Department of Earth, Ocean & Atmospheric Sciences

Designing field learning experiences with accessibility and inclusion scenarios in mind: A reflection and planning tool

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Purpose

Showcase and gather feedback on a faculty and curriculum development tool designed to enhance accessibility and inclusion practices in field-based learning experiences.

This tool was collaboratively produced in the context of the Earth Science Experiential and Indigenous Learning (EaSEIL) initiative seeking to (re)imagine and (re)design field-learning experiences in science courses (Lukes et al., 2022).

Background

Disciplinary traditions, contextual factors, and students' and educators' identities, background, and prior experiences shape field-based learning experiences (e.g., field trips, field-based courses, research stations) (Carabajal et al., 2017; O'Connell et al., 2021). Proactively designing inclusive field learning experiences can reduce educators' workload while in the field and enhance student wellbeing and academic performance (Lawrie et al., 2017):

- Using universal design for learning (UDL) standards to prevent alienation of specific students and support those hesitant to disclose personal circumstances.
- Working with students disclosing exceptionalities to address their individual learning and wellbeing needs in field settings using tailored accommodations. Lack of knowledge about possible learning barriers and accommodations in field-based learning can hinder students' self-advocacy.

Accessibility/Inclusion Scenarios and Teaching Practices in Field-Based Learning Experiences

- Supports educators recognize potential accessibility and inclusion scenarios that may come up in field-based experiences and devise strategies to address them.
- Uses: individual reflection, 1-1 pedagogical coaching or small group discussions.

Share your ideas:
New scenarios or teaching practices

(Use post-it notes or QR code)

1. **Add a new scenario (** **)**
2. **What can you do BEFORE going to the field? (** **)**
3. **What could you do to adapt WHILE in the field?** **)**

Scan me to access the tool (*some scenarios were edited for brevity), and contribute your thoughts and feedback.

Scenario #1
A group of students in your course **do not have experience with outdoor learning activities and do not know what going to a field-camp entails.** How can you support these students to understand what their experience might look like so they can focus on their learning?

- Share photos, descriptions, videos of field sites
- Regular check-ins: emotional, physical, cognitive

Scenario #2
A student's **religion/cultural traditions requires them to pray at designated times/locations or adhere to a particular level of modesty around the opposite sex**. What can be done to ensure that religious principles and cultural traditions are respected?

- Use a pre-field survey to know students and build time into the schedule
- Create supports for privacy (e.g., identify a quiet area for praying)

Scenario #3
A student has a **respiratory condition** limiting their ability to do intense exercise without serious risk. What can be done to allow this student to participate to the fullest of their ability without putting their safety at risk?

- Describe the field experience clearly to gauge activity levels
- Find alternative locations that do not require hiking to conduct field work

Scenario #4
A student **injures their leg halfway through the field experience** such that they cannot safely navigate the terrain. How can this student continue to participate in and complete the field experience?

Scenario #5
A student in your course **identifies as non-binary. Sleeping arrangements for field-camp have traditionally been men/women tents**. What could you do to ensure your student feels welcome in your field experience?

- Include a question on pre-field survey asking about preferences on set up options

Scenario #6*
A student has **arthritis which limits the hand dexterity** affecting writing or the effective use of handheld tools requiring fine motor control. What accommodations can be provided such that the student is able to record field notes, observations, and measurement?

Scenario #7*
A student may go through a serious **emotional distress crisis** during the field experience and being surrounded by and working with other people is triggering. What resources or supports could be in place for students who need privacy to engage in self-soothing practices?

- Inform students about available mental health resources local to field site
- Evaluate student safety when in crisis. Ask whether and how to support

Scenario #8
Students may feel **concerned about not having contact with their family for extended periods**. These concerns may be heightened in those with mental health issues, students with young children, or whose family member is ill. What structures could be in place to support these students?

Scenario #9
A student has a **visual impairment and has a seeing-eye dog** which helps them navigate in day to day life. What visual activities or documents could be presented in alternate formats (audio/tactile)?

Scenario #10*
A group of **male students belittles their female colleagues** in the field. These students ignore, speak over, or dismiss their female colleagues' ideas and observations. How can you ensure female students are included in valuable peer learning?

- Construct a student-led code of conduct and establish clear consequences if it is broken
- Have a mechanism in place for anonymous reporting

Scenario #11*
A student has **extremely limited mobility and uses a powered wheelchair** (unsuitable for loose terrain, very heavy). What measures can be taken to ensure this student is not excluded from the field learning experience and community?

- Modify course to rely only on wheelchair accessible paths
- Check-ins with student on accessibility challenges

Scenario #12*
A student with **carpal tunnel syndrome requires intermittent breaks** to avoid hand pain, numbness, and/or maintain writing legibility. This student was granted 1.5x time for tests. How could you extend work time without jeopardizing the student's time to meet basic needs (e.g., sleep, eat, socialize)?

Scenario #13*
A student takes **medication that affects their balance and steadiness on their feet**. Are there any field locations where falling would likely result in serious injury or would be difficult to navigate with limited balance? What extra precaution(s) can be taken to mitigate risk at these sites?

- Inquire about best times of day to work on their feet

Scenario #14*
A student has an **ostomy bag which is located on the lower abdomen, along the hip.** For safety and health reasons, excess external pressure cannot be placed on the outside of the device. How can you support this student to navigate the field learning experience in a safe way?

Scenario #15
A student approaches you at the field-experience information meeting and mentions they have a **reading disability**. How can you tweak activities to make learning and assessment accessible to this student?

- Describe in detail the type of activities, ask the student if/what accommodations are required

Scenario #16
A student is **hard of hearing**. How can you ensure this student is receiving instruction and support comparable to fully hearing students? Are there any extra safety risks in the environment that may arise due to lack of hearing? What can be done to mitigate this?

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