THE DEVELOPMENT OF A MASTERS LEVEL ENVIRONMENTAL EDUCATION PROGRAM FOR GLEN HELEN AT ANTIOCH COLLEGE

A Thesis
Presented in Partial Fulfillment of the Requirements for the Degree Master of Science

by

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INTRODUCTION

General Background

Environmental education is a relatively new field of formal education. Stapp (1974) details its development out of earlier preservation and resource management movements as expressed in nature study, outdoor education and conservation education combined with the environmental quality movement of today. It received national recognition in 1970 by the enactment by Congress of the Environmental Education Act (U.S. Office of Information, 1971) and international recognition with the establishment in 1973 of the UNESCO/UNEP Environmental Education Programme by the United Nations (Stapp, 1975).

Much has been written about environmental education for grades K-12 and about in-service teacher training (Roth, et al., 1973 and Roth, et al., 1976) yet literature on pre-service training of teachers is sparse. Perhaps this is because of the interdisciplinary nature of environmental education (Winn, 1971) and because it has seemingly lacked widespread acceptance as a course of study at the undergraduate or postgraduate level. In-service teachers surveyed by Arnsdorf (1975) reported "they depended upon departments or colleges other than education for additional background study" (in environmental education) but a recent survey by Railton (1975) showed environmental education programs to be centered
in "pre-service teacher education units in 70% of the institutions represented by the respondents. It appears, then, as if environmental education is a concept whose time has come. It is clear that there is an emerging field of specialization in environmental education though it has been slow to be recognized as such by teacher training institutions and certifying agencies. Indiana recently recognized certification of a teaching minor in conservation and environmental studies (Environmental Education Report, April, 1976) and Ohio has indicated some interest in a similar certificate validation (Hug, 1975 and Hoffengardner, 1975).

The precise roles, responsibilities and definitions in this new field have been slow in coming into sharp focus. A recent conference on "Environmental Education--Perspectives and Prospectives" thoughtfully addressed the important questions needing clarification. The published report of this conference (Schafer and Disinger, eds., 1975) makes specific recommendations with respect to resident instruction in environmental education in the area of higher education.

It appears, too, as if there will be a growing need for educators with special training in environmental education. Hug (Disinger and Bowman, 1975, pp. 190-193) reports increased environmental education activities of several varieties (land lab development, resident outdoor education programs, mini-courses, curriculum adoption) in Ohio school districts as do correspondents for most other states (Disinger and Bowman, 1975).
Environmental interpretation is the name generally applied to environmental education in a non-formal setting. It was brought to this country from Europe about fifty years ago and until recently has been largely devoted to the interpretation of natural and cultural history. Though not a part of the formal education system, even its most eloquent spokesman, Freeman Tilden (1967) acknowledged in his definition of interpretation that it is an "educational activity." Practitioners often have training in the formal education field and most work in both the formal and non-formal setting, if not on the same job, in successive jobs during their career. It is hard to separate them and much of the formal education needed is the same. Thus, any program to educate environmental educators should include those who might consider their career goal as environmental interpretation.

In recent years, the scope of environmental interpretation has been broadened to include the interpretation of man's interaction with the resources of the earth—the area of environmental degradation. Brown in his classic *Islands of Hope* (1971) advocates an even broader role for the interpreter than that traditionally filled by park naturalists and historians. These would include serving as agency ecologist, environmental information clearing and environmental catalyst and advocate in the community.

Until the past decade, interpretation has largely been limited to national, state and regional parks and youth camps but dozens of
privately funded nature centers now employ interpretive personnel and museums and zoological parks have greatly expanded their interpretive programs. The publication of a textbook in interpretation (Sharpe, ed., 1976) and the spread of course offerings in interpretation in colleges and universities across the land attests to the acceptance of this specialization in the non-formal education area within the general field of environmental education.

Antioch College, a world-wide network of higher education facilities based at Yellow Springs, Ohio, has a long history of innovation in education and concern for the environment. The Yellow Springs Campus offers an interdisciplinary environmental studies curriculum at the undergraduate level and Antioch/New England, located at Keene, New Hampshire, offers a Master of Science in Teaching degree in Environmental Education (see Appendix A). The programs offered at Glen Helen, the 1000-acre nature preserve owned by the college adjacent to its Yellow Springs campus, have included a resident outdoor education program with opportunities for pre-service and in-service training in outdoor education and environmental interpretation since 1956 (Hunt, 1971).

A course in environmental interpretation has been offered by a member of the Glen Helen staff through Antioch/Yellow Springs at least once a year for the past six years. This course has been geared for undergraduates and has been generally an examination of the methods of interpretation with students required to read assigned references and
complete several projects.

In addition, since 1956 a resident outdoor education program has been conducted in Glen Helen. Originally it was associated with the Yellow Springs campus and used work-study students as teacher-naturalists. Since 1970, the program has been considered as part of Glen Helen separate from Antioch/Yellow Springs.

The Problem

The purpose of this study is to design a masters level program in environmental education offering a Master of Science Teaching (MST) degree to be centered in Glen Helen at Yellow Springs.

Scope and Delimitations of this Study

For purposes of this study, it is assumed that such a program is desirable. This is based upon an assessment of the literature cited and upon the writer's personal knowledge of inquiries received by the Glen Helen and Outdoor Education Center offices. During the three years that the writer has been Director of Glen Helen, he has received approximately twenty letters and fifteen visits from college students wishing to enter a masters program in environmental education, and the Director of the Outdoor Education Center has reported to the writer that he has received nearly sixty. These were all unsolicited.

It is also assumed that such a program is feasible utilizing the existing resources and facilities of Glen Helen.
The following delimitations must also be recognized as functioning in the development of such a program:

1. The program must serve a viable need in the educational marketplace;
2. The program must be financially self-supporting;
3. The program must integrate work and study;
4. The program must not place undue additional responsibilities on faculty and staff persons already working to capacity;
5. The program must give consideration to crediting for prior learning experience;
6. The program must allow for a combination of classroom and independent study;
7. The program must be superior to similar programs offered by public institutions;
8. The program must be in congruence with "the Purpose of Antioch" as set forth in A Self Study of Antioch College 1971 (see Appendix B).

Definitions

For the purposes of this study, the following definitions shall apply:

of population, pollution, resource allocation and depletion, conservation, transportation, technology, and urban and rural planning to the total human environment."

2. Environmental education is considered as being "formal" when carried out within the structure of educational institutions (K-16) and "non-formal" in all other settings.

3. Environmental educator--a person professionally engaged in the field of environmental education, either formal or non-formal.

4. Interpretation (Tilden, 1962)--"An educational activity which aims to reveal meaning and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information."

5. Interpreter--a person professionally engaged in the field of environmental interpretation.

6. Program--an aggregate of courses and experiences required to provide professional competence in a given field of professional endeavor.

Method and Procedure

Information was obtained through a literature search and personal communications about programs of a similar nature being offered at four other institutions.

The resources of Antioch/Yellow Springs and Glen Helen were ascertained by interviews and personal observation. Since July of 1973,
the writer has been a member of the administrative faculty of Antioch serving in the position of Director of Glen Helen and a member of the adjunct faculty of Antioch/Yellow Springs serving as an assistant professor of environmental studies. The Director of the Outdoor Education Center reports directly to the writer. During the past three years, the writer has hosted a "brown-bag" luncheon on the last Friday of each month to which all Environmental Studies Center faculty were invited. A masters level program in environmental education has been the topic of discussion at that luncheon nearly every month for the past two years. In addition, the writer met formally with the Outdoor Education Center staff on five different occasions to discuss such a program. On two separate occasions, the writer met at length with the chairman and one professor from the Antioch/Yellow Springs Education Department. The person in the Center for Experiential Education responsible for work-study jobs in the environmental studies field was also consulted (see Appendix C).

The writer also met with Antioch administrators to discuss the possibility of such a program. (See Appendix C). These involved wide ranging discussions of the present programs of the Glen and the Yellow Springs Campus, the need for such a program, the financial considerations of such a program, the institution procedures for implementation of such a program and the delimitations placed on the development of such a program.
The writer also traveled to Keene, New Hampshire, where he observed first hand the environmental education MST program in operation there and talked with the Center Director and Program Director about program design and recruiting.

