

The Kanawha Project: Environmental Issues Across the Curriculum

Introduction

Environmental literacy is increasingly being recognized as an important asset in the professional, educational, and personal spheres. A person who is environmentally-literate understands basic environmental concepts, holds beliefs related to sustainability, and has skills to solve environmental problems. One of the most essential populations to work with to enhance environmental literacy is undergraduate students. This population is only a few steps away from becoming the business and community leaders who will have the power to make decisions that will affect the sustainability of the global environment.

Understanding where you live in relation to the environment is one important component of environmental literacy. The goal of the *Kanawha Project*, named for the physiographic region in which Ohio University is situated (see Appendix 1), is to develop the environmental literacy of undergraduate students. The project will enhance the undergraduate curriculum through faculty professional development.

Faculty development in environmental literacy will strengthen the curriculum and enhance the undergraduate experience. Knowledge of environmental sustainability issues will give Ohio University graduates a competitive advantage in the workforce. In addition, environmental literacy will enable them to make wise consumer choices that can positively contribute to environmental quality and sustainability.

Program Need

The need for this program is supported by a survey of undergraduate students at Ohio University in the fall of 2006, conducted as part of a National Science Foundation grant in partnership with The Ohio State University. This survey was based on previous research designed to assess environmental literacy and gather opinions about environmental issues. More than 700 undergraduates in Health 202 and Junior English classes responded to the on-line survey. These classes were chosen because the students represent a cross section of all majors at the university and are most likely to be freshmen, sophomores, and juniors.

The survey provides some baseline data for two important components of environmental literacy: knowledge and beliefs. The survey assessed *environmental knowledge* by asking questions related to 8 ecological concepts.¹ The findings indicate that undergraduates lack a solid understanding of several major ecological concepts (see Appendix 2 for a discussion of the concepts and results of the survey). The data also underscore the need for the University to take an active role in enhancing environmental literacy of its students.

¹ Morrone, M., Mancl, K., and Carr, K. (2001) Development of a Metric to Test Ecological Knowledge as One Component of Environmental Literacy. *Journal of Environmental Education* 32, 4: 33-42.

Although their knowledge of environmental issues is somewhat limited, students who responded to the survey believe they have a *personal responsibility* to help improve environmental quality (Figure 1). The undergraduate respondents also appear to recognize the importance of obtaining a background in *sustainability* as a means to enhance their planned careers (Table 1).

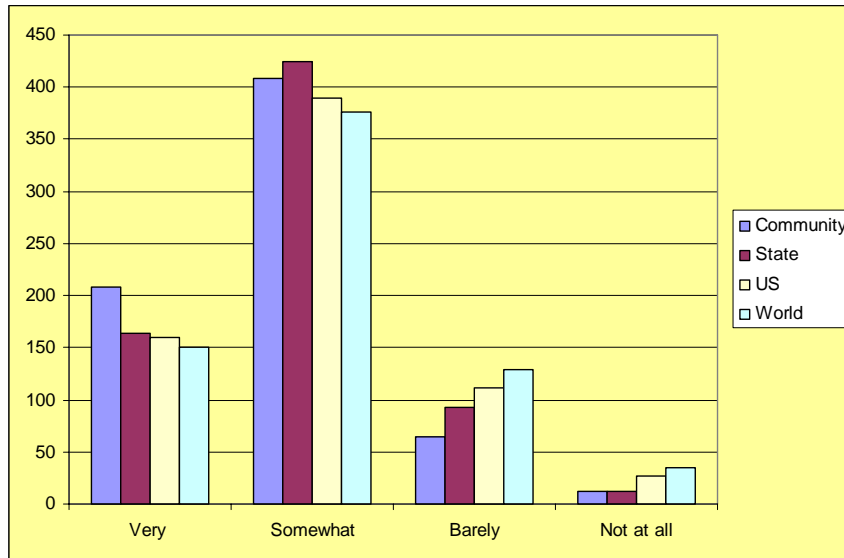


Figure 1. To what extent do you feel it is your personal responsibility to help improve the environmental quality in your community, the state, the US, and the world?

Table 1. Results of on-line survey of OU Undergraduates (N= 719) (December, 2006)				
Survey question	Response			
	Very	Somewhat	Barely	Not at all
Do you think that there is currently a demand for you to obtain skills or understanding of sustainability for your major?	20.5%	49.6%	19.9%	10.1%
Do you think there will be increasing demand for you to obtain skills and understanding in sustainability in your professional field in the next 5-10 years?	27.0%	47.5%	18.8%	6.6%

In other words, this survey demonstrated that a cross section of Ohio University undergraduates feel responsible for making ecologically sustainable decisions in their personal and professional lives; however, they lack some of the fundamental knowledge of environmental issues necessary to implement these personal beliefs. The results also illustrate that Ohio University students recognize that environmental sustainability skills and understanding are becoming an important professional asset.

