### Thesis Prospectus 2022-23

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**Student Final Submission (date):** 12/04/2022

**Faculty Reader Approval (date):**

**MES Director Approval (date):**

1. **Working title of your thesis[[1]](#endnote-1).**

Environmental Education Outreach and the Effects on K-12 Grade Minds

1. **In 250 words or less, summarize the key background information needed to understand your research problem and question.**

The need for future generations to care for the land around them has held importance since time immemorial. However, looking back in time it is clear that this specific type of education is not revered, required, or often even thought about. This thesis desires to design programs through the Puget Sound Estuarium to teach methods in environmental stewardship to K-12 students, and inspire the continuation of those lessons in their own lives. Then, data will be analyzed through time to see the impacts of those lessons though interviews, surveys, and experimental research.

1. **State your research question(s).**

Can exposing K-12 students to estuary based stewardship opportunities encourage them to carry out stewardship on their own time?

How can estuary based stewardship education impact local ecosystems?

How are students inspired to learn about estuary based stewardship? What ways can we utilize that passion into long term sustainability effects?

1. **Situate your research problem within the relevant literature. What is the theoretical and/or practical framework of your research problem?**

Ballantyne, R. (2004). Young student’s conceptions of the marine environment and their role in the development of aquaria exhibits. GeoJournal, 60, 159–163.

Barney, E. C., Mintzes, J. J., & Yen, C.-F. (2005). Assessing knowledge, attitudes, and behavior toward charismatic megafauna: The case ofdolphins. Journal of Environmental Education, 36(2), 41–55.

Gough, A. (2002). Mutualism: A different agenda for environmental and science education. International Journal of Science Education, 24(11), 1201–1215.

Carleton-Hug, A., & Hug, J. W. (2010). Challenges and opportunities for evaluating environmental education programs. Evaluation and program planning, 33(2), 159-164.

Michael J. Brody & Helmut Koch (1990) An Assessment of 4th-, 8th-, and 11th-Grade Students' Knowledge Related to Marine Science and Natural Resource Issues, The Journal of Environmental Education, 21:2, 16-26, DOI: 10.1080/00958964.1990.9941927

Nicole M. Ardoinhttps://orcid.org/0000-0002-3290-8211, Alison W. Bowers, Noelle Wyman Roth & Nicole Holthuis (2018) Environmental education and K-12 student outcomes: A review and analysis of research, The Journal of Environmental Education, 49:1, 1-17, DOI: 10.1080/00958964.2017.1366155

Ord, J. (2012). John Dewey and Experiential Learning: Developing the theory of youth work. Youth & Policy, 108(1), 55-72.

Jensen, B. B., & Schnack, K. (1997). The action competence approach in environmental education. Environmental education

1. **Explain the significance of this research problem. Why is this research important? What are the potential contributions of your work? How might your work advance scholarship?**

This research is significant because it is one of the main avenues through which 6th-8th grade students in Thurston and Mason County are exposed to environmental science outside of their classrooms. It is vital that the lessons are engaging so that students can properly learn the basic concepts of biology and chemistry. Furthermore, this is the main avenue through which many of these young people become involved in environmental stewardship activities. Therefore, it is vital that they are meaningful and effective for students. The Puget Sound Estuarium is also reliant upon grants, and its educational programming needs to be assessed in order for it to remain secure as a non-profit.

1. **Summarize your study design[[2]](#endnote-2). If applicable, identify the key variables in your study. What is their relationship to each other? For example, which variables are you considering as independent (explanatory) and dependent (response)?**

These environmental stewardship programs will be assessed via random sampling surveys of participants. 6th-8th grade participants will be given a mixed-methods survey before and after participating in an Estuarium program. The surveys will attempt to assess if the student participants feel more inclined to participate in environmental stewardship activities after participating in an Estuarium extracurricular program. It will also feature qualitative sections where the students can give more in-depth responses with regards to stewardship and extracurricular program participation.