At the encouragement of the Assistant Provost, a preliminary program design was submitted to the college officers in February of 1976. The response of the Assistant Provost to this proposal is shown in Appendix D. His suggestions were taken into consideration in the completely new design offered here.

The superintendent of the Yellow Springs Exempt Village School District and the Director of Special Instructional Programs of the Springfield City School District were interviewed personally (see Appendix F).

The design of two other autonomous programs of the Antioch Network recently developed were reviewed (see Appendix E) to determine elements that might be useful in the design of an environmental education program for Glen Helen.

The writer met with the Environmental Education Consultant and the person responsible for teacher certification from the Ohio Department of Education. The principal topic of discussion was the status of certification as it applies to environmental education in Ohio. The writer was referred to the "Blue Book" (Ohio Department of Education, 1971) and the "Red Book" (Ohio Department of Education, 1975) and a mimeographed handout from the State Board of Regents (September, 1975).
The information thus gathered was summarized with comments by the writer then communicated to the Outdoor Education Center Director and Assistant Director at three program design "brain-storming sessions". The program herein proposed is a result of the assimilation of pertinent data and the input of ideas put forth by Glen Helen staff members who would be most directly affected by the initiation of such a program.

The scarcity of program models in the literature and the delicate institution politics involved seem to justify this procedure. The latter is especially true as it involves the Outdoor Education Center where the staff feels comfortable in what they are doing and were initially less than enthusiastic about such a MST program.
BACKGROUND OF STUDY

Related Literature

A review of the available literature identified published works in three areas:

1. Papers dealing in a general way with the pre-service educational environmental educators;
2. Papers reporting on institution arrangements being used to accommodate environmental education programs; and
3. Papers dealing with curriculum design of undergraduate and graduate environmental education programs.

Stapp (1975) urges colleges to "review their teacher education programs to determine if they are providing

1. Opportunities for teachers to acquire basic competencies in the environmental sciences, educational foundations, and instructional skills, and
2. Opportunities to combine the above components in a closely supervised work-study program prior to assuming a professional career."

He recommends that future environmental education develop "skill competence in: handling of values, environmental problem solving, leading field trips, school site planning and development, environmental
monitoring, handling of controversial issues, using instructional materials and evaluating institutional programs."

Reporting on "higher education" at the recently held conference on "Environmental Education—Perspectives and Prospectives," a panel of educators recommended that "professional undergraduate programs of study should incorporate methods of instruction and materials which provide students a total systems orientation to environmental issues and problems, and their potential solutions, through specialized preparation. Programs designed for the preparation of professional (environmental) educators should require, in addition, a sound knowledge of one or more related disciplines, such as economics, political science, environmental biology, psychology, etc." (Schafer and Disinger, 1975).

Mand (1967) suggests the inclusion by teacher education institutions of a required outdoor laboratory course in a camp setting and need to increase the opportunities for prospective teachers to engage in learning outside the classroom.

Hammerman and Hammerman (1973) recommend that professional preparation at the pre-service or undergraduate level should have three primary areas of emphasis:

1. Outdoor education as a means to more effective and efficient learning;
2. Relating the school curriculum to the out-of-doors; and
3. The out-of-doors as a practical laboratory for living and learning.
Along with a broad review of the literature as it relates to the reported interdisciplinary and multidisciplinary nature of environmental education, Jinks (1975) reported upon what he calls a "totally integrated and cross-disciplinary approach to environmental education". He offers a "Pan-disciplinary Environmental Educational Curriculum Model" which involves the construction of a two-dimensional matrix to determine learning objectives and plan learning strategies. Five environmental concepts, 1) patterns, 2) balance, 3) evolution, 4) causality, and 5) origins, are listed on one axis and the various disciplines on the other. He advocates use of this grid in curriculum design at all levels of environmental education.

At Bowling Green State University, where nearly one-third of the graduates are from the College of Education, environmental education is administratively located in the College of Education. According to DuShane (1975), "the program is directed by an 'EE Monitoring Committee' with a 'Program Monitor,' who is an "Environmental Education Associate with the Environmental Studies Center," responsible for the administrative details. Students are encouraged to obtain their degree in a chosen major or teaching field other than environmental education because of certification problems in Ohio. An environmental education major is available but students are given a university-originated certificate indicating the scope of their training and advised that official certification areas are dependent upon other courses and qualifications.
Northern Illinois University offers a Master of Science in Education in Outdoor Teacher Education at its Lorado Taft Field Campus (Northern Illinois University, 1975). Outdoor Teacher Education is a department of the College of Education. Two options are available: a thesis option requires a minimum of eighteen semester hours of work including the thesis (1-6 hours) and sufficient courses in other departments to bring the total to a minimum of thirty semesters. A non-thesis option requires that seven three-semester-hour courses be taken in the Department of Outdoor Teacher Education along with a minimum of nine semester hours in other departments. Only two courses are required to be taken by students in both options: "Foundations of Outdoor Education" and "Introduction to Educational Research in Outdoor Education". Only one course, "Environmental Quality Education," addressed directly environmental issues.

Environmental education at The Ohio State University is located in the resource management oriented School of Natural Resources of the College of Agriculture. A Division of Environmental Education offers thesis and non-thesis options in three areas of emphasis: environmental education, environmental interpretation, and environmental communications. Students are required to complete a minimum of 45 quarter-hours (including up to fifteen thesis quarter-hours) in the thesis option and a minimum of 55 quarter-hours in the non-thesis option. All students are required to take "Natural Resources Policy," "Interactions in Resource
Management," "Research Methods in Natural Resources Management," and three quarter-hours of graduate seminar. To this natural resources core and research method and design ingredients are added the third component of the M.S. program, specialization. Internships are encouraged though no experiential component is required and students are not required to take any courses in the College of Education. Some do elect to take "Resident Outdoor Education". No institutional certificate of environmental education specialization is offered, probably because such a specialization still has no standing with the Ohio Department of Education. Dual degree programs in environmental education may be arranged on an individual basis with the College of Education or the Department of Agricultural Education leading to certification in science, social science, early and middle childhood education, and vocational agriculture (The Ohio State University, 1975) (Roth, 1974-76).

City College of New York, through its School of Education, recently undertook the development of an entirely new graduate program in environmental education for teachers of science and social studies at the secondary level (McKenna, 1975). The thirty semester-hour program is to be divided into three categories. An "Environmental Studies Core" will contain three fundamental courses required of all students. Its purpose is to develop a strong understanding of the ecosystem concept in both social and scientific disciplines. A second category, "Common Professional Requirements," aims at allowing students to meet their professional
requirements as teachers by developing systems of communications through curriculum workshop courses, seminars and independent research study on specific areas of student interest. Category III, "Electives," is intended to allow students to select courses from various disciplines which will meet their own needs for a better grasp of the ecosystem concept of environmental issues. All courses are to be designed with a built-in interdisciplinary approach from the standpoint of content and methodology and each is to include an "action involvement" project for students.

Environmental education at The University of Michigan is, as at Ohio State, centered in the School of Natural Resources (Sandman, 1974). Three options offered are instruction, communication, and advocacy. The masters curriculum leads to an M.S. degree in Natural Resources and normally requires two years to complete. Four new students are admitted to each program option each fall. Each student is required to have taken or take after entering one course each in ecology, economics, political science, behavioral science and research methods. All students must take a team-taught core course, "Environmental Education and the Concept of Values". All are required to take a minimum of "three courses in environmental sciences--defined broadly to include resource and human ecology; resource and welfare economics; and resource policy, management, law, etc." All students participated in guided "work-study" experiences as instructors, communicators, or advocates, but this require-
ment may be waived for students with appropriate prior experience. A thesis or practicum is optional with 24 semester credit-hours of courses and work study, plus six for the thesis being required for the thesis option and 36 semester-credit-hours of courses and work study for the non-thesis. As a part of a large institution, a wide variety of courses is available providing theoretical foundations and instructional skills.

