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ABSTRACT

Approximately 117 doctoral studies on outdoor education which were completed in the past 3 decades are presented. The documents are available to the Council on Outdoor Education and Camping of the American Association for Health, Physical Education and Recreation for publication and distribution to outdoor education leaders interested in the research in the field. The summarized dissertations fall generally into 5 major categories: (1) proposals for new program developments; (2) organization and administration; (3) historical analysis; (4) teacher education; and (5) evaluation. The summaries consist of a brief statement of the problem, the procedure followed, and a resume of results and conclusions. The University (Northern Illinois, Lorado Taft Field Campus) Microfilm order number is included for the investigator who wishes to obtain the complete study. A library source reference is listed for some of the studies not included in Dissertation Abstracts. It is hoped that these summaries will stimulate further research and the growth of quality programs in outdoor education in educational systems. (FF)

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RESEARCH IN OUTDOOR EDUCATION

Summaries of Doctoral Studies

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## CONTENTS

iv	Foreword
1	Proposals for New Program Development
26	Organization and Administration
45	Historical Analysis
56	Teacher Education
95	Evaluation
165	Index, Author and Title

## FOREWORD

The growth of outdoor education has been accompanied by a considerable amount of research as reflected by the sizable number of doctoral studies related to this development in education. The breadth and diversity of outdoor education programs and the increasing amount of advanced graduate study in the field are resulting in more research. In order to help in identifying and designing needed research, three members of the staff of the Lorado Taft Field Campus, Northern Illinois University, summarized 117 doctoral studies completed in the past three decades, and have made this document available to the Council on Outdoor Education and Camping of the American Association for Health, Physical Education and Recreation for publication and distribution to outdoor education leaders interested in the research in the field.

The doctoral dissertations summarized here fall generally into five major categories: (1) proposals for new program developments; (2) organization and administration; (3) historical analysis; (4) teacher education; and (5) evaluation. The summaries consist of a brief statement of the problem, the procedure followed, and a resume of results and conclusions. The University Microfilms order number is included for the investigator who wishes to obtain the complete study. A library source reference is listed for some of the studies not included in Dissertation Abstracts. Several studies were obtained directly from the researcher.

AAHPER acknowledges the efforts of Donald R. Hammerman, William D. Stark, and Malcolm D. Swan, in the compilation of the summaries of doctoral dissertations in outdoor education, and expresses gratitude for their willingness to make this document available for distribution.

It is hoped that the summaries will serve to stimulate further needed research and the growth of quality programs in outdoor education in educational systems.

Julian W. Smith  
Director  
AAHPER Outdoor Education Project

PROPOSALS FOR NEW PROGRAM DEVELOPMENT

## RECOMMENDATIONS FOR THE ADMINISTRATION OF THE NEW PALTZ STATE TEACHERS COLLEGE SCHOOL CAMP

University Microfilms  
Order #19979

By: Merrill H. Archard, Ed. D.  
New York University  
1956

### Purpose

The purpose of the study was to propose a plan for initiating and developing a school camp at a selected State Teachers College in the State of New York.

### Procedure

Archard identified the educational objectives of New Paltz State Teachers College and its Campus School. He then specified 43 potential contributions of school camping to the educational objectives of the institution. The validity of the potential contributions of school camping and their relationship to the educational objectives of the New Paltz State Teachers College and its Campus School was established by a jury rating.

### Results and Conclusions

Seventy-three principles to guide the development and administration of a school camp operated by a State Teachers College were formulated. Finally, the study proposed nine recommendations, including: selection and preparation of leaders, finance, selection of the campsite, health and safety, food management, business administration, and program planning.

# CAMPING EDUCATION FOR THE PUBLIC SCHOOLS OF JEFFERSON COUNTY, KENTUCKY

By: Charles M. Bain, Ed. D.  
Teachers College, Columbia  
1956

## Purpose

The study proposed a school camping program for the public schools of Jefferson County, Kentucky.

## Procedure

Programs of seven school camps were reviewed. Guiding principles for establishing a school camping program were developed. Potential sites for establishing a school camp in Jefferson County were identified and assessed.

## Results and Conclusions

Bain recommended sixth grades as those most appropriate to engage in a week long resident camping experience. The facilities of Otter Creek Park were recommended. It was also recommended that a program of day camping begin in the fifth grade. Methods for initiating the project, standards for administering it, policies for financing, and application of program to curriculum subjects were discussed.

ESTABLISHMENT OF AN OUTDOOR EDUCATION PROGRAM  
FOR UNIFIED SCHOOL DISTRICT #345  
WITH MAXIMUM USE OF FEDERAL OR PRIVATE FUNDS

University Microfilms  
Order #68-17369

By: Frank Edwin Colaw, Ed. D.  
University of Kansas  
1968

Purpose

Colaw's purpose was to plan an outdoor education and camping program for his school district (Unified School District #345) in Topeka, Kansas, utilizing outside or nondistrict funds, and subsequently to establish this program.

Procedure

A review was made of various aid programs that might be sources of funds. Since Title III of the Elementary and Secondary Education Act seemed to fit the district's needs, application was made for funds for planning purposes. A planning grant was subsequently received from this source.

Colaw visited outdoor education programs in Illinois, Maryland, Colorado, Texas, California, etc., to gather information in planning the program. At these sites he interviewed staff members in regard to curriculum, facilities, finance, sites, organization, and relationships with other local agencies.

Results and Conclusions

Colaw reported that a variety of programs and arrangements exist for the use of outdoor laboratories throughout the country. In general, he reported, resident programs are limited to the elementary schools and financed through local tax monies. Most camps or sites are rented or leased by the schools.

He found that financing was available for the proposed outdoor education program in his district through Titles I and III of the Elementary and Secondary Education Act. In addition, he reported many other federal agencies have lands, funds, and services to offer school districts for outdoor education and recreation purposes.

Unified School District #345 acquired a 160-acre outdoor laboratory and financing for three years of operation (without the expenditure of local or state funds) using the findings of this study.

A SUGGESTED SCHOOL CAMPING PROGRAM  
FOR KANAWHA COUNTY SIXTH GRADE

University Microfilms  
Order #15464

By: Arnold Craddock, Ed. D.  
George Peabody College for  
Teachers  
1955

Purpose

The purpose of the study was to find out if school camping as an integral part of the curriculum would contribute to the achievement of established educational goals in Kanawha County, West Virginia.

Procedure

A questionnaire was devised and sent to school camp and school personnel in several states. Learning experiences provided in the various school camp programs were evaluated. Kanawha County parents and teachers responded to a check list. The existing classroom program and manual program was analyzed to determine whether a camping program was either desired and/or needed.

Results and Conclusions

Both parents and teachers agreed on the need and desirability for including camping in the school curriculum at the sixth grade level. Other recommendations were: (1) the program should be cooperatively planned, (2) the program should be based on those areas of learning which cannot be provided as well elsewhere, (3) a program of in-service pilot projects and workshops should be undertaken to implement the school camping project.

## A DESIRABLE OUTDOOR EDUCATION PROGRAM FOR ADULT EDUCATION CENTERS

University Microfilms  
Order #68-17263

By: David Louis Ferris, Ed. D.  
Indiana University  
1968

### Purpose

Ferris studied outdoor education programs for adults. He wished to learn the status of these programs in the midwestern states, and to prepare guidelines for developing and conducting such programs for adults in the future. His study was limited to the adult education centers in cities of 25,000 to 100,000 population in Illinois, Indiana, Iowa, Michigan and Ohio with directors belonging to the National Association for Public School Adult Education.

### Procedure

A questionnaire concerning outdoor education was sent to directors of adult education centers in the study area. Based on returns Ferris constructed a subsequent questionnaire containing the factors or characteristics believed to be desirable in outdoor education programs for adults. This was submitted to a jury of 12 leaders and experts in outdoor education for their ratings and suggestions. From these, a final outline of factors thought desirable in adult outdoor education programs was developed, and conclusions and recommendations were made.

### Results and Conclusions

Twenty public school adult education centers that met Ferris' criteria had outdoor education programs. Thirty other centers with some outdoor education courses were identified.

Ferris reported that only partial use was being made of the areas, facilities, equipment and resources available in these communities for adult outdoor education programs. He found that well received programs included such varied activities as astronomy, archery, biology, boating, conservation, natural science, gardening and photography. Instructors in such programs were for the most part local educators, hobbyists,

college majors in a science field, homemakers, and college students who had special qualifications by way of experience and educational background in the particular program area.

The teaching methods most highly recommended for adult outdoor education classes were demonstrations, laboratory techniques, discussions, and problem solving. Ferris reported differences in opinion between his jury of experts and the adult education directors in regard to specific matters on his questionnaires; but both groups were in fairly close agreement on the general aspects of the study.

Ferris concluded that: (1) interest in outdoor education for adults will continue to grow; (2) the factors (purposes, objectives and outcomes, etc.) selected by all his respondents provided an adequate guide for establishing such programs; and (3) adult education directors, generally, are interested in improving their programs in outdoor education.

## AN ORGANIZED PROGRAM RELATING ART AND THE ENVIRONMENT THROUGH COLOR SLIDES AND ACCOMPANYING SCRIPT

University Microfilms  
Order #69-19661

By: Barbara Wagner Fredette, Ed. D.  
University of Pittsburgh  
1969

### Purpose

Fredette's project was to develop a visual perceptual program using color slides and structured verbal presentations. The program was to be designed for people having had limited learning experience in the visual arts and to be a solution to some existing conditions of visual illiteracy and their apparent effects.

### Procedure

The steps or procedures involved in this project included:

- a. collection of 2 x 2 color slides having art qualities observable in the environment,
- b. review of these slides by a panel of artists acting as the criteria for the selection of appropriate and aesthetic images,
- c. organization of these slides into sets which, when used in sequence and with the verbal materials contained in a script, comprised a program.

### Results and Conclusions

The slides are organized into sets to present a sequential definition of a particular quality of art and environment (called a topic). These sets are organized sequentially in a series with a script to provide a verbal means of relating each slide to the purpose for which it was selected. The sets are each organized around the topics (1) Line, (2) Edge, (3) Surface, (4) Shape, (5) Color, (6) Lights Reflections, (7) Types of Organization.

Each of the scripts contains a statement about each of the slides and serves to explain and interpret the visual image in a manner consistent with the purpose of the program. Problem solving questions are provided to elicit active viewer participation in the visual experiences.

Fredette notes that although the panel of artists gave assurance to quality in photography, composition within each frame, and variety as well as unity within each topic, the materials have not been proven through use. Because the materials have not been used in a teaching-learning situation their effectiveness remained to be established.

## A GUIDE FOR THE ADMINISTRATION OF SCHOOL CAMPING IN CALIFORNIA PUBLIC ELEMENTARY SCHOOLS

University Microfilms  
Order #69-6377

By: Walter Victor Hanson, Ed. D.  
Columbia University  
1968

### Purpose

Hanson wished to add to the knowledge of elementary school camping programs. He studied the organizational procedures, personnel practices, program content and administrative practices of a selected group of California programs and developed guides and recommendations that could be helpful to others in California initiating school camping programs.

### Procedures

Subsequent to his review and analysis of the literature of school camping, Hanson analyzed the administrative practices of five California camping programs, each of which was considered to be exemplary in organization and administrative efficiency. He analyzed the written material on the camps, visited each one, and interviewed each of the directors.

A synthesis of his findings, recommendations found in the literature, and information from other sources was utilized in the development of evaluation and administrative guides applicable to other California school districts wishing to initiate camping programs.

### Results and Conclusions

The guides issuing from this study are in agreement with the philosophy and legal framework of school camping in California. No attempt was made to set forth a radical or an experimental approach to school camping. Emphasis in the guides is placed on (1) careful initial planning involving many persons, (2) the development of a sound philosophy, (3) leadership from the County Schools Office, with responsibility of the camp resting directly on a certified teacher or administrator, and (4) the importance of using certified teachers in the camp programs.

The guides also deal with matters such as program interpretation, finance, transportation, evaluation, and in-service training.

Little attention was given in the guides to curriculum or program content other than to stress (1) the importance of pre-planning and followup, (2) the opportunities provided for growth in social living and (3) their potential for leisure time education. This was not a major purpose of the study, the main thrust being on organizational and administrative practices.

