

**Department of Environmental Studies:
Policy, Planning, Education, and Geography –
Self-Study Report**

**Mission, Goals, Objectives, Learning Outcomes, Assessment,
General Education Contributions, Program Improvement[^]**

January 30, 2007

[^] Prepared by Gigi Berardi, chair. Special thanks to all departmental faculty and staff for providing needed information and text – in particular, program coordinators Grace Wang (policy and planning), John Miles (environmental education), Bill Dietrich (environmental journalism), and Tom Terich (geography). Special thanks also to secretary supervisor Suzanne Whalen in the production of this report.

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Department of Environmental Studies: Policy, Planning, Education, and Geography – Self-Study Report

Mission, Goals, Objectives, Learning Outcomes, Assessment, General Education Contributions, Program Improvement

DEPARTMENT BACKGROUND AND MISSION

The mission of the Department of Environmental Studies is to affirm and work within the broader mission of Huxley College – interdisciplinary education for undergraduate and graduate students through diverse programs. Through the integration of the natural and social sciences, and allied professions, the Department endeavors to educate problem solvers who are able to meet the environmental challenges of our times. Degree programs are environmental education, geography, planning and environmental policy, environmental journalism, and environmental economics.[^] These programs allow students to link their interest in the environment with social science and humanities disciplines, directing them to specific environmental career paths or providing an excellent background for advanced study in law, environmental education and interpretation, public administration, planning, and resource management. Degree titles include the following:

- B.A. Planning and Environmental Policy (Tracks: Planning, Policy)
- B.A. Environmental Education (Tracks: Outdoor Education and Interpretation, Community Education and Mass Communication)
- B.A. Geography (Tracks: Environmental and Resource Management, Human and International Geography)
- B.A. Geography/Social Studies
- B.A. Environmental Studies/Journalism
- B.A. Environmental Studies/Economics
- B.A. Education (Majors: Environmental Studies-Elementary, Geography-Elementary)
- M.S. Geography (Tracks: Resource Conservation and Management, Regional Development and Environmental Policy, Earth Surface Processes)
- M.Ed. Environmental Education (Tracks: Thesis or Field Project in Environmental Education, Residency in Environmental Education).

The Department served about 265 majors in the 05-06 academic year in eight separate programs (including the self-designed major option), in addition to approximately 75 students served in our minors in environmental education, environmental studies, environmental policy, geography, Geographic Information Systems, and sustainable design. Approximately 40 students currently are enrolled in our two graduate programs – Geography and Environmental Education. More specific information is given in Appendix 1.

[^] Environmental Economics is a (B.A. in Economics) degree program in The College of Business and Economics, Department of Economics. Information on the program will be in that Department's self-study report.

The work of this department is largely interdisciplinary, though programs maintain a strong disciplinary identity. Department **faculty** are trained in anthropology, geography, education, natural resource management, urban and regional planning, law, political science, and related fields. As of the 2007-2008 academic year, we will have 17 FTE tenure-track faculty and approximately two full-time equivalent limited-term faculty; Table 1 shows some of this growth. The department also employs five full-time staff.

Table 1. ENVIRONMENTAL STUDIES

DATA TABLE	1995-1996	2000-2001	2005-2006
FTE Faculty	10.9	13.5	14.5
Student-Faculty Ratio	27.9	20.1	21.6
Student Credit Hours – UG	4,406	3,908	4,323
Student Credit Hours-G	127	124	243
Majors-UG	177	229	265
Majors-G	23	22	35

Active research allows faculty to remain current in the rapidly evolving areas of environmental and natural resource management. Department academic programs draw heavily upon the expertise of colleagues in other units of the University, such as the departments of political science and economics.

Department **facilities** support applied student learning with the 30-terminal spatial analysis lab, which has a complete suite of state-of-the-art GIS, cartography, and remote sensing software, GPS receivers, and extensive local data sets. Facilities also include the planning studio, the map library, and the environmental education lab. Experiential learning is emphasized in many of our programs, taking students into the field where they can apply their skills and knowledge of current problems. Student work has received recognition from national and statewide organizations for exceptional problem-solving solutions, which use Geographic Information Systems and computer-aided design.

Standards of practice include,

- To support high professional standards in the practice of environmental education, environmental economics, environmental journalism, environmental policy and planning, and geography.
- To encourage networking and exchange among departmental scholars in the above-mentioned disciplines.
- To foster research that informs both teaching and practice.
- To form partnerships that encourage respect, collaboration, and shared leadership.
- To foster environmental literacy from the local to global levels.

Commitment to scholarship and practice includes,

- To make contributions to real-world problem-solving and policy.
- To build bridges with local, regional, state, national, and international organizations.
- To emphasize applied learning.

The Department is committed to effective teaching as a result of regular assessment and evaluation. Within the past two years, we have established programmatic **goals** that include,

- **Enhancing existing programs** e.g., establishing a site-design planning studio, continuing work in Environmental Education in preparing the document, “Assessment of the field and directions,” establishing a permanent faculty position in environmental journalism (this goal was achieved last year), securing faculty with skills in Geographic Information Systems (this goal also was achieved this year), adding permanent faculty to bring stability to GER course offerings, improving and developing our students’ quantitative research skills (through linking courses that provide students with a strong foundation in statistical modeling).
- **Developing new programs** e.g., establishing a new graduate program in Environmental Studies, which includes a sustainable development track, establishing a Sustainable Design minor (this goal was achieved last year), establishing a new track in planning: Disaster Reduction and Emergency Planning (this goal was achieved last year), establishing international programs such as the sustainable development program in Kefalonia, Greece (this goal was achieved two years ago).
- **Recognizing the value of applied contexts** e.g., increasing the international dimensions of our work, utilizing new faculty to build international studies, providing more field trips, case studies, real-life applications in courses, and fully recognizing faculty activity that’s more professionally-oriented; this includes more interaction with the College’s Advisory Board.
- **Supporting faculty in the development of their teaching and research** e.g., increasing support for faculty research by increasing funds available for faculty travel and encouraging faculty to stay fresh: teaching in their areas of expertise and interest, and somehow feeding that interest by continuing to be responsive to student needs and needs of the profession. We also strive to improve faculty teaching and advising through improvement-oriented course evaluation – “performance-evaluations,” including carefully defining instructional teaching goals, and establishing a systematic way of getting student feedback that’s valuable; each faculty member should have specific components of teaching that he/she wants to improve upon.
- **Improving administrative operation and facilities** e.g., planning for labs and studios, as well as tracking student enrollment and its impact on program quality, and setting appropriate growth goals.

ASSESSMENT information related to expected student LEARNING OUTCOMES and the achievement of the program’s objectives.

Evaluation is essential to determine if the department’s and faculty’s goals for our programs and courses are being met. Faculty member Gene Myers, who teaches a course on educational program evaluation explained, “Evaluation should be *useful*, and to be useful there needs to be specific people who want the information and intend to use it. Deciding what to evaluate about the [classes] is as important as deciding what to put in [them], because they are part of the same process. Neither can be done well (i.e., usefully) without participation.”

As a first step to assessment, we identify the attributes of a Huxley graduate. These attributes, hopefully, are the result of achieving expected learner outcomes in coursework and other experiences (such as internships and capstone courses), and thus the achievement of our programmatic objectives.

The attributes of a Huxley graduate are as follows.

- Understand the natural environment as a system and how human enterprise affects that system.

- Acquire the knowledge and skill to apply a systems approach to the analysis and management of natural and human-made environments.
- Understand that the modern world is an entity that is ecologically, economically, and politically interconnected and interdependent and what the implications are of this for environmental problem solving.
- Be able to deal in complex wholes – to view the self and social situation in their full ecological, cultural, and social context.
- Understand the temporal dimension of the environment, including what forces have created the contemporary environment and what effects current behavior may have on future environments.
- Perceive the future of society and environment as a range of alternate possibilities, which will be determined by the policies and decisions of the present, and understand the processes through which these policies and decisions are made.
- Acquire a measure of logical skill in working through the moral dilemmas implicit in the assignment of social priorities and in the risks involved in seeking to attain those priorities.
- Acquire specific skills necessary to achieve understanding of and solutions to environmental problems, including those necessary for assessment of environmental impact of human activity, and for monitoring of the health of environmental systems.
- Be prepared for entry into professions involved in environmental monitoring, assessment, management and education, and/or for entry into graduate and professional school.

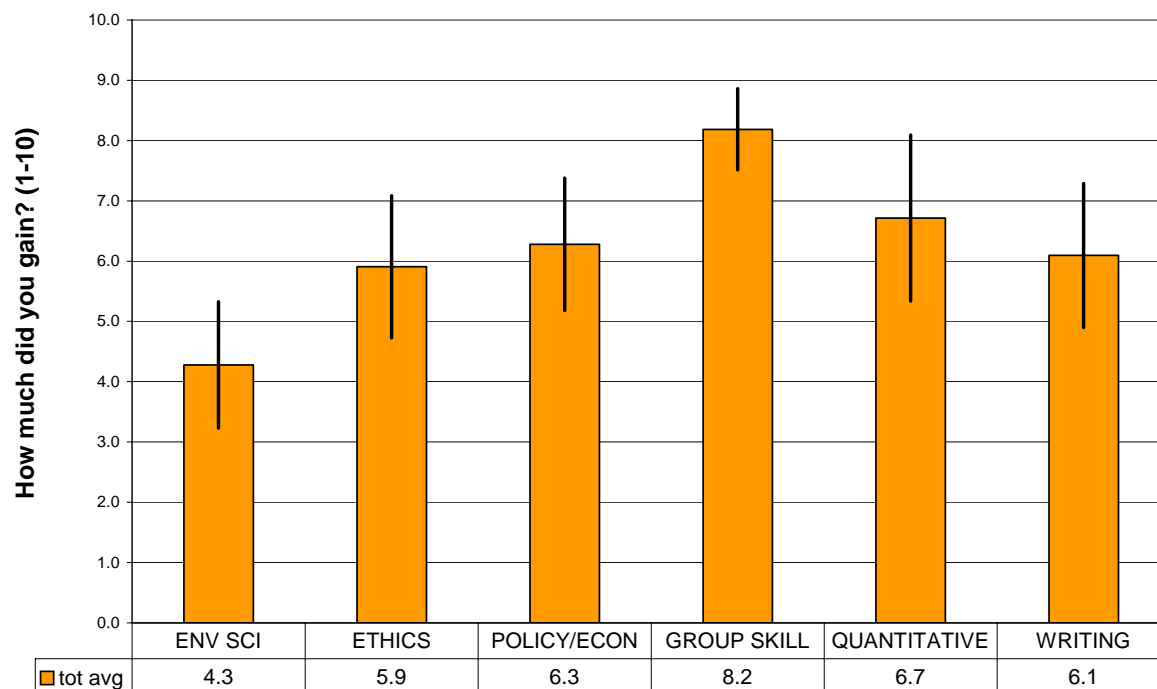
Three common components of learning reflected in these attributes are of interest across all programs: content knowledge, intellectual development, and problem solving skills. Together these reflect some important goals for all of our courses. One example of assessment of these goals was what was performed for the Huxley Core class taught by this Department. In recent years, as the new Core course was developed and taught, student achievement of the above learning goals was systematically assessed using an Environmental Problem Solving Essay and a Knowledge Assessment instrument. Content analysis of the essays revealed the use of problem solving steps. It was also professionally scored as the standardized Measure of Intellectual Development (MID) by nationally-certified judges. The Knowledge Assessment measured gains in understanding of concepts and content in the course. The results of this evaluation showed gains in all the sections that were taught. The MID instrument taps the complexity of thinking about a challenging problem – the results show that the course prompted development away from simplistic dualistic thinking about environmental problems, as indicated in the following figures. The Problem Solving scores and the Knowledge Assessment showed both strong and weak areas across the full range of interdisciplinary content, and were used to improve course design and delivery.