Antioch/New England offers a four-quarter environmental education program earning a Master of Science in Teaching. It is essentially a non-resident in-service program with classes arranged after public school hours and on Saturdays except during the summer. It is intended to strengthen the skills of teachers of general science, biology, environmental studies or ecology at the secondary level; prepare natural science teachers for positions as environmental education specialists at the elementary level; and prepare naturalist-educators for positions in nature centers, conservation schools, park agencies and conservation agencies. A core curriculum for all students includes a course in field ecology each quarter, ecological theory, environmental economics, politics and law, man and the environment and environmental education. An internship component in the area of their interest is required of all students and additional courses are available to qualify non-certified students for certification in elementary or secondary education.

The environmental education program at the University of Wisconsin-Stevens Point began as a major in conservation education in 1946 at a
time when that institution was solely a teacher's college. It was the first of its kind in the nation. Newman reports (Disinger, 1975) undergraduate and graduate programs now located in a College of Natural Resources have provided a large number of the conservation and environmental educators now teaching in the public schools of Wisconsin and neighboring states. The major problem he reports is the lack of incorporation of environmental education programs in the public school system. A recently initiated internship program seems to be the most successful thing they have attempted in the way of an out-reach nature to the public schools and they plan to expand this program and hire a staff person with that as his or her specific responsibility.

Institutional Setting

Antioch College

This 175-year-old institution has a long tradition of innovation and leadership in the education of educators. Since 1921, all undergraduates have been required to complete work-study periods in order to receive their degree. With the growth of the network during the past decade, all new components have included an experiential element whether they be undergraduate, graduate or professional schools. A unique Antioch Graduate School of Education with offices located in Yellow Springs is an umbrella organization for a system of graduate teacher-education centers throughout the country.
Personal interviews with the college president (Dixon, 1974), the college provost (Keeton, 1974), the chancellor of the Yellow Springs Campus (Shaw, 1974), the dean of the Graduate School of Education (Wolff, 1975), the acting director and the chairman of Environmental Education Programs at Antioch/New England (Bryant, 1976, and Dobos, 1976), and the chairman of the Environmental Studies Center at Antioch/Yellow Springs (Bieri, 1976), have all elicited enthusiastic support for a master's level environmental education program though imposing the constraints listed above.

The facilities and faculty of the Yellow Springs Campus are available to any proposed program on a contractual basis.

Glen Helen

Glen Helen's facilities include a resident outdoor education center operating 38 weeks of the year in that capacity and six weeks in the summer as an ecology oriented youth camp. It can accommodate up to eighty youngsters at a time and has been booked full each year for the past several years. It is staffed by a full-time director with a masters degree in outdoor conservation education and certification in vocational agriculture, a full-time assistant director now working on a Ph.D. program in environmental education through the Union Graduate School, a part-time secretary, a cook and a handyman. During the weeks that the center is in operation, up to twelve teacher-naturalists are on hand. In the early days of the program, these positions were filled with under-
graduate work-study students from Antioch/Yellow Springs but for the past six years have been post graduates recruited for the positions from all areas of the country. They presently are paid $20 a week stipend, provided room and board and given ten hours of graduate level credit from the Antioch Graduate School of Education in "Field Biology" and "Outdoor Teaching Methods". They normally stay for nineteen weeks but some choose to stay for a full academic year and receive an additional five hours in "School Camp Administration" and "Independent Study" if they do. The outdoor education center is self-supporting in terms of its operational budget. The director and assistant director of the center have been a part of the planning team for the program since its earliest inception. While they may not concur on all points, they generally agree on the desirability of such a program and the roles they and the center might play in such a program. The director of the center reports directly to the writer.

In addition, Glen Helen includes among its many facilities, a small interpretive center managed by a work-study student from the Antioch/Yellow Springs Campus and a new structure, known as the Glen Helen Building, that houses the offices of the Glen, a library, conference rooms, a 200-seat auditorium, and an interpretive laboratory that includes a dark room. The writer has direct responsibility for the manner in which these facilities are staffed and utilized.

There is also a large house located in Glen Helen between the
Outdoor Education Center and the Glen Helen Building that was once used as a dormitory and is now being used as private apartments. It could be converted back to use as a residence hall to house additional students.

The Glen itself is 1000 acres of natural area that includes mature forests, thickets, open meadows, planted prairies, a variety of aquatic habitats and a rich cultural and historical heritage. A 250-acre area of the Glen is registered with the National Park Service as a Natural Landmark, four miles of Ohio's first national and state scenic river, the Little Miami River, flows through it, the route of the proposed North Country Trail would pass through it, and a Hopewell mound located in it is registered as an historic site. There is a 150-year-old mill and a 100-year-old covered bridge located in the Glen (the latter moved there in 1975 from a Corps of Engineers reservoir site 28 miles away).

Consortial Arrangements

Antioch College is a participant in the Great Lakes College Consortium and the Miami Valley Consortium, making available the resources and facilities of other member institutions.

Educational Perspectives

The Environmental Education Consultant for the Ohio Department of Education is a former Director of the Outdoor Education Center. In numerous conversations and correspondence with him (Hug, 1975-76) he
has encouraged the development of such a program and offered to serve on an advisory committee for the program if it is established.

In general conversation, the Department of Education staff person responsible for approval of teacher-training programs and programs of teacher certification (Hoffengardner, 1975) has also been supportive of the idea of a master's level environmental administration program and has assured cooperation to the fullest extent within the existing laws and rules and regulations.

**Internship Perspectives**

The superintendent of the Yellow Springs Exempt Village School District (see Appendix F) and the Director of Special Institutional Programs for the Springfield City School District (Brown, 1976), have both promised cooperation in the placement of interns. It has been reported to this writer through the Director of the Outdoor Education Center that cooperation is virtually certain from the Mad River and Beaver Creek School Districts that have long time commitments to outdoor education. Other schools that send their youngsters to the Center are also likely to be cooperative.

**Employment Perspectives**

Though it has seldom been immediate, nearly all of the up-to-twenty students who have passed through the Outdoor Education Center annually as teacher-naturalists have obtained jobs in the field. This, even though they do not have advance degree. Those without certification
find it more difficult because school systems are not open to them but
nature centers and other environmental and outdoor education centers are.
Outdoor Education Center alumni can be found in all areas of the country
and they have a reputation as being well qualified persons.

While the economy is still tight with inflation shrinking the value
of the school districts' dollars faster than it increases their income,
many persons in the field feel that the need for well trained environmental
educators with experience will continue at least at the present pace if
not expand steadily.

One nearby school district has switched to a twelve-month schedule
and with that change, strengthened their outdoor education program.
Other systems are considering this and should it happen, more teachers
trained in environmental education will be needed.
RESULTS OF THE STUDY

Program Design

A master's level program in environmental education is proposed which would combine learning through lectures, an internship, a concentrated colloquium, a practicum, seminars and independent study. It has been designed to take advantage of the unique resources of Glen Helen, Antioch and the surrounding community. Its aim is to produce highly competent professional environmental educators in two areas of concentration: education and interpretation. The program would take twelve months to complete and would require that the students earn a minimum of sixty quarter hours of credit. Up to 45 students would be accepted for entry into the program at the beginning of summer quarter only. The class would be divided into three sections with persons of the same option grouped together. A summary of the program design is shown in Table I. A discussion of details follows.

Institutional Organization

A Glen Helen Graduate Center for Environmental Education would be organized within the Antioch Graduate School of Education to carry out the program. Separate administrative personnel would be hired who would report directly to the Dean of that school (see Appendix H). Staff and permanent faculty would be a part of that unit, not of Glen Helen, the
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Internship (Nature Center Park)
Outdoor Education Center or Antioch/Yellow Springs. Any personnel used from these latter units would be used on a contractual basis.