## MODEL FOR A DUAL PROGRAMMED SUMMER DAY CAMP FOR MENTALLY RETARDED CHILDREN

University Microfilms  
Order #72-2490

By: Marion Hartshorn, Ed. D.  
University of Georgia  
1971

### Purpose

The objective of this study was to devise and evaluate a model program of day camping for mentally retarded children. The program would devote as much time to academic work as to physical activities.

### Procedure

The literature was reviewed and experts were polled. From gathered data, the author listed materials for inclusion in a program and set up her model. She arranged for the physical facilities and personnel to operate the program, obtained the subjects and then carried out the program. Continuous evaluations and revisions were made to develop the final model which was submitted to a panel of experts.

### Results and Conclusions

The panel of experts concurred that the model program was in fact a model by definition and design and was unique because of the dual thrust in the program as well as the use of volunteer workers and loaned facilities. The model was judged adaptable to any community and/or agency with little or no modification. The program was a day camp program that provided specific activities for development of motor skills as well as providing a block of time for academic work to extend the learning capabilities in an informal environment.

## EDUCATIONAL SPECIFICATIONS FOR THE OUTDOOR SCHOOL

University Microfilms  
Order #66-1337

By: Paul Barringer Homan, Ed. D.  
University of Denver  
1965

### Purpose

By studying the curriculum offerings and the administrative problems, a set of specifications could be developed for governing the establishment and operation of an outdoor school.

### Procedure

Literature was reviewed to determine criteria for the establishment of outdoor education facilities. These factors were submitted to a panel of experts for validation and ranking. The four areas resulting were: curriculum, site selection, administration, and facilities development.

### Results and Conclusions

Results were reported in very general terms that make the study almost impossible to use. Most significant of the results was that all facilities should be developed for the needs of the specific program offered. Also, studies need to be made on determining the effectiveness of outdoor education programs, changes in the attitudes of participants, and the defining of objectives in terms of the total school curriculum.

A STUDY OF EXISTING PUBLIC SCHOOL SPONSORED  
CAMPING PROGRAMS IN NEW YORK STATE  
AND AN ANALYSIS OF FACTORS WHICH MIGHT ENCOURAGE  
THE DEVELOPMENT OF ADDITIONAL CAMPING PROGRAMS  
IN THE PUBLIC ELEMENTARY SCHOOLS OF NEW YORK STATE

Interlibrary Loan, Library  
State University of New York  
Buffalo, New York

By: J. D. Margulis, Ed. D.  
University of Buffalo  
1952

### Purpose

Margulis sensed a feeling of insecurity about public school camping in New York because no survey had been made of costs, finance sources, programs, sites available, etc. He wished to conduct such a survey and identify factors hindering the establishment of additional programs.

### Procedures

Margulis found 22 school camping situations in New York of four types: field trip, weekend, partial week, and full week. He gathered information from administrators, teachers, and others using interviews and questionnaires. Questionnaires were also sent to some administrators and lay leaders in counties without camping programs to find why they did not have programs.

### Outcomes or Results

Margulis found flexibility in practice and procedure. The opportunity for a wide range of educational activities in school camping programs existed in the state. In all cases joint planning by faculty and pupils preceded the actual experience. Staffing patterns varied -- some using combinations of adult non-faculty and faculty, others using faculty members and student aides. Most schools rented nearby sites. Since owners of the camps were receptive, Margulis forecast continued expansion in camping programs.

Administrators in schools with camping programs agreed in wanting to expand them. There was disagreement, however, as to the share of the cost to be borne by the school, the length of stay, and staffing needs. Margulis concluded that most programs had been

initiated by administrators, and a professional camp director was needed to handle the details at the sites.

Social living, scientific understandings and appreciations, wholesome work experiences, and healthful living in that order were ranked as the important outcomes. Help was wanted in program development and training of teachers and evaluators. Planning was stressed as an essential ingredient.

In counties without programs Margulis found misunderstandings about the philosophy of school camping and the belief they were recreational in nature. Most of these people favored camping programs but said that lack of (1) interest by parents, (2) sites, and (3) funds deterred them from beginning programs.

Margulis recommended the passage of legislation, state aid for additional camping programs, and erection of facilities on state lands. Improved programs of outdoor teacher education were needed in the university and should be part of inservice programs.

THE PROBLEMS OF ENVIRONMENTAL MANAGEMENT:  
A MANUAL DESIGNED FOR GROUP DISCUSSION,  
INCLUDING A PRELIMINARY PROGRAM OF EVALUATION

University Microfilms  
Order #72-20685

By: Mark M. Sharron, Ed. D.  
New York University  
1972

Purpose

Sharron set out to prepare a manual dealing with environmental management problems to be used by concerned citizens as a basis for group discussion.

Procedure

Articles for the manual were selected from an extensive bibliography. Criteria applied in selecting articles were readability, accuracy and consistency, author's reputation, and timeliness.

The manual was organized into ten sections dealing with: (1) an ecological overview, (2) overpopulation, (3) air pollution, (4) water pollution, (5) the effects of pesticides and chemicals, (6) nuclear hazards, (7) disposal of solid wastes, (8) abuse of natural resources, (9) excessive noise, (10) citizen action and education.

Results and Conclusions

The manual was endorsed by nine of ten organizations associated with environmental problems. Based on results of the study it appears that the manual will be useful in a variety of settings including classes in adult education, high school classes, unions, corporations, environmental groups, and neighborhood discussion groups.

A PROGRAMMED GUIDE TO SELECTED  
SPRING WILD FLOWERS OF NORTH AMERICA

University Microfilms  
Order #69-9522

By: Marion A. Skelton, Ed. D.  
University of Georgia  
1968

Purpose

The purpose of this study was to prepare a programmed field guide for the identification of spring wild flowers in northern Georgia.

Procedure

Preparation of the field guide included pilot testing with eighth grade pupils to check error rate. The upper reading limit for the field guide was set for sixth grade reading level. The Flesch Test of Readability was used in this connection. A panel of botany professors and elementary school specialists evaluated the guide. Revisions were based on the Flesch Test, the field study error rate, and suggestions received from the panel. Subjects used in this study were eight sections of sixth graders and six sections of eighth grade pupils.

Results and Conclusions

Knowledge gain was significant at the .01 level for subjects using the programmed material. Neither mental age nor sex was found to be a source of variation, although reading achievement was significant to the .05 level.

DEVELOPING A CONSERVATION EDUCATION PROGRAM  
FOR THE ANN ARBOR PUBLIC SCHOOL SYSTEM AND  
INTEGRATING IT INTO THE EXISTING CURRICULUM (K-12)

University Microfilms  
Order #64-892

By: William B. Stapp, Ph. D.  
University of Michigan  
1963

Purpose

This study was designed to evaluate a conservation education program developed for the Ann Arbor Public School System. A chronology of the manner in which the program was integrated into the school system was also documented.

Procedure

A conservation education program was designed, content material prepared, in-service preparation was provided for teachers and evaluative instruments were submitted to administrators and teachers. Pupils from all grade levels participated in a series of field trips to various community resource areas.

Results and Conclusions

The program was rated high by both elementary and secondary teachers in helping to meet their instructional goals. Stapp concluded that conservation was most effectively taught when integrated into existing curriculum as opposed to isolating it as a specific course to be offered at a particular grade level.

## SITE REQUIREMENTS FOR OUTDOOR INSTRUCTION FOR VIRGINIA ELEMENTARY SCHOOLS

University Microfilms  
Order #19764

By: George G. Tankard, Jr., Ed. D.  
George Peabody College of Education  
1956

### Purpose

The purpose of the study was to establish site requirements for elementary schools in the state of Virginia.

### Procedure

Outdoor activities through which the objectives of education may be achieved were identified. These activities were grouped into desirable elementary school programs. Outdoor space needed to support these programs in schools of varying enrollments was then determined.

### Results and Conclusions

Space needs for programs of outdoor instruction were determined as follows: (1) minimum program (enrollment of five to 35 classrooms) requires from 2.21 acres to 7.40 acres; (2) adequate program, from 2.44 acres to 7.80 acres; and (3) exceptional program from 2.62 acres to 8.22 acres for the same enrollments.

Other conclusions were drawn concerning relationship of outdoor instruction to objectives of education in Virginia's elementary schools, adequacy of facilities and planning requirements.

BASIC GUIDES FOR THE ESTABLISHMENT AND DEVELOPMENT  
OF SCHOOL OUTDOOR EDUCATION: SPECIAL REFERENCE  
FOR GREAT NECK SCHOOL DISTRICT

By: Harry C. Thompson, Ed. D.  
Teachers College, Columbia  
1955

Purpose

The project was designed to recommend basic guides to the Great Neck, New York, Board of Education to aid in the development, establishment, and administration of an outdoor education program.

Results and Conclusions

A plan was devised to implement outdoor education in the Great Neck Schools. The plan included provisions for day visits to outdoor instructional areas, overnight and weekend trips and multiple-day camping. The program would be administered by the Department of Health, Physical Education, and Recreation. The program would be financially supported by the Board of Education.

## VACANT LANDS AND EMERGING EDUCATIONAL NEEDS

By: Kenneth P. Vogt, Ed. D.  
Teachers College, Columbia  
1954

### Purpose

Vogt's investigation centered on the examination of vacant lands and buildings in a selected political unit to determine the educational value of these resources to meet the needs of youth.

### Procedure

The literature was surveyed to identify newer practices and emerging educational trends. All vacant lands and farm buildings in the town of Union Vale, New York, were surveyed. A schedule was devised for evaluating the educational worth of the selected resources.

### Results and Conclusions

Vogt found 15,000 acres of vacant land in Union Vale with 760 acres readily available. He found vacant buildings which could serve as school camps or recreation centers. Other lands and facilities were available for community-resource education, work experience activities and conservation. Vogt recommended that educational planners pay particular attention to lands and facilities available within their districts as resources for education.

## A STUDY OF ENVIRONMENTAL/ECOLOGICAL EDUCATION PROGRAMS IN ELEMENTARY GRADES IN SELECTED CITIES OF ILLINOIS

University Microfilms  
Order #72-29326

By: Vivian A. Walkosz, Ed. D.  
Northern Illinois University  
1972

### Purpose

This was a study to determine the extent of existing environmental/ecological education programs in elementary grades in selected Illinois schools. Curriculum materials, teacher preparation, teacher participation and school commitment were also to be determined and model programs developed.

### Procedure

Data were collected from administrators and teachers in 14 school districts that represented about 35 percent of the elementary school population in Illinois. The researcher used a structured interview and a questionnaire for data gathering. The data were classified into areas of general information, curriculum development, resources, teacher training, pilot demonstration projects and future plans for environmental programs.

### Results and Conclusions

Most school systems acknowledged the need for an environmental education program because of the need to solve problems such as pollution of air, water and land. No school system, though, had a formal program of environmental education but did agree that such a curriculum should be sequential and interdisciplinary in approach and should emphasize science and social studies.

Schools expected to add new curricular materials including multimedia types and additional experiences, such as field trips, to their curriculum. Sources of information and assistance to the schools were: state departments of education, labor and industry, colleges and universities, federally funded projects, government agencies, local communities and published research.

The researcher developed models that included the study of inter-relationships in the environment and a sequential, interdisciplinary curriculum which included problem-solving situations and utilized in-service training, effective use of resources and pilot demonstration projects.

## ENRICHING SCIENCE THROUGH OUTDOOR EDUCATION

Universit Microfilms  
Order #61-2580

By: Irving J. Weiss, Ed. D.  
New York University  
1961

### Purpose

The purpose of this study was to develop a guide for elementary school teachers for the utilization of the park facilities of New York City as a means of enriching science instruction in the elementary schools. The study comprised five parts: determining the value of an outdoor science program; inventorying the facilities available in New York City parks; listing basic science concepts; establishing procedures for field trips; and compiling a resource guide for utilizing these outdoor facilities.