Thus, evaluation components and the measures used were:

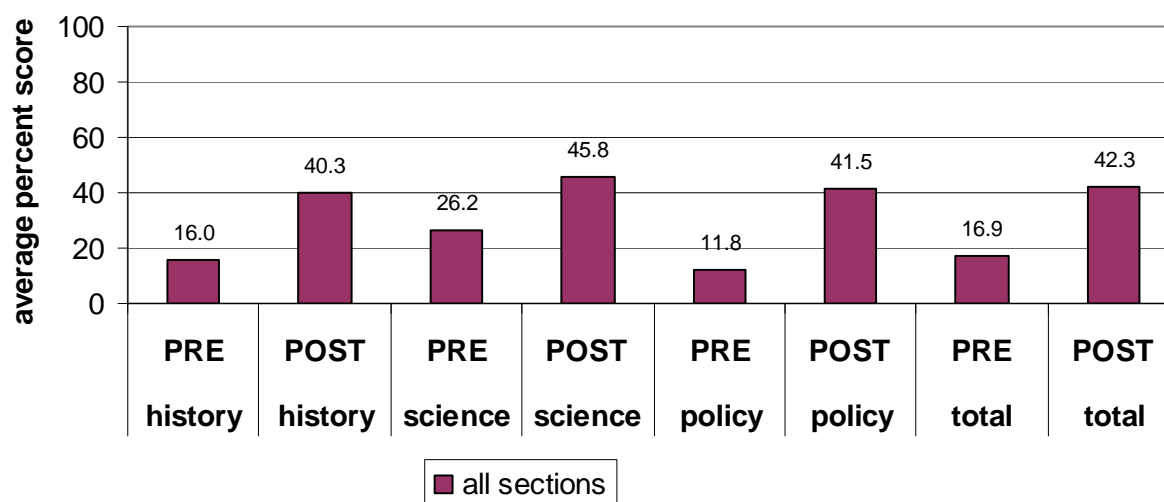
Area of Learning	Measure
Env. science and studies content knowledge	Self-reported learning in subject & skill areas; Knowledge Assessment (KA)
Development of understanding of knowledge and learning (Perry stages)	Measure of Intellectual Development (MID)
Solving real-world environmental problems	"Env. Problem Solving Essay" (EPSE)

Summary results are shown in Figures 1-3 below (source: Assessment of Student Learning in *Explorations in Environmental Studies*, Gene Myers).

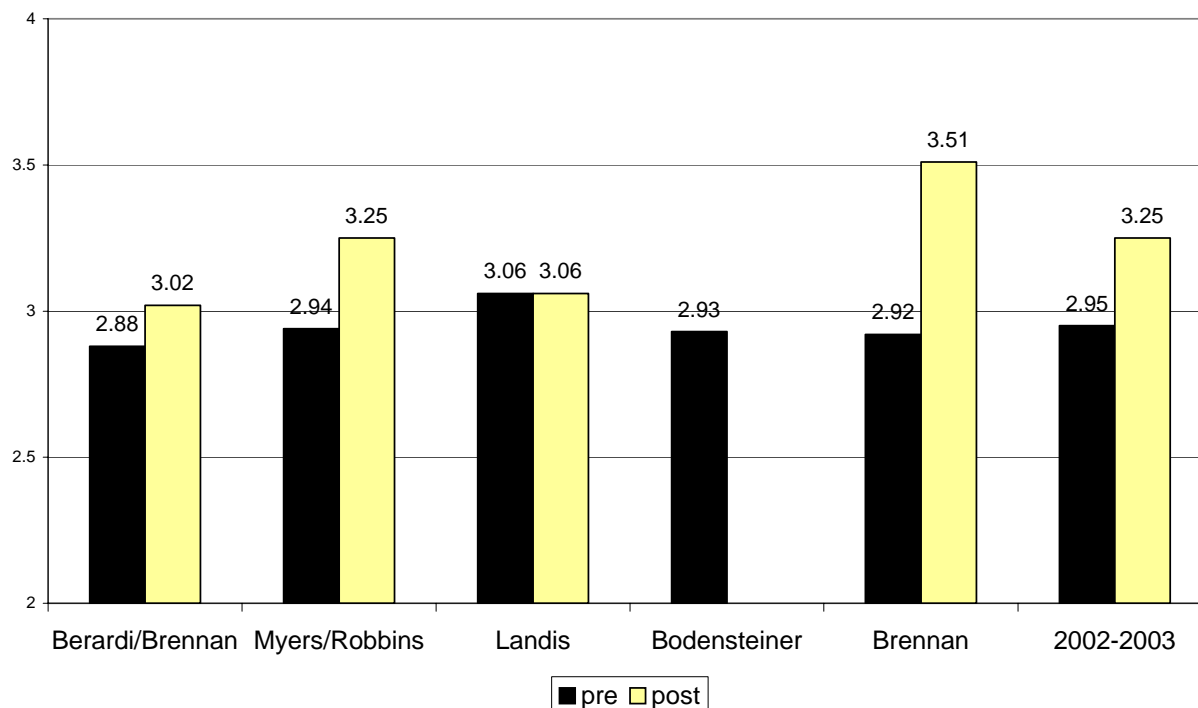
**Figure 1. 301 Student self-rated understanding/Skill gained
(points w/ s.d.) (Autumn 2002, all sections)**



**Figure 2. 301 Pre/Post Knowledge Assessment
(Autumn 2002, all sections)**



**Figure 3. 301 Average course MID score pre- and post-course
(Spring & Autumn 2002, & Spring 2003)**



Other examples of assessment are:

- Use of Capstone courses. The complexity of thinking and depth of course work indicates to what extent the student has been able to integrate study at Huxley into real-world problem solving.
- Use of Internships and final projects. These contain the elements of the entire suite of skills a Huxley grad should have. Advisors approve the internship reports and final projects in light of the goal statements that the student specifies.
- Development, implementation, and administration of alumnae survey. This comprehensive survey, the results of which were mentioned throughout this review, offers detailed information on the success of our graduates, and strengths or weaknesses of the program, as expressed by the graduates now in the workforce.
- Use of Huxley Advisory Board, which counsels on the real-world utility of certain features of our curricula, and the attributes of a successful Huxley graduate.

In addition, as departmental faculty member Nicholas Zaferatos writes, “The best assessment tool is job placement - and planning students have continued to show high placement rates upon graduation. A WWU study of incomes from the various majors show Policy and Planning students earning at the upper level of Western graduates. In addition, due to the applied nature of the program, case study projects within the community are emphasized, and community response to student work is exceptionally high. We experience continued demand for student classes to work to solve local problems.”

SPECIFIC PROGRAMS

The quality of the departmental programs is a function of the diversity of individuals and organizations, its success in serving students, and its encouragement of scholarly exchange among faculty, students, and professionals. Emphasizing applied learning, the Department supports high professional standards in the practice of environmental education, environmental economics, environmental journalism, environmental policy and planning, and geography. Experiential learning is emphasized in many of our programs, taking students into the field where they can apply their skills and knowledge of current problems. We note in the *2002 Survey of Graduates* (2003, Huxley College), that “personal helpfulness and support of faculty” was one of the key variables (explaining 49% of the variation in a path analysis exercise) in Huxley graduate satisfaction with their degree. In particular, “professors’ practical experience and real-world knowledge” played a key role. To address this, future faculty hires should have some “real-world hands-on training,” as well as show a commitment to providing the scholarly tools needed for graduate study since close to 20% of all graduates seek advanced degrees. Nevertheless, gaps remain in the programs; goals to improve the quality and productivity of the programs appear below.

PLANNING AND ENVIRONMENTAL POLICY

The primary focus of the *Planning and Environmental Policy* (PEP) major at Huxley College of the Environment lies in synthesizing legal, policy development, and planning processes in the pursuit of decision-making for natural landscapes. PEP is an interdisciplinary program that prepares students for a variety of careers. Students in the undergraduate program take on one of two paths of study. Courses in both programs maintain an emphasis on sustainability in both the human and natural environments.

Students majoring in Planning and Environmental Policy are expected to develop the ability to work successfully in collaborative environments. Achievement in this field requires, among many skills, effective communication: listening to others attentively, recognizing non-verbal cues, stating ideas and questions in a clear manner, and making an effort to understand diverse perspectives. Ultimately, the program goal is for students to develop the ability to hear and understand the diverse needs and perspectives of those involved in the collaborative processes typical of environmental policy and planning.

Program Skills Objectives

- To introduce integrative approaches to understanding of human/environment interactions.
- To encourage the identification of problem analysis skills and evaluative methods in the evaluation of policy alternatives.
- To construct methods for alternative policy analysis and construction of policy action plans.
- To develop skills to evaluate assumptions, values, beliefs, regarding diverse local, regional, national, and global issues.
- To assist students in developing improved environmental literacy as it pertains to human and environmental balance.
- To provide students with the analytical tools needed to assess impacts to human and environmental resources.
- To assist students in locating and analyzing research and reports in the field of environmental policy and planning.
- To assist students in engaging in critical thinking about issues and concepts in environmental policy and planning.

- To assist students in gaining active listening behaviors which are demonstrated through such skills as asking questions of clarification, offering constructive feedback, summarizing group comments, nodding in affirmation while others are speaking, paraphrasing for comprehension, etc.
- To assist students in gaining a greater understanding of the complexities of diverse perspectives, including appreciation for social, political, and cultural contexts.
- To assist students in actively incorporating diverse perspectives into group decisions when appropriate.
- To assist students in writing and speaking effectively and persuasively.
- To assist students in successfully working in uncertain settings with conflict.

The PEP faculty (Jean Melious, Nicholas Zaferatos, Grace Wang, Troy Abel, Scott Miles, and Jason Levy) are engaged in ongoing and informal program assessment, including assessment of current courses and consideration of potential courses to meet the demands of a dynamic field. Further, there has been an attempt (guided by Professor Gene Myers and his graduate students at Huxley) to consider formal evaluation of student learning outcomes that addresses the mandates of both the Washington State Legislature and the Northwest Association of Schools and Colleges. Appendix 2 contains an evaluation that provided qualitative information for PEP faculty seeking to understand and improve the development of communication abilities and awareness in their students. Based on this and other feedback, the programmatic faculty have focuses more on "hands on," "on the ground" courses (for example, in U.S. and Washington Environmental Regulations, Environment Dispute Resolution, and Planning Studio classes), attempted to reduce overlap and duplication through courses by constantly reevaluating major requirements and increasing coordination among faculty, and increased offerings and faculty in the Planning track, as students find that this is an area that offers both interesting academic challenges and excellent preparation for jobs. Appendix 3 contains further exhibits (success stories, etc.) as documentation of the processes discussed above.

ENVIRONMENTAL EDUCATION

The **mission** of the undergraduate and graduate programs of study of environmental education at Huxley College is to prepare professional practitioners to assume positions of service and leadership in this field. Programmatic faculty are John Miles and Gene Myers, as well as Wendy Walker, who has a longstanding full-time limited-term appointment.

In terms of program **goals**, the graduate in environmental education will:

- (1) Achieve a level of environmental literacy sufficient to enable them to educate others;
- (2) Be knowledgeable of the goals, theory, practice, and history of the field of environmental education;
- (3) Understand and accept the responsibilities associated with practicing environmental education;
- (4) Be proficient in design and implementation of effective instruction about the environment;
- (5) Be proficient in facilitating learning about the environment and about issues and problems of that environment; and,
- (6) Be able to effectively assess and evaluate the outcomes of environmental education instructional programs.

In terms of program **objectives**,

for Goal #1: The student will achieve a level of environmental literacy sufficient to enable them to educate others.

Objective #1. The student will demonstrate skills of questioning, analysis, and interpretation.

Objective #2. The student will gather information on complex questions, analyze that information, and explain conclusions drawn from this analysis in written and oral presentations.

Objective #3. The student will describe the earth as a physical system and how human societies do and have in the past interacted with and affected that system.

Objective #4. The student will describe the perceptions of nature that have governed human interactions with the environment over time.

Objective #5. The student will exercise skills in analyzing issues about the environment, reviewing a range of positions on issues, and making decisions regarding resolution of issues.

Objective #6. The student will be motivated to learn about, evaluate, and act on environmental issues.

Objective #7. The student will enjoy a sense of self efficacy regarding the challenges of addressing and solving environmental issues and problems.

for Goal #2: The student will be knowledgeable of the goals, theory, practice, and history of the field of environmental education.

Objective #1. The student will be able to state the goals of the field of EE as described in the Belgrade Charter, the Tbilisi Declaration, and other historically important formulations in the field.

Objective #2. The student will be able to define “environmental education” and explain the broad view that EE takes of “environment.”

Objective #3. The student will describe the commonly accepted qualities of good EE, including that it is interdisciplinary, integrative, and involves a process of moving learners from awareness to action.

Objective #4. The student will be able to describe the variety of settings in which EE is commonly delivered, the difference between formal and non-formal delivery systems, and the special challenges and opportunities of the various settings.

Objective #5. The student will be able to explain how the field has changed over time, moving from nature study to conservation education to outdoor education to environmental education and how and why the field evolved in this way.

Objective #6. The student will be able to describe the nature and broad conclusions of environmental education research and how that has and is affecting practice.

Objective #7. The student will identify current and emerging issues in the field.

for Goal #3: The student will understand and accept the responsibilities associated with practicing environment education.

Objective #1. The student will understand the need for fairness and balance in addressing issues of the environment.