Physically the Glen Helen Center would have its office located in the Glen Helen Building, and it would make use of seminar, laboratory, library, and auditoriums located there, or it could utilize part of the Neff House. Rent would be paid for the use of these facilities. From time to time, the new center would also use facilities of the Outdoor Education Center and that use would also need to be compensated for. Rooms for students not at the Outdoor Education Center could be provided in the Neff House managed by the Glen and the Mercer House managed by the Outdoor Education Center and a limited amount of board could be provided by the latter. Arrangements for these accommodations would be made between those units on a rate schedule approved by the new center director. Services required of the Yellow Springs Campus would be on a contractual basis as negotiated between the director of the new center and the Yellow Springs business manager.

The services of the network financial aid, registrar and business office would be used for the normal services that they furnish other units.

Degree to be Offered

The degree Master of Science in Teaching (M.S.T) would be conferred on all persons completing the course of study. Antioch already has the authority to grant this degree and approval would not be required from the Ohio Board of Education or the Ohio Board of Regents for the new
course of study.

Degree Requirements

Students would be required to earn a minimum of sixty quarter-hour credits by satisfactorily completing three five-hour core courses required of all students, three five-hour required courses in their chosen field of specialization; by participating in the intensive four-week outdoor teacher education colloquium at the Outdoor Education Center; by satisfactorily completing the outdoor teacher practicum at the Outdoor Education Center; by satisfactorily serving a ten-week internship in a school, nature or outdoor education center, park or camp; and by completing at least one course of independent study requiring the preparation of a research paper in the broad field of environmental education (see Table II).

Degree Process

The degree process would begin with admission and continue through graduation. The process would include registration, orientation, assignment of an adviser, quarterly meetings with the adviser, recommendation to a degree committee that a candidate be considered for the degree, interview by the degree committee and recommendation to the college president through the director and dean that the degree be granted.

A five-person degree committee selected from persons outside of the center knowledgeable in this field of environmental education and interpretation would meet quarterly to review the progress of all students
<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Quarter-hour Credits</th>
</tr>
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<tbody>
<tr>
<td>Outdoor Teacher Education</td>
<td>30</td>
</tr>
<tr>
<td>Outdoor Teacher Education Colloquium</td>
<td>5</td>
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<tr>
<td>Outdoor Teacher Education Practicum</td>
<td>10</td>
</tr>
<tr>
<td>Internship</td>
<td>5</td>
</tr>
<tr>
<td>Independent Study (3 hours required)</td>
<td>5 - 20</td>
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<tr>
<td>Interterm</td>
<td>2</td>
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<tr>
<td>Seminar (1 hour each quarter)</td>
<td>3</td>
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<td>60 - 75</td>
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and to pass on recommendations for the granting of degrees during the spring quarter.

**Recruitment and the Admission Process**

Students would be sought who have undergraduate degrees in elementary or secondary education or natural science or resource management fields from accredited colleges and institutions. Two letters of recommendation from persons professionally acquainted with the applicant would be required as would a transcript of academic work and short biographical sketch that would include elaboration on the generation of the applicant’s interest in the field of environmental education. Candidates who are not familiar with Glen Helen would be encouraged to visit prior to registration, but would not be required to do so. Personal interviews would be desirable but not mandatory. An admissions committee would be formed to screen applications and interview applicants. The director of the Outdoor Education Center and the director of the Glen would automatically be members of this committee.

Recruiting and admissions would be the responsibility of the center director and/or whomever else he might delegate. A non-refundable $25 admission fee would be required with application.

**Administration**

Administration of the proposed program would be the responsibility of a center director aided by an administrative assistant and a secretary.
The director should have a doctorate in environmental education, at least five years of experience including K-12 classroom teaching, environmental education program administration and college level teaching. His or her academic strengths should lie in the area of environmental education as defined by Roth (1971) in order to complement the outdoor teaching and interpretation strengths of the present Outdoor Education Center and Glen Helen directors.

An administrative assistant should have a masters degree in environmental education or equivalent with experience in student teacher supervision. He or she will need proven ability to work well with college age students. As a part of a small staff, this person will be required to perform all manner of administrative and advisory duties.

A full-time secretary will be required from the onset. This person should have abilities beyond that of clerk-typist since he or she will in effect be the office manager.

Faculty

The director will be expected to teach one class during each of three study quarters (summer, fall, and winter). All other formal courses will be taught by adjunct faculty recruited from nearby colleges and universities. In view of the financial problems of Antioch/Yellow Springs, it is imperative that first consideration be given to its faculty members when seeking adjuncts. No teacher would be expected to teach more than ten quarter hours per quarter without additional pay.
The outdoor teacher education colloquium will be completely directed by the director of the Outdoor Education Center and his staff on a contractual arrangement with the new center. The environmental education program director will be able to take vacation at that time.

Faculty meetings shall be held at least once a month and more often if needed.

**Educational Resources**

The library of Wright State University will be available to the new program as will that of Glen Helen. The latter has 441 titles owned by the Glen and 693 titles on loan from the director in fields related to the program. It also has subscriptions to 29 appropriate journals and has 4410 pamphlets and reprints on environmental subject matter. It is possible that a 1000-volume education library may be available to the new program inexpensively at the time the Yellow Springs Graduate Education Program closes later this year. The fee proposed by the Antioch/Yellow Springs business manager for the use of its Olive Kettering Library is beyond budget capabilities and its resources in the environmental education field are limited. The center will want to begin building its own library, perhaps through the acquisition of microfiche readers and a set of microfiche environmental education titles from ERIC/SMEAC.

The services of the audio-visual department of Antioch/Yellow Springs will be available on a cost for services rendered basis as will those of the duplicating service.
Formal Courses of Study

All students will be required to take the following three five-hour courses during their first quarter:

1. *Introduction to Environmental Education*—an introduction through lecture, selected readings, audio-visual material and guest speakers to the broad field of environmental education as it is evolving in America and the world.

2. *The Environment and Man*—a study of man's historic relationship to his environment and the new concept of values essential to provide a suitable quality of life for all of the earth's human occupants and to perpetuation as species of all other living things. Lectures, textbooks, and selected readings, audio-visual materials and guest speakers will be used.

3. *The Politics of Environment and Education*—an inquiry into environmental decision-making at the local, state, national, and international levels with special attention given to the Environmental Education Act of 1970. Selected readings, lectures, and guest speakers will be used.

Students electing the education option will be required to take the following additional courses during their second study period:

4. *Environmental Education Curriculum Design*—an investigation into curriculum design in general and into environmental education curriculum material currently available. Lectures will be supple-
mented by library and audio-visual material.

5. Teaching Techniques for Today—a discussion of behavioral and attitude modification and the use of gaming-simulation and values clarification to effect changes. Texts and readings will supplement the actual use of games and simulations.

6. Environmental Monitoring, and Advocacy—Instruction in simple techniques for monitoring all aspects of the environment and an examination of models of environmental advocacy useful for school children and adults. Lectures, labs, and field work will be supplemented by selected readings.

Students electing the interpretive option will be required to take the following three courses during their second period of study:

1. Environmental Interpretation—a survey of techniques and equipment being used in parks, nature centers, and museums today. Students will be required to design an interpretation exhibit, develop a self-guided trail and prepare and give an interpretive talk with or without illustration materials. Lectures and a textbook will be supplemented by audio-visual and library materials. Several field trips will be taken to nearby interpretive facilities.

2. Interpretive Site Planning and Design—the fundamental concepts of designing with nature but with the public's being served in mind will be studied, then the class will do an on-site analysis and a group exercise in site planning. Lectures, selected readings,
laboratory work and field work will be combined in this course.

3. Interpretive Administration and Communication— a skill-developing course that will cover budget management, personnel policies, fund raising, proposal writing, and the publicity processes. Lectures and a text will be supplemented by selected readings.

In addition, all students will be expected to participate in a once-a-week seminar on Current Issues in Environmental Education during their two study quarters and the Outdoor Teacher Education Practicum at the Outdoor Education Center.

Each student will be required to pursue one subject area through independent study during the quarter of his choice and with an acceptable paper on that subject for five (5) hours of credit. Students may elect to take up to five (5) credit hours a quarter by independent study in an area approved by their adviser and under the direction of faculty member or recognized expert in the field.