### Procedure

A survey was made of both science and elementary school educators to determine values of an outdoor education program. Literature was reviewed to obtain basic science concepts, administrative procedures for field trips and physical facilities of New York City parks of 100 or more acres in size. From these investigations and reviews, Weiss compiled a resource guide for elementary teachers that included basic concepts and understandings, possible approaches, background information, preparation for the trips, experiences on the trips, enrichment activities after returning, bibliographies for both students and teachers and audiovisual materials. He also suggested that the parks make the school experiences an integral part of their programs.

### Results and Conclusions

Weiss found that teachers wanted resource guides prepared on the following topics and in the order listed: plants, animals, rocks, inter-relationships, conservation, humaneness, weather, erosion and machines. He also recommended that guides be prepared for junior high school teachers.

The guides that were developed were comprehensive and contained a wealth of information, not only for teachers but also for other school personnel. They included information on administrative procedures for field trips and on experiences with living things, with physical science, and with conservation.

## ORGANIZATION AND ADMINISTRATION

AN INVESTIGATION OF THE ADMINISTRATIVE PROBLEMS  
RELATED TO RESIDENT OUTDOOR EDUCATION PROGRAMS  
IN CERTAIN PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

University Microfilms  
Order #65-1317

By: Edward J. Ambry, Ph. D.  
Southern Illinois University  
1964

Purpose

Ambry identified administrative problems connected with the operation of resident outdoor education programs. He also attempted to isolate those administrative problems which might be unique to outdoor education and suggested implications for graduate preparation of prospective school administrators.

Procedure

Data were gathered by means of a questionnaire. The questionnaire was approved by a jury of experts and given a trial run before being administered to 90 school districts. Returns were received from 76 percent of the school districts. Data were classified, treated with the Chi square test of statistical significance, and interpreted.

Results and Conclusions

Among the findings were: (1) It was possible to identify administrative problems unique to outdoor education. These problems were not necessarily the most difficult to solve, however. (2) The problems were classified from the most difficult to least difficult. (3) Rated most difficult were problems dealing with "staff"; judged of ordinary difficulty were problems of "legality," "finances and budget" and "miscellaneous"; rated least difficult were problems in the areas of "curriculum," "public relations," and "Board of Education."

The study concludes that identifying the uniqueness of problems associated with outdoor education and the degree of difficulty can lead to their better solution in practice and their better study in programs of professional preparation for school administrators.

# THE ADMINISTRATION OF A PUBLIC ELEMENTARY SCHOOL CAMPING AND OUTDOOR EDUCATION PROGRAM

By: John H. Christman, Ed. D.  
The University of Buffalo  
1957

## Purpose

This study was undertaken to record the progress of outdoor education and school camping in the New York public schools. Guides for administering programs of outdoor education in the state of New York were also included.

## Procedure

Christman used the historical and normative survey methods of investigation in the study.

## Results and Conclusions

Christman found that there were only a few year-round camping education programs operating at the time of his study. He determined that the school camp should be organized and administered by the same public authority which operates the schools.

He also concluded that: (1) camping programs should serve all age levels; (2) pupils should attend camp of their own volition; (3) the school camp should be coeducational; (4) the school camp should not exceed 40 pupils.

The study lists nine principles of program organization and six general conclusions and recommendations including the suggestions that: (1) a New York state committee be reappointed to study ways and means of organizing, maintaining and supporting school camps; (2) required courses in camping and outdoor education be instituted by New York state colleges and teachers' colleges; and (3) the state and federal governments assist in providing camping resources and funds for implementing these programs.

# LAW AND LIABILITY OF MUNICIPAL, CHARITABLE AND PRIVATE CORPORATIONS FOR CONDUCTING RECREATION CAMPS

By: William H. Freeberg, Re. D.  
Indiana University  
1949

## Purpose

Purposes of the study were: (1) to determine the legal liabilities of municipal, charitable and private organizations related to the operation of a recreation camp; and (2) to analyze state department regulations applicable to recreation camps.

## Procedure

Freeberg investigated previous studies, legal texts, periodicals and state law journals. The statutes of each state were searched. Statutes relating to the problem were then examined and analyzed. Court decisions were searched in similar manner. The most recent cases were traced and their validity confirmed through Shepard's Citor.

## Results and Conclusions

Fifteen major conclusions were drawn from the study. These included: (1) recreation camps are affected by laws at all governmental levels--municipal, state, and federal; (2) specific state health and sanitation regulations in most instances have the power of law; (3) camp leaders are considered in loco parentis, as being the lawful parents of the children for whom they assume responsibility; (4) the liability for charitable corporations for torts varies from unqualified liability in a few states to full immunity in others; (5) some courts consider camping an extension of the park and playground system; (6) the American Camping Association standards are legally and ethically sound.

## A STUDY OF ADMINISTRATIVE FACTORS IN ESTABLISHING A PROGRAM OF SCHOOL CAMPING

University Microfilms  
Order #1488

By: John W. Gilliland, Ed. D.  
New York University  
1949

### Purpose

The purpose of the study was to appraise and analyze administrative practices and policies related to the development of school camping programs.

### Procedure

Gilliland gathered data through personal interviews, school camp visitations and from the literature. Observations and interviews took place in 40 school systems operating camps. A list of administrative problems was rated by a jury of ten specialists, who then evaluated statements of administrative policy and practice as to desirability.

### Results and Conclusions

Twenty-one administrative practices occurring in a majority of school camps were identified. Ten administrative policies that should guide camp operations were listed. Gilliland's final recommendations pertain to: (1) developing interest, (2) planning the program, (3) staff selection, (4) health and safety, (5) interpreting camp to community, (6) financing the school camp, (7) developing leadership, (8) business management, and (9) meeting legal problems.

CAMPING IN NEW JERSEY: SUGGESTED ORGANIZATIONAL  
AND ADMINISTRATIVE PROCEDURES FOR  
CONDUCTING SCHOOL CAMPING PROGRAMS

University Microfilms  
Order #58-600

By: Everett Louis Hebel, Ed. D.  
New York University  
1957

Purpose

This study was an attempt to formulate procedures for the New Jersey State Department of Education to use in organizing and administering school camps for New Jersey public schools.

Procedure

A review of literature on camp organization and administration was made by the investigator. Directors of camping programs were contacted by the investigator, who then made follow-up visits and personal observations of many of the camping programs. A study was also made of the factors that influence education in New Jersey.

Results and Conclusions

Using a set of 68 guiding principles gleaned from the literature, the investigator isolated twelve factors as influencing New Jersey education. From these influencing factors, a number of recommendations were made as means of meeting educational objectives yet providing for the establishment and operation of outdoor school camps.

## A PROSPECTUS FOR THE ADMINISTRATION OF COLLEGE AND UNIVERSITY CAMPS

By: Everett Delmer Lantz, Ed. D.  
University of California at  
Los Angeles  
1955

### Purpose

This study was devised to formulate a set of principles for the operation and administration of camps by colleges and universities.

### Procedure

Literature was reviewed along with information from authorities and a survey of college camp directors. From this data, the writer compiled a list of suggestions for effective camp operation.

### Results and Conclusions

Although college camps exist for different reasons, there are commonalities. Camps should be modern rather than primitive and should have facilities for a minimum of 75 students and a maximum of 150. Both elementary and advanced courses should be offered. As camps generally rely upon motor transportation, the camp should be located near an all-weather road. Staff members should basically be regular staff members with only a few visiting professors. Adequate health facilities are a must and a pre-registration examination should be required. An adequate physical plant is needed with the areas of Service, Instructional, Living and Central as the usual arrangement. To insure an adequately manned staff, student help should be utilized as much as practical.

SCHOOL CAMPING IN FLORIDA: A GUIDE FOR LOCAL SCHOOL ADMINISTRATORS IN PLANNING, ESTABLISHMENT AND ADMINISTRATION OF SCHOOL CAMPING PROGRAMS

University Microfilms  
Order #59-1048

By: Frank Excell Philpott, Ed. D.  
New York University  
1958

Purpose

Philpott devoted his research to constructing a guide for school camping in Florida. He wanted to determine the objectives, ascertain the influencing factors, establish guiding principles, and subsequently develop a Florida State Department of Education guide for initiating and operating school camping programs.

Procedures

Objectives, influencing factors and guiding principles were obtained by searching the literature and from personal interviews. These were organized into an instrument that was reviewed and validated by juries of school camping authorities and Florida educational leaders. These and other accumulated data were used as the foundation for his guide.

Results and Conclusions

School camping objectives were identified and related to the objectives set forth for Florida schools. Among 15 influences that Philpott listed were: (1) recognition of the need for conservation; (2) a national surge to the outdoors; (3) increases in juvenile delinquency; (4) acceptance of the concept of the whole child; (5) the activity approach to the curriculum; and (6) acceptance of the values of direct learning in the out-of-doors. Specific administrative factors found to be influencing camping programs included those of staff selection, public relations, program planning, health, safety, evaluation, and finance. In total, a list of 123 principles for school camping applicable to Florida schools was developed and reviewed by the jury.

This study resulted in an administrative guide entitled School Camping in Florida. Among the areas covered in this guide are:

(1) history of school camping; (2) public relations; (3) the school camping program; (4) staffing the program; (5) sites and facilities for school camping; (6) administration and organization; (7) health and safety; (8) legal aspects of school camping; and (9) leadership development.

# COLLEGE AND UNIVERSITY OUTDOOR EDUCATION CENTERS-- PRESENT STATUS AND RECOMMENDATIONS FOR THE FUTURE

By: Diane Carol Pick, Re. D.  
Indiana University  
1972

## Purpose

The purpose of this study was to ascertain the current status of college and university outdoor education centers. Pick set out to identify the colleges and universities presently operating outdoor education centers and to formulate recommendations related to the administration and operation of these types of facilities.

## Procedure

A survey instrument was sent to 102 institutions of higher education. Replies were received from 101 institutions. The responses were analyzed to determine which institutions were operating major centers characteristic of a typical outdoor education center.

## Results and Conclusions

Ten schools indicated they operated centers that (1) were in year round use, (2) had resident facilities, (3) had a full-time administrator, (4) served a single college or university, and (5) were associated with education, outdoor education, recreation or related departments.

Forty-five schools had centers that did not meet all five criteria to qualify as a major center. Forty-six schools had no outdoor education center, but six of these institutions indicated they were in the process of planning or constructing their own centers.

Pick went on to describe a typical major center, and concluded with recommendations for an ideal outdoor education center. Recommendations provided dealt largely with the general areas of the physical facility including buildings and grounds, administration and use of the center.

# A PRELIMINARY DEFINITION OF THE ROLE OF THE OUTDOOR EDUCATION COORDINATOR IN REPRESENTATIVE PUBLIC SCHOOL OUTDOOR EDUCATION PROGRAMS

University Microfilms  
Order #65-1336

By: Thomas J. Rillo, Ph. D.  
Southern Illinois University  
1964

## Purpose

The purpose was to identify the perceptions of outdoor education coordinators of their own role, and the perceptions of school superintendents and teachers of the role of these coordinators. Rillo wished to identify points of consensus in the expectations of the referent groups.

## Procedure

Role perceptions were ascertained by Rillo's checklist of 45 items of roles believed appropriate for outdoor education coordinators. This instrument was validated by jury and constructed to test the hypothesis: There is no significant difference of role expectations for the outdoor education coordinator position as perceived by the groups of role definers.

The superintendent, outdoor education coordinator, and three teachers in each of the 90 school districts in the United States having a three-day or longer resident program and employing a person to coordinate the program were asked to participate. Chi-square was used to identify any divergence in the expectations of the three groups.

## Results and Conclusions

A 75 percent return was obtained. All groups gave the greatest response to the role: To assume leadership in planning and organizing the outdoor education program as an integral part of the total school curriculum. Teachers and coordinators gave their second highest response to: Work closely with teachers and assist them in developing an outdoor education program for their classes. However, superintendents ranked: Assuming leadership for constant and continuous evaluation and Make recommendations for improvement of the outdoor education program second highest.

Rillo's analysis revealed a lack of consensus on nine checklist items. Among these were items about the coordinator prevailing upon the board of education for increased allocation of funds, making policy changes and notifying teachers of such changes.

