

PDG PROJECT RECRUITMENT

GENERAL BUMPH FOR ALL Partnership Development Grant (PDG) PROJECTS: In new, SSHRC-funded research, an interdisciplinary faculty and student team from Royal Roads University, the University of Waterloo and the University of Victoria will investigate the role of affect (emotion) in environmental education, knowledge retention, and decision making. The research team leads (Drs. Barbeau, Noble and Wolfe) are recruiting four Masters students and one Doctoral student for this exciting multi-project program.

All students will develop both academic and non-academic skills including use of various research methods and theoretical frameworks for analysis; publication and research communication; knowledge mobilization and dissemination; data management and analysis; research ethics; interdisciplinary research; leadership and teamwork; and effective presentations (scope, tone and ‘story telling’) at community events and conferences.

Specialized skills will include the design of quantitative and qualitative data collection techniques; the collection, coding and analysis of primary and secondary data; developing strategic outreach opportunities and a communication strategy for the research project. Students will be part of a dynamic research community supported by active mentoring through advisor/committee engagement and an active research lab (via Slack and Zoom for now).

As part of their tuition-funding expectations, all graduate students will contribute their findings to the public domain through scholarly conferences and publications, accessible outreach materials such as blog posts, newspaper opinion articles and other social media opportunities. Support for scholarly journal publication expenses, i.e., reasonable page charges at reputable journals, will be available.

PROJECT SPECIFIC DETAILS

PDG-PROJECT 1 (starting in 2022; one Masters position): The **Masters student (#1)** will complete a **retrospective analysis of British Columbia and Ontario’s environment and sustainability education post-secondary curriculums**. Specifically, the student will study the affective loads of concepts used over time in the diverse case-study analysis of interdisciplinary environmental studies and science (IESSc) programs and curricula at Royal Roads University and the University of Waterloo, including the objectives of these programs and the assumptions about emotions implicit in their approaches. This research is the foundation for three subsequent projects. **Methods:** *Boolean search of academic course databases; thematic coding (TBD) to saturation; NVivo9; Qualitative assessment*. This student may have a background in environmental and/or affective education; perhaps a certified teacher seeking a graduate research degree. Students with a strong background in environmental education, curriculum and/or pedagogical design and/or content and discourse analysis would be best suited for this research.

For more information about this research position, please contact: Dr. Sarah Wolfe (sewolfe@uwaterloo.ca).

Anticipated Advisor: Dr. Mickie Noble (RRU).

PDG-PROJECT 2 (starting in 2022; two Masters positions): Two masters-level researchers will **analyze student emotional responses, motivations, and commitment to, undertaking and completing environment/sustainability studies and science.** The student researchers will assess whether the factual-but-potentially-emotionally charged (e.g., fear, anger, guilt, and shame) information within interdisciplinary environmental studies and science (IESSc) curricula impedes the recruitment and continued engagement of environmental students and alumni. There is sufficient funding for two **Masters (#2 and #3) students** to undertake an online survey of 300+ randomly selected Ontario and British Columbia students at four educational stages—senior high school (e.g., grade 12), post-secondary ENV programs' first- and final-year students, and IESSc program alumni to generate an expansive data set. The survey will be designed to assess the emotions that students associate with environmental and sustainability education, their self-perceived pro-environmental identities, and their intentions to pursue IESSc at different stages, e.g., the post-secondary or graduate level and/or the application of this knowledge in the lives post-graduation. **Methods:** *Analysis will use standard statistical methods to identify patterns across and within the data sets. Example methods may include random, online survey (Survey Monkey Pro); New survey design extracting and integrating New Ecological Paradigm; Positive and Negative Affective Schedule-X (PANAS-X); questions about future study intentions; Coded and analyzed in IBM SPSS Statistics.* These two students may have backgrounds in education, psychology, ecology, water/geography and/or sociology. Strong skills in survey design, data management and quantitative analysis are necessary.

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Anticipated Advisor: Dr. Sarah Wolfe

PDG-PROJECT 3 (starting in 2022; 1 doctoral): Analysis of implications of variability in ecological learning AND interdisciplinary water education formats for students' knowledge retention and expressed commitment to pro-environmental behaviors. One data set will be drawn from established ecology courses (RRU; UW), while the second data set will come from interdisciplinary water courses (UVic; UW). The project will be designed to *assess the intersection of students' emotions, their learning modes, and their patterns of information/knowledge retention as they relate to environmental content.* Specifically, the researcher will investigate 1) whether mortality primes—that is, stimuli that remind people of their own mortality—in different learning settings (for instance, in the field, lab, classroom, or online) change the way students respond to or retain environmental content; and 2) whether mortality primes in different learning settings influence the receptivity to or support for particular environmental interventions that impact them or others. The research could be structured as a pre- and post-test design in conventional education settings using standard mortality salience or control interventions. These interventions will be mirrored in courses from all participating universities, although the instructors and course details will vary. Collaborating course instructors will be aware of the research but will not be involved in data collection, analysis, or interpretation. First-year, fourth-year, and/or graduate students will be randomly assigned to control or intervention groups, and then attend their class (for example, an ecology field tour); post-class assessment will measure students' receptivity, knowledge retention, and pro-environmental intentions. **Doctoral researcher** will be responsible for the research and the successful completion of a minimum of three co-authored publications in scholarly venues. **Proposed Methods:** *Final design and data analysis are TBD but we anticipate*

example approaches such as in class or online data collection via SurveyMonkey. Randomly assigned questionnaire packet with two versions containing either the salience induction or control; Statistical analyses will assess the gathered data to find significant effects of interventions on participants' death-thought accessibility. These may include two-way ANOVA and sets of contrast analysis to identify main effects of intervention results. T-tests will determine whether findings are due to chance. This doctoral researcher may have a background in social psychology, education and/or interdisciplinary studies. Strong skills in research design, data collection and management along with openness to both quantitative and qualitative analysis are necessary.

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(sewolfe@uwaterloo.ca).

Anticipated Advisor: Dr. Sarah Wolfe

PDG-PROJECT 4 (Starting in 2023; one Masters): Development of new cross-institutional approaches, incorporating findings on affective loads, for interdisciplinary environmental studies and science. Masters student (#4) will draw on advice from all faculty researcher partners and other student researchers who have been part of the research to design new pedagogical approaches for delivering post-secondary interdisciplinary environmental studies and science (IESSc) based on our findings regarding affective loads, delivery modes, and content retention. As the culminating project in this research program, the ideal student researcher would be able to analyze and synthesize large amounts of information, have strong written communication skills and be willing to assist in generating recommendations for further research to inform our application for a full SSHRC Partnership Grant proposal (circa 2025). **Methods:** *Qualitative, interpretative analysis TBD.* This student should have a background and/or strong interest in environmental education and pedagogy. Skills in data management and interpretation, curricular applications, strong writing skills and attention to detail are essential.

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(sewolfe@uwaterloo.ca).

Anticipated Advisor: Dr. Christine Barbeau (UW).