Outdoor Teacher Education Colloquium

A four-week resident training program in outdoor teacher education will be conducted by the staff of the Glen Helen Outdoor Education Center during the month of September. The first two weeks will be with no children present and during the second two weeks, sixth grade children will be there. This is designed to prepare all students for their ten-week period of practicum at the Outdoor Education Center where they will work as teacher-naturalists, and to prepare them for internships at other
centers. Students will receive five (5) quarter hours credit for this session. This is essentially a "see and do" program with little outside reading and no formal lectures.

**Outdoor Teacher Education Practicum**

Each student will be required to spend ten weeks at the Glen Helen Outdoor Education Center in a supervised practicum in outdoor teacher education. They will be required to live at the Outdoor Education Center and will work full-time as teacher-naturalists. They will receive their room and board free, a small weekly stipend (presently $20) and ten (10) quarter hours of credit. This practicum will be entirely supervised by the faculty of the Outdoor Education Center, for which they will be paid by the new Graduate Center.

**Interterm**

A required ten-day interterm between fall and winter quarters will be a student designed field trip to a different environment. The ecosystem concept of environment will be stressed along with techniques that might be used to interpret that environment to children and adults. Stops will be made en route at other environmental education and interpretation facilities. Two (2) credit hours will be given for "the Extended Field Trip as a Teaching Technique".

**Internships**

Each student will be required to serve a ten (10) week internship in
the field of his or her choice. Internships would be more available in
the spring and fall and would need to be negotiated by the Graduate
Center administration. Potential internships are Aullwood Audubon
Center and Farm; Camp Campbell Guard; Camp Joy; Camp Kern; Camp
Willson; Camp Woodland Altars; Mohican School in the Out-of-doors; the
Beaver Creek, Mad River, Northfield, Springfield, and Yellow Springs
School Districts; Glen Helen; Ohio Division of Parks and Recreation,
and the Dayton-Montgomery Metropolitan Park District. Students would
work regular hours and would, in most cases, receive some pay. They
would be supervised by the Graduate Center administrative assistant
and would be required to meet together twice during the quarter in a
seminar and write a paper describing their experience and knowledge
gained. They will receive five (5) hours of credit for this internship.

Prior Crediting Arrangements

At the time of application for admission, students with prior work
experience and graduate level course work in the field could apply for
credit of up to twenty (20) quarter-hours toward the sixty (60) required for
the degree. Students who have previously worked at the Outdoor Educa-
tion Center would apply to have their five (5) hours of Outdoor Teaching
Methods and five (5) hours of Field Biology earned at that time converted
to ten hours of Outdoor Teacher Education Practicum credit and be awarded
an additional five (5) hours of Outdoor Teacher Colloquium credit, then
not be required to repeat these parts of the program. Five (5) hours of
internship credit for ten (10) weeks or more of full-time work in an approved position would be awarded upon presentation of a letter of recommendation from the person's immediate supervisor and an acceptable report about the experience. Students who previously earned independent study credits at the Outdoor Education Center could have them transferred to their Environmental Education Program records but they could not be used toward or in place of the five (5) hours of independent study required for degree completion. Graduate level work from other institutions would be transferable but its acceptance in lieu of required courses would be on a case by case basis up to twenty (20) hours total.

Financial Considerations

Financial Aid.--The usual channels of student financial aid would be available including College Work Study Program and low interest student loans. At an early date, efforts would be made toward establishing an endowment within the college to provide an ongoing scholarship fund for worthy students.

Fees.--It is anticipated that the tuition cost of the program would be in the neighborhood of $4000 with students able to earn some funds during their Outdoor Teacher Education practicum and internship. A proposed schedule is shown in Appendix I.

Room and Board Costs.--The cost of room and board would vary as to the housing available. Residents of the Neff House would provide their own board and married students would be permitted to seek housing
in the community. Room and board would be provided free during the Outdoor Teacher Education practicum and room and/or board might be provided on some internships.

**Budget.**—A proposed budget for the first year of operation is included in Appendix J. It is anticipated that the college will provide "seed money" to hire the administrative personnel four to six months in advance of the entry of the first class.

**Student Governance**

In accordance with the policies of Antioch College, a student governance organization would be created to allow students to participate in the decision making in the operation of the program. The several models used in the network would be examined and one suitable for the new program would be chosen or drafted by a committee of students, faculty and administration.

**Program Advisory Committee**

An important element in this development of the new program would be creation of a program advisory committee. This group would meet frequently during the period ahead of the arrival of the first class to help define more precisely course content, identify texts to be used and resource materials to be acquired, and recommend adjunct faculty. After the program gets under way, the committee would meet at least quarterly and more frequently upon the call of the director.
Composition of the advisory committee would include representatives from the

1. Outdoor Education Center,
2. Glen Helen office,
3. Antioch/Yellow Springs education department, and
4. Antioch/Yellow Springs environmental studies center,
5. The Ohio Department of Education,
6. Aullwood Audubon Center,
7. The Ohio State University School of Natural Resources,
8. The Ohio Department of Natural Resources,
9. The Yellow Springs Exempt Village School District, and

Persons would be asked to serve without pay but where expenses could not be recovered from the agency they represent they would be paid for by the Glen Helen Graduate Center for Environmental Education.

Certification

The question of "environmental education" specialty certification will be important to students in the education option. State Department of Education officials have indicated a willingness to work with the Antioch Graduate School of Education in establishing certification but the route they have outlined would require more resources in both time and money than could be available in the first year of operation. The new center administration should work with others in the state who are seeking
to have the State Department of Education address the question on a broad plane instead of on a case-by-case basis. Time permitting, the center administration might want to play a leadership role in seeking strong legislative support for environmental education in Ohio, but their first priority must be to establish a first rate program at Glen Helen.

Potential students will need to be advised from the outset that degree completion does not carry with it any automatic certification or certificate validation. The center staff will need to cooperate with the undergraduate departments of education at Antioch/Yellow Springs and other colleges in the Miami Valley Consortium in helping the non-certified students design a total program for certification along with the masters program in environmental education if this interest occurs.

Affirmative Action

Careful attention must be given in all hiring and recruiting that there be no discrimination on the basis of race, creed, color, sex, religious preference or country of origin. In the recruiting of administrative and staff personnel and both full-time and adjunct faculty, care shall be taken to assure adequate representation by both sexes and of minority groups.
RECOMMENDATIONS AND SUMMARY

Implementation Strategy

The proposed program should be prepared in the format prescribed by the Antioch administration, then steps be undertaken to gain approval for implementation beginning with the 1977-78 academic year. A letter accompanying the proposal should request appropriation of "seed money" to hire basic staff before tuition money would be available. In addition, it should be emphasized that the exact format of the program and title and content of proposed courses would, of course, be subject to modification by a program director acting in concert with the Program Advisory Committee. In addition, it should be pointed out that while 45 students would be the ideal from the point of view of program design, the program could function with as few as 24 students (eight in each section).

Concurrent with the request for approval from the college, initial approval to proceed should be sought from the State Board of Education. Following that approval, a program director should be hired and the Program Advisory Committee appointed. A combined timetable for these activities is given in Appendix K. A discussion of each major step follows.
Institutional Approval

For reasons of institutional policy and politics, the proposal for the Glen Helen Graduate Center for Environmental Education should be submitted jointly by the Glen Helen Director and the Dean of the Graduate School of Education. The first step in the long road to adoption is approval by the Dean of the Graduate School of Education. After personally reading it and recommending what he feels are desirable changes, he will circulate an amended version to all center directors within the School for comment. Following that, a further amended draft copy will be circulated to the college officers for comment. After modifications based on their comments and only if they approve, the proposal will be sent to members of the Antioch Board of Trustees Executive Committee at least thirty days in advance of their next meeting. Their recommendation for approval is tantamount to approval by the full Board of Trustees and implementation can go forward from there.