Rillo concluded: (1) This is a professional position instituted in the public educational system for the purpose of administering and coordinating the outdoor education program as an integral part of the total school program; (2) a major portion of his role is concerned with working with teachers and assisting them in developing an outdoor education program for their classes; (3) a high degree of consensus exists between the three groups used as role definers; and (4) the coordinators were adequately prepared for their positional roles.

AN INVESTIGATION OF PERSONNEL PRACTICES  
AND PROGRAM ORGANIZATION IN PUBLIC SCHOOL  
CAMPING AND OUTDOOR EDUCATION

By: Lenore C. Smith, Ph. D.  
University of Southern California  
1951

Purpose

The purpose of the study was to investigate personnel practices and program organization of public school camping. The study sought to answer some of these questions: (1) upon what basis were counselors employed? (2) what were professional staff responsibilities? (3) how were pupils grouped for living? (4) what health protection measures were used? (5) were there identifiable emphases characterizing the various camp programs?

Procedure

The study was sponsored by the American Camping Association. Data were gathered from the literature, from visiting three school camps, and by means of a questionnaire. The questionnaire check list was designed to gather information related to the site, operating agency, and facilities used, the program organization, personnel practices, and school-community cooperation.

One hundred twenty-six school systems that had sponsored outdoor education or school camping programs were surveyed. Replies were received from 111 for a return of 88 percent. Fifty-five school systems from 18 states were represented in the return. Eighty-six practices reported by the respondents were appraised by a ten-member jury of experts. A summary of desirable practices grew out of the analysis of jury appraisals.

Results and Conclusions

The study revealed considerable variation in camp site characteristics and organization. Smith listed 25 major conclusions covering various aspects of personnel and program practices. No significant evidence was found to substantiate the belief that formal classroom procedures would unduly influence the school camp program. Smith recommended, among other things, that further study be made of program appraisal measures.

## STANDARDS FOR SCHOOL CAMP PROGRAMS

By: John L. Squires, Ph.D.  
University of Utah  
1951

### Purpose

Purpose of the study was to develop standards which school authorities could apply as guidelines as they establish, organize and maintain public school camping.

### Procedure

A set of standards was devised based upon personal interviews with educators and camp experts, a review of the literature on camping, and correspondence with camp specialists and school camp administrators. The standards were judged by a panel of four authorities who either approved or suggested revisions.

### Results and Conclusions

Standards were established in the following areas: (1) membership, (2) leadership, (3) program, (4) administration, (5) institutional organization and auspices, and (6) profession.

Squires concluded that many established educational standards were adaptable to public school camping. The similarity between the generalized objectives of school camping and education was recognized. Camp experts did not agree as to the value of standards, nor as to which standards should be accepted.

SCHOOL LAWS AFFECTING CERTAIN ASPECTS  
OF OUTDOOR EDUCATION IN THE UNITED STATES

University Microfilms  
Order #70-19815

By: Ishmael W. Stagner II, Ed. D.  
Brigham Young University  
1970

Purpose

The purpose of this study was to identify and review state legislation in the form of school laws relating to outdoor education in the United States.

Results and Conclusions

Among the findings were:

- (1) Ninety-one state laws were identified that pertain to outdoor education.
- (2) Fifteen states had no laws pertaining to outdoor education.
- (3) Fifty-two of these laws are on the books in seven states (California, Illinois, Michigan, Montana, New York, Wisconsin and Virginia).
- (4) Some states having no legislation related to outdoor education nevertheless have outdoor education programs. This would seem to point up the need for additional school laws to allow for these outdoor education developments.

# AN ANALYSIS TO DETERMINE SIGNIFICANT ADMINISTRATIVE PROCEDURES USED IN THE ESTABLISHMENT AND OPERATION OF SELECTED RESIDENT OUTDOOR LABORATORY SCHOOL PROGRAMS

University Microfilms  
Order #68-469

By: Walton George Turner, Ed. D.  
Colorado State College  
1967

## Purpose

Turner wished to identify the administrative procedures being used to establish and operate some of the outdoor laboratory school programs and to determine if different procedures were being used by various categories of schools.

## Procedure

Turner constructed a questionnaire that he asked superintendents of schools throughout the United States operating resident outdoor laboratory school programs to complete. Included on the questionnaire were items about finance, facilities, public relations, transportation, insurance, staffing, food service, timing, and board policies. Turner categorized his returns by school size, geographical region, etc. Frequency distributions, percentage tables, and other descriptive techniques were used to report the returns.

## Results and Conclusions

School size category did not appear to be a factor in the operation of the programs. Most of the programs surveyed had been in operation more than 11 years, and fifth and sixth grade children were most frequently involved. Spring and fall were the most popular seasons. Most of the districts charged the students a fee for the program. Most sites were leased or rented rather than being school owned. Turner's respondents indicated that staffing, facilities, and finance were their most prevalent and consistent problem areas.

Turner concluded that many more trained teachers, laboratory sites and facilities, and additional sources of financial support must be made available or found if such programs are to be continued and expanded. The total educational cost per student did not seem to be related to whether or not a district had a resident program.

A STUDY OF THE ADMINISTRATIVE PRACTICES  
USED IN THE OPERATION OF THIRTY SELECTED  
PART-TIME SCHOOL CAMP PROGRAMS IN MICHIGAN

University Microfilms  
Order #14282

By: Thomas W. Walton, Ed. D.  
Michigan State University  
1955

Purpose

The purpose of this study was to determine the administrative practices used at 30 part-time outdoor education camps in Michigan and to analyze these practices in relation to current practices gleaned from literature, records from specific programs and from the investigator's personal observations. The data and analyses would be systematized in a form useful to school administrators.

Procedure

The review of literature resulted in the classification of administrative practices into a) facilities, b) personnel, c) program, and d) school camp-community relations. A personal interview was held with the camp directors with 179 items comprising the interview schedule. These items had been submitted to a jury of experts, corrected, and administered to three program directors who were not included in the study.

Results and Conclusions

Walton reported findings under the four administrative headings. Some of these findings include: all but three part-time camp programs used state-owned camps; half of the camps had some infirmary facilities; and the distance away from the school was not a factor in the site selection. Most camps were for sixth grades. Substitute teachers were provided for students who could not attend camp and the camp director had other school teaching or administrative duties in addition to the directorship of the camp.

Program planning done by teachers and pupils usually occurred after the teachers had visited the site. Nonobjective evaluation of the program was generally used and was made by the campers, teachers, parents and other community sources. Camp directors agreed that a public relations technique was needed to interpret the program to the community. Few camp groups belonged to any professional camping organization.

**A SURVEY OF TEACHER READINESS AS DETERMINED BY  
ATTITUDES AND ACADEMIC TRAINING FOR OUTDOOR  
EDUCATION IN THE ELEMENTARY PUBLIC SCHOOLS  
OF MONTGOMERY COUNTY, MARYLAND**

University Microfilms  
Order #69-15738

By: Charles I. Wiles, Jr., Ed. D.  
The George Washington University  
1969

Purpose

This study had a threefold purpose: (1) to determine the utilization of outdoor education activities at the sixth grade level in Montgomery County, Maryland, (2) to ascertain the basic experiences which teachers felt would be helpful in preparing for outdoor education activities and (3) to survey teacher attitudes relative to outdoor education as a method of teaching.

Procedure

The researcher developed a survey instrument which was administered to 261 sixth grade classroom teachers in Montgomery County, Maryland. Data drawn from the survey were analyzed according to frequency and percentage of response.

Results and Conclusions

Major recommendations were that:

1. An administrative unit for outdoor education should be authorized and a director appointed with the following responsibilities:
  - (a) coordinate the efforts of an outdoor education study center
  - (b) organize in-service training sessions for teachers
  - (c) develop personnel policy for a resident outdoor education facility
  - (d) organize a corps of teacher specialists to assist classroom teachers in preparing for carrying out a resident outdoor education experience
  - (e) maintain an inventory of teaching skills for use in teaching outdoors.
2. Local school administrators should assume responsibility for helping to facilitate the operation of outdoor education programs.

3. The Department of Staff Development should organize workshop type training sessions and should encourage colleges and universities to establish off-campus centers near schools demonstrating an interest in outdoor education.
4. The Board of Education should appropriate the necessary funds to employ personnel and to purchase a limited number of outdoor education camp facilities and lease the majority of such facilities.

## HISTORICAL ANALYSIS

## E. LAURENCE PALMER: HIS CONTRIBUTIONS TO NATURE, CONSERVATION, AND SCIENCE EDUCATION

University Microfilms  
Order #70-19386

By: Joseph Bellisario, Ed. D.  
The Pennsylvania State University  
1969

### Purpose

The life and career of E. Laurence Palmer, Professor Emeritus of Nature, Conservation, and Science Education at Cornell University has spanned more than a half century. Bellisario, in this historical study of Palmer's life and contributions, wanted to assess:

1. the manner in which his early career helped to prepare him for leadership in nature, conservation and science education,
2. the philosophy that he utilized in his work,
3. his contributions to nature education,
4. his contributions to conservation, and
5. his contributions to science education.

### Procedure

Analyses were made of information obtained from both primary and secondary sources, using procedures common to historical research. Upon verification, Bellisario's data were organized to provide:

1. a description of E. Laurence Palmer's life,
2. lists and descriptions of his contributions to nature, conservation, and science education, and
3. an examination of E. Laurence Palmer's contributions in light of selected criteria.

### Results and Conclusions

These were among the conclusions that Bellisario provided:

1. The philosophy that Palmer accepted and utilized in his work came from leaders such as Liberty Hyde Baily and Anna Botsford Comstock. The philosophy he practiced took into

consideration relationships between cause and effect and attached importance to looking into proof for authority rather than looking to authority for proof.

2. Palmer's major contributions to nature education are a result of his writing and teaching, especially his Field Book of Natural History and his articles in the Cornell Rural School Leaflets and Nature Magazine.
3. His contributions to conservation are a result of articles in publications such as the Cornell Rural School Leaflets, Nature Magazine, and A Guide to Conservation. Palmer was instrumental in gaining acceptance for the ecological aspects of conservation. Perhaps his important influence on conservation was through his students, many of whom have assumed leadership roles.
4. Palmer was an outspoken critic of science education, and his persistent attacks helped to provoke science educators to reexamine their objectives.

## PHILOSOPHY AND GOALS FOR OUTDOOR EDUCATION

Library  
Colorado State College

By: Clinton N. Fitzpatrick, Ed. D.  
Colorado State College  
1968

### Purpose

Fitzpatrick set out to develop a statement of philosophy for outdoor education and to identify its goals consistent with this statement of philosophy. He hypothesized close agreement among outdoor educators in regard to these goals.

### Procedure

Fitzpatrick extracted the ideas of educational leaders and philosophers applicable to outdoor education and synthesized them into a statement of philosophy. Tentative goals were identified by surveying persons in outdoor education. These were organized into nine statements and submitted to a group of program directors to rate. They were submitted to three juries of ten persons each: (1) experts in outdoor education, (2) leaders in the various disciplines and professional areas in education, and (3) superintendents of school districts having outdoor education programs, to evaluate from the standpoints of agreement with the statement of philosophy and the significance to outdoor education. Reactions of the jurors were provided in percentage and number tables. No statistical analysis was made.

### Results and Conclusions

The statement of philosophy resulting from his study is: Outdoor education is a method which utilizes resources beyond the classroom as a stimulus for learning and as a means of curriculum enrichment. By extending the learning environment beyond the classroom, theoretical knowledge is enriched by practical knowledge gained through firsthand experiences with people, places and things. The knowledge obtained through this direct approach to learning should enable the individual to better understand the unity of all life. It should also help him to develop a sense of pride for the historical, educational, scientific, recreational and inspirational values that are a part of his heritage. Ultimately, he should be able to play a more constructive role in the society of which he is a part.

All nine of Fitzpatrick's goals were approved by the outdoor education directors to whom they were sent; eight of the nine received the majority approval of all three juries. Since only one goal was rejected by only one jury, support appeared to have been provided for the hypothesis.

Among the eight goals on which Fitzpatrick obtained agreement were: (1) To help realize, through outdoor education, the full potential of the individual toward optimum development of mind, body and spirit; (2) To utilize fully and constructively resources beyond the classroom as a stimulus for learning and a means of curriculum enrichment; (3) To develop awareness, appreciation, and understanding of the natural environment and man's relation to it.