The need for this program is further underscored by the work of the Association for the Advancement of Sustainability in Higher Education (AASHE). AASHE is a membership-driven organization consisting of numerous 4-year and 2-year colleges and university. Its mission is to promote environmental sustainability on campus from all aspects including university operations and curriculum. AASHE is evidence of the widely-recognized need for environmental literacy across the curriculum. Since there are only 4 Ohio institutions are members of AASHE (Oberlin, The Ohio State University, Columbus State Community College, and Northwest State Community College), by joining this initiative Ohio University would enhance its national prominence.

This 1804 proposal is based on the successful model for faculty environmental literacy training developed by AASHE. In January 2007, Michele Morrone, the PI and Director of Environmental Studies, attended one of the AASHE-sponsored workshops at Emory University. The workshop trained university representatives from across the U.S. and Canada on methods to integrate environmental issues into the undergraduate curriculum. More information about AASHE and the workshop can be found in Appendix 3.

Project Goals and Activities

The overall goal of this project is to enhance the undergraduate curriculum by integrating environmental issues across disciplines. This goal will be accomplished with the following measurable objectives.

1. Offer professional development to 20 faculty members from a range of disciplines that focuses on enhancing environmental literacy.
2. Modify individual courses to include environmental issues as an integrating theme.
3. Measure student environmental literacy in classes taught by participating faculty.

Initially, the program will involve 20 faculty members from a variety of disciplines. Faculty must apply in order to ensure that the group is truly interdisciplinary. Efforts will be made to include faculty from disciplines that are not traditionally environmentally-oriented, such as English, Chemistry, and Fine Arts. This faculty selection process is based on the recommendations from the AASHE workshop noted above. Faculty will be selected by the project facilitators Drs. Michele Morrone (Environmental Studies) and Nancy Manring (Political Science).

Participating faculty will be asked to: (a) read several books on environmental sustainability; (b) participate in the Faculty Development Workshop; (c) revise one syllabus to integrate environmental issues; (d) participate in a facilitated monthly discussion group; and (e) work with project facilitators to assess the impacts of syllabus change. The timeline for the proposed project is as follows:

- August 2007: Project facilitators meet to begin planning activities and develop call for participants
- September-October 2007: Project is promoted and participants solicited
- November 2007: Participants provided with reading material
- December 2007 (intercession): Faculty Development Workshop

- January 2008: Participants submit revised syllabus and monthly discussion group begins
- February 2008-June 2008: Facilitated monthly discussion groups
- July-August 2008: Project facilitators submit grant proposal to Ohio Environmental Education Fund to seek additional funding for continuation of effort; and prepare project report

The Faculty Development Workshop is the cornerstone of this project. It will take place during the winter intercession and will involve one evening and one full day of training. The agenda for the workshop is in Appendix 4 and is based on the model and materials provided by the AASHE. As the agenda notes, several “resource people” will contribute their expertise to the workshop (letters from the resource people are attached). The goal of the workshop is to foster environmental literacy among the participating faculty members so that they can enhance their teaching by incorporating environmental sustainability themes.

Following the workshop, faculty will revise one syllabus and submit the revisions to the project facilitators for posting on a community website. When the faculty member is ready to begin using his/her new syllabus, project facilitators will provide access to the on-line environmental literacy survey for students to complete before and after the class. These surveys will be one metric to assess whether integrating environmental issues in the traditional undergraduate curriculum enhances environmental literacy.

Faculty participants will be invited to facilitated monthly discussion groups to share experiences and continue to generate ideas for integrating environmental issues into the curriculum. Additional faculty will be invited to participate in these monthly sessions with the goal to begin developing a critical mass of environmentally-literate faculty members at Ohio University.

In July of 2008, the project facilitators will submit a grant application to the Ohio Environmental Education Fund to expand the reach of the project. The 1804 grant-funded effort will serve as a pilot project to demonstrate the effectiveness of this approach to raising environmental literacy among undergraduate students.

Project Facilitators

This project will be facilitated by Drs. Michele Morrone and Nancy Manring who share a common background in environmental education and literacy. Both facilitators have been involved in developing environmentally-oriented curriculum at Ohio University and they both integrate diverse dimensions of environmental literacy into all of the current courses they teach.