State Approval

Though initially certification will not be sought for graduates and approval of the Division of Teacher Education and Certification will not be necessary to implement the program, it would seem prudent, however, to follow at least part of the prescribed procedure for such approval and to work closely with that agency in the program development. The first step would be a letter from the Dean of the Graduate School of Education asking approval of the program. This would need to be supplemented by state-
ments and data justifying the addition of that program to the college's curriculum. The statements must validate the college's philosophical and financial commitments to provide a quality program and the data will need to support the student demand for such a program. A complete program format should accompany the letter and a request should be made for an early meeting to discuss potential certification.

Since the college already has the authority to confer the Master of Science in Teaching (M.S.T.) degree, approval would not be required of the Ohio Board of Regents. Again, it would seem appropriate to inform them of the new program and seek their advice and council in the move toward eventual certification.

Staff Recruitment

Recruitment of a program director should follow immediately the approval of the program by the Antioch Board of Trustees. A job description for the search should be developed by a select committee of Antioch faculty and local environmental educators.

The filling of staff positions would follow in consultation with the newly appointed director.

Student Recruitment

The college editor would be asked to prepare a relatively simple recruiting brochure immediately upon Board of Trustees approval. Steps would then need to be taken to include material about the program in the
catalog of the Graduate School of Education, and material would need to be prepared to send to undergraduate colleges and departments of education and natural resources nationwide and targeted high prospect audiences such as former Outdoor Education Center staff members. Advertisements placed in widely circulated magazines such as Audubon and Natural History have proved successful for Antioch/New England and should be considered for the Glen Helen programs. Numbers and dates for a go-no go decision would need to be established.

Evaluation and Audit

The center director will work with the Dean of the Graduate School of Education and the provost to determine the need for and timing of program evaluations and academic audits.

Summary

Based upon a review of the literature, an assessment of the educational needs and an evaluation of the institutional setting, a proposal has been made for the creation of a program leading to a Master of Science Teaching (M.S.T.) degree in Environmental Education to be based at a new Glen Helen Graduate Center for Environmental Education. A curriculum of study has been designed and a strategy and time-table proposed for its implementation.
APPENDIX A

September 1975

ANTIOCH/NEW ENGLAND
MASTER OF SCIENCE TEACHING DEGREE (MST)
ENVIRONMENTAL EDUCATION

A. GENERAL PROGRAM OBJECTIVES.

1. To prepare natural science teachers who will be able to teach in the areas of general science, biology, environmental studies, or ecology for the secondary level.

2. To prepare natural science teachers who will be able to serve as environmental specialists for the elementary level.

3. To prepare naturalist-educators who will be able to serve as ecology teachers for schools, nature centers, conservation schools, parks, and conservation agencies.

4. To develop skills in all students that will help them serve as environmental educators. These skills include the following:

   a. The ability to translate ecological information and attitudes effectively to a target group.

   b. The ability to develop an environmental education curriculum that would make maximum use of the available resources.

   c. The ability to continue independent study in the ecology of plants and animals after completing the program.

   d. The ability to communicate concepts of ecology which describe the structure and function of the ecosystem.

   e. The ability to critically evaluate how Man's social systems interact with natural systems.
f. The ability to work through the political structure to initiate activities that would increase Man's harmony with natural systems.

B. METHODS OF ACHIEVING OBJECTIVES.

A core curriculum for all MST students includes a learning experience in each of the following areas: Field Ecology, during the four seasons of the year; Ecological Theory; Environmental Economics, Politics and Law; Man and the Environment; and Environmental Education. All students must successfully complete these program requirements either by participating in a faculty/student designed course or by a course of independent study that a MST faculty member supervises.

The field ecology classes include discussion of readings and the structure and function of ecosystems, and the natural history of ecosystem components; field trips to diverse natural communities; field and laboratory observations and measurements; and, practice in the development of skills appropriate to conducting classes in the natural environment.

The seminar classes collectively include discussion of selected readings; class presentation by specialists in the topic under discussion; field trips to resource facilities (Audubon Centers, environmental education curriculum centers, and research stations); lectures by the instructors; student participation in ongoing community projects; and development of effective teaching methods for environmental education.

Each student achieves a degree of specialty through the internship component of the program. Those students seeking secondary certification must complete an internship working with secondary students, usually as a junior high school general science teacher or senior high school biology or ecology teacher. Additionally, they must successfully complete education courses required for state certification.

Those students seeking elementary certification must complete an internship in an elementary school classroom. In addition to the MST core curriculum, they must complete the course requirements for elementary certification. Students who seek the MST degree and elementary certification should plan their program over a minimum of six quarters.
Those students who are already certified as teachers or do not seek certification need complete only the MST core courses. Educational electives and/or independent study in subjects of ecology comprise the remainder of their program.

Verification of the learning experience in each MST course is usually accomplished through a research project on a subject compatible with the course objectives. The instructor critically reviews this documentation and communicates his reaction to the students. Students document their internship experiences through a written journal and through discussion of internship activities in a support seminar. Antioch MST faculty support students at their internship site. The student also gains support from an on-site supervisor.

C. SPECIAL PROGRAM RESOURCES.

1. Hancock Field Station.

Field classes are held at the Harris Foundation House in Hancock, N.H. This location serves as a laboratory and classroom center. The adjacent private land (several thousand acres) and surrounding public lands contain a wide diversity of habitats and natural systems that are used for ecological study. The proximity of the center to the White Mountains and Atlantic Seashore provides opportunity for field study in these ecosystems.

2. Other Resources.

The New England region contains a relatively large number of active conservation organizations, conservation agencies, conservation schools, public schools and private schools that are supportive of environmental education programs. Many of these agencies and schools readily accept interns from our environmental education program.

D. PROGRAM FEEDBACK AND EVALUATION.

Students write a critical evaluation of each course. Additionally, students and faculty meet as a group once each quarter for the expressed purpose of discussing any problems that arise in the program. The "free time" on extended field trips also provides students ample opportunity to discuss the program with the faculty.
Evaluation and feedback occurs when the faculty visit on-site support personnel. Usually, the faculty receive feedback on how successfully the program facilitates the intern's work. Finally, the Center's evaluation officer interviews students throughout their program in an effort to provide feedback information to the coordinator and other faculty.

E. PROFESSIONAL ADVICE.

Many intern supervisors are professional environmental educators. Ideas are exchanged between MST faculty and these professionals when MST faculty visit interns. The coordinator also seeks advice and input from environmental educators throughout New England.

MB/11
APPENDIX B

(Excerpted from *A Self Study of Antioch College 1971*)

PART A. THE ANTIOCH NETWORK

SECTION I - THE PURPOSE OF ANTIOCH

Antioch intends to be an international network of learning centers at post-secondary level. It seeks to serve students of diverse ethnic and racial origins, of the entire range of income backgrounds, of varied academic aptitudes and prior preparation (including the ablest on diverse measures and also those called "high risk" on some measures), of a wide range of ages, and with varying but active social, political, and philosophical concerns. With respect to these students, the purpose of Antioch is to evoke a high degree of learning and growth compatible with their own increasing self-determination and their own aspirations. With regard to their cultures and communities, Antioch seeks to show the respect due in a culturally pluralistic world in which both culture and individuality are entitled to equality of expression and opportunity.

The needs and the means to these ends vary, but the purpose of enlargement among students of horizons, appreciations, and competence to cope and serve is common.

In its learning strategies, Antioch is marked by a commitment to
the use of work experience and experience in resident roles in diverse communities as a key resource. Active interaction between first-hand experience and the world of books and ideas is sought as a pervasive strategy.

Antioch seeks to utilize the resources of diverse settings and communities and cultures as aids to learning. It intends thus, not to be a residential college concentrated in one place, but a geographically dispersed network drawing upon the unique resources of each setting to enrich the student’s opportunities to learn.

Antioch seeks to bring together able faculty of diverse qualifications with its diverse students. The College works from the hypothesis that the interaction of well qualified and differently qualified people among both students and staff is a primary source of its measured impact.

Antioch seeks to be an innovator in higher education and a stimulus to innovation in other educational institutions.

