

EDI considerations in off-campus research environments

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Background of issue

Field experiences are critical to recruitment and retention of science students. They have been shown to improve graduation rates, develop specialized skills and global thinking, improve self-efficacy, and clarify career intentions with many university science programs requiring fieldwork for both undergraduate and graduate degree completion. At uOttawa, there are compulsory field courses in the undergraduate Geology/Geoscience program(s), compulsory courses that have field components in the EVS program, and courses with compulsory field components in the Biology program. For graduate studies, field work is required for some research areas.

Fieldwork and other off-campus research environments (e.g., conferences) are different from standard academic settings as they offer more of an opportunity for casual socialising. In such settings, students may also interact with individuals or groups who are not part of the uOttawa community. These differences in learning environments may lead to situations and circumstances that might not arise in the ‘normal’ campus setting. As well, situations may arise that those involved may not be adequately prepared for and, given the location is outside of campus, resources may not be immediately accessible.

Overview of problems

Elements of field experiences can create barriers for some students. They can be physically and mentally demanding due to the rigours of field life which may include long days with few breaks, rugged terrain, unpredictable weather, or isolated settings. These strains may add to the potential for conflict with peers and/or instructors.

Field experiences may not be accessible to everyone. They are low pay and/or high cost (e.g., field courses), have long or non-standard work hours which can conflict with family care, there is a lack of accommodation for those with mental and physical disabilities, and there can be discrimination, harassment, and unwelcoming work environments. Issues of power imbalance, discrimination, etc. can occur in field settings where institutional oversight may be minimal or hard to enforce.

Scope of this document

Here we outline some challenges students may face in off-campus research environments. We have restricted this discussion to conditions once trainees/students have already been selected to participate in an experience, thus we have excluded barriers that may exist prior to student enrolment in these activities. Furthermore, we have placed focus on individuals who may be at-risk or perceive greater risk when engaged in off-campus activities due to: race/ethnicity, sexual orientation, disability, gender identity, religion and/or personal circumstance. With this list of considerations, our aim is to identify what resources and training activities are needed to better prepare individuals (both students and supervisors) for off-campus activities.

Table 1. Main categories and potential situations where EDI considerations are most likely to arise.

Category	Description of category	Potential situation or need for accommodation
1. Mental health and well-being	Emotional, psychological, and/or social well-being	Previously identified mental health issues or disorders
		Emergent issues or disorders
		Reduced well-being due to removal from daily structures and social networks
		Reduced well-being from coping with environmental stresses
		Reduced well-being from coping with social stresses
1. Accessibility	Students with temporary or permanent ‘disability’ (hearing, visual, mobility, attention, learning, development)	Transportation to and accessibility at the site
		Accessing and completing academic tasks
		Operating equipment
		Ableism (type of discrimination ¹ , idea that bodies and minds should be a particular way to be considered ‘normal’)
2. Health impairment	Students with a chronic illness (e.g., diabetes, complex drugs)	People on medication - may have difficulty with a full-time schedule or fieldwork locations that involve travel or overnight stays; refrigeration
		Dietary requirements

¹ When someone experiences negative treatment or impacts because of an actual or perceived connection to a group (e.g., sexual identity, race)

<p>3. Challenges specific to members of the lgbtqia2s+ community</p>	<p>Students who identify as Lesbian, Gay, Bisexual, Transgender, Questioning, Intersex, Asexual and Two-Spirit. These terms are used to describe gender identities and sexual orientations.</p>	Gendered language and labels
		Gender and size labelled gear
		Bathrooms
		Accommodation (housing)
		Access to refrigeration for medication
		Compromised privacy in outdoor activities
		Strenuous activities may impact students from taking hormone therapy or using chest binders (associated with medical risks)
		Risk of bodily harm from peers and community
		Potential for there to be insufficient access to medical care should a situation arise
		Increased anxiety and energy spent on challenges of being in or out (i.e. regarding one's sexuality or gender) in different situations
		Concern over being perceived as an outsider
		Unwanted physical contact
Persecution in some countries		
<p>4. Challenges specific</p>	<p>Students who identify as</p>	<p>Police violence (mental or physical)</p>

<p>to racialized and Indigenous peoples</p>	<p>black, Indigenous, or racialized.</p>	Internal discrimination from team
		Discrimination and harassment from general public
		Racial profiling
		Problematic accommodations or places
		Increased anxiety and energy spent on challenges associated with vigilance
		Violation of traditions, beliefs, or cultural norms
<p>5. Religious considerations</p>		Clothing denoting a religion leading to discrimination
		Accommodation (time, space, access to community gathering) for religious ceremonies
		Clothing denoting a religion that may prevent PPE from being worn or may otherwise be considered a safety risk
		Can lead to preferences for gender separation which could lead to an intersectional challenge with the lgbtqia2s+ community
		Dietary requirements
<p>6. International students</p>		Situations that may jeopardize visa/immigration status
		English as an additional language

		Existing accommodations for students with disabilities may not work
7. Students with caregiving duties or who are pregnant		Timing of activity – students with children or other dependents may not be able to participate unless childcare is available.
		Length of activity – it is more difficult for students with children or other dependents to participate in multi-day activities
		Students unable to leave infants
		Attendance in field courses by students who are pregnant – these students may have consequent time, mobility and other physical limitations.
		Lack of access to medical care (pregnant individuals)
8. Students who identify as a woman		Psychological and physical health from persecution and discrimination ¹ in some countries
		Psychological and physical health from sexual harassment ²
9. Socioeconomic status		Disadvantaged when there are upfront costs associated with field work while away

² Form of discrimination that includes unwelcome and offensive sexual gestures, words or actions about a person's sex.