Objective #2. The student will accept the responsibility of developing EE that is developmentally appropriate.

Objective #3. The student will understand and accept the challenge of relating EE to accepted curriculum standards and educational reform goals.

Objective #4. The student will model responsible, respectful, and reasoned behavior during instruction.

Objective #5. The student will be able to identify instructional materials, strategies, and techniques that allow learners to form their own opinion, draw informed and reasoned conclusions, and make independent judgments.

for Goal #4: The student will be proficient in design and implementation of effective instruction about the environment.

Objective #1. The student will design lessons based on knowledge of learners which will involve understanding of learning theories and theories of cognitive and moral development.

Objective #2. The student will be familiar with instructional strategies identified by the North American Association for Environmental Education as “essential,” such as: hands-on observation and discovery in the environment; inquiry; cooperative learning, community-based action research and problem-solving; service learning; and project-based learning, among others.

Objective #3. The student will be able to plan instruction from multiple-lesson programs to individual lesson plans.

Objective #4. The student will know of the wide range of materials and resources available for EE, and understand how to access, evaluate, and use these resources.

Objective #5. The student will be proficient in using a range of technologies available to assist student learning.

Objective #6. The student will be able to design safe and conducive learning environments both indoors and outside.

Objective #7. The student can use the process of curriculum design and development that involves steps from needs assessment through development of goals and objectives to selection of content and process and assessment of outcomes.

for Goal #5: The student will be proficient in facilitating learning about the environment and about issues and problems of that environment.

Objective #1. The student will be able to create a learning climate in which learners are motivated to study the environment.

Objective #2. The student will understand the importance of allowing learners to have firsthand experiences of the world around them, and will facilitate such experience in implementing EE programs.

Objective #3. The student will value the diverse backgrounds and perspectives of learners and incorporate this diversity into the learning experiences.

Objective #4. The student will understand the need for flexibility and be adept at modifying programs and lessons plans to take advantage of unanticipated learning opportunities.

Objective #5. The student will smoothly blend a variety of instructional methods and activities to meet instructional objectives according to the learner variables present in the instructional situation.

for Goal #6: The student will be able to successfully assess and evaluate the outcomes of environmental education instructional programs.

Objective #1. The student will be skilled at writing learning objectives that clearly state the learner outcomes intended in programs and lessons.

Objective#2. The student will identify standards (where there are any) that apply to the EE curriculum and link assessment of EE to them.

Objective #3. The student will understand assessment and evaluation options and be adept at prescribing appropriate strategies to understand the outcomes of educational programs.

Objective #4. The student will recognize the value of assessment and evaluation to program development and improvement, and will use them to improve future instruction.

Objective #5. The student will understand why it is important to constantly evaluate EE programs.

Actual **student learning outcomes** underlying each objective, with **assessment** methods for each outcome, as well as **criteria** for judging the quality of the outcome are given in Appendix 4.

In terms of the **time cycle for review of objectives and related outcomes, and evaluation**, each time a course is offered, the goals and objectives are reviewed and revised based on student evaluations, new literature, and other factors. Further, an extensive review of Spring Block (the principal field experience of the undergraduate program) and of the residency experience (the principal field experience of graduate students) is done annually by the EE faculty and, in the case of the residency, the staff of the North Cascades Institute.

Gene Myers is responsible for coordinating the assessment process. The type of feedback data provided by the assessment process include student evaluations, alumni feedback, employer feedback, placement rates, types of placements after graduation, observations, and portfolios (required of graduate students). Program faculty meet regularly to process all data. Also in process is “Strategic Plan for Huxley’s Environmental Education Program” prepared by a committee of faculty, students, and EE practitioners from outside the University and drafted by Gene Myers in September 2006. Also see Appendix 5, which contains various exhibits for the EE program – success stories, typical student feedback on an internship report, and syllabi.

ENVIRONMENTAL JOURNALISM

In terms of program **mission and goals**, the mission of the Environmental Journalism program is to help students attain the writing and critical thinking skills necessary to perform as reporters, editors, or communicators of environmental news and information. Careers can include, but are not limited to, work as environmental beat reporters, environmental publication editors, freelancers, public affairs officers for environmental agencies or non-governmental groups, and communication specialists in the corporate world. Goals include a firm understanding of basic scientific concepts and the scientific method, news writing skills, journalism law and ethics, and successful performance on student publications including the quarterly magazine, *The Planet*. Students should graduate from the program with an understanding of critical environmental issues as well as a foundation in conservation history, physical science, biology, and chemistry. The combination of science and communication skills should make graduates uniquely marketable, intellectually curious, and self-motivated for further study.

In terms of program history and resources, a combined Environmental Journalism major is offered cooperatively by Huxley College and the Department of Journalism, resulting in a BA in journalism. This program was initiated by students in the late 1970s and has steadily grown in student interest and institutional support. Graduates have gone on to jobs in national and regional media organizations, public agencies, environmental organizations, and private industry. The program at present has a .5 tenure-track faculty position to teach a senior-level course in environmental journalism and advise the student-run *The Planet* magazine, but students take a total of 85 credits through the two departments. Approximately half are at Huxley and half in Journalism, thus tapping into the resources of both departments. In addition, *The Planet* has a well-equipped office in the Communications Building, CF 220, and uses the campus printing plant to produce approximately 2,000 copies of the magazine per quarter, of approximately 32 pages per issue. The magazine's budget, supported by student fees, has grown over the past decade at a rate faster than inflation, an indication of improved university support. Classroom space in proximity to *the Planet* Office, in the Communications Building, is something desired by students and is being provided in Winter of 2007.

In terms of program **objectives**, reporting on the environment requires an understanding of science, economics, human values, and an ability to cover a contentious subject with accuracy, fairness, and balance. The environmental journalism major is designed to provide this understanding. The first objective is to provide undergraduates with an academic foundation. To that end, prospective Huxley students complete 100-level courses in chemistry and biology, take an additional laboratory course in physics or geology, and take basic math, economics, political science, and journalism courses. The second objective is to prepare them to understand environmental issues. Majors take upper-division Huxley courses in ecological processes, applied environmental science, and select electives among environmental pollution, environmental systems, fundamentals of ecology, oceanography, the natural history of the Pacific Northwest, environmental toxicology, water quality, and wastewater treatment. The third objective is to teach them journalistic techniques and ethics. Students take eight academic courses in the Journalism Department on reporting, news writing, media law, and the mass media, plus at least one quarter on each of three student publications: the *Western Front* newspaper, *Klipsun* Magazine, and *The Planet* magazine. The fourth objective is to bring skills together in 'capstone' courses: environmental journalism, and *The Planet*. Here the skills they have acquired are applied to covering and writing about environmental issues.

At the conclusion of their course of study, students should be able to:

- Display critical thinking skills, verbally and in writing, about environmental issues that integrate scientific, economic, political, and moral understanding.
- Write an effective magazine-length environmental journalism essay, under deadline.
- Work effectively with their peers on student publications.
- Have some understanding of how the media works.
- Have a strong understanding of basic environmental science and research that is reflected in their writing.

In terms of **program outcomes**, the success or failure of the environmental journalism program is in part on public display in published student work in *The Planet*, *Klipsun*, and the *Western Front*. Additionally, their knowledge and thinking skills are tested by their upper-division writing courses: student essays are a clear indication of how successful they are in effectively using what they have been taught. Other ways in which the Environmental Journalism program can measure its success in meeting its objectives:

- Huxley College's survey of its graduates (see Appendix 6).
- *The Planet's* success at winning journalism awards. The publication has established a strong record in past years.

- The job-placement success of environmental journalism majors. Because journalism is more vocationally-oriented than some academic majors, its effectiveness can be assessed by how graduates are faring in journalism, environmental, or public relations careers.
- Student assessment of individual courses.

In terms of program evaluation, assessment, and possible improvements, the program needs to address basic writing skills, coordination in curriculum planning with the Journalism department, and development of new courses such as an “environmental politics” course. Specifically, Professor Bill Dietrich (the only permanent faculty in the program, who has a .5FTE position) notes, “Some students come to upper-level courses still struggling with journalism basics such as punctuation, proper attribution, or knowledge of AP Style. Ideally, they would not graduate without the foundation skills to satisfy any city editor. An emphasis on these skills in 200 and 300-level journalism courses could help. I also want to slightly modify ESTU 480 and 481, *The Planet* and ‘Environmental Journalism,’ to reinforce these skills.”

Professor Dietrich also notes that the Journalism Department is in the process of re-evaluating its curriculum. Two promising developments are the addition of a mandatory journalism ethics course and a visual journalism (photography, TV, and web) program. Both are scheduled for the 2007-2008 academic year, and both should benefit the environmental journalism program as well. Further, we need to be working on improving communication between the Huxley and Journalism programs with more frequent meetings. Because *the Planet* began as a non-journalism publication, it has historically been treated as something of a stepchild, according to EJ students. It would benefit both programs to have stronger integration.

In terms of a timeline, since Professor Dietrich is new to the program (this is his first year), issues most likely will be addressed by the 2007-2008 academic year. Planned improvements include a self-written handbook for *The Planet* by Winter Quarter, 2007, a meeting or meetings with Journalism faculty that same quarter, and further discussion on future courses in 2007. See Appendix 7, which contains various exhibits for the Environmental Journalism program -- success stories, syllabi, and copies of *The Planet*

GEOGRAPHY

The primary focus of the study of modern geography lies in its synthesizing approach of human-environment relationships over space and time. Geography is an integrative science that fosters an understanding of the patterns and issues of people, places, and societies in spatial settings. The discipline of geography as a field of intellectual inquiry is a well established and a growing part of the American curriculum at all levels of the educational system. Geography’s programmatic **mission** is to educate Western’s students in spatial principles thereby enabling them to organize, describe, and analyze geographic relationships and interactions within and between the physical and human environments at global and regional scales for the purpose of understanding present conditions, predicting trends, and prescribing future courses of action.

The programmatic **objectives** include:

- To introduce geography’s integrative approach towards an understanding of human and environmental interactions;
- To enable students to recognize spatial patterns on the earth’s surface and understand the processes that create them;

- To encourage the identification and analysis of spatial patterns of human/environmental interactions for the purpose of prediction and policy action;
- To help students to evaluate the assumptions, values, beliefs, and policies regarding diverse local, regional, national, and global issues;
- To have students gain an understanding of and appreciation for the diversity of national and global cultures;
- To assist students in developing improved understanding of geographic literacy: space, place, and relative and absolute location as it pertains to human and environmental conditions;

To provide students with the analytic tools needed in order to assess human and environmental issues/problems using the latest technologies, i.e., Geographic Information Systems and Global Positioning Systems;

In terms of **assessment** practices, it is first important to understand that assessment is an on-going process utilizing the tried and true practices of faculty-student interaction through advisement, office visits, and student performance on (and faculty evaluation of) examinations and term assignments. However, in addition to these practices, the geography faculty further assess students' abilities and program objectives employing the following procedures:

- The use of capstone courses which are designed to assess the collective knowledge senior students have gained through their course of study;
- The preparation and presentation of senior projects such as those required as the final assignment in GIS courses as well as other problem oriented senior level classes;
- Successful completion of internships where students must apply their academic training and skills to professional settings;
- International study requiring students to utilize their classroom experiences to assess and evaluate geographic and environmental issues in a real world setting;
- The use of college wide post baccalaureate questionnaires and assessments of graduates to determine the efficacy of geography's academic objectives and curriculum;
- Attendance at and evaluation of regular meetings with practicing geographers through the Association of Washington Geographers, Association of Pacific Coast Geographers, Association of American Geographers, Canadian Association of Geographers and with practicing professionals, e.g., in Geographic Information Systems with the objective of improving and/or modifying courses and program directions.
- The hosting of research conferences on campus with opportunities for the presentation of student research projects.

The programmatic faculty (Debnath Mookherjee, Thomas Terich, Patrick Buckley, Andy Bach, Gigi Berardi, Michael Medler, and David Rossiter) believe that the above assessment practices provide the geography program with qualitative and quantitative information enabling the faculty to regularly assess the quality of the geographic education curriculum at Western Washington University. For more information, please see Appendix 8, which contains various exhibits for the geography program – success stories, syllabi, assessment tools.