Antioch aims to foster autonomy of the individual. It seeks to do so by according to students an unusual degree of autonomy in student living, college governance, and academic planning and educational programs. The encouragement of student initiative in defining educational objectives and methods is viewed as a factor in enlarging the growth and learning possible through the College’s activities.

Antioch has recently been characterized by an increasing engagement of students and faculty in efforts to achieve desirable social change.
The College encourages committed activity rooted in the processes and findings of inquiry.

Antioch does not aspire to growth in size for its own sake. It aims to be capable of growth or contraction as practical considerations conduce to the need for these changes and as the demand for its services fluctuates.

The purpose of the College is acknowledged to exceed its grasp of means, yet the purpose is not intended to be so far out of reach as to fail in guiding the direction of the College's efforts. As understanding and resources grow, the purpose is expected to change.
APPENDIX C

RESOURCE PERSONS CONSULTED AT ANTIOCH

Antioch College Administration

Office of the President
  Dr. James P. Dixon, Past President
  Dr. Morris Keeton, Acting President

Office of the Provost
  Dr. Morris Keeton, Provost
  Mr. Ralph Wolff, Assistant Provost

Antioch/Yellow Springs

Administration
  Dr. Francis X. Shea, Chancellor

Science Institute
  Dr. Warren Watson, Chairman; Professor of Chemistry

Environmental Studies Center
  Dr. Robert Bieri, Chairman; Professor of Biology
  Dr. Walter Tuleki, Professor of Biology
  Dr. Richard Frankeviglia, Professor of Geography
  Peter Townsend, Assistant Professor of Geology
  Rodney Bean, Center Coordinator

Department of Education
  Dr. Phillip Rothman, Chairman; Professor of Education
  Dr. Louis King, Professor of Education

Center for Experiential Education
  Mr. Robert Parker, Director; Professor of Experiential Education

  Mrs. Dorothy Scott, Professor of Experiential Education

Glen Helen
  Outdoor Education Center
    J. Douglas Dickinson, Director
Richard Paterson, Assistant Director
Christine Dixon, Staff Extension Naturalist

Antioch/East

Administration
Mr. John Sullivan, Dean

Antioch/New England
Mr. John Bryant, Acting Center Director
Mr. Marvin Bobos, Program Director

Antioch Graduate School of Education

Administration
Mr. Rolph Wolff, Dean

Yellow Springs Center
Mr. James Barber, Director
MEMORANDUM

To:    Ralph Ramey

From:  Ralph Wolff

Re:    Proposed Master's Program

March 15, 1976

I have discussed with you at some length the results of the officer group review of your degree program proposal. While I am planning to spend much more time with you on this when I return the 26th, one area which I thought you should begin thinking about is the program leadership. Serious questions were raised upon review of the time availability of you and Doug to lead the program and to see it through its proper development when you both are already working full-time. Other questions were also raised as to the background, experience, and breadth of the faculty you had indicated would participate in the program. I believe it is imperative to consider hiring a program director for the environmental education program, who will be able, on a full-time basis, to focus exclusively on the development of a degree program in this area. Perhaps someone with a terminal degree in the natural sciences, environmental education, or the like should be considered. In order for the College to approve a full degree program, however, it was made abundantly clear that there would have to be clear resources allocated from the program's budget to insure (and to oversee) the program's development as a free standing program.

We also discussed the questions that were raised about the curriculum, and we will need to look over this closely once you have developed course descriptions and class schedules over a several week period. It was very clear from last week's meeting that the concept of using the Glen's and CEC's activities as a learning resource was supported, it was agreed that the most sound way of developing a degree program was to create that which would be financially self-supporting in size and administration. We will have the chance to discuss this more, but perhaps you can start thinking of some options for later conversation.

Ew:ag
APPENDIX E

ANTIOCH PROGRAMS REVIEWED

APPENDIX F

YELLOW SPRINGS SCHOOLS

February 13, 1976

Mr. Ralph Ramsey, Director
Outdoor Education Center
Glen Helen
Yellow Springs, Ohio 45387

Dear Mr. Ramsey:

I am very enthusiastic about your proposal for a Master’s program at Antioch. We can visualize establishing an even stronger relationship with the Outdoor Education Center over the next year or two.

Graduate students might find the Yellow Springs Schools a convenient center for educational projects. We would like to strengthen our educational programs by including more nature and ecological studies from the earliest grades through high school.

If the new program is approved, our staff members will be pleased to consult with you on how we may be involved. There is a possibility of a district financial contribution in the form of a fellowship stipend or part-time employment in return for increased participation by Yellow Springs students.

I hope the program becomes a reality. If it does, I am confident that it will be outstanding.

Sincerely yours,

Edward C. McKinney
Edward C. McKinney
Superintendent

Ex: tcn
APPENDIX G

GLEN HELEN

June 7, 1976

To: Ralph Wolff
From: Doug Dickinson
Re: Data requested on O.E.C. Graduate Courses

1. Statement of Rationale. Six years ago as I came on the job at O.E.C. there was a need to attract new schools and teachers to our program. I attempted to do this, in part, by upgrading our instructors. I slashed income from $40.00 per week to a "stipend" of $20.00 and (with the aid of Jim Corwin and some Antioch folks) introduced graduate credit for courses taken at the Center. With minimal advertising, applicants were quick to respond. We have enjoyed a new, enthusiastic breed of people at O.E.C. these past four years, and our schedule of schools and teachers has been full to overflowing during the past two years.

O.E.C. has always been unique in its insistence on offering in-service training for its staff. We do this by setting Mondays of each week aside for this purpose. We attract individuals who specifically seek training in field sciences and methodology and we give some credit as part of the package. The ten credits may open some doors for them upon leaving O.E.C. or can be applied to graduate programs elsewhere. The Center receives some aid from the program as a result of lowered intern salaries.

2. Policy on Admissions. Successful applicants will be found to have a B.S. or B.A. degree. We are tending, particularly in recent months with increasing numbers of applicants, to accept those students who have majored in education, biology or environmental studies. We continue to involve an Antioch Coop whenever possible. We ask that applicants visit O.E.C. to explore the program in action, and allow us to get to know them as well. We seek interns who have had successful experiences with children in a leadership role and who express visible enthusiasm, vitality and creativity.


4. Faculty. The facilitators of the overall training experience are Doug Dickinson, Center director; Dick Paterson, Associate director; and Chrissy Dixon, Springfield Environmental Specialist.

OG 580 Outdoor Education Methods - This course is coordinated by Dick Paterson, with assistance coming from Dickinson and Dixon. Valuable resource persons have been: Current staff of about eleven persons

Ralph Ramey . . . . Director, Glen Helen
Paul Knop . . . . . . . . Director, Aullwood Audubon Center
John Hug . . . . . . . . Supervisor of Environmental Education for the State of Ohio
Mary Lee Lowery . . . . Director, Coleraine School for the Handicapped in Columbus

A LIVING MEMORIAL OF ONE THOUSAND ACRES FOR OUTDOOR APPRECIATION, EDUCATION, AND RESEARCH
Pauline Richardson . . . . Director, School for the Adult
Retarded in Dayton

Mike Sherman . . . . . . . Program Director, Camp Kern Outdoor
Education Center

Walt Auburn . . . . . . . Program Director, Camp Campbell Gard
Outdoor Education Center

Elodie Hamilton . . . . . . Food Service at O.E.C.

Mary Paterson . . . . . . . Land Lab Specialist at O.E.C.

OE 584 Field Science - Dick Paterson coordinates this program, assisted by
Dickinson and Dixon. Valuable resource persons have been:

Current staff of about eleven persons
Robert Wood . . . . . . Greene County Game Protector
Douglas Gibson . . . . . Veterinarian, Enon Clinic
Faith Morgan Odiorne . . Taxidermist and bee keeper, Yellow
Springs
Ralph Ramsey . . . . . . Director, Glen Helen
John White . . . . . . . . Antioch Science Department

OE 586 School Camp Administration - Dickinson coordinates this course,
backed by Paterson and Dixon. Valuable resource persons have been:

Ralph Ramsey . . . . . . General administration
June Dickinson. . . . . . Budgeting and food service
Various camp directors whom the staff visit

OE 590 Independent Study - This program coordinated by Dickinson, aided by
Paterson and Dixon, and other area persons as needed to supply appropriate
expertise.