# A HISTORICAL ANALYSIS OF THE SOCIO-CULTURAL FACTORS THAT INFLUENCED THE DEVELOPMENT OF CAMPING EDUCATION

University Microfilms  
Order #61-2370

By: Donald R. Hammerman, Ed. D.  
Pennsylvania State University  
1961

## Purpose

A review of the rise and development of school camping as a part of the total school curriculum was the primary objective of the study. The study also sought to identify the points of change or the beginning of specific trends in school camping.

## Procedure

A review of literature aimed at an analysis of the underlying educational theory of school camping was utilized by the investigator. Sources reviewed include periodicals, history text books, letters and biographical information from key figures in outdoor education, and selected works in both educational foundations and philosophy.

The premise of the study was that the development of camping education was a natural outgrowth of the socioeconomic forces at work in America during 1930-1960. Certain propositions characteristic of school camping were established with the resulting generalizations based upon both a topical method and a chronological system of corroboration.

## Results and Conclusions

The trend of American society towards urbanization gave need for the return to the elementary satisfaction that rises from outdoor living. The roots of camping in school theory can be traced to Pestalozzi, Spencer, Rousseau, and Hébert. The economic stress of the depression years gave rise to changes in the experimental educational curriculum just as did the booming World War II economy. Much groundwork of the early school camping programs as well as much of the physical facilities were provided by the C. C. C.

As schools broadened their functions, school camping became another means to aid in extending the range of experiences of every school child. The study presents many conclusions and implications for camping education in the curriculum now and in the future.

## FACTORS INFLUENCING THE DEVELOPMENT OF OUTDOOR EDUCATION

University Microfilms  
Order #69-3186

By: Charles Albert Lewis, Ph. D.  
New York University  
1968

### Purpose

The major thrust of this study was a historical review of the origin and development of outdoor education. Lewis set up five sub-problems to review: the basic concepts of outdoor education; the origin and development of the school camping movement; the origin and development of the nature study movement; the conditions and factors of American education that contributed to the development of outdoor education; and how did the interaction of these movements lead to the present status of outdoor education?

### Procedure

After identifying the five sub-problems of the study, Lewis set up a review of literature and from this review identified concepts he considered worthy of consideration. He then structured these concepts into an instrument which he submitted to authorities in the field who were asked to respond as to the merit of each of these concepts.

Data for the other four sub-problems were gathered from literature, official records and documents, correspondence, legislation, state and national organization files and reports, and from personal interviews. Some questionnaire data gathering was also used.

### Results and Conclusions

The substantiation of Lewis's conclusions was through documentary analysis rather than a statistical treatment. He considers his study as providing an analysis and evaluation of outdoor education as presently constituted. He suggests that this method be utilized in future programs. He further states that there needs to be broad-based leadership that cooperates with national organizations and that teacher-training institutions should further the potential of outdoor education through research and instructional programs. He also recommends that the significance of outdoor education must be measured in terms of interdisciplinary curricular extensions.

## PRINCIPLES AND FUNCTIONS OF OUTDOOR EDUCATION

University Microfilms  
Order #16559

By: Martin Humann Rogers, Ed. D.  
Syracuse University  
1955

### Purpose

Rogers' purpose was to gather, organize, and analyze the thought in outdoor education, thereby providing schools and teachers with a source to which they could turn for guidance.

### Procedure

Rogers set out to identify points of agreement in three steps. First, he examined the literature in the field to identify all definitions, objectives and principles. These were synthesized into statements of definitions, objectives, and principles thought to be a consensus of writers in the field. Secondly, he tested these statements with the definitions, objectives and principles of education in general for consistency, and directly observed outdoor education programs to determine if they were actually being applied. Subsequently, a panel of nine authorities in the field voiced opinions about these composite definitions, objectives, and principles.

### Results and Conclusions

A thorough analysis of definitions used in connection with outdoor education is provided. One definition approved by the jury is: Outdoor education is a method of approaching educational objectives through guided direct, real-life experiences in the out-of-doors, utilizing as learning materials the resources of the natural environment.

Twenty-one objectives received approval. These are in both the affective and cognitive domains and relate to the intellectual, physical and social development of children. Included were: (4) to develop self-reliance; (11) to supplement reading and study and to enrich learning through real, direct experiences; (12) to develop powers of observation and scientific thinking; and (17) to increase the capacity for worthwhile emotional reactions.

Forty-nine principles received approval from the jury. Included are items relating to the expanding environment, real-life experiences, planning, school-community participation, teacher roles, and guides to administration. Among them are these: (2) the program content of outdoor education experiences should center on natural out-of-door resources and phenomena; (4) outdoor education should begin in the immediate environment with simple experiences and gradually expand to the ultimate development of school camping; (7) inexperienced pupils should have short trips and simple experiences; (13) cooperation and companionship are stressed rather than competition; (25) an outdoor experience requires adequate guidance -- merely being outdoors is not enough; and (42) school camps should follow standards of the American Association for Health and Sanitation.

## THE ORIGIN AND DEVELOPMENT OF ORGANIZED CAMPING IN THE UNITED STATES 1861-1961

University Microfilms  
Order #69-3203

By: Stanley M. Ulanoff, Ph. D.  
New York University  
1968

### Purpose

The primary objective of this study was to trace the development of organized camping by national youth organizations from its origin about the time of the Civil War to 1961. An attempt was made to (a) trace the emergence of the concept of organized camping, (b) identify the number and nature of organized camps, (c) determine the factors influencing the growth and development of the summer camp, and (d) assess the relationship between these three sub-problems.

### Procedure

A historical review was made using both primary and secondary sources. The researcher synthesized the information gathered.

### Results and Conclusions

The review showed that organized camping was born out of reaction to the Civil War and people's desire to return to nature. It was a sustained movement that reflected the closing of the frontier and the beginnings of urbanization. Early camping was usually done under private auspices but came under the leadership of national youth agencies near the end of the 19th century.

## DEVELOPING A RATIONALE FOR OUTDOOR EDUCATION

By: Morris Wiener, Ed. D.  
Michigan State University  
1965

### Purpose

Through a study and review of the historical development of outdoor education, a current rationale was to be developed. Comprehensive and consistent elements of a rationale were to be isolated and used as a basis for developing outdoor education programs in public schools. Wiener was to trace the contributions of two key leaders in the outdoor education movement and determine the implications that a current rationale would have upon the design of new programs in outdoor education.

### Procedure

A historical review of literature of outdoor education was made, common elements identified and a profile of the two leaders, L. B. Sharp and Julian W. Smith, was made. Personal interviews with these leaders were made.

### Results and Conclusions

A logical foundation for outdoor education resulted from the development of a rationale, both past and present. The contributions of both Smith and Sharp form much of the present basis for outdoor education. Wiener found that outdoor education is best understood as a process which is an integral part of the school program and has its uniqueness in its setting. It emphasizes the unity of man and the universe.

TEACHER EDUCATION

**A PLAN FOR DEVELOPING COMPETENCIES FOR LEADERSHIP  
IN SCHOOL CAMPING AND OUTDOOR EDUCATION  
FOR ELEMENTARY EDUCATION STUDENTS**

University Microfilms  
Order #58-5650

By: Harriet J. Berger, Ed. D.  
New York University  
1958

Purpose

Berger's purpose was to design a plan for developing competencies essential for leadership for students majoring in Elementary Education at State Teachers College, Cortland, New York.

Procedure

A list of competencies was compiled from data drawn from the literature and from the researcher's own extensive experience in camping. The competencies were rated by authorities in outdoor education. The Cortland faculty was interviewed to gather information about the curriculum in elementary education. These data were compiled and related to each competency. A plan for developing these competencies was then devised and submitted to five jurors for rating and evaluation to determine feasibility, practicality, functionality and validity of the plan.

Results and Conclusions

Objectives of outdoor education and school camping were established in five areas: outdoor education experiences, purposeful work experiences, social living, healthful living and recreational living.

Leadership competencies were identified in the two specific areas of: (1) basic skills in camp activities and (2) understandings and knowledges.

Berger concluded that no single experience or course could develop all the necessary competencies, and that an integrated program was more desirable than a single specialized course which might be unrelated to the total curriculum.

VISUAL ENVIRONMENTAL EDUCATION: THE USE OF VISION  
AS THE PRIMARY SENSORY MODE OF PERCEPTION  
EMPLOYED IN THE TEACHING OF THE FUNDAMENTALS  
OF ENVIRONMENTAL EDUCATION

University Microfilms  
Order #72-22023

By: Doris Marie Carter  
University of Massachusetts  
1972

Purpose

This study is an exploration in the use of vision as the primary mode of perception employed in teaching the fundamentals of environment education. Resource material for the use of educators in higher education was compiled and categorized into ten diversified environmental areas of concern. This material is presented in both visual and verbal form for use in a creative manner. The resource material focuses upon the clarification of values and understanding the relationships among man, his culture, his bio-physical environment and nature.

Procedure

Ten areas concerning visual environmental education were identified and investigated. Resource materials were gathered and reviewed for the following areas:

1. The intimate city--with the visual design elements used to create intimacy being illustrated,
2. Organic/inorganic relations--for the purpose of identifying links useful in building visual structures,
3. A case study in environmental education--consisting of a specific example of an environmental analysis,
4. A case study in visual space usage--including a structural model outline and a case study executed on the University of Massachusetts campus,
5. The human habitat as a spacial form--reviewing ways various cultures have used proxemics to design living environments,
6. Small urban spaces--the elements of designing facilities such as vest pocket parks,
7. Solving city problems--physical urban problems and alternate solutions to these problems are reviewed,

8. The American artifact--types of objects, consumership problems, emotional-relationships, etc., as examples of artifacts,
9. The visual environment expressed through the fine arts--using vision to develop sensitivities about the environment rather than to solve problems,
10. The elementary curriculum--a guide for the graduate student involving him in elementary curriculum and teaching strategies.

### Results and Conclusions

The materials for each of the areas is presented using the methodology or format outlined below:

- a. Verbal synopsis--a statement about the purpose of the chapter,
- b. Verbal content--verbal resource-material; concepts and thoughts about the nature of the given area,
- c. Visual content--visual resource-material; visual concepts and thoughts about the nature of the given area,
- d. Visual projects verbalized--suggested projects related to the content to be solved visually by the students,
- e. Visual projects visualized--examples of visual results of student projects, photographs.

AN EXAMINATION OF THE OUTDOOR TEACHING PRACTICES  
OF OUTDOOR TEACHERS IN SELECTED SCHOOL CAMPS  
INTERPRETED BY INTERACTION ANALYSIS

University Microfilms  
Order #72-28531

By: Robert M. Christie, Ph. D.  
Southern Illinois University  
1972

Purpose

The purpose of this study was to examine the teaching practices of professional outdoor teachers to determine if the practices employed by outdoor teachers were consistent with the stated goals and precepts of outdoor education. A secondary purpose was to examine the relationships between course work in outdoor education and teaching experience upon outdoor teaching practices.

Procedure

The data were collected by questionnaires and tape recording lesson segments. Teaching practices of thirteen outdoor teachers from three selected school camps were analyzed. A modified version of the Flanders System of Interaction Analysis was used to classify the verbal interaction of outdoor teachers and the students.

The outdoor teachers were divided into four categories according to combinations of course work in outdoor education and teaching experience. The interaction analysis data were tabulated and compared with models of directive and indirective classroom teachers constructed from the findings of other researchers.

Results and Conclusions

Among Christie's conclusions were that outdoor teachers who had either teaching experience or course work in outdoor education met, in a minimal way, outdoor education objectives relating to teaching practices, while teachers with both outdoor education course work and teaching experience more than adequately met outdoor education objectives relating to teaching practices.

Other conclusions were that outdoor teachers displayed flexibility and modified their teaching practices to meet different situations. A combination of both teaching experience and course work in outdoor education increased the use of indirective practices of outdoor teachers.

The researcher recommended that outdoor teachers should be required to take course work in outdoor education, and school camp staffs should be composed of more experienced teachers than inexperienced teachers. He also suggested using a broader sample than was used in this study to obtain valuable information about the outdoor teaching process.