CONTRIBUTION TO GENERAL EDUCATION

It is important to recognize that General Education Requirements embody Western's belief that liberal education – education in breadth – is as important for informed and effective participation in contemporary life as is specialized education. Graduates of Western must be prepared for a complex, rapidly changing world. Students must be skilled communicators, able to critically analyze and use information, able to recognize and address the complex issues of the modern world, and able to become informed and effective citizens. In Environmental Studies, we support the GUR program by offering the following classes:

Environmental Studies: ESTU & EGEO GUR Courses

Class	GUR*	Title
EGEO 322	ACGM	The Middle East
EGEO 323	ACGM	South Asia
EGEO 324	ACGM	East Asia
EGEO 203	BSCI	Physical Geography
EGEO 201	SSC	Human Geography
EGEO 209	SSC	Geography and World Affairs
EGEO 312	SSC	Geog of World Economy
ESTU 202	SSC	Envr Studies:A SocSci Apprch
EGEO 301	WP	Research and Writing (WI)
ESTU 370	WP	Processes & Methods in Planning (WI)
ESTU 418	WP	Social Impact Assessment (WI)
ESTU 436	WP	Envrnmntl Impact Assessmt (WI)
ESTU 466	WP	US and WA State Envr Regs (WI)
ESTU 470	WP	Planning Studio (WI)
ESTU 477	WP	Am Lit of Nature & Place(WI)
ESTU 480	WP	Write/Edit the Planet (WI)

*GUR Key:		
ACGM	Section A-Comparative Gender	
BSCI	Section B-Science	
SSC	Social Sciences	
WP	Writing Proficiency	

CONCLUDING WORDS

This self-report is necessarily long since we are actually 4 or 5 departments in one – offering an impressive total of almost a dozen separate undergraduate and graduate degrees, including those enrolled in Huxley's self-designed major options. This report has presented our departmental – and individual program – goals, objectives, learning outcomes, assessment tools and criteria, and evaluation practices. The tremendous growth in majors, programs (environmental journalism, emergency planning and hazards mitigation, GIS, and the residential graduate program in environmental education), and faculty is just one indicator of the success of our assessment and evaluation procedures. The department certainly faces challenges in terms of adequacy of space resources and course budgets to further goals, but we are confident that we can meet these challenges to keep doing excellent work..

APPENDICES

APPENDIX 1: STUDENT DATA

Data on number of majors and degrees granted in the last three academic years for each degree program incorporated in the review; number of FTE faculty and graduate assistants (GAs) that teach in the department (see Table A-1.1 for program-review-summary statistics).

Table A-1.1 gives data on the number of degrees granted in the last three academic years for all of our programs. Also included are statistics regarding the number of FTE faculty and graduate assistants that teach in the department. Note that the Environmental Journalism major has suffered slightly from inconsistent support through the past couple of years as there had been no permanent faculty member associated with the program. The department has addressed this issue with the creation of a permanent faculty position beginning Fall 2006. Elsewhere, please note that the lower graduation numbers in 2004-05 reflect dips in enrollment from two or more years prior to that time. The increased enrollment in 2004-05 (which is part of a national trend) should result in higher graduation numbers in 2006-07 and perhaps the latter part of 2005-06. The issue is whether or not Huxley will have the resources to handle the increased enrollment.

Note also that the numbers associated with the B.A. in Education-Environmental Studies (Elementary) and B.A. in Education-Geography (Elementary) major are low. Although the Geography Social Studies program has low numbers, geography as taught in the elementary, middle, and high schools is a rapidly growing component of the social studies curriculum. Geography (along with history) is not an "endorsable" degree, but social studies programs in a majority of Washington's middle and high schools are now offering courses in U.S. or World Geography and these courses should be taught by competent instructors with training in geography. In addition, Geographic Information Systems is now being introduced in middle and high schools in computer-assisted mapping application classes, which brings technical applications of geography to Washington's classrooms.

TABLE A-1.1 PROGRAM REVIEW SUMMARY

Department Name: **Environmental Studies:**
Policy, Planning, Education & Geography

	2002-03	2003-04	2004-05	2005-06
Instructional Faculty FTE	13.5	13.5	13.5	14.5
Graduate Assistant FTE	3.58	2.92	3.17	6.5

Degree Program		2002-03	2003-04	2004-05	2005-06
Environmental Ed.	Majors (student headcount)	35	38	44	33
	BA Degrees Granted	15	18	13	24
	MEd Degrees Granted	7	12	12	8
Geography	Majors (student headcount)	72	63	70	73
	BA Degrees Granted	26	32	25	33
	MS Degrees Granted	5	7	4	9
Geography/Social Studies	Majors (student headcount)	3	6	6	2
	BA Degrees Granted	0	2	3	2
Planning & Envrn. Policy	Majors (student headcount)	54	55	76	109
	BA Degrees Granted	18	22	13	43
Environmental Studies/Journalism	Majors (student headcount)	18	26	22	13
	BA Degrees Granted	1	7	6	8
Environmental Studies/Economics	Majors (student headcount)	31	21	21	26
	BA Degrees Granted	19	8	10	6
Educ: Envrn. Studies/Elementary	Majors (student headcount)	1	4	3	4
	BA Degrees Granted	0	0	3	1
Educ: Geography/Elementary Student/Faculty Design BA	Majors (student headcount)	0	1	3	4
	Majors (student headcount)	8	7	3	1
	BA Degrees Granted	5	2	3	3

	2002-03	2003-04	2004-05	2005-06
ESTU Majors	222	221	248	265
Total ESTU Degrees	96	109	92	137
ESTU BA Degrees	84	91	76	120
ESTU MS/MEd Degrees	12	18	16	17

APPENDIX 2: PLANNING AND ENVIRONMENTAL POLICY ASSESSMENT: ASSESSING COMMUNICATION IN COLLABORATIVE LEARNING

ASSESSING COMMUNICATION IN COLLABORATIVE LEARNING

An Evaluation Proposal for the Planning and Environmental Policy Program

For ESTU 575: Assessment, Evaluation, and Research in Environmental Education

Prepared by: Joshua D. Benoliel, Derek R. Jackman, and Jenica A. Wood-Beauchamp

March 13, 2006

Subsequent communications with the professors narrowed the broad goal of collaborative skills into a more tightly focused learning objective. In email correspondence we asked each of the professors to list the classes that have collaborative components, the extent of class time devoted to discussing the skills required for successful collaborative work, and the top 3 to 5 teamwork skills that program graduates should possess. All three professors indicated that group/team/collaborative work played a prominent role in many of their courses, yet class time devoted to the discussion of collaborative skills varied from course to course. Professors' opinions regarding the most important teamwork skills for program graduates displayed striking commonalities, foremost the emphasis on effective communication. (See Figure A-2.1)

Figure A-2.1. Summary of professors' responses to: "What are the top 3-5 teamwork skills that you would like a graduate of your program to enter the professional field with?"

Dr. Jean Melious	Dr. Nicholas Zaferatos	Dr. Grace Wang
Understand others' perspectives	Hear client's expressed need and get from problem ID to problem solution	Work with others and experience diverse viewpoints
Frame issues to make them understandable to others	Form solutions/alternatives that are not limited to preconceived notions	Public speaking skills
Write and speak persuasively	Effectively communicate to a broad audience	Time management
Persistence	Successfully work in uncertain setting with conflict	Learning to "get along" with others

This clear articulation of the professors' student learning priorities aided us in defining a specific program goal and an objective that are both feasible and beneficial to evaluate.

Program Goal: Students will develop the ability to hear and understand the diverse needs and perspectives of those involved in the collaborative processes typical of environmental policy and planning.

Program Learning Objective: Students will be able to demonstrate self awareness and self assessment of their communication within collaborative contexts and use this information to improve their abilities.

RATIONALE FOR PROGRAM GOAL AND OBJECTIVE

The ability to communicate effectively, listen attentively, and understand diverse perspectives are all attributes that planning and policy graduates will depend upon in their careers. Communication drives the process of both policy and planning. The exchange of ideas amongst clients, stakeholders, co-workers, and communities at the local, state, federal and even global level demands professionals skilled in the facilitation of this process.

Evaluation of student self awareness and self assessment of communicative abilities offers the faculty much needed information regarding the achievement of a highly valued learning objective. A primary challenge in evaluating communication is the difficulty of measuring this highly complex and subjective aspect of human beings. Keeping feasibility squarely in mind, we sought to develop an instrument that would meet the faculty's needs by providing useful information with minimal expenditure of time and money.

Since collaborative projects are assigned in many policy and planning courses, we also sought to design an evaluation instrument that could be integrated into any course involving group work. Out of the wide variety of possible evaluation approaches, including observations, pre and post tests, and practical scenarios, we opted for a three part self and peer evaluation technique.

EVALUATION DESIGN

In the first two sessions of the evaluation process, students will reflect on their communication skills by responding to the questions in instrument one, "Reflections on Communication" (see Figure A-2.2). Students will then share these reflections with the other members of their team. During this portion, groups will select a note taker to document the key elements of each individual's response as well as emergent group themes. The professor will receive a copy of each group's detailed notes. These sessions should take place approximately one-third and two-thirds of the way through the group project and can be conducted in or out of class.

The group responses can provide the teacher with a window into the inner-workings of their students' collaborative efforts, alerting them to any trends that may require attention and possibly intervention.

Using the instrument repeatedly allows the professor to gauge students' progress or stagnation. This type of formative evaluation allows us, "as teachers...[to] carry out assessment in small ways, day-to-day, in each of our classrooms, as we take the pulse of student learning and shape our teaching accordingly" (Jean MacGregor, The Washington Center for the Improvement of Undergraduate Education, n.d., ¶ 9).

The third session takes a more quantitative approach (see Figure A-2.3 for example of instrument, modeled after the Northwest Regional Educational Laboratory's Group Assessment Rubric). At the end of each quarter or project, students are asked to rate themselves and their team members in terms of three specific aspects of communication: active listening behaviors in collaborative settings, understanding perspectives, and communication of ideas. As with the first two "Reflections on Communication" exercises, completing the evaluations provides students with another opportunity to think critically about communication and expand their ideas on this important topic. Both instruments serve dual purposes, being diagnostic and heuristic.

Figure A-2.2. “Reflections on Communication” self assessment instrument

Reflections on Communication

Students majoring in Planning and Environmental Policy are expected to develop the ability to work successfully in collaborative environments. Achievement in this field requires, among many skills, effective communication: listening to others attentively, recognizing non-verbal cues, stating ideas and questions in a clear manner, and making an effort to understand diverse perspectives. This list isn't exhaustive; it is merely intended to be a starting point on your “journey” of communication.

Reflect on the following questions and write out your answers. When your group meets please share responses one person at a time, with all group members offering the speaker their undivided attention. After everyone has shared, you may offer feedback. Each team will designate a note-taker and turn in one concise summary of each member's reflections as well as a list of common experiences, discoveries, or themes.

1. What is the most important thing you have learned recently about communication? How did you learn this and why is it important?

2. How will you apply what you've learned to the rest of the quarter?

3. What have you discovered recently about your own strengths and weaknesses as a communicator? How will you use your strengths? How will you improve upon your weaknesses?

Figure A-2.3. Peer/Self evaluation instrument**PEER/SELF EVALUATION**

The purpose of this peer and self-evaluation exercise is to gauge the quality of communication skills within your collaborative work, which you have had the opportunity to reflect on throughout the quarter. This **anonymous** survey is a program evaluation instrument and requires your honest feedback.

Using the scales below, please rate yourself and your team members on the skills shown. The following descriptions of skill levels are meant to be used as a guide and are not absolute or complete; choose the number that best reflects the level of skill between 1 (low) and 5 (high).

Active Listening Skills in Collaborative Settings		
1	3	5
Listening behaviors may be limited to sitting unresponsively while others talk. Distracting behaviors may include conducting side conversations, sleeping, writing notes, etc.	Active listening behaviors are generally limited to maintaining eye contact, using facial expressions to convey interest, disagreement, etc.	Active listening behaviors are demonstrated such as asking questions of clarification, offering constructive feedback, summarizing group comments, nodding in affirmation while others are speaking, paraphrasing for comprehension, etc.

Understanding Perspectives		
1	3	5
Shows limited receptivity to others' viewpoints.	Acknowledges multiple perspectives and is able to incorporate them into group discussion and negotiation.	Shows greater understanding of the complexities of diverse perspectives, including appreciation for social, political, and cultural contexts. Actively incorporates perspectives into group decisions when appropriate.

Communication of Ideas		
1	3	5
Minimal contribution of ideas; lack of relevance or clarity.	States ideas and questions adequately.	States ideas and questions exceptionally well.