Dr. Morrone is the Director of Environmental Studies in the College of Arts and Sciences. She is also an Associate Professor of Environmental Health Sciences in the College of Health and Human Services; however, this project will fall under her Environmental Studies position. Prior to her appointment at OU, she was the Chief of the Office of Environmental Education at Ohio Environmental Protection Agency. In this capacity, she was the lead environmental educator for the state of Ohio. She also coordinated a multimillion dollar grant program that provided funding to schools,

nonprofits, and industry in the state to conduct environmental education programs. In collaboration with two colleagues, she developed a metric to test environmental literacy that will make an important contribution to the Kanawha Project.

Dr. Nancy Manring is an Associate Professor in Political Science and the Associate Director of the Environmental Studies program. She also coordinates the Undergraduate Certificate in Environmental Studies. Dr. Manring has been involved in environmental literacy in various forms for many years. Before coming to Ohio University, she worked as an environmental educator at Glen Helen Outdoor Education Center in Yellow Springs, Ohio. Dr. Manring was responsible for preparing the curriculum proposal for the Undergraduate Certificate in Environmental Studies. She also participated in the Freshman Year Enrichment Program, which was dedicated to raising environmental literacy of incoming freshmen at OU, and she taught an Environmental Literacy Seminar in 2001.

Conclusion

This proposal directly addresses Vision Ohio goals for undergraduate education by enhancing the curriculum to include environmental issues. Specifically, by integrating environmental issues across the curriculum, the goal of "inculcating students with a sense of personal responsibility and acquainting students with the values associated with the public good" will be addressed. This will be done without the creation of new courses, rather by revising existing courses.

Faculty willing to redesign their courses to incorporate environmental issues will come from all disciplines, thus creating a diverse community of educators dedicated to the same mission. This proposal also directly relates to Vision Ohio Goals of enhancing national prominence by preparing Ohio University faculty to join the growing network of prestigious universities involved in AASHE, including many of our peer institutions such as University of North Carolina-Chapel Hill, University of New Hampshire, and Auburn which are currently AASHE members.

In the past several years, environmental initiatives have become more prominent at Ohio University. The institutional commitment to sustainability is evidenced by investments in facilities, personnel, and planning. Enhancing the curriculum is the next step to accomplishing our environmental goals. By integrating environmental issues throughout the undergraduate curriculum using faculty development, this proposal will add an important missing component that will enhance the effectiveness of Ohio University's recent environmental investments.

Budget Summary

Budget Item	Itemization	Total	In-Kind/Match
Faculty stipends	20@\$500 ea	10000	
Student assistant	10 hours/week * \$10/hour * 25 weeks		2500 ²
Meals	Dinner: 25 @ \$20 ea Lunch: 25 @ 10 ea Breaks	500 250 50	
Resource person honoraria	6@ \$200 ea	1200	
Facilitators	2@ \$250 ea	500	
Books for participants: Sustainability on Campus Stories and Strategies for Change Edited by Peggy F. Barlett and Geoffrey W. Chase	25@ \$24.95 ea	623.75	
Principles of Sustainability Simon Dresner	25@ \$32.50 ea	812.00	
Monthly networking meetings	6@ \$25 ea	150	
Membership to AASHE	1 year @ \$1500	1500	
Total 1804 Grant Request		\$15585.75	Match: \$2500

Budget Justification

Faculty Stipends: Every project participant will receive a stipend of \$500 as an incentive; \$250 will be provided once the faculty member attends the workshop and \$250 will be provided after the faculty member submits a revised syllabus.

Student Assistant: As part of the National Science Foundation grant, there is salary for student workers to assist with the development of sustainability curricula on campus. This student would assist the project facilitators in communication and logistics for the workshop and monthly networking meetings. In addition, the student would assist in preparation of the OEEF grant and in developing outreach materials about the project—including a website.

² The student will be funded with funds from the National Science Foundation grant noted in the proposal narrative.

Meals: We are requesting support for 2 meals and 2 breaks: dinner will be provided the night before the workshop as suggested by the coordinators of the AASHE trainers; lunch and breaks will be provided during the workshop.

Resource Person Honoraria: There are 6 resource people identified who will participate in the workshop (see Agenda). Each of these resource people will receive \$200 in appreciation for their efforts.

Facilitators: Drs. Michele Morrone and Nancy Manring will be donating part of their time to organize the project; the \$250 is a stipend to offset some of their time.

Books: There are 2 important books that will be provided to faculty participants. These books will serve as the basis for the networking discussion that follows the workshop.

Monthly Networking Meetings: These meetings will start in January 2008 and will run for 6 months; \$25/meeting is requested for light refreshments.

Membership to AASHE: The annual membership dues to join AASHE is \$1500 for an institution our size. We are requesting funding for membership in AASHE for one year in order to enhance the Kanawha Project through access to additional AASHE resources and to evaluate the benefits of membership for Ohio University.