Increasing Undergraduate Authentic Science Pedagogy using Community Focused Videos

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a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA
Faculty of Science
Environmental Science

Background

- This TLEF funded project saw the research and design of 6 videos, 3-4 minutes in length. individuals from the Vancouver region were interviewed about environmental relevant issues.
- Looking to improve the use of guest lectures in the introductory Environmental Science course (ENVR 200), these videos allow community voices to remain integral to the course while improving the alignment between the student activity and the course objectives.
- In 4th year, all Environmental Science majors complete a two-term Community Based Research capstone project. In preparation, this new in-class activity is designed to expose 2nd year students to real, local community challenges.

Video 1: Tasha Murray

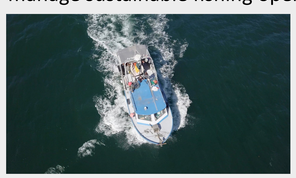
Executive Director, Invasive Species Council of Metro Vancouver

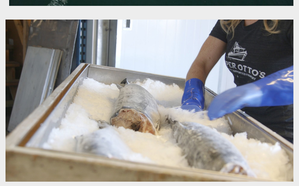
Tasha explains the need for local approaches to invasive species management. In this video, she discusses two cases of invasive species that have become problematic in the Vancouver area: Hog Weed and Fire Ants.

Video 2: Shaun Strobel,

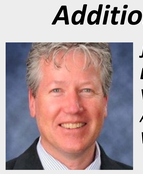
Fisherman, Skipper Otto, Community Supported Fishery (CSF)

Shaun Strobel explains why monitoring fish stocks is necessary for sustainable fishing and discusses the notion of "eating with the ecosystem" as a viable option that fisheries can practice as a way to manage sustainable fishing operations.





Additional Videos



John van der Eerden, B.A.Sc., M.Eng,
Vice President, Associated Engineering, Water Resources

Sustainable design: flood protection in the lower mainland.

John Gibeau, B.SC., MBA,
President, Honey Bee Centre Honey Bee Education, Crop Pollination Services

Maintaining honey bee health: a sustainable future for local agricultural.

Bruce Blackwell, M.Sc., RPF, R.P.Bio.,
Principal,
B.A. Blackwell and Associates, Fire Ecology and Fuel Management

Community Wildfire Protection Plans for the wildland urban interface.

Research

- Using multiple forms of media (internet sources, news sources, podcasts, research databases, and the city of Vancouver and metro Vancouver websites), we vetted potential research projects to determine potential interview candidates
- We chose members from the community that are devoted to investigating global issues at a local scale while encouraging ecological sustainability.

Pre-Interview

- The pre-interview was used to make first-contact with potential interviewees to determine whether their interests met the requirements of our project.
- Information attained during the pre-interview developed a broader understanding of interview topics, that later helped to structure the videos.
- Shot location and the structure of the filmed interview were also discussed for time efficiency on the day of filming.

Filming Interviews

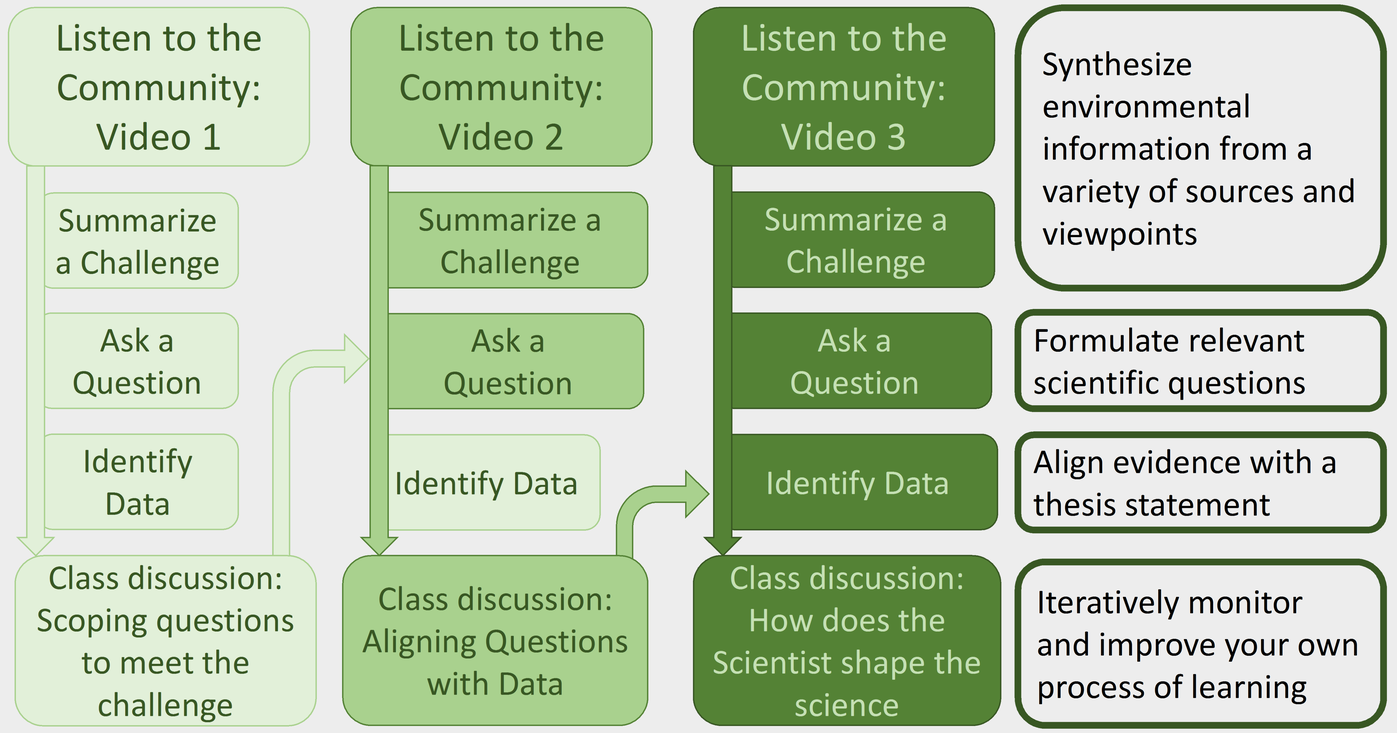
- Interviewees were sent the questions prior filming to allow them to develop sound arguments.
- 1 - 1.5 hour interviews were filmed in a relevant location. Supplementary footage of their context and their work was filmed when possible.
- Interviews conducted by Brad Jackson, filming by UBC Studios
- All interviewees were encouraged to guide the content and speak about issues of importance to them and their work.

Editing

- Collaborative effort: Tara Ivanochko (EOAS Faculty), Brad Jackson (Graduate Assistant), Michael Sider (UBC Studios Producer)
- 1-2 themes chosen per video, 3-5 minute final edit prepared to include:
  - 30 second introduction of the subject and their work
  - exploration of 1-2 themes and real world applications
  - supplementary footage to provide context when possible
- More themes could easily be retrieved from the filmed material

In-Class Activity: Scoping Science to Meet Community Needs

Three 50 - minute Activities: *Video, Individual Assignment, Small Group Discussion, Class Debrief*
Three opportunities for reflection: *End of week journal*



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