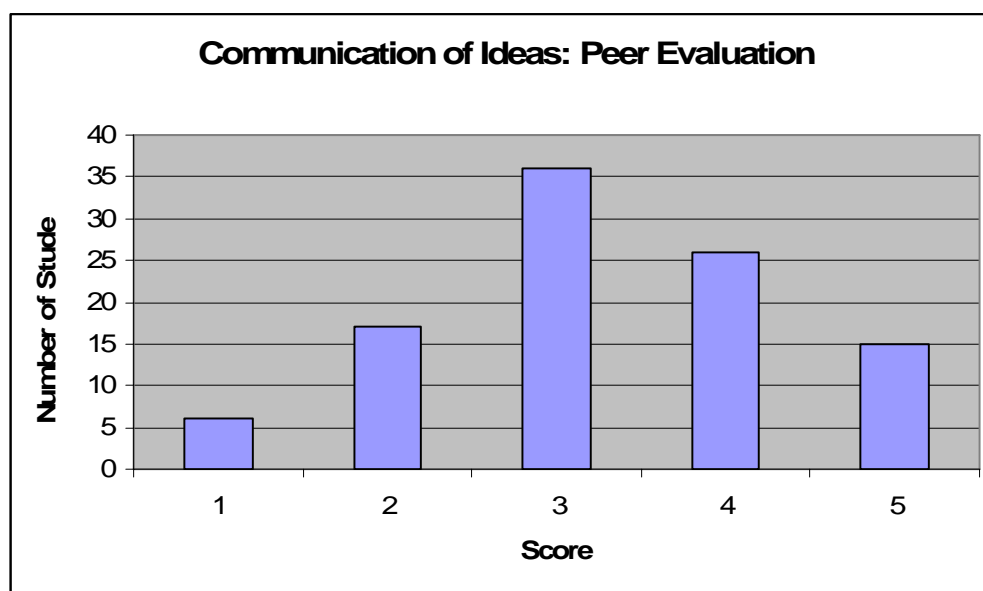
	Active Listening Skills					Understanding Perspectives					Communication of Ideas				
Self	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Team Member	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Team Member	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Team Member	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Team Member	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

DATA ANALYSIS

Professors can use group responses from the “Reflections on Communication” instrument in a variety of ways. First, to detect trends and themes at both a classroom and program level, and use this information to check intended outcomes against the state of student perceptions. Any lack of coherence between the two might alert the professor to the need for new instructional approaches or specific attention to aspects of communication that appear to be less well developed in students.

The data collected in the peer/self evaluation can be organized into histograms that display the number of individuals scored at each level for each of the three communication components. We advise against lumping scores into an aggregate, as this would diminish the validity of data regarding student score distribution within each category. The use of histograms in this phase of the evaluation offers the faculty a visual snapshot of students’ perceptions of their own and each other’s communication abilities. (See Figure A-2.4)

Figure A-2.4. Example histogram of data from self/peer evaluation.



WHAT THIS EVALUATION CAN DO AND CAN NOT DO

According to the Office of Academic Planning and Assessment at UMass Amherst, “a combination of qualitative and quantitative methods can offer the most effective way to assess goals and outcomes” (Stassen, Doherty, & Poe, 2001). The combination of our two proposed instruments can collectively elucidate trends in student learning. They present the user with an array of useful information including student reflections of a qualitative nature and self and peer evaluations of a quantitative nature.

While this evaluation can provide a series of snapshots and feedback loops for both students and professors, it not intended to provide summative judgments regarding students' communication capabilities. This type of information is limited by its subjective nature, as student self assessment accuracy can be biased by varying degrees of self awareness and honesty. Despite these pitfalls, self assessment is easily applied, engaging for participants, and can gather information that is easily integrated into improved learning.

Program professors expressed concerns regarding the availability of time and resources for implementation of evaluation. Taking these concerns into consideration, we opted for instruments that were flexible, cost effective, and productive of information that professors could use to gauge and improve student learning.

BUDGET

The evaluation process consists of two thirty minute sessions for group sharing of "Reflections on Communication" and one ten to fifteen minute session for completion of the Peer/Self Evaluation questionnaire. Professors' time outside of class should consist of two sessions of approximately one and a half hours to review group submissions of "Reflections on Communication," and three hours for analysis of Peer/Self Evaluation questionnaires and data calculation. (See Figure A-2.5)

Figure A-2.5. Approximate time budget (professor hours per course)

Overall Time Budget	Instrument Administration	Analysis Of Data	Total
Communication Reflection	1 hour	3 hours	4 hours
Peer/Self Evaluation	.25 hours	3 hours	3.25 hours
Total	1.25 hours	6 hours	7.25 hours

TIMELINE

The timeline for administering the "Reflections on Communication" portion of the evaluation process is dependent upon the duration of collaborative project work within a given course. Sessions for "Reflection on Communication" should take place one third of the way and again two thirds of the way through a collaborative process. The Peer/Self Evaluation should always be administered near to or upon completion of a group project. (See Figure A-2.6)

Figure A.-2.6. Timeline for instrument administration

Project Duration	Comm. Reflection	Comm. Reflection	Peer/Self
Full Quarter	3 Weeks	6 Weeks	Week 10
Eight Weeks	2.5 Weeks	5 Weeks	Week 8
Half Quarter	1.5 Weeks	3 Weeks	Week 5-6

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APPENDIX 3: PLANNING AND ENVIRONMENTAL POLICY EXHIBITS

SUCCESS STORIES

(From Troy Abel)

Here's a success story. is presenting to the City Council today [Jan. 22, 2007]. She's been interning for 8 months with Baykeepers Alliance and wrote an ordinance for the city to green their purchasing by avoiding products containing Persistent Bioaccumulative Toxics (PBTs). There is a sponsor and they are optimistic about passage this week. I saw ...'s practice presentation Friday and it was impressive. She only had me for one class so there's not much credit I can take for her professionalism but she's a story to promote for sure.

APPENDIX 4: ENVIRONMENTAL EDUCATION STUDENT LEARNING OUTCOMES

Student learning outcomes underlying each objective are given in the text, with assessment method for each outcome and criteria for judging the quality of the outcome.

(Note: in the following breakdown the term “student” refers to the college student and “learner” refers to the elementary and secondary students with whom the college students work in the field experiences)

Goal #1 Environmental Literacy

Objective #1 Skills of questioning, analysis and interpretation

Actual learning outcomes observed include:

- formulation of questions in all required courses
- formulation of research questions in environmental studies content courses such as Environmental History and Ethics and American Literature of Nature and Place.
- informed discussion, involving analysis, of works read and material covered in other ways.
- demonstration of understanding of conceptual material in actual teaching situations such as those of the Spring Block teaching practica.

Criteria for judging the quality of the outcomes include:

- questions are clear and focused
- the topic being analyzed is broken down logically
- proper inferences are drawn from material analyzed
- proper generalizations are drawn from analysis
- interpretation of complex ideas and concepts is understandable by non-specialists

Objective #2 Skills of presentation of analysis

Actual learning outcomes include:

- presentations in many courses
- formulations of lessons and presentation of complex material to learners at various developmental levels
- writing of essay questions on examinations

Criteria for judging the quality of outcomes include:

- the structure of the presentation is clear and logical
- evidence is cited in support of arguments
- assumptions are presented
- all parts of the presentation are directed at the argument or thesis
- the topic controls the presentation throughout

Objective #3 Knowledge of the earth as a physical system and human interactions with the system

Actual learning outcomes include:

- demonstration of knowledge of natural history in coursework and design of learning experiences for teaching practicums
- successful completion of required courses in environmental science
- in field courses, students are able to explain the natural processes being examined to each other and to learners at various developmental levels
- natural history journals are assigned and students record inquiries made into the natural systems in which they are working as apprentice environmental educators
- students working as interns demonstrate knowledge, and the ability to gather, organize, and present knowledge of natural systems and human impacts thereon to various audiences using various media

Criteria for judging the quality of outcomes include:

- scope and depth of knowledge of the earth as a physical system is demonstrated on tests, in presentations, and in lessons developed
- the student has developed a modest level of expertise in at least one specialized field of natural history such as geology, ornithology, or botany
- presentations of concepts and other information is accurate

Objective #4 Perceptions of nature

Actual learning outcomes include:

- successful completion of the course titled “Environmental History and Ethics, in which the student writes extensively about the history of perception of nature from aboriginal to post-modern perspectives.
- successful completion of the course titled “The American Literature of Nature and Place” in which the student writes about and makes presentations about views of nature in American history as reflected in American literature.
- in preparation of EE curricula the student incorporates historical perspectives into lessons and teaches them

Criteria for judging the quality of the outcomes include:

- students explain the core values of worldviews, including perceptions of nature, at various stages of the human experience, particularly in Western Civilization
- students express appreciation of the need to understand historical perspectives on nature and incorporate them into EE
- in their written work, students put contemporary perceptions of nature into perspective based on their understanding of the background of those perspectives

Objective #5 Skills of issue analysis

Actual learning outcomes include:

- in various classes students apply research and analytical skills to investigate issues ranging from local to global
- in assignments for these courses student evaluate the consequences of specific environmental changes, conditions, and issues for human and ecological systems
- methods of identifying stakeholders and their positions on issues are analyzed
- various action strategies for resolution of issues are studied and practices in courses

- students design lessons that address environmental issues in fair and balanced ways

Criteria for judging the quality of the outcomes include:

- a systematic approach is issue analysis and problem solving is demonstrated.
- students define the issue clearly, state the facts relevant to the issue, describe stakeholders values that are in conflict, and generate and evaluate alternative solutions to problems involved in the issue
- students use approaches such as Opposing Viewpoints, EE3, and methods explained in *Investigating and Evaluating Environmental Issues and Actions* (Hungerford, et.al. 1985) in developing issue-oriented lessons

Objective #6 Student is motivated to learn about, evaluate, and act on issues

Actual learning outcomes include:

- students volunteer to practice their skills in service learning, tutoring, stewardship programs (Eagle Watchers, Mountain Stewards) and other such processes
- students participate in organizations that are actively seeking solutions to environmental issues and problems
- students take initiative to form organizations and/or participate in existing programs at the University such as the Environmental Center and the Outdoor Center
- students select internship experiences that are oriented toward active problem-solving

Criteria for judging the quality of the outcomes include:

- volunteerism and participation is ongoing and sustained
- supervisors of internships report effective work by the students
- insight, commitment, and dedication are demonstrated by action and by reflection students do in their journals

Objective #7 Sense of self-efficacy is nurtured

Actual learning outcomes include:

- all of those listed above under objective #6
- acceptance of greater responsibility for learning
- a change of attitude from resignation to hopefulness
- expressions of a sense of empowerment
- willingness to accept leadership roles

Criteria for judging the quality of the outcomes include:

As above for #6

Goal #2 Knowledge of goals, theory, practice and history of the field of EE

Objective #1 Knowledge of major goal statements of the field

Actual learning outcomes include:

- ability to cite the historically important goal statements of the field
- ability to use classic goals in formulating program and curriculum

Criteria for judging the quality of the outcomes include:

- the student's work reflects the breadth of the goals contained in the classic goal statements
- the student's work reflects a global perspective on the field

Objective #2 Knowledge of definitions of the field

Actual learning outcomes include:

- a paper is written that formulates the student's philosophy of education in general and EE in particular which contains analysis and synthesis of definitions of the field examined in lecture, discussion, field observation, and review of literature
- during the Spring Block field experience and practicum a clear understanding of the definition of EE is reflected in programs designed, implemented and evaluated for learners at the high school and 5th grade levels

Criteria for judging the quality of the outcomes include:

- all of the student's work reflects a broad definition of EE
- the student uses terminology of the field such as "environmental literacy," "outdoor education," "conservation education," and "nature study" in a consistent and clear manner in all their work
- the student's work reveals that they are aware of definitional issues in the field that are reflected in the research literature
- the work also indicates an understanding that the field is growing and evolving, that it is still "young" and in its early stages of development

Objective #3 Understanding of the qualities of EE

Actual learning outcomes include:

- the student can define terms such as "disciplinary," "multi-disciplinary," and "interdisciplinary," recognize that most EE is interdisciplinary, yet recognize that the other two organizations of knowledge have their place in programs and curricula
- the student can cite and explain the research literature that indicates how EE can and does serve as an integrative process and is thus proving of value in educational reform
- the student can explain the generally accepted "stages" of EE which are awareness ("environmental sensitivity") to knowledge (of environment and of consequences of behavior in that environment) to commitment and motivation (attitude) to sense of empowerment (sense of self-efficacy) to action.
- students can explain the "information assimilation" and "experiential learning" processes, compare and contrast them, and use each of them in design of program and lessons.

