

Telling Science Stories Through Student-Produced Podcasts and Videos

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A new course, Communicating Science (SCIE 300), was developed at the University of British Columbia (UBC) in Vancouver, Canada, to give undergraduate students practical experience communicating science to diverse audiences in engaging and creative ways. A major project in the course asks students to produce a short video and short podcast about recently published UBC research. This conference session will discuss the rationale and iterative development process for this project and the class activities and assignments used to prepare students for the assignment. Student feedback and examples of student work will be shared. Finally, shifts in student thinking towards communicating scientific information and considerations for scaling up the course will be discussed.

Survey data has revealed that science students at UBC recognize that communication skills are important for success in their undergraduate courses and after graduation. However, a majority feel that formal training in this area is lacking. Students say that although both written and oral communication skills are expected during their degree, their courses rarely include instruction on these topics. Instead, they are left to develop these skills independently. SCIE 300 aims to address this perceived deficiency.

While SCIE 300 is a course within the UBC Faculty of Science, we do not limit the course to communicating with scientific audiences. Instead, SCIE 300 introduces students to a variety of methods for communicating scientific information to diverse audiences. When considering non-expert audiences, for example, students contribute to a course blog and produce their own podcast and video about current scientific research. This multimedia production entails project planning, background research, developing interview questions, interviewing a UBC researcher, scripting the podcast and video, filming, and editing.

To support students in this assignment, woven throughout the course are hands-on writing activities that address important scientific writing skills. To develop students' critical thinking about science communication, we also include class discussions on contemporary issues related to communicating science, such as the role of social media, copyright in the digital age, and misconceptions of science and the scientific process. We also hold optional workshops on using the technology associated with this project, such as audio and video editing software.

By the end of the course, students have not only produced a multimedia project, but they have had an opportunity to become more digitally literate citizens and better critical thinkers. They have also gained valuable communication, planning, and teamwork experience. In addition, through the researcher interview, these undergraduate students gain exposure to the university research community, which at large institutions like UBC, is often difficult to provide. Moreover, with a class size capped at 25 students, there is an opportunity for students to closely interact with a faculty member.

To evaluate student attitudes and perceptions of the various components of the course, we have conducted several surveys and focus groups. The responses have been used to make refinements to the course content, activities, and assessments of learning. Survey data has also been used to explore shifts in student thinking towards science communication. For example, when asked to list keywords related to communicating science at the beginning of the course, students listed academic papers, clarity, accuracy, and educational as the top four keywords. After the course, the keywords shifted to style, relevance, interactive, and engaging.

Each offering of the course results in a collection of student-produced podcasts and videos about scientific research happening at UBC. From the student perspective, the multimedia project provides hands-on training in oral and written communication skills and challenges students to become more digitally literate members of society. There are also positive outcomes from the perspective of the scientists -- the graduate students, post-docs, or faculty members whose work is featured in the projects. As a way to give back to these researchers who donate their time to the students, we offer a free media training session prior to filming. This is training that may be useful to them in their future and significantly increases the number of UBC researchers who have had media training. In addition, each researcher is given a DVD with the video and podcast, which they can use on their own web site or blog.

Attendees at this session will take away inspiration and ideas for incorporating audio and video projects into their classrooms, plus aspects to consider before implementation that will help them make the right choices for their course. Audience members will also participate in a discussion of some activities and tools that can be used to prepare students for producing digital content. The group will be encouraged to share similar experiences and suggest additional activities that would be useful and relevant to such a project.