5. Schedule for classes. Each semester begins with a ten day seminar which
exposes the intern to approximately 95 contact hours, divided between Field
Science and Methods. Areas of "immediate concern", which will prepare the
uninitiated interns for the arrival of elementary children and teachers, are
studied during this period. Typical units are:

a. How to teach using the inquiry approach at the biotic communi-
ties - field, stream, deciduous forest, coniferous forest, pond,
thicket.
b. How to use a weather station
c. How to lead a night hike
d. How to care for injured hawks and owls
e. Working with problem children
f. Scheduling individual trail groups and a variety of other topics

Each Monday thereafter (approximately 15 days), interns meet for a seminar at
the Center, or at another environmental or educational institution. Subject
matter typically covered would be:

Teaching about Birds of Glen Helen Animals of the Night
Beginners Taxidermy Wildlife Laws of Ohio
Teaching with Games Working with the Handicapped
Teaching about Soils Establishing Land Laboratories
Teaching about Astronomy The Geology of Glen Helen
Teaching about Meteorology Values Clarification
Music at the Outdoor Education Center Tree Identification
Herbaceous Plants
Insect Studies
Other Environmental Schools (Visitations)
The Learner and the Learning Process
Teaching Early Ohio Pioneer Skills
Teaching about Map and Compass

Our way of teaching blends the Methodology and the Field Science. When we are sharing the one, the other is usually close at hand.

During the Tuesday through Friday experience, interns are employing newly acquired skills to their teaching elementary school children and teachers in residence at the Outdoor Education Center.

Many resources are used to carry out our program. The Outdoor Education Center, like greater Antioch, considers itself an innovative educational institution. It proceeds on the following assumptions that distinguish it from rigidly traditional institutions:

a. A great deal of quality education can occur with students learning from each other. People are our most valuable resource.

b. It is entirely feasible that, given the proper atmosphere, students can actually learn independently. It is more effective, for example, to make a student want to learn botany than to sit him down and try to "teach" it to him. Our people literally spend most of their "free" time studying. The Glen is our second most valuable resource.

c. "Classes" can, indeed should, be defined and evaluated by the quality of learning that takes place, not by the outward appearances; i.e., regularity of times and places, systematic use of textbooks, test, instructor-orientation, etc.

d. There are many alternatives to books as traditional sources of the word.

e. Especially in environmental education, but applicable to any field, the quantity of information in the world today makes the teaching of information somewhat useless. Of greater importance are matters of process: concepts, attitudes, understandings; and, at another level, a creative methodology for communicating these things. Of more importance is communicating humanness. That's a course people ideally teach themselves at O.E.C. We all work very hard at it.

f. Each of the twenty-one schools in Springfield which our interns visit as they rotate into the work of the Environmental Specialist is a resource. The School for Retarded Adults in Dayton is a resource. The Coleraine School for the Handicapped in Columbus, where all our interns helped to develop a land laboratory, is a resource.

g. We publish our own "how to" series for the interns. These deal with methodology, natural and physical sciences and the necessary tools to carry out a hands-on educational program.

h. I think of our youthful staff as interns only, with each of their host of environmental experiences designed thoughtfully so as to provide an ever broadening sense of awareness of sound teaching techniques.

6. Evaluation criteria. All of the students who complete our program receive credits. We would not permit students to remain who were unworthy of the credits, for their influence at this type of institution would be unacceptable.

Interns are asked to keep a current journal for the primary purpose of self-evaluation. Journals are collected and commented upon twice during the five month period. Each intern's field trips with children are observed twice by Dick or myself, more often if necessary. An oral and a written evaluation follows. We have evaluations and journals on file should you care to see them.
Again, we tend not to see any significant portion of the experience as employment requirements. All "systems" are part and parcel of the overall environmental experience.

I hope we have answered your questions. I do wish at this point in time that we had somehow managed to kidnap you for a day for the purpose of immersing you totally into our daily scheme of things — with staff, with classroom teachers, student teachers, children, plants, animals, and the Glen.

I will be back in town on the 23rd of June and will give your office a call soon thereafter.

JDD: jcd

cc: Ralph Ramsey

[Signature]
APPENDIX H

PROPOSED PROGRAM FLOW-CHART

ANTIOCH
NETWORK
ADMINISTRATION

ANTIOCH/
YELLOW
SPRINGS

GRADUATE
SCHOOL
OF
EDUCATION

GLEN HELEN

GLEN HELEN
GRADUATE
CENTER
FOR
ENVIRONMENTAL
EDUCATION

OUTDOOR
EDUCATION
CENTER

ADVISORY
COMMITTEE
APPENDIX I

PROPOSED FEE SCHEDULE

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<tr>
<td>Summer study quarter</td>
<td>$1000</td>
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<tr>
<td>O.T.E. Colloquium</td>
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<tr>
<td>O.T.E. Practicum</td>
<td>750</td>
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<tr>
<td>Internship quarter</td>
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<td>Second study quarter</td>
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<tr>
<td>Winter interterm</td>
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$4000

Medical fees will be commensurate with the rest of the Graduate School of Education. Presently those are $64 per half year for medical fee for clinic services and $32 per year for health insurance.
APPENDIX J

PROPOSED FIRST YEAR BUDGET

INCOME

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<td>Graduate tuition*</td>
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<td>411</td>
<td>Admission fees</td>
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<td>415</td>
<td>Health/Medical Insurance</td>
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<td>418</td>
<td>Medical fee</td>
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EXPENSES

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<td>Staff salaries</td>
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<td>Library supplies</td>
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<td>640</td>
<td>Travel--meetings and workshops</td>
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<td>Employee travel</td>
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<td>Rent of office space</td>
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851 Network overhead (9%) $11,295
852 Administrative charge (5%) 6,275
860 Operating reserve (3%) 3,765
861 Tuition variance (3%) 3,765
862 Contingency reserve (3%) 3,765

Interdepartmental transfers
Duplicating 2,400

$132,160

*Based on 36 students, 10 of whom are former Outdoor Education Center staff members returning, who already have credit for the Outdoor Teacher Education colloquium and practicum and an internship, thus reducing their tuition by $1850 each.

*Three-digit numbers are Antioch sub-account numbers.
APPENDIX K

PROPOSED TIME-TABLE FOR IMPLEMENTATION

September 1, 1976  Submit proposal to Dean of Graduate School of Education for approval and circulate to other Center Directors for comment.

September 15, 1976  Submit proposal to college officers for comment and approval.

October 1, 1976  Submit proposal to Executive Committee of College Board of Trustees for approval and placement on agenda for next meeting of full Board.
Submit proposal to Ohio Board of Regents for initial comment.
Submit proposal to Division of Teacher Education and Certification of Ohio Board of Education for initial comment.

November 1, 1976  Form committee to write job description and conduct search for Center Director.
Mail first recruiting literature to targeted prospective students.

February 1, 1977  Announcement of appointment of Center Director to begin March 1.
Deliver copy to college editor for inclusion in 1977-78 catalog.

March 1, 1977  Appointment of Program Advisory Committee with concurrence of Center Director.
Intensify student recruiting efforts.
Prepare job description for administrative assistant, conduct search and announce appointment to begin April 1.

April 1, 1977  Program Advisory Committee meets to refine curriculum and recommend adjunct faculty.
Submit revised budget to Dean of Graduate School of Education.

May 1, 1977
Complete program policy manual.
Make faculty appointments.

May 15, 1977
Program Advisory Committee meets to approve course syllabi.

June 1, 1977
Deadline for student enrollment.
Program policy manual completed.
Two-day faculty and staff seminar held to finalize plans for program start-up.

June 20, 1977
Students arrive in Yellow Springs.

June 21, 1977
Registration and first tuition payment due.

June 22, 1977
Summer quarter classes begin.
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