Criteria for judging the quality of the outcomes include:

- in writing about the field the student can cite its core literature
- analysis of program includes critical examination of how well it reflects accepted qualities of EE
- student's work reflects critical analysis of the theoretical foundations of the field

Objective #4 Knowledge of learning settings

Actual learning outcomes include:

- students visit a range of settings and describe the qualities of each as part of their required coursework

- in Spring Block, students analyze the learning opportunities and potentials of various settings ranging from backyard to backcountry for achievement of EE goals and objectives
- in Spring Block students design and implement learning experiences for public school students in various settings and analyze the challenges and opportunities of each
- students examine the demands of a range of learning settings through observation and practica and demonstrate the perceptions of the different demands of each through design of learning experiences that they implement in Spring Block
- students compare and contrast formal (K-12) learning settings, and non-formal (outdoor, non-profit-administered) settings and report on their conclusions in writing and curriculum development assignments

Criteria for judging the quality of outcomes include:

- in Spring Block and other practica, the lessons the students design reflect their analysis and are successful as judged by teachers and others whose learners are the subjects of the lessons
- in written work, discussion and practica students display analytical skill in designing lessons appropriate to the settings in which the lessons will be delivered

Objective #5 Knowledge of the history of the field

Actual learning outcomes include:

- students demonstrate in discussion and written assignments, their understanding of the history of the conservation idea and how it affected the course of environmental education's predecessors
- students can recount the contributions of the leading practitioners through history of nature study, conservation education, outdoor education, adventure education, and other categories of environmental education

Criteria for judging the quality of outcomes include:

- students cite the classic works in the field in their work
- students take perspectives from various historically significant sub-fields of EE and incorporate them into their work

Objective #6 Knowledge of research and how it affects practice

Actual learning outcomes include:

- students know what the leading research journals are
- students know what the leading research questions in the field are
- students can cite the findings of some of the leading researchers in the field

Criteria for judging the quality of outcomes include;

- student work reflects knowledge of current research in the field in the form of citations in papers and current research-supported ideas in practice

Objective #7 Knowledge of current and emerging issues in the field

Actual learning outcomes include:

- students read the current literature in the field including *The Journal of Environmental Education*, *The Canadian Journal of Environmental Education*, *The Green Teacher*, *The Journal of Experiential Education*, and *Clearing* and identify current trends in assignments

- students attend meetings such as the regional “Storming the Sound” meeting held annually in NW Washington and the annual meeting of the Environmental Education Association of Washington (EEAW) where they hear up-to-date discussion of trends and issues. They report on what they learn at these meetings.
- As course assignments, students visit current EE programs and discuss the state of programs with practitioners. They report on these encounters.
- Students read postings on the website of the North American Association for Environmental Education (NAAEE) which track current trends in the field.

Criteria for judging the quality of outcomes include:

- written work reflects an informed perspective on current trends in the field

Goal #3 The student will understand and accept the responsibilities associated with practicing environmental education.

Objective #1 Understanding of need for fairness and balance in addressing issues

Actual learning outcomes include:

- students are able to distinguish the difference between education and advocacy
- students demonstrate instructional techniques for presenting differing viewpoints and theories
- students practice differentiating among instructional materials on the basis of their factual accuracy and bias
- students learn and demonstrate, in design of lessons, instructional strategies and techniques that encourage learners to explore different perspectives, form their own opinions, and explain their beliefs.

Criteria for judging the quality of outcomes include:

- understanding of the nature of advocacy and bias
- lessons that encourage of diverse perspectives on issues
- observed practice in the field of techniques that encourage exploration of differing perspectives

Objective #2 Acceptance of responsibility for EE that is developmentally appropriate

Actual learning outcomes include:

- knowledge of the cognitive and moral developmental theorists
- students design lessons based on developmental theory
- in Spring Block, students create lessons for learners at different developmental levels and analyze the outcomes
- knowledge of developmental theory is demonstrated in discussion of curriculum and other aspects of the field.

Criteria for judging the quality of outcomes includes:

- in their work students consider the developmental level of their target group
- in discussion, written work and field practice students demonstrate knowledge of relevant developmental theory

Objective #3 Relating of EE to curriculum standards and ed reform goals

Actual learning outcomes include:

- students examine the national standards (NETS) in traditional disciplines such as the National Science Standards, Social Studies Standards and Early Childhood Education Standards as well as state standards such as the Washington Essential Learning Area Requirements (ELARS)
- EE students examine the literature that describes how environmental education is contributing to educational reform
- students design lessons that address both EE goals and NETS

Criteria for judging the quality of outcomes include:

- students demonstrate knowledge of NETS and where to find them on the Internet
- students create lessons that address EE goals, NETS, and ELARS and identify all of these in the goals and objectives of the lessons

Objective #4 Modeling responsible, respectful and reasonable behavior

Actual learning outcomes include:

- students observe professionals in the field and examine definitions of what constitutes responsible, respectful and reasonable behavior
- in field practica, students practice such behaviors in working with learners of various ages and backgrounds
- in the extensive teamwork required by programs students develop skills for collaboration and cooperation
- standards for responsibility and respect are established by students as part of their definition of professionalism in educational work

Criteria for judging the quality of outcomes include:

- tasks are completed in a timely fashion
- students agree to schedules and modus operandi and adhere to them
- students in their field practica deal effectively with learners of diverse abilities, socio-economic, and ethnic backgrounds
- students actively question supervisors as to what professionalism demands in specific situations and reflect among themselves on such questions

Objective #5 Selection of instructional approaches that allow learners to form their own opinion, draw conclusions, and make independent judgments

Actual learning outcomes include:

- students are familiar with the literature that examines how to emphasize education and avoid promotion of a particular position on environmental conditions, issues, or actions
- students are knowledgeable of the NAAEE standards for evaluation of EE learning materials and apply those standards in selecting material from which to build lessons which they design
- students practice design of curricula and lessons which are fair and balanced in their approach to controversial issues
- students examine when it is advisable to address controversial issues and when not
- students are familiar with theory and methodology of moral and values education and practice applying them in design of instruction

Criteria for judging the quality of outcomes include:

- students demonstrate in their discussion and written work an understanding of the nature of bias and advocacy

- in their lessons, students demonstrate knowledge of ways to facilitate moral reasoning and independent judgment by learners

Goal #4 The student will be proficient in design and implementation of effective instruction about the environment.

Objective #1 Lessons will be designed based on knowledge of learners

Actual learning outcomes include:

- students examine the work of developmental psychologists and the implications of their work for design of instruction
- the challenge of identifying developmentally appropriate education material and strategies is discussed in courses and practiced in field practica
- students demonstrate in their written work and instructional design their knowledge of learning theories such as multiple intelligences and learning styles
- in Spring Block, students apply this knowledge in creating EE instructional plans and programs for particular grade levels and classes
- students consider varying cultural perspectives in designing their lessons, especially Hispanic culture in the NW region

Criteria for judging the quality of outcomes include:

- observation of student instructors working with learners reveals that lessons have been designed that are developmentally appropriate
- written work submitted by students demonstrates knowledge of learning theory
- teaching by students in Spring Block reveals sensitivity to the needs of various students and ability to respond using resources studied in earlier academic components of the program

Objective #2 Familiarity with instructional strategies identified by NAAEE as “essential”

Actual learning outcomes include:

- students complete courses in curriculum, experiential learning, and field methods in EE in which they both experience and facilitate all or most of the strategies recommended by NAAEE
- students observe, analyze and critique a variety of instructional strategies demonstrated by professionals in the field
- a variety of instructional strategies are analyzed and incorporated into curricula employed by students with learners in Spring Block

Criteria for judging the quality of the outcomes include:

- each student attempts a variety of instructional strategies in the field experiences
- observation of student-facilitated lessons indicates that learners are engaged and student-formulated learning outcomes are being achieved
- students demonstrate comfort with a variety of instructional strategies as they use them in field experiences

Objective #3 Ability to plan instruction from multiple-lesson programs to single lessons

Actual learning outcomes include:

- working in teams, students design curricula for learners at the high school and fifth grade levels that extend to five and four days respectively
- students analyze and report on varied planning challenges of formal and non-formal EE programs
- individual students prepare multiple lesson plans as assignments in courses

Criteria for judging the quality of the outcomes include:

- plans are complete, clear, thorough, and detailed
- plans are described so clearly that they might be implemented by others
- a student's lesson is sufficiently developed so that other students may implement it in field experience

Objective #4 Knowledge of materials and resources and how to access them

Actual learning outcomes include:

- students examine an inventory of learning materials both in courses and practica
- bibliographies and lists of resources are provided to students and used by them in a range of hands-on learning experiences
- students are familiar with NAAEE's *Environmental Education Materials: Guidelines for Excellence*
- students know key resource sites on the Internet and how to access them

Criteria for judging the quality of outcomes include:

- students are adept at accessing resources for preparation of program plans and lessons

Objective #5 Proficiency in use of instructional technologies

Actual learning outcomes include:

- in coursework and practica students use field instruments (binoculars, spotting scopes, water quality test kits), laboratory instruments, and a range of tools for environmental observation, measurement, and monitoring
- students demonstrate proficiency with technologies used to display, analyze, and communicate information
- students use and practice with instructional technologies as part of their field experiences

Criteria for judging the quality of outcomes include:

- students indicate comfort with technology and its use in instructional situations
- students employ technology in their lessons in an appropriate way and in appropriate situations
- students use technology to assist communication but not to replace such skills as explanation, oral interpretation, and storytelling

Objective #6 Ability to design safe and conducive learning environments both indoors and outside

Actual learning outcomes include:

- students observe, compare, contrast, and analyze the different demands of indoor and outdoor learning settings
- using this background, students prepare and implement lessons in both indoor and outdoor settings

- the rudiments of risk analysis, assessment and management in a variety of learning settings are examined
- students learn to write risk management plans
- in practica, students design lessons and conduct learning experiences using the understanding of risk analysis, assessment and management learned in observations and coursework

Criteria for judging the quality of outcomes include:

- risk management plans are thorough and feasible
- programs in all learning settings are conducted safely in field experiences such as Spring Block

Objective #7 Knowledge of the curriculum design process

Actual learning outcomes include:

- students examine theories of curriculum design
- students examine in coursework the steps of curriculum design including needs assessment, learning resource inventory, the writing of educational goals and objectives, processes of selecting content including conceptual frameworks, processes of selecting learning experiences, program implementation, assessment and evaluation of learning outcomes
- working in teams, students practice processes of curriculum design, implementation, assessment and evaluation, and revision
- students review major curriculums in the EE field

Criteria for judging the quality of outcomes include:

- students write instructional goals and objectives effectively so that assessment of learning outcomes is possible
- the curriculum and lessons prepared by students in Spring Block and in residence at the North Cascades Environmental Learning Center are judged effective by classroom teachers whose students are the learners in the instructional situation

Goal #5 The student will be proficient in facilitating learning about the environment and about issues and problems of that environment.

Objective #1 Ability to create a motivating learning environment

Actual learning outcomes include

- students understand constructivist learning theory and apply principles of that theory, thus building on learner goals and perceptions
- students learn how to structure learning experiences that require learners to take initiative, make decisions, and be accountable for results
- students learn how to design and implement learning experiences that involve the “whole” learner, including mind, heart, and body
- students examine theories of motivation and practice them in field experiences such as Spring Block
- students learn to be aware of the “teachable moment” and skills for taking advantage of it

Criteria for judging the quality of outcomes include:

- students demonstrate knowledge of motivational theory in written work and in field experience
- students design lessons which engage learners
- students take advantage of “nature moments” in the course of Spring Block lessons

Objective #2 Learn skills of facilitating firsthand experience of learner's environment

Actual learning outcomes include:

- students examine experiential learning theory and method and demonstrate knowledge of it in written work and field experience
- the learning environment for EE is defined as reaching from the classroom to the backcountry and students examine how this spectrum of environments may be used for learning
- community education is examined
- place-based education ideas are incorporated into thinking about program and curriculum design and planning
- instructional strategies for using school, schoolyard, and neighborhood are examined and tested in field experiences

Criteria for judging the quality of outcomes include:

- curricula and lessons planned by students utilize the local environment
- experiential learning processes are incorporated into curricula and lessons
- learners testify to increased perception of place as a consequence of student lessons

Objective #3 Value diverse backgrounds and perspectives of learners

APPENDIX 5: ENVIRONMENTAL EDUCATION EXHIBITS

SUCCESS STORIES

A student success story: One of our EE graduates is a middle school teacher who has just purchased the Snowgoose EE vessel from Sue and Bert Webber and will be running school marine education programs locally, as well as ecotourism tours to Alaska.

QUOTES FROM CLASS EVALUATIONS ABOUT EE CLASSES:

“I liked the alternative ways of promoting education. EE classes provided me with many resources and skills to help take my education to the next level.”

“The EE classes create a welcoming and encouraging atmosphere. I felt challenged in ways that are not traditional in a ‘normal’ classroom.”

“The best class I’ve taken at WWU.”

“Instructors proved a wealth of knowledge and experience and encourage students to explore their own morals, goals and develop appropriate skills for future work in the field.”

