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Science Infographics: Experimenting with Creativity and Information Literacy

The Challenge

The ability to critically evaluate information and media is an essential skill in our rapidly-changing global society. Information literacy and critical thinking skills contribute to academic achievement, engaged citizenship, and continued learning after graduation. It is becoming increasingly clear that acquiring and practicing these skills should be an integral part of students' learning throughout their entire academic careers.

The Approach

Working collaboratively with the science librarian, we developed an infographic project to teach students how to search literature effectively and communicate complex scientific topics to a broad audience. This assignment also required students to use their artistic imagination to create an infographic that would visually communicate these topics. This project was incorporated into sophomore-level chemistry courses. Working in groups of two, students were asked to create a 20"x30" digital infographic explaining a chemical reaction, or biological/scientific process with a general audience in mind.

For this assignment, our primary objectives were to use a creative project to increase engagement and conceptual understanding and to ultimately improve students' information literacy and science communication skills. The specific learning outcomes for this assignment were divided into three areas: information literacy, creativity and communication, and chemistry content

How it Went

This collaboration—between faculty in different departments along with a science librarian—was successful. This variety of contributors brought different perspectives on how to make the scaffolding assignments effective to build information literacy skills for students. This team approach made the instruction in both the chemistry/biology and information literacy more effective. Our science librarian also made herself incredibly accessible to students who had questions about searching for information and evaluating sources.

One benefit of using a creative assignment like the infographic is allowing students to experience an alternative way to learn and be assessed besides exams. Many of the students who produced outstanding infographics were not top performers on traditional assessments like summative exams. This outcome suggests that this type of assignment might benefit students that struggle with more traditional instruction and assessment methods, and we plan to explore this possibility more formally in future iterations of this assignment.

Advice for Others

Partner with people with different expertise.

See what people have already done here at DU (no need to reinvent the wheel).

Have scaffolding assignments to help break down a large assignment like this for students.



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