## A STUDY TO DETERMINE THE SIGNIFICANT OUTDOOR EXPERIENCES FOR ELEMENTARY TEACHERS

Abstracts of Field Studies for the  
Degree of Doctor of Education  
Colorado State College of Education  
Volume 23, p. 112

By: Vincent A. Cyphers, Ed. D.  
Colorado State College  
1961

### Purpose

The aim of this study was to identify those outdoor experiences which were significant for elementary teachers who wished to extend their instruction beyond the schoolroom.

### Procedure

The periodical literature published between 1925 and 1958 was reviewed to select experience items to be used in developing a Personal Experience Inquiry Form. Experiences receiving a high rating on the Personal Experience Inquiry Form and mentioned frequently on the Free Response Form were used in constructing an Experience Attitudinal Inventory Form. This instrument was used to obtain judgmental ratings from elementary teachers and a jury of experts. Cyphers used a percentage analysis and Chi square technique in treating the data.

### Results and Conclusions

Among the major conclusions were: (1) a majority of respondents had not received adequate emphasis on the use of outdoor resources in either their undergraduate or graduate studies; (2) most respondents had not participated in the 102 outdoor experiences in their professional education, but they had participated in more than half of these experiences in their background of experiences outside that of professional preparation; (3) teachers in both outdoor and non-outdoor school systems and jury members indicated high agreement on a majority of experiences making up the Experience Attitudinal Inventory Form.

AN INVESTIGATION OF THE EFFECT AN OUTDOOR EDUCATION  
EXPERIENCE HAS UPON ELEMENTARY EDUCATION STUDENTS'  
UNDERSTANDING OF HOW LEARNING IS FACILITATED

University Microfilms  
Order #59-1906

By: William M. Hammerman, Ed. D.  
University of Maryland  
1958

Purpose

The problem under consideration was to determine the contribution of an outdoor education experience on a pre-service teacher's understanding of the learning process. A second phase of the problem was the illumination of problems inherent in measuring one's understanding of how learning is facilitated.

Procedure

Changes in an individual's understanding of how learning is facilitated were to be measured as an altering of his self-system and related concepts--his feelings, opinions, attitudes, and behavior. The investigator developed an instrument to test the understanding which was administered both prior to and after the outdoor experience. A stratified sample of elementary education majors from Northern Illinois University was selected and tested during the spring semester 1957. Instruments used were the Q-sort of learning, an index of adjustment and values, and the American Council on Education Psychological Examination for college freshmen.

Results and Conclusions

Comparisons were made among sophomores, juniors, and seniors and by personality types and mental ability. No significant difference was found for the Q-sort and grade level before and after the outdoor experience. Sophomores and juniors generally made greater gains than did seniors. No difference was found by quartiles for the ability differences. Seniors with student teaching prior to the outdoor experience did not increase their understanding but seniors without student teaching experience showed a significant change in understanding how children learn.

# THE EFFECT OF AN ORIENTATION TO THE OUTDOORS ON TEACHING BEHAVIOR IN THE CLASSROOM

By: Billy D. Hauserman, Ed. D.  
State University of New York,  
Buffalo  
1963

## Purpose

The study had as its focus the classroom performance differences between student teachers with an orientation to the outdoors and those without this orientation. An attempt was made to determine the differences in the teaching-learning processes utilized by the two groups.

## Procedure

Elementary education majors from the State University College of New York at Geneseo who did student teaching during the spring of 1963 were selected as the population for this study. An equal number of students in an experimental and control group were selected. The experimental group received an introduction to outdoor education through observation of a sixth grade camping program, by viewing and discussing films as sophomores, and by becoming actively involved in a school camping program while taking part in a school outdoor education unit. Observations were made on the OSCAR instrument and an analysis of variance statistical treatment was used.

## Results and Conclusions

The student teacher group with an outdoor orientation revealed a statistically greater behavioral pattern in their teaching-learning processes used. The OSCAR (observational instrument) showed a statistical difference in the emotional climate in the two groups. The major findings were that student teachers with an outdoor orientation had consistently warmer, personal climates with greater emphasis on individual activities.

DETERMINING CHANGES COLLEGE STUDENTS UNDERGO  
IN SELECTED CATEGORIES AS A RESULT  
OF THE SCHOOL CAMPING EXPERIENCE

University Microfilms  
Order #65-1831

By: Ruth Heppel, Ed. D.  
Wayne State University  
1964

Purpose

The purpose of this study was to determine changes in college juniors after they had experienced five days of a school camp situation with children.

Procedure

Data were obtained from 45 juniors in a teacher preparation program through a questionnaire, a daily log, a supplement to the log, and by an attitude scale of teaching values.

Results and Conclusions

Students who were majoring in elementary education generally reacted differently from secondary majors. All students experienced anxiety the first two days, but this gave way to confidence later on in the week. Attitudes expressed as changed include awareness to the different environment, appreciation for informal group activities, individual differences, insights into children's interest spans, cooperativeness, eagerness and personality fluctuations. Elementary students generally formed more positive attitudes toward a camping program than did the secondary majors.

ANALYSIS OF THE FACTORS WHICH INFLUENCE  
ELEMENTARY TEACHERS IN THE UTILIZATION  
OF OUTDOOR INSTRUCTIONAL ACTIVITIES

University Microfilms  
Order #64-11064

By: John Wallace Hug, D. Re.  
Indiana University  
1964

Purpose

This study was an attempt to discover and analyze the factors which either encourage or discourage the use of outdoor instructional activities by intermediate elementary teachers.

Procedure

An instrument for interviewing intermediate elementary teachers about school, environmental, and teacher-related factors was developed. Factors were related on a continuum from strong encouragement to strong discouragement. Teachers using outdoor instructional activities were compared to teachers who did not utilize the out-of-doors.

Results and Conclusions

Although most factors were not statistically significant, teachers active in outdoor activities were younger, had more children, had 1.3 fewer years teaching experience, had more degrees, had attended more college outdoor related courses and had been enrolled in college more recently than the non-active teachers. Farm-raised teachers tended to stay away from outdoor activities.

The makeup of the class had little bearing upon the use of the out-of-doors, but classes with one or more low IQ students less often used the out-of-doors.

Classroom factors of grade level, ability level, availability of proper clothing, general health, and socioeconomic class had no or only minor influence on the utilization of the outdoors. Not one of the community factors was significant. Little or no influence on the use of the outdoors was found for the teacher factors of age, health, home responsibility, personal grooming, educational preparation, and disruption of the usual classroom routine.

## USE OF NEAR SHORE MARINE ENVIRONMENT AS A FIELD LABORATORY BY SCIENCE TEACHERS AND STUDENTS

University Microfilms  
Order #70-29833

By: Dale Eugene Ingmanson, Ed. D.  
University of Florida  
1965

### Purpose

An explanation of the possible use of the near-shore environment as an extension of teaching marine science was the main purpose of this study. Another aspect of the study was the development of a rationale and justification for working in a marine environment.

### Procedure

Concepts basic to marine sciences such as biology and geology were identified and classified in the regular science curriculum of the school. Concepts were to be investigated as demonstrable in the marine environment and specific directions and examples were to be developed.

### Results and Conclusions

Basic areas of study in marine science include substrate, temperature, currents, tides, salinity, pH, light penetration, dissolved oxygen and others. They were discussed in terms of classification, nature, measurement, relationship to organisms, and their role in the school curriculum. Ingmanson made many cases for including marine science in the school curriculum by relating such objectives as principles of learning, human growth and development, curriculum development, setting up research models, and carrying out investigations.

A SURVEY OF TRAINING PROGRAMS FOR AUXILIARY SCHOOL  
PERSONNEL IN ENVIRONMENTAL EDUCATION IN NEW ENGLAND  
WITH EMPHASIS ON THE ROLE OF ENVIRONMENTAL AIDES

University Microfilms  
Order #72-18108

By: Warren Masters Little, Ed. D.  
University of Massachusetts  
1972

Purpose

This study was a survey of existing programs to gather information about environmental aide programs. The data would help administrators in determining effective ways for utilizing aides assisting teachers and students in environmental education programs.

Procedure

Five operating programs were identified and a structured interview with the administrator of each was held. A questionnaire was used with the administrator, selected teachers, and aides to determine their perception of the role and function of the aide. All respondents ranked a 50 item activity sheet modified from Bowman and Klops of the Bank Street College of Education. Profiles of the aide were drawn from this information.

Results and Conclusions

No statistical analysis was used in the study. Data gathering led to a description of the role and function as seen by each sector of the interviewed population. A possible role conflict was identified among the aides and teachers as aides saw themselves as specialists and wanted to move vertically upward in the hierarchy, while teachers saw aides as supplementary to the teachers. There seemed to be a variance in programs as to the role of the aide but a general agreement between the aides and teachers as to things the aides should not do. Teachers welcomed the assistance.

A STUDY OF ELEMENTARY EDUCATION MAJORS' KNOWLEDGE  
OF CONSERVATION CONCEPTS AND DEMOCRATIC PROCESSES  
AT THE UNIVERSITY OF SOUTHERN MISSISSIPPI

University Microfilms  
Order #71-28837

By: Georgianna Heywood Lowen, Ed. D.  
University of Southern Mississippi  
1971

Purpose

A major issue today is that of maintaining our natural resources in ecological balance. The best way to do this is through education in conservation and democratic processes. This study was an attempt to determine the knowledge of the concepts in conservation and democratic processes held by elementary education majors and to determine what educational and background experiences aided this knowledge.

Procedure

The author surveyed 200 junior and senior students majoring in elementary education at Southern Mississippi University. She administered the Test of Reasoning in Conservation and the Principles of Democracy Test to all subjects and had each fill out a questionnaire concerning his background. The analysis of variance statistic was used.

Results and Conclusions

The review of literature indicated that half of the colleges in the United States offered a course in conservation in 1957, but a study at Wisconsin University in 1967 indicated no significant difference in students' conservation attitudes after taking such a course. A 1968 survey at Michigan University showed that student teachers were not exposed to environmental education courses.

The students who had taken a course did no better on the Principles of Democracy Test than the other students. With no correlation between background and academic preparation, other methods for acquiring concepts of conservation and democratic processes must be presented. The implications of this study are that the school administrators need to plan for formal preparation in this area for prospective teachers.

## A DESCRIPTIVE STUDY OF PROSPECTIVE ELEMENTARY TEACHERS' ATTITUDES RELATING TO ENVIRONMENTAL PROBLEMS

University Microfilms  
Order #72-6674

By: Kathleen Pauline Lyons, Ed. D.  
Indiana University  
1971

### Purpose

The purpose of this study was to determine the effectiveness of an instructional program designed to develop positive attitudes toward environmental problems in selected preservice elementary teachers.

### Procedure

Three preservice elementary education students were selected for the study. They participated in six planning sessions to develop lessons based on the general topics of litter, air and water pollution, and ecosystems. Each student teacher taught a lesson after each planning session. Subjects were then interviewed to identify changes in attitude or life style that might have occurred.

### Results and Conclusions

The subjects displayed positive attitude changes toward environmental problems. Participation in the study appeared to affect life styles and attitudes of the pre-service teachers.

Lyons recommended that the procedures and materials used in this study serve as a model for the development of an elementary environmental workshop.

A SURVEY OF THE DUTIES AND RESPONSIBILITIES  
OF PROFESSIONAL SCHOOL CAMP DIRECTORS AND COUNSELORS  
IN A SELECTED GROUP OF CALIFORNIA CAMPS

Graduate School  
University of Oregon

By: Dorothy Lou Ma. Millan, Ed. D.  
University of Oregon  
1957

Purpose

Mac Millan wished to survey the school camp directors and counselors in a number of California school camps to identify their duties and responsibilities and to use this information as a basis for developing recommendations for the preparation of professional workers in the field.

Procedure

Data were obtained by reviewing the relevant literature, by interviewing school camp experts, teachers, and administrators, by visiting camps, attending outdoor education and school camping conferences, and through 18 years of experiences as a counselor and director in school camps or in the camping field. Among others, all the camps operating for the entire school year in southern California were visited.