“The classes have given me the tools, knowledge and confidence to do anything in the field of environmental education.”

SAMPLE INSTRUCTOR COMMENTS: INTERNSHIP REPORT WENDY WALKER, ASSISTANT PROFESSOR

xxx:

Thank you for turning in your internship report in such a timely manner. It is helpful to receive these early in the quarter before the normal deluge of last minute assignments.

You have included all the required elements in your internship report. I was able to understand the nature of the program and of your role within the program. A future student who might be interested in this internship could get a clear idea of the duties and responsibilities involved.

We met and discussed your goals and objectives the quarter before the internship and you seemed like you had a reasonable set of expectations for this real-world experience. I was glad to read that the internship met most of your objectives and that you adjusted your expectations to fit the reality of the job when appropriate.

Your journal entries effectively described your daily tasks and reflected upon what you learned from your experiences. I think it probably helped that you had considerable experience with writing reflection papers because of assignments during your spring block quarter last spring. Your entries indicated that you were analyzing the experience and generalizing the lessons learned to apply them to future challenges in your life. Good work.

Your self-evaluation summarized the entire summer's experience. You wrote concisely and thoughtfully about what you learned and gave some guidance to other students who might consider this internship in the future. I may ask other students with similar interests to read your report as they decide among their internship options.

Your supervisor letter indicated that you did a good job for the agency. Congratulations! I'll be interested to see if you do further work in this area.

Overall: This report effectively documents your internship and was sufficient to chronicle your learning process. You could have included more information about the job in the appendix and some photos would have been a nice touch, but neither were required.

SAMPLE SYLLABI

ENVIRONMENTAL STEWARDSHIP--ESTU 496 Winter Quarter 2005 –Syllabus

INSTRUCTOR: Wendy Walker, 650-3504; 371-0131, wwalker@cc.wvu.edu

Office Hrs.: T/TH 11-12, M/W 1-2 Office: AH 230

TEACHING ASSTS: Erin Schneider 733-2515 schneie5@cc.wvu.edu, Brian Stafki 510-2424
bstafki@cc.wvu.edu, Amy Brown 738-8292 amyb35@hotmail.com, Joy Tally
tallyj@cc.wvu.edu

TA Office Hrs: Friday 9-11 – AH 230

CLASS TIMES: Mon. 2-5 and Wed. 2-4 or M 2-6 and Wed. 2-3, Room: AH 14

BOOKS: Photocopied readings or books will vary with the project group as needed to accomplish specific goals. These will be available through the library or your group leader. Because of few book costs for this course, each student will be expected to spend around \$30 on materials for their project product or presentation.

CLASS DESCRIPTION:

This class offers students an opportunity to explore environmental issues and meet challenges related to real-world complex environmental projects in a field setting. In 2005, the projects will relate to land management, conservation and education at Hovander /Tennant Lake Park managed by Whatcom County Parks and Washington State Department of Fish and Wildlife.

CLASS OBJECTIVES: That students will be able to:

- *Apply concepts of environmental studies toward making tangible contributions to meeting local environmental challenges.
- *Integrate concepts, skills and approaches from environmental studies, including science, policy, geography, economics, planning and education.
- *Improve understanding of issues faced by environmental professionals and the interdisciplinary nature of the professional work world.
- *Develop abilities to translate goals about environmental issues into effective action.
- *Experience collaboration between experts, disciplines and government and non-profit agencies.

ASSIGNMENTS: Points are based on 100-point scale.

Individual: Class Attendance-10, Class Tasks & Reflection Journal-15, Stewardship Volunteer Work Hours-15, Self and Group Evaluations-10, Individual contributions to project and presentation-10

Group: Project Plan-5, Written/Physical Product-20, Presentation-15

Class Schedule—496--Winter Quarter 2005

Required Extra Class Times: Due to two Monday holidays on the field session day for this class, you will need to schedule at least one extra four-hour field session with your project group outside of class time before 2/1. The original class schedule listed Wednesday as the field day. We need to change it to Monday.

W 1/5	Class Introduction, Project Group Intro and Selection, Project Groups Meet (3 hours)
M 1/10	Project Groups meet—on site (4 hours) w/ Dennis, Cam, Jim and ?Holly
W 1/12	Field Trip Day for Proj Groups or 2 hr class & do field trip during extra field session
M 1/17	No School-Martin Luther King Day
W 1/19	Whole Group Meets in Class—Draft Project Plans Shared, Cam, Jim, Dennis (2 hrs)
M 1/24	Proj Work Field Session—Final Plans Due, Divide work among grp members (4 hrs)
W 1/26	Whole Group Meets in Class— Individual work contracts due (1 hour)
F 1/28	Stewardship Work Party #1: Blaine Parks Archive clean: Wendy & Lynne facilitate
M 1/31	Project Work (4 hours)
W 2/2	Whole Group Meets in Class (1hour)
Sa 2/5	Stewardship Work Party #2: 10-4 Tennant Lake boardwalk clean up: Erin and Jim
M 2/7	Project Work (4 hours)
W 2/9	Whole Group Skill Session (1 hour)
M 2/14	Project Work (4 hours)
W 2/16	Whole Group Skill Session (1 hour)
M 2/21	No School-Presidents Day
W 2/23	Whole Group Skill Session
Sa 2/2	Stewardship Work Party #3: 10-4 Hovander Park: Erin and Amy Facilitate
M 2/28	Project Work (4 hours) Stewardship volunteer hours reflection due.
W 3/2	Whole Class—Planning for presentations (2 hrs) Draft written projects due to leader
M 3/7	Practice for Presentations (4 hours)
W 3/8	Whole Class Meets--Feedback and Improving Presentations (1 hour)
W 3/16	Final Written Projects, Self Evals and Group Evals Due by 3 pm

PROJECTS FOR ENVIRONMENTAL STEWARDSHIP--WINTER QUARTER 2005

1. Tennant Lake Visitor Center Interpretive Plan: Includes planning for future exhibits for the whole visitor center and detailed planning for one room and a creation of outreach teaching “boxes” which might double as temporary exhibits. Possible remodeling of “cave” into interpretive facility. 7 students-AMY/ JOY with JIM EDWARDS /HOLLY ROGER
2. Hovander Park/Tennant Lake Garden Interpretation/Education/Service Projects: Includes economic garden and interpretive signs, brochures or exhibits. 5 students- ERIN/DENNIS CONNER
3. Hovander Park/Tennant Lake Live Programs Interpretive Planning/Training for seasonal walking/talking interpretation with Cam (park employee) and park volunteers. Production of scripts and prop kits for two example interpretive programs. 5 students- BRIAN/CAM

4. Hovander Park/Tennant Lake historical video: Includes footage of houses, barn and audio from previously recorded oral history interviews. New video interviews possible. Collaboration with ESTU 479, video production class. 5 students- WENDY/DENNIS (should be in both classes)

Written Products: Each group will produce a project plan and a final report documenting and evaluating their project accomplishments. Other physical products will vary from group to group.

Presentations: Each group will present their work to an audience of peers, instructor, teaching assistants and representatives from Whatcom County Parks and Washington Dept. of Fish and Wildlife.

Due to the project nature of this class, 40% of your grade will come from group products and processes. Each student will have an opportunity to showcase your individual participation in the group process and the other 60 % of your grade will come from individual assignments.

ASSIGNMENT DESCRIPTIONS:

Individual: 60%

Class Attendance-Show up and participate fully, one point will be deducted for each class hour missed without arranging a make-up assignment. 10 Points

Class Tasks & Reflection Journal-Keep track of each task you do for this class, indicating amount of time spent and what you accomplished. Reflect on each task and class session, writing a paragraph about what you learned about the task, site, subject and yourself. Add nature observations about the park. Describe plants, animals, weather, rocks and Due 3/8, 15 Points

Stewardship Volunteer Work Hours-Spend 6 to 8 hours outside of regular class time working to protect or restore wildlife habitat or help the parks improve visitor services. Write a 2-3 page reflection on what you learned. Due 2/28, 15 Points

Self and Group Evaluations-At the end of the class you will write an evaluation of your participation in your project group, giving yourself a score (out of 10) for individual contribution. You will write evaluations of your group's process and products. Due 3/16, 10 Points

Individual portions of project write-up and presentation-Your individual contribution as graded by you and project leader. See assignment above for self eval description. 10 Points

Group: 40%

Project Plan—Write a 3-5 page plan for your project that includes your objectives, the scope and sequence of tasks with due dates and a group member assigned to accomplish each task, background research sources including interviews with experts. This plan should describe the final product and presentation. Draft 1/19, Final Due 1/24, 5 Points

Written/Physical Product-draft 5 & final 15—Descriptions vary. Draft 3/2, Final Due 3/16, 20 Points

Presentation-practice 5 & final 15—The audience for these presentations are the other members of the class, instructors and representative from Whatcom County Parks and Washington Department of Fish and Wildlife. The hour-long presentation should showcase products and describe how these products could be used effectively. Practice 3/7, Final Due 3/15, 15 Points

ENVIRONMENTAL STUDIES 479
METHODS IN ENVIRONMENTAL INTERPRETATION
Winter Quarter, 2007

Instructor: Wendy Walker, Office: ES 230, Phone: 360 650-3504

Teaching Assistants: Kevin Dixey, Caroline Tucker

Classroom: Arntzen Hall 30

Lass Times: MW, 2-4pm, and Field Trips

Office Hours: MW, 1-2pm, or by appointment

REQUIRED TEXTS AND SUPPLIES:

1. Environmental Interpretation, Sam Ham
2. Readings supplied during class sessions
3. Exhibit construction materials up to \$30

COURSE OBJECTIVES:

This course will enable you to:

1. ..practice and increase your skill in interpretive writing, speaking and design.
2. ..analyze audience, communication style and educational success of interpretive media.
3. ..create interpretive signs, brochures, newspapers, exhibits or electronic media for a real project.
3. ..learn about or participate in an interpretive planning process.
4. ..become aware of career opportunities in interpretation.

CLASS REQUIREMENTS:

GRADING SCALE: This course will be based on 100 total points for all the assignments

A=90-100

B=80-89

C=70-79

D=60-69

F=< 60

ASSIGNMENTS:

1. 20 points – Class attendance and participation -- field trips and homework
2. 10 points – Interpretive Plans – presentation 2/5 (3 pts.) final plan 2/12 (7 pts.)
3. 10 points – Skill Acquisition--(Desktop Publishing, Video Editing etc.) 2/26
4. 10 points – Journal: Project and skill progress, client interactions, time/tasks and reflection 3/12
4. 10 points – Project Presentations: project drafts to peers, instructor and client 3/7-3/14
5. 10 points – Project Peer Critiques-- day after project presentations
6. 30 points – Final Interpretive Projects—due to instructor and client 3/20

PROJECTS: A group of 2-3 students will work with each of these community-based groups

1. ReSources: Example: Develop exhibits for new Sustainable Living Center
2. Nooksack Salmon Enhancement: Example: Create newspapers for individual watersheds
3. Campus Sustainability: Example: Create program for dorms to encourage sustainable Living

Environmental Studies 479 -- Winter 2007-- Class Schedule

W	1/10	Class Introduction & Project Ideas
M	1/15	No Class—Martin Luther King Jr. Holiday Read Ch. 8 Ham, 1-20 Interp. Projects, Homework 1 and 2
W	1/17	Project ideas and sign up; Interpretive Planning— Read C. 9 Ham, Homework 3
M	1/22	Brochures, Newspapers, other print media
W	1/24	Signs, Exhibits, other 3-d media: possible field trip Read Ch. 10 Ham
M	1/29	Electronic media: video, slide shows, video podcasts: Kevin Dixey
W	1/31	Interpretive Planning: step by step as applied to our projects
M	2/5	Presentation of Interpretive Plans—class and client critique
W	2/7	Interpretive Writing--Creative Approaches
M	2/12	Interpretive Graphics and Design--Kevin
W	2/14	Interpretive Writing --Editing—in class edit- creator/editor skit--interp.
	plans due	
M	2/19	No Class—Presidents' Day Holiday
W	2/21	Desktop Publishing/Photoshop--Computer Lab—Kevin
M	2/26	Interpretive Signs and Exhibits--Fabrication, Materials, Costs; skill acquisition due
W	2/28	Universal Accessibility, Responding to Clients, Adjusting for Audience
M	3/5	In-class project workshop
W	3/7	Presentation for Critique: ReSources
M	3/12	Presentation for Critique: NSEA
W	3/14	Presentation for Critique: Campus Sustainability
T	3/20	Final Time: 3:30-5:30 Final Draft Gallery—Project write-ups due

Assignment Descriptions

1. CLASS ATTENDANCE AND PARTICIPATION—20 points – Self evaluation due 3/14 -- Field trips and homework Come every class day, participate with vigor and complete homework with excellence for full points.

