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Preparing for an Honors Capstone: Interdisciplinary Methods and Ethics in a Research Methods Course

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Abstract: Teaching interdisciplinary research methods to honors students across disciplines is complex. A pre-capstone seminar, The Art of Inquiry, centers ethical considerations within and beyond individual research interests, helping junior and senior students of all majors prepare for ethical, scholarly projects.

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An aquatic ecologist, a cognitive psychologist, and an anthropologist walk into a classroom. This might sound like the opening to a joke, but it is the beginning of an innovative teaching collaboration at the University of Montana's Davidson Honors College to design a capstone preparation course for honors students of all majors. These three honors faculty members were tasked with designing an interdisciplinary research methods course satisfying an undergraduate ethics general education requirement. Although they were well-versed in teaching research methods to students in their own disciplines, none had previously taught research methods to an interdisciplinary audience.

In designing and teaching this course, we found that centering ethics as the foundation of research, as well as a point of comparison between disciplines and methodologies, helped students deepen their learning about the purpose and process of research overall. Moreover, the exposure of students to peers from a variety of academic traditions helped them understand

research as a broader exercise outside of their own discipline. Teaching research methods, no matter the discipline, is inherently a practice in helping students learn skills and mindsets rather than specific knowledge because it trains metacognitive skills, i.e., the skills of thinking about thinking (Fortuin & Van Koppen, 2016). Students who are aware of why they are interested in the topics they want to study, who can articulate how their approach to research might influence their findings, and who are comfortable talking about their own strengths and weaknesses as researchers are more likely to be actively engaged in the self-directed learning required to complete a large, ambitious task like a capstone project. In this process, students are also learning "self-authorship" (Baxter Magolda, 2007: 69).

We began the course by having students give Pecha Kucha presentations about who they were and why they were interested in their topic. Pecha Kucha presentations are a series of twenty slides, using only images, where the presenter must talk about each slide for exactly twenty seconds before the presentation advances to the next image. These presentations led into discussion about individual stories, the power of topics we care about to hold our interest, and differences and commonalities among the students. This sharing also began the creation of our learning community designed to facilitate the trust and respect needed to engage in discussion over the semester.

After covering the basics of asking and answering research questions as well as the assessment of what constitutes peer-reviewed scholarly research, students were asked to free-write what they perceived as the major ethical considerations and implications of their projects. Reading these reflections, we noticed that students who were majoring in psychology or pre-med or who worked in research labs on campus generally had a basic understanding of the foundations of research ethics, such as minimizing harm to people and ensuring consent. Students already engaged with research on animals on campus also understood expectations of ethical treatment of research subjects. Other students lacked this awareness but still sought to minimize harm and have an overall positive impact on society. In this first free-write, not all students discussed other ethical issues that we covered later in class, including the ethical implications of how their research might be used, how the subject populations of their research might feel about being studied, the complicated relationship between experts and the public, and whether they had an obligation to make their research understandable to a general audience.

About two-thirds of the way into the course, we implemented a second free-write after covering the history and requirements of the IRB; so-called ethics beyond the IRB; evaluation of case studies and professional ethics

guidelines from different fields of study; the ethics of peer review; and written positionality statements about how their own experiences, preparation, and interests might influence the execution of their research capstone. A final writing assignment bringing all these considerations together was due at the end of the term as part of the proposal portfolio that included a literature review, final research questions, and proposed methods.

Overall, these activities allowed students to gain insights into their chosen academic and professional disciplines as well as the origins of the research area they had chosen. Further, the increased reflective skills helped students understand the knowledge and power of the systems with which they were aligning themselves, including an awareness of how we align ourselves with certain identities or groups and how these may influence our actions or how we are received. Ultimately, metacognitive reflections that focused on ethics embedded in course activities allowed students to evaluate their understanding of their research through their own interests, goals, and lived experiences. Explicitly talking, reading about, and practicing ethical decision-making helped students learn to recognize and then negotiate the complex ethical challenges that arise before, during, and after their research.

REFERENCES

Baxter Magolda, M. B. (2007). Self-Authorship: The foundation for twenty-first-century education. *New Directions for Teaching and Learning 109*: 69–83.

Fortuin, K. P. J., & van Koppen, C. S. A. (2016) Teaching and learning reflexive skills in inter- and transdisciplinary research: A framework and its application in environmental science education. *Environmental Education Research 22*(5): 697–716.

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