Results and Conclusions

Mac Millan reported that an excessively wide ratio between campers and trained persons existed. Her respondents believed counselors and directors should have special training, teaching experience, and experience in organized groups or club work, and they need training in science, in-service training, camp counseling, arts, crafts, and music. She reported that counselors and directors believed a special knowledge and interest in children was important and that understandings about working with people and administrative skills were required.

Among MacMillan's recommendations are: (1) training should be provided in teacher training institutions for individuals in school camping and outdoor education; (2) counselors and directors should be accredited teachers; (3) counselors should have training and experience in the methods of teaching outdoor education and camping, all areas of the basic sciences, appreciation for environment, conservation, and ecology of life; and (4)

directors of programs should have additional training and experiences in developing courses of study, administrative processes, and teacher education.

In addition to the above, MacMillan provided a long list of findings and recommendations for the training and preparation of counselors and camp directors.

## THE OUTDOOR LABORATORY: IN-SERVICE EDUCATION IN THE PROCESSES OF SCIENCE

University Microfilms  
Order #67-12883

By: Florence R. McCormick, Ed. D.  
University of Arkansas  
1967

### Purpose

The purpose of the study was to develop and test an in-service program for secondary school biology teachers which would provide increased understanding of scientific processes and the skills necessary to incorporate these processes in their teaching.

### Procedure

Thirty-one biology teachers in a ten week National Science Foundation Institute participated in this two phase program. The Watson-Glaser Critical Thinking Appraisal and the Sequential Tests of Educational Progress - Science were administered to the subjects on a pre- and post-test basis.

In Phase I of the project the teacher made a disciplined investigation of ecology using a principles concept habitat approach including a substantial amount of field work. In Phase II, each participant supervised one of his own students in a similar investigation. An NSF Summer Institute in Ecology was used as the control.

### Results and Conclusions

Twenty-two participants responded to the questionnaire administered near the close of the subsequent year. They revealed that 14 outdoor laboratories were in use for the first time and 18 teachers were using outdoor laboratories in their teaching. Eight new herbariums had been established. Twice as many students were in independent study as in the previous year. Student interest had been stimulated by the outdoor laboratories. Fifteen teachers used the outdoor laboratory for entire classes. Four teachers used the outdoor laboratory in teaching general science.

McCormick concluded that participants in the experimental program had changed their teaching practices. There also appeared to be a slight increase in teacher understanding of scientific processes.

A COMPARISON OF THE LEARNING BEHAVIORS OF  
EIGHTH AND NINTH GRADE ESCP EARTH SCIENCE STUDENTS:  
ONE HALF EXPERIENCING LABORATORY INVESTIGATIONS  
IN THE INDOOR ENVIRONMENT; THE OTHER HALF EXPERIENCING  
LABORATORY INVESTIGATIONS IN THE OUTDOOR ENVIRONMENT

University Microfilms  
Order #72-13895

By: Eugene Stephen McNamara, Ed. D.  
Pennsylvania State University  
1971

### Purpose

This study investigated whether there would be a significant difference in overall achievement, critical thinking, preference for the outdoors, and the individual achievement of concepts between groups experiencing laboratory investigations indoors and those working outdoors. A second aspect was the determination of difference in IQ group levels as based on the Lorge-Thorndike Intelligence Test.

### Procedure

Pre-testing was done with the ESCP Unit Achievement Test I, the Cornell Critical Thinking Test, and the McNamara Indoor-Outdoors Preference Appraisal. All work for the indoor group was conducted indoors. The laboratory work was conducted outdoors for the outdoor group. The Lorge-Thorndike Intelligence Test was administered, scores analyzed and the difference between group means tested for significance. Five significantly different groups were identified with one-half of each group randomly assigned to the outdoor group. Concept Test I was administered after three chapters were covered, and Concept Test II administered after the sixth chapter was completed. Post-testing with the ESCP Achievement Test, the Cornell Critical Thinking Test, and the McNamara Indoor-Outdoor Preference Appraisal was held after the six chapters were completed.

### Results and Conclusions

Significant differences between groups were found when evaluating single concepts rather than overall achievement. Learning was enhanced in the outdoors if the concepts were directly related to the environment. Critical thinking and preference for the outdoors were changed favorably for those working in the outdoors. The author recommends that curriculum planners and administrators consider the use of the outdoors for the low ability groups to help to enhance their achievement.

## ENVIRONMENTAL CONSERVATION EDUCATION IN MINNESOTA'S COLLEGES AND UNIVERSITIES

University Microfilms  
Order #71-22229

By: William Raymond Miles, Ph. D.  
University of Minnesota  
1971

### Purpose

The purpose of this study was to analyze attitudes, policies and plans for present and future development of programs in teaching, research and continuing education in environmental conservation education in Minnesota colleges and universities.

### Procedure

Questionnaires were used to survey 41 institutions of higher education and 750 elementary and secondary educators in Minnesota. Selected educators and conservationists were interviewed and a catalog survey of colleges and universities conducted.

### Results and Conclusions

Miles drew 14 conclusions. Among these were: (1) Minnesota educators are better prepared to teach and are teaching more environmental conservation than is being reported; (2) educators unanimously agree on the need for environmental conservation instruction for both pupils and teachers; (3) the term "environmental education" is being used by educators in preference to the term "environmental conservation."

Among the seven recommendations were:

1. A state-wide environmental conservation advisory group should be established.
2. Courses dealing with environmental conservation should be required for teacher certification.
3. Colleges should develop programs for the preparation of specialists in environmental conservation.

## A PATTERN OF CURRICULAR EXPERIENCES IN OUTDOOR EDUCATION

University Microfilms  
Order #72-13324

By: Sandra Ann Modisett, Ed. D.  
University of Northern Colorado  
1971

### Purpose

The purpose of this study was to identify the curricular experiences in outdoor education to be included in an undergraduate elementary education teacher preparation program. A secondary purpose was to survey the status of outdoor education in colleges and universities, and the acceptance of outdoor education by schools of education.

### Procedure

Teachers, principals, supervisors, curriculum directors, and college instructors rated experiences they felt should be included in the undergraduate preparation of elementary school teachers. These experiences were submitted to two juries for rating: (1) professionals in outdoor education and (2) professionals in teacher education. Experiences were judged appropriate for (1) a specific course in outdoor education, (2) an education methods course, or (3) a professional preparation course in elementary education.

### Results and Conclusions

There was general agreement among teachers, principals, curriculum directors, and supervisors as to the curriculum experiences that should be included in outdoor education. Generally speaking there was lack of agreement or only slight agreement between the teachers and the college instructors, and between the teachers and the professionals in outdoor education and the professionals in teacher education as to which experiences should be included in an outdoor education curriculum. For the most part, the outdoor education experiences were placed in a specific outdoor education course by the respondents.

A specific result of this study was the development of a course in outdoor education for Adams State College.

A COMPARISON OF THE EFFECTS OF TEACHING  
A TWELFTH GRADE GOVERNMENT AND SOCIOLOGY CLASS  
IN AN ENVIRONMENT SATURATED WITH STUDY TRIPS AND  
RESOURCE SPEAKERS WITH THE EFFECTS OF A TRADITIONAL  
COURSE OF GOVERNMENT AND SOCIOLOGY WHEN BOTH ARE  
OFFERED IN A VOLUNTARY SUMMER SCHOOL PROGRAM

University Microfilms  
Order #71-28078

By: Edward Bottom Morrison, Ed. D.  
University of the Pacific  
1971

Purpose

Morrison believed that using field trips and resource speakers to saturate the environment would cause students to react in a manner superior to a regular or traditional program of instruction in the same subject area.

Procedure

Some 73 summer school students were placed in the experimental group and studied government and sociology by taking field trips and studying onsite. In addition many resource persons were brought to the classroom for discussions. The traditional group stayed in the classroom and used the same methods that the school had been using in the past. Both cognitive and affective gains were tested through standardized national tests, by video-taped questionnaires, and evaluation of school and counselors' records and appraisals.

Results and Conclusions

Members from the experimental group scored significantly higher at the .01 level by analysis of covariance in the cognitive measures. This same group also showed an increase in school attendance. Increased participation in community activities and a reduction in the number of discipline referrals by the experimental group was significant at the 0.20 level.

Cognitive gains were made by the Caucasian members of the experimental group whereas minority members of the experimental group did not achieve significantly differently from minorities in the control group. In the affective area, on videotaped tests minorities

selected responses concerning attitudes that were divergent from those of Caucasian subjects.

It was recommended that this program be utilized during the regular school year, and that further experimentation be done using videotaped tests as questionnaire.

## A STUDY OF OPPORTUNITIES FOR LEADERSHIP TRAINING IN OUTDOOR EDUCATION

Cornell University Library  
Ithaca, New York

By: Gilbert Warren Mouser, Ph. D.  
Cornell University  
1950

### Purpose

Mouser wished to learn the nature of available training for outdoor education leadership. He saw leadership training as the critical factor if outdoor, conservation, and camping education were to gain importance and hence the need to know the status of training for teachers and leaders.

### Procedure

Mouser visited 100 youth camps to interview directors and staff relative to the training of staff members. He visited and examined 21 centers believed representative of training programs in general, and administered questionnaires to staff persons and students in these programs. He also questioned school administrators and state education officials in regard to outdoor education needs.

### Results and Conclusions

Mouser reported that 18 states had no programs of training for outdoor leadership. The greatest numbers of such programs were in California, Texas, Michigan, North Carolina and Illinois. He reported that the National Audubon Camps, the Ohio Laboratory, and the Purdue Camps were doing effective work in preparing outdoor leaders.

Most programs operated only in summer and were classed as summer camps, workshops, and laboratories. Some were conducted by colleges on their own campuses or in extension. Sponsors were of five types: (1) private organizations; (2) state departments; (3) colleges and universities; (4) civic groups; and (5) individuals. Emphases varied: (1) conservation education; (2) camping skills; (3) nature study; (4) social development; (5) outdoor education, etc.

Students attended mainly because of an interest in nature or the desire to teach conservation. They said that the important outcomes related to nature study, field activity, conservation, and teaching aids, and that this training had a major impact on their teaching methods. Most wanted greater emphasis on field study in the programs.

The directors were primarily biologists or specialists in related fields and wanted greater emphasis placed on soils, wildlife management, forestry, and field study of birds, fish, plants, etc. Offering the training in a camp situation was considered an advantage. Most directors thought it more important to emphasize basic field information than methods of teaching.

Mouser recommended that (1) weekend conservation education workshops be offered more frequently for school administrators, university faculty, and teachers; (2) colleges and universities lend greater assistance to programs of outdoor teacher education; (3) directors examine and evaluate their programs to make them more effective; (4) appropriate state agencies be more active and lend greater assistance; and (5) workshops be operated for longer periods (say six weeks) in camp settings and include greater amounts of field study emphasizing ecological relationships.

THE DEVELOPMENT AND EVALUATION  
OF AN AUDIO-TAPED PROGRAM OF INSTRUCTION  
IN LEARNING CONCEPTS OF ECOLOGY AND CONSERVATION

University Microfilms  
Order #72-8989

By: William Presnell, Ph. D.  
Cornell University  
1971

Purpose

Presnell set out to design, develop, use and evaluate a program for pre-field trip instruction in environmental education that could be utilized by teachers with little background or preparation. He wished to develop an instructional program that was inexpensive, could be readily incorporated into the existing curricula, and could serve to help both students and teachers deal with ecological principles.

Procedures

Ten half-hour sequential audio-taped lessons were designed: four comprised an autumn pre-field trip program, three a winter program, and three a spring program. Included with these were color slides, bulletin board displays and charts, guide books, and various natural materials and illustrative models. The audio input was provided using cassette recorders. An experimental group of nearly 200 students experienced these lessons, were provided appropriate field trips led by Presnell and completed the tests he devised. A control group of students completed only the tests. Analyses were made of the students' responses to the test items, and staff responses to questionnaire items. A substantial amount of time was spent in the observation of students.

Results and Conclusions

A program of instruction was devised, utilized, tried, evaluated and made available. Few significant differences were found between the responses of the two groups of students used in the study. Although more significant gains were made by the fifth graders than the sixth graders, there was considerable evidence that the materials developed were more appropriate for sixth graders.

