, I must be contributing to the lack of diversity of identity, because I favor the 'tough', hardworking, and explorative students whoever they are. Is this because I haven't intentionally dissected my experiences as a field biologist in a way that highlights multiple identities that would both welcome multiple identities AND possibly benefit field work outcomes?

- I definitely think we have some work to do with our own perceptions of students and what learning means. You point to an interesting dilemma because it usually is 'easier' to be in the field when you have a physical advantage. Just like good gear can help you be warm and safe. There are just some things that make fieldwork easier and more accessible. I think it is useful to think about *why* fieldwork is a part of teaching and that learning should be accessible for everyone. If we are able to create space for 'all' students, we might see more types of students thrive in the field and through that learn to recognize different types of contributions.