

**Student questions: Students from SES 496/598 colloquium on “Equity in the Academic Sciences”**

2/17/21

**Claire Richardson:** *“Leveling the playing field: making fieldwork in SESE and CLAS more equitable and accessible”*

Do you think teaching or adding ethnogeology in geoscience curriculum could be a way of helping achieve DEI community?

*Absolutely! Not only would it be a step toward decolonizing a highly colonial discipline, but multiple perspectives are important for any scientific field to advance efficiently and to achieve a comprehensive understanding of a topic. Helen Madeen, one of my classmates who didn't present during colloquium, worked specifically on decolonization of academic curriculum, and her white paper can be found under the Equity in the Academic Sciences tab here: <https://sese.asu.edu/inclusive-community/groups-resources>.*

It was mentioned that you would like to have field camp/ field trips be more accessible for physically handi-capped individuals in the Geological Studies program. What would you subject other than using pictures and doing it online? Because being in Geological Studies it is heavily encouraged to gain experience with making observations and handling samples in person on site.

*There are a plethora of additional resources to use to make field work more accessible. I'll list a few here, but the geoscience education literature is ripe with more. First, field trips should be designed with accessibility in mind. This means choosing as many sites as possible that can be driven to or are reasonably wheelchair accessible. For any sites where this just isn't possible, there are a plethora of tech-based options, such as tablet applications and synchronous video calls. Asynchronous options like looking at photos or videos later are also good, but should only be used if the others I've mentioned can't be.*

It was said that there should be a second opinion other than taking field camp for students in Geological Studies. What would be the course's main goal, how would it be carried out, and would the course be more geared towards people that are seeking more of an academic or laboratory career?

*An alternative to field camp could look like a lot of different things. It could be as simple as allowing a student to choose from a selection of senior-level courses as a capstone, or a research-based semester of independent study in a field of their interest. Developing a field-specific alternative would be more challenging, but is something that the disability community has been working toward for a long time so plenty of framework already exists. Additionally, given the unique challenges posed by the last year, many geology programs have had to develop a prototype of their own. The goal of having multiple options like this would be to allow the most flexibility for geology students with different abilities, interests, and goals.*

Are there recent precedents of virtual alternatives taken for field trips in undergraduate/graduate courses in geological sciences programs with this type of component?

*Yes! The disability community has been working on and advocating for inclusive and accessible fieldwork for many years. In some cases these changes have been implemented, and several examples of successful, accessible field trips exist. Additionally, given the unique challenges posed by the last year, many geology programs have had to develop and run a prototype of their own.*

What is a good framework for encouraging/allowing members of sometimes small field teams to bring up issues when there might be power differentials and reduced options for discussion/resolution?

*My condensed suggestions would be to implement the suggested risk assessment before leaving, ensure that reporting mechanisms are always well understood, and always have an option to reach the “outside world” that doesn’t involve a “gatekeeper”, e.g., having to go through a TA or instructor to get to a satellite phone or internet access. Of course, this question is complex, and gets at more deeply ingrained problems in academia that involve a lack of discipline for bad behavior by faculty and/or senior researchers.*

What is your suggestion when there is a very important sites that you need to visit for your research but the natives who own the land refuse to let you go in there?

*As euro-centric Earth Sciences have taken advantage of Indigenous land virtually since their inception, and often by virtue of extremely violent means, my suggestion would be to respect the wishes of the Indigenous people who have a right to govern their land.*

You talked about providing an alternative to in-field activities for those who are not able to experience it normally. I was wondering if there was any way we could go about that in a way that is beneficial to the student in that the alternative experience would still be applicable for the career requirements after college?

*Absolutely! Alternatives to field experiences enable all Earth science students—not just those who are unable to go into the field—to have a more flexible and tailored college experience. For example, if a student hopes to be an experimental mineral physicist, it probably makes more sense for them to take an upper-level mineral physics class or do a semester of independent study than it does to spend a summer out in the field studying sedimentary structures and depositional environments. Likewise, for students who experience disabilities, expanded options afford a way to design an undergraduate career that is most in line with their career goals.*

You talked about the alternative experiences/lessons for the students. I was wondering now, from the faculty side, how does one make sure that the people receiving the alternative lessons, have the exact same experience as the people completing the in-person, in-field activities?

*Realistically speaking, the “exact same” experience for students who complete alternative lessons would be very difficult to achieve 100% of the time. However, achieving the exact same learning outcomes would not. Thus, faculty should design the field-based components of their courses on the foundation of critically and carefully designed learning outcomes.*

Could your recommendations be applied to STEM study abroad programs or how would you modify them so that they could?

*Yes, for sure. In fact, not only can they be, but they should be applied to study abroad programs and any/all academic field campaigns. Many study abroad programs already do a reasonably job at implementing these measures with formalized, standardized risk assessments, scholarships, and reporting mechanisms, but there is still much room to grow and do better.*