2. PLANNING ASSIGNMENT-- 10 POINTS—Presentation 2/5 and Written Plan 2/12

Work on an interpretive plan for your final project or in a planning group as assigned in class. The plan should include all the elements that are in the *Silver Falls Interpretive Plan* (in your photocopied readings) and should utilize planning process ideas from the *Guide to Interpretive Planning* (also in the readings). Each student uses group process ideas to research and write up a portion of the plan, e.g., audience analysis, site description, 2-3 pages (5 pts.). Each student writes up an exhibit plan for one interpretive sign, brochure or program as suggested by the interpretive plan. 1-2 pages (5 pts)

Step 1: Meet with client to clarify agency/group needs. Meet on site as a group on site and brainstorm ideas. Let the site guide your creativity. What kind of media will work well here? Who are the audiences? What are the amazing stories that the land has to tell? What are your educational objectives for the site? What do you want the visitors to know or feel or do after they've experienced your interpretation? Come up with an overall theme for the site interpretation. Make sure it is a complete sentence and narrows the ideas down to fit the site and sparkles with excitement. Someone should type the objectives, audience analysis and theme.. so someone else could create a site sketch or map.

Step 2: Meet again as a group.. this time with the real-world person that you will be working with (Dave or Heather). Run your objectives by him or her.. do they make sense of the audiences and for the site needs? Ask him or her to respond to your overall project theme.. Does it work for him or her.. does he or she think it will amplify effectively the important messages at the site. Ask for help in locating research ideas or resources to fill in the facts in the big ideas. Ask about whether your media choices make sense.. which ones are most important to do first? Finances? Ways of fabricating? People to help? Locate the various media or exhibits on the ground if possible.. mark the locations or sketch map them. Someone should write a site and project description and edit the previous pages to include new ideas. Someone else could create a research resource list with contact information.

Step 3: Meet again as a group.. Divide the project into manageable hunks for each person to meet the requirements of this 10 week class.. Each person should probably work on one or two interpretive signs.. one 3-d exhibit or one brochure, for instance. Each separate exhibit needs a page in the plan (written by the person who will be creating it) with its own theme statement.. full sentence..a location mapped or described.. topics to be covered, research needed and some ideas for an interpretive approach..e.g., metaphor or other creative ideas as described in Sam Ham's book.. finally a sentence and maybe a sketch with some graphics ideas. See the Silver Falls Plan for format for this.

Step 4: Assemble all the pages into a booklet.. collate and staple and turn it in to instructor and client on 2/12

3. SKILL ACQUISITION—10 points-- Due 2/26

Attend a workshop, training or other skill-building session outside of class time. This interpretive skill should apply to the project for this class and help your group complete the project at a high level of quality. Skills needed will vary with the project, but possible skills include: Desktop Publishing, Photography and Photo Editing, Exhibit Design and Construction, Drawing and Illustration, Creative Writing, Website Design, Radio Broadcasting, Video Shooting and Editing. Choose a skill that interests you and that you think might be helpful in your future career. It should be a new skill or you can choose to improve rudimentary existing skills. See student tech center and Kevin for computer related skills. See Wendy for others.

4. JOURNAL – 10 points—Due 3/12

Keep a journal recording time spent and describing tasks related to your final project. Reflect upon what you are learning as you progress on the project. Describe sessions and relationship with project group and client. Problems? How have you solved them? What have you discovered about yourself as a group member, individual project worker and communicator? Describe your skills acquisition process. Why did you choose this skill? How did you acquire it? What further training might you need? How do you think you might use it in your future career? There should be at least two entries a week. Journal each time your group meets, each time you meet with client, each time you work on the project and as you practice your skill. Comment on class sessions and readings as they apply to your project.

5. PROJECT PRESENTATION –10 points – Due 3/7-3/14

Your group will have one full class session to present your project to the class, instructor and client. The purpose of this event is go get feedback on your final project so that you can change, improve, adjust and fine-tune the product before presenting it in final form. Any physical materials should be available in draft form for viewing and critique. Make sure there are copies for the client, instructors and peers to take away or view for further comment. Each person in the group should speak as part of the presentation with a clear indication of which parts of the produce he/she has created. If appropriate, the presentation can occur on site. The project group is responsible for inviting the client in a timely manner. Dress and speak in a professional manner. Think of yourself as a \$75 an hour contractor presenting your product for client approval.

6. PROJECT PEER CRITIQUES--10 POINTS--Due the day after drafts or programs are presented in class...

Write a one-two page evaluation of each of the two other project presentations and draft products

- a. Discuss whether the project/program met the goals, objectives, themes and audience.
- b. Describe the strong points of the: overall planning, creativity, clarity, visual aids, organization, writing, graphics, design, media and creation of final product.
- c. Describe some changes that could be made in order to improve it.

- d. Describe strong points of presentation and make suggestions for improvement.

E-mail copies of your critique to the presenters and the instructor by 5pm the day after the presentation.

7. FINAL INTERPRETIVE PROJECT – 30 points Draft due at presentation; Final due to instructor and client 3/20

This is a group project but has an individual component built into the grading. The overall group project should demonstrate understanding of client needs, research into the subject matter and interpretive media, competence with the media, and understanding of the audience. The group needs to work well as a team and create and maintain good and professional communication with the client.

Each group project should include a **write-up** with:

- a. goals, objectives and theme statement.
- b. description of the client, target audience, interpretive products and how project meets audience needs.
- c. an outline of topics covered and a **description of research** with bibliography of sources
- d. steps/costs involved in producing the interpretation in the real world (include real fabrication and printing costs even if you just do a mock-up for class.)

Each project group member creates an individual interpretive product as part of the overall product. Possibilities include:

1. Interpretive Sign -- Full size camera-ready mock-up including text and graphics. Written description of the media you would use to fabricate the signs and the reasons you chose this particular type of sign. Describe the fabrication process and the steps necessary to prepare for fabrication. Make small copies of each sign for class members or display in AH hallway. Emphasis will be on quality of writing, graphics and design and appropriateness for target audiences.

2. Interpretive Brochure -- Research topics, write text and design and layout graphics. Use desktop publishing for best quality, but cut and paste copied products will work if well- done. Research steps to printing a real brochure for your audience and write-up the process. Describe how the brochures would be dispensed and the pros and cons of that process. Make copies for each class member and present to class.

3. Interpretive Exhibit -- Three-dimensional or interactive exhibit. Should clearly illustrate an interpretive theme and include some text and graphics. Research topics, write text, collect or create graphics, fabricate exhibit or mock-up of exhibit. Describe the fabrication process in writing and discuss its pros and cons. Present to class and describe how exhibit was produced and how it works to interpret its theme.

4. Interpretive Slide/Tape Program -- Include written script with auto tape. Program should include high-quality slides, preferably taken by yourself and a tape with narration, sound effects and music if appropriate. Visit media services to learn how to use tape mixing lab and slide/tape technology. In writing, describe the production process and its pros and cons. Program should stand alone. Present to class. 10-15 min

5. Video --Include written script. Description of place/subject of video and of editing process required to reach final product. Research methods for producing a video. Visit media services or a professional video production studio. Describe steps and costs involved in researching, producing, duplicating and dispensing the video to the public. Include pros and cons of video as an interpretive media. 5-10 min.

6. Advanced Interpretive Live Program-- Build on the skills you developed in ESTU 473 and create a second live interpretive program using a different method than fall quarter. For example, if you did a guided walk in 473, try storytelling or living history. You must present this program to a public audience for your client.

APPENDIX 6: SURVEY OF HUXLEY GRADUATES -- EXCERPTS FROM *SURVEY OF HUXLEY GRADUATES (Office of the Dean, Huxley College)*

DESIRE FOR BROADLY INTEGRATED AND HANDS-ON TRAINING

...Though the intensity for the preference is not quite as pronounced as it was in the 1998 survey, a large majority of the graduates in the 2002 follow-up continue to espouse a preference for broadly integrated interdisciplinary training as opposed to concentrating on one particular specialty. About 3 out of 5 respondents in the 2002 study indicate a moderate to strong preference for broadly integrated training compared to just under 16% who wanted to concentrate on one particular specialty.

...Along with their preference for a broadly integrated approach, most of the graduates wanted to focus on applied problems and field work as opposed to lab studies and theoretical issues. Only about 1 out of 10 of the graduates in the 2002 study was more interested in theoretically oriented lab work, results closely paralleling the 1998 findings.

GRADUATE SATISFACTION WITH THEIR HUXLEY EXPERIENCE CONTINUES AT A VERY HIGH LEVEL

...More than 75% of the 2002 survey respondents rated their overall satisfaction with their Huxley experience at 70 or more on the 100 point scale, where 100 means "absolutely perfect." One out of 4 rated their satisfaction from 90-100. As you might guess from this high satisfaction level, graduates were similarly positive about most of the specific dimensions of their Huxley experience they were asked about.

...The satisfaction rates in the 1998 survey were nearly as positive as the 2002 findings, but the earlier study did uncover a perceived need for the College to provide better help in learning about internship availability, obtaining internships and locating career opportunities. To determine whether there has been improvement over these areas during the last 4 years, the ratings of 1994-97 graduates in the 1998 study were compared to those of the 1998-01 respondents in the 2002 project. This allowed us to hold time since graduation constant.

...The resultant comparison shows no change in perceptions of the help given in learning about internship availability, some improvement in help obtaining internships and significant improvement in perceptions of the help they received in locating career opportunities. If the comparison between the two studies is further limited to graduates now working in occupations moderately->strong related to their Huxley training (presumably individuals with a greater motivations to work in the area of that training) we find there has been significant improvement across all three areas relative to the perceptions of the equivalent 1994-97 graduation cohort.

KEY INFLUENCES ON GRADUATE EVALUATIONS OF THEIR OVERALL HUXLEY EXPERIENCES

...Path analysis was used to determine the relative impact of graduate satisfaction with specific aspects of their Huxley experience on overall satisfaction with the program. Three dominant themes emerge from this analysis.

...To begin with, graduate satisfaction is significantly influenced by their perceptions of the degree to which Huxley provided access to real-world/hands-on training. This takes two forms: the opportunity for students to get real-world experience outside of the classroom and, as a complement to that, the extent to which professors effectively bring applied real-world experience to bear in the classroom.

...A second strongly related theme revolves around the extent of graduate satisfaction with the help they received in learning about and acquiring internships, along with help in learning about and obtaining employment after graduation. These dimensions were and remain the areas graduates consider most in need of improvement. This area of lower ratings acknowledged, a comparison of the 1998 and 2002 survey data shows that graduates think Huxley has improved in these areas over the last 2 or 3 years.

...The third theme might be described as “warm fuzzies.” This relates to the emotional, as opposed to the intellectual, aspect of student experience. This motivation manifests itself in the graduates’ relationships with other Huxley students – the sense of comfort, camaraderie and reinforcement they derive from being with others who share their values, along with their interpersonal relationship(s) with their advisor(s). The data show that perceptions of the extent to which they think their advisor has a real concern for them as a person matters more to their post-graduation satisfaction with their Huxley experience than the quality of the advisor’s professional expertise.

CONTINUED SUCCESS IN OBTAINING EMPLOYMENT IN THE FACE OF A SAGGING ECONOMY

...The primary effect of a slowing economy seems to have been a modest slow-down in the speed of post graduation job acquisition, rather than any substantial increase in unemployment. Among members of the 1994-97 graduation cohorts interviewed in the 1998 study, 40% reported having a job in hand by graduation, vs. 20% among the 1998-2001 cohort. However, within 6 months of graduation, most of this differential disappears. Five percent of the 1998-01 graduates actively on the job market were still looking at the time of the 2002 survey versus 3.8% of the equivalent cohort of 1994-97 graduates in the 1998 study.

MEANINGFUL FULFILLING CAREERS

...Not only are recent Huxley graduates achieving high rates of employment, but using the 1975-97 cohorts surveyed in the 1998 study as a baseline once again, we find that the 1998-01 graduates have been even more successful in obtaining jobs related to their Huxley training. 36% of the graduates interviewed in the 1998 study reported that their first full-time job after graduation was strongly related to their Huxley training and another 26.5% indicated moderately related occupations. Among the 1998-01 graduate cohort slightly over 50% report that their first full-time job after graduation was or is strongly related and another 25% report a moderately related occupation. In short, following graduation three out of every four of our more recent graduates found employment in occupations moderately–strongly related to their Huxley training!

Satisfaction with Specific Aspects of Huxley Experience

1993-97 & 1998-2001 Graduates

