WCSE Proposal

Abeer Siddiqui

Title

Consumers or Producers? Exploring the Role of Students in Science Communication

Thread

C: Curriculum

Keywords

Science communication, science literacy, data literacy

Abstract

We often fail to provide our science students with authentic opportunities to cultivate core skills in science literacy – i.e. the ability to access, assess, and communicate scientific information. The scientific literature is too often presented as static information, rather than a conversation that our students are invited to partake in. This presentation describes a collaboration between McMaster University's School of Interdisciplinary Science and the McMaster University Library to address instructional gaps in the areas of science communication, data literacy, and professional practice.

This session will share McMaster's approach in articulating science literacy learning outcomes, mapping them to the existing Life Science program, and embedding science literacy learning opportunities. More importantly, the session will showcase corresponding instructional content and developed resources on science communication (covering topics such as academic presentations and writing), data representation and management, and professional practices (such as citation management, academic publishing, and copyright). Participants will be invited to discuss how such instructional content aligns with their own classes and learning objectives, and how to best embed (and assess) this type of learning.

Acknowledging science literacy as a valuable component of our instruction can help us engage our students not just as consumers of scientific information, but as producers of it as well.

Engaging activity

We will explore exemplar assignments (ex. lab reports, literature critique, culminating presentation, etc.) alongside McMaster's articulated learning outcomes (LOs). Seminar participants will be asked to consider how and if LOs apply to these assignments, and how these assignments can be modified to better assess student learning/achievement in science literacy.