1. **Describe the data that will be the foundation of your thesis. Will you use existing data, or gather new data (or both)? Describe the process of acquiring or collecting data[[3]](#endnote-3).**

Earlier Estuarium surveys will inform the creation of this mixed-methods survey. It will also be informed by the needs of the Estuarium itself. Important actors such as Estuarium board members and other employees will inform the creation of the survey.

1. **Summarize your methods of data analysis. If applicable, discuss any specific techniques, tests, or approaches that you will use to answer your research question.**
2. Address the ethical issues[[4]](#endnote-4) raised by your thesis work. Include issues such as risks to anyone involved in the research, as well as specific people or groups that might benefit from or be harmed by your thesis work, perhaps depending on your results. List any specific reviews you must complete first (e.g., Human Subjects Review or Animal Use Protocol Form).
3. List specific research permits[[5]](#endnote-5) or permissions you need to obtain before you begin collecting data (e.g. landowner permissions, agency permits).
4. **Reflect on how your positionality as a researcher could affect your results and how you will account for this in the research process[[6]](#endnote-6).**

My positionality *could* affect my results, as I am one of the educators in charge of not only creating the lessons, but teaching them. I will have other teachers (for example the Education Coordinator) assisting in oversight of

1. **Provide at least a rough estimate of the costs associated with conducting your research, if any.  Provide details about each budget item so that the breakdown of the final cost is clear.**

I do not believe there will be any costs associated with this survey. If there are, the Estuarium will absorb them.

1. **Provide a specific work plan and a timeline for each of the major tasks in the work plan. Be as realistic and specific as you can at this point, including the** **deadlines for Spring quarter.**
2. **Who (if anyone), beyond your MES thesis reader, will support your thesis (in or outside of Evergreen)? Be specific about who they are and in what capacity they will support your thesis. If you are working with an outside agency or expert, be specific about their expectations for your data analysis or publication of results.**

-MES Reader

-Estuarium Director

-Estuarium Board of Directors

-Co-Educators at the Puget Sound Estuarium

1. **Provide the 5 most important references you have used to identify the specific questions and context of your topic, help with issues of research design and analysis, and/or provide a basis for interpretation. Annotate these references with notes on how they relate to/will be helpful for your thesis. For any other sources cited in your prospectus in other answers, provide a complete bibliographic citation here as well.**

Ballantyne, R. (2004). Young student’s conceptions of the marine environment and their role in the development of aquaria exhibits. GeoJournal, 60, 159–163.

Barney, E. C., Mintzes, J. J., & Yen, C.-F. (2005). Assessing knowledge, attitudes, and behavior toward charismatic megafauna: The case of dolphins. Journal of Environmental Education, 36(2), 41–55.

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1. You are not locked into this title; we want you to identify the main point or topic of your thesis. [↑](#endnote-ref-1)
2. You might discuss selection of case studies, sampling methods, experimental design, and/or specific hypotheses you will test. You should also address any specialized knowledge or skills that are necessary to complete the research. [↑](#endnote-ref-2)
3. If you are planning to use existing data, explain the specific source, contact information, arrangement with collaborating agencies, and expectations about use of data and final products of your research. If you are planning to gather new data, describe specific methods, time, place, and equipment that will be required. [↑](#endnote-ref-3)
4. If you’re not sure where to start, consult a ‘Code of Ethics’ or other similar document from an academic society in an applicable field of study. [↑](#endnote-ref-4)
5. If you are collecting ANY samples or data, even observational data, on public lands (city, county, state and/or federal) it is your responsibility to find out the permit requirements BEFORE you collect data. Conducting research with tribal members/on tribal lands will have different and additional requirements. [↑](#endnote-ref-5)
6. Your *positionality as a researcher* refers to the fact that one’s “…beliefs, values systems, and moral stances are as fundamentally present and inseparable from the research process as [one]’s physical, virtual, or metaphorical presence when facilitating, participating and/or leading the research project…” (The Weingarten Blog 2017). [↑](#endnote-ref-6)