Because of the teachers' lack of training in ecology and conservation they were not involved in the early planning of the program or its use. They, therefore, considered this to be an enrichment program which they were incapable of supplementing. Although some teachers indicated interest in assisting with the field experiences, few, other than the science teachers, did so.

The teachers involved in this study were receptive to the materials and believed that their students learned from them. Since no major problems were encountered, it was concluded that the lessons could be utilized in the schools by untrained personnel at reasonable cost.

AN ANALYSIS OF SELECTED OUTDOOR EDUCATION PROGRAMS  
AND RECOMMENDATIONS FOR CURRICULUM AND IN-SERVICE  
EDUCATION FOR THE OUTDOOR EDUCATION PROGRAM OF  
THE JEFFERSON COUNTY, COLORADO, PUBLIC SCHOOLS

University Microfilms  
Order #64-6308

By: Mabel Gertrude Pulliam, Ed. D.  
Colorado State College  
1963

Purpose

Pulliam set out to survey successful outdoor education programs and to use the data to improve the Jefferson County, Colorado, outdoor education program and teacher in-service program for outdoor education.

Procedure

Pulliam reviewed the literature and subsequently developed a questionnaire that was submitted to the directors of some 60 jury-selected outdoor education programs. These data gave Pulliam a foundation for developing tentative recommendations to the school district in regard to improving its outdoor education program. Primary emphasis in these recommendations was on curriculum or program. These tentative recommendations were submitted to a jury of experts for review. They were then revised for presentation to the school district. A plan for in-service training of teachers was included.

Results and Conclusions

Pulliam recommended that the outdoor education program be expanded in nearly all curricular areas and include conservation and outdoor skills. She recommended specific objectives for the program, and specific concepts, understanding, and "facts" for areas such as conservation of forest and grassland, water, soil, wildlife, and beauty of nature, etc. Pulliam provided and listed specific activities for language, such as letter writing, creative writing, public speaking; for mathematics, such as orienteering, land measure, etc. Similar types of activities were recommended for other curricular areas. Plans were developed for a series of teacher meetings and workshops to provide teachers with outdoors experiences.

## UTILIZATION OF COMMUNITY RESOURCES BY PUBLIC ELEMENTARY SCHOOL TEACHERS

University Microfilms  
Order #70-2622

By: Alden Merle Reed, Ed. D.  
University of Pittsburgh  
1969

### Purpose

Reed wanted to find what factors encourage teachers to use community resources and what factors deter them from using these resources.

### Procedure

One hundred seventy-three second and third class school districts in Pennsylvania were surveyed. Data were obtained from administrators and teachers in these districts as Reed wished to get to those directly facing the problem.

Two instruments were used. One was administrative in nature, dealing with organization for resource use, administration of the resource program, general school information, encouraging and discouraging procedures, etc. The other was used to obtain teachers' personal views, biases and practices. Items included were (1) the use of community resources and field trips, (2) critical incidents that encouraged or discouraged the use of field trips, and (3) availability of resources. Comparisons were made of responses by size of school, experience of teachers, etc.

### Results and Conclusions

Administrative factors found to encourage teachers to use community resources included:

- a. active encouragement by administrators,
- b. readily available transportation for field trips,
- c. staff meetings or sessions devoted to sharing resource information, plans and values,
- d. freedom to select and use community resources,
- e. funds budgeted specifically for this purpose.

Factors encouraging the use of resource persons included previous (a) success in using a resource person, (b) favorable reactions by students, and (c) favorable reaction by resource person to children.

Factors encouraging use of field trips included: (a) previous success in use of field trips, (b) evidence of favorable reaction on the part of students, (c) evidence of gain by pupils, (d) good presentation by host, (e) favorable reaction on part of host.

Factors found to discourage use of community resources included: (a) limited funds and transportation, (b) lack of an organized program, and (c) too rigid bus schedule.

Factors discouraging the use of resource persons included: (a) resource persons' presentation not at child's level, and (b) resource persons' presentation unacceptable.

Factors discouraging use of field trips included: (a) difficulty in obtaining transportation, (b) groups too large to transport, (c) unsatisfactory previous experience.

Reed found no appreciable difference in the data from the four types of districts studied or among the teacher experience categories.

A PROPOSED INTERDISCIPLINARY APPROACH TO AN  
OUTDOOR EDUCATION PROGRAM IN THE PROFESSIONAL  
TEACHER PREPARATION CURRICULUM AT WEBER STATE COLLEGE

University Microfilms  
Order #67-11687

By: Raymond Elmo Rhead, Ed. D.  
University of Utah  
1967

Purpose

In this study, Rhead wished to develop a proposed interdisciplinary approach to an outdoor education program in the teacher preparation curriculum at Weber State College. To do so, he had to survey the programs in operation in western colleges and universities, establish a set of objectives to guide the program he proposed at Weber, and develop the proposed program.

Procedure

A tentative list of outdoor education objectives was constructed by Rhead and submitted to an expert jury for analysis. Items the jury ranked high were retained on the revised list used by Rhead. He then constructed a survey questionnaire, tested it, revised it, and then sent it to administrators in 50 western colleges and universities. The data obtained from this survey and the objectives were used by Rhead as the basis for developing his proposed interdisciplinary outdoor teacher education program. This program was subsequently submitted to a jury of experts for approval, and revised.

Results and Conclusions

Rhead found that 18 of the colleges and universities he surveyed had an outdoor education program, and seven had an outdoor teacher education program. Six of them required that student teachers have resident experience in outdoor education. He found that interest was growing in the western United States, and that a lack of published material and research existed. Rhead concluded that Weber had most of the resources that it needed for an interdisciplinary program in outdoor education.

Rhead recommended that a series of planned outdoor education experiences be made a part of the curriculum at Weber State College

and that each division at Weber share in planning and providing these outdoor experiences for prospective teachers. He also recommended that a resident outdoor school be developed and that Weber cooperate with area schools to provide in-service training in outdoor education for their teachers.

A DETERMINATION OF BASIC URBAN  
ENVIRONMENTAL UNDERSTANDINGS IMPORTANT FOR  
INCLUSION IN THE ELEMENTARY SCHOOL CURRICULUM

University Microfilms  
Order #70-5314

By: Leo Leonard Ronfeldt, Ed. D.  
University of South Dakota  
1969

Purpose

The purpose of this study was to determine understandings deemed basic to the knowledge of urban environment and important to include in the elementary school curriculum.

Procedure

A survey instrument was constructed consisting of 104 understandings in five categories: air, water, land-use, man-made resources and urban ecology. It was sent to a critic panel of 30 conservationists and 60 educators for completion and evaluation.

Results and Conclusions

All 104 understandings were judged important enough to include in the elementary school curriculum by the panel of educators. The conservationists judged 98 understandings to be basic and fundamental to the knowledge of urban environment.

Both conservationists and educators stressed the need for urban environmental education in the elementary school curriculum. Both elementary school teachers and curriculum specialists were in close agreement on the understandings to be included in the elementary school curriculum.

The critic panel felt that urban environmental education should be incorporated into other disciplines rather than being taught as a separate discipline. The five categories of understandings were judged to be of equal importance.

FUNDAMENTAL CONCEPTS FOR  
ENVIRONMENTAL MANAGEMENT EDUCATION (K-16)

University Microfilms  
Order #69-22468

By: Robert E. Roth, Ph. D.  
The University of Wisconsin  
1969

Purpose

The purpose of this study was to develop a taxonomy of conceptual objectives for use in planning instructional programs related to environmental management education.

Procedure

Questionnaires and personal interviews were used to obtain and validate appropriate concepts. One hundred twenty-eight concepts developed in cooperation with the Wisconsin Panel of Scholars were submitted to a national panel composed of 699 scholars representing 40 disciplines in 24 universities from 12 ecological zones in the United States. There was a fifty percent return from the national panel.

Results and Conclusions

Ninety percent of the respondents judged 111 concepts as meeting the criteria for selection. These concepts were organized into a Taxonomy. The concepts were classified into 13 topics such as Environmental Ecology, Politics, The Family, Natural Resources, Economics, Management Techniques, and the like. Scholars from the 40 academic areas and 12 ecological regions tended to agree on the majority of concepts to receive emphasis in environmental management education.

~~SECRET~~

A STUDY OF THE USE THAT IS BEING MADE OF THE  
OUT-OF-DOORS IN TEACHING IN THE PUBLIC SCHOOLS  
AND IN THE TEACHER TRAINING SCHOOLS

By: Eugene Shelar, Ph. D.  
Cornell University  
1949

Purpose

The problem under investigation is stated precisely in the title: to investigate the ways in which the outdoors is being used in the public schools and in the teacher training schools. Shelar considered programs in the categories of school yards, school forests, school farms, school sanctuaries, and using privately owned facilities.

Procedure

The study was limited to programs operating only during regular school hours, and which were an integral part of the educational program. Shelar sent out 2,000 questionnaires and traveled 15,000 miles gathering data through personal interview and observation.

Results and Conclusions

Major findings consisted of detailed descriptions of school programs classified according to the above mentioned categories. Shelar also identified state laws pertaining to ownership of land by public schools for the purpose of maintaining an outdoor laboratory.

One of Shelar's conclusions was that relatively little field work was taking place in connection with teaching the natural sciences.

A COMPARISON OF THE EFFECTIVENESS OF  
EIGHT-WEEK CAMPUS SESSIONS AND ONE-WEEK WORKSHOPS  
IN TEACHING OUTDOOR RECREATION ACTIVITIES

University Microfilms  
Order #72-29915

By: Laure Mae Switzer, Ed. D.  
University of Oklahoma  
1972

Purpose

This study was an attempt to assess the differences in teaching six different recreational activities in a one-week workshop and in a regular campus session. Subjects were evaluated in cognitive, psychomotor, and affective domain skills in these six areas.

Procedure

Five hundred nineteen students (enrolled in Southwestern State College, Weatherford, Oklahoma) were administered psychomotor, cognitive, and affective domain tests in the recreational activities of archery, baitcasting, canoeing, golf, sailing, and trapshooting. Some 337 students were involved in one week massed meetings offered during July and August. The others were involved during a regular session during the fall semester. A one-way analysis of covariance was used for the psychomotor and cognitive tests along with a student's test for the affective domain testing.

Results and Conclusions

The distributed practice of the regular session shown by the pre- and post-tests for cognitive learnings in the areas of baitcasting, canoeing, sailing, and trapshooting along with psychomotor skills in golf were better than in the one week massed sessions. The one-week session was better for the skills acquisition of baitcasting, canoeing, sailing, and trapshooting and these students developed better attitudes in general towards recreational concepts. The students seemed to acquire more knowledge about the six recreational areas during the longer sessions than in the one-week sessions but students produced superior skills and attitudes in the more relaxed, informal atmosphere of the one-week sessions.

## CRITERIA FOR EVALUATING CONDITIONS AND CHANGES AFFECTING TEACHER-STUDENT RELATIONSHIPS IN OUTDOOR EDUCATION

University Microfilms  
Order #71-2184

By: Charlene Lucile Vogan, Ph. D.  
Michigan State University  
1970

### Purpose

The determination of objectives which would foster conditions for positive teacher-student relationships and the establishment of evaluative criteria were the main purpose of this study. The research was based upon the premise that outdoor education, especially the residential camping experience, is an accepted tool for educational enrichment.

### Procedure

The study covered 18 states and school systems that had a residential school camping program for at least three days for fifth and sixth grade students. The author included five steps in her research: (1) obtaining a background in readings; (2) a review of current practices in outdoor education; (3) construction of a questionnaire to survey specific practices of interrelationships of activities and the organizational patterns of existing programs; (4) development of an experimental guide to test the feasibility of such an approach; and (5) the preparation of evaluative criteria for teachers pertaining to positive changes in teacher-student relationships.

### Results and Conclusions

Vogan found a wide range of procedures in planning, organizing, and implementing programs existed along with a lack of emphasis upon guidelines for the enhancement of student-teacher relationships. Vogan suggested that teachers include students more in planning, goal determination, planning ways to utilize facilities, and evaluation.

Other recommendations include a greater openness between students and teachers. The teacher should be a more active learner and forget much of the classroom routine when outside working in the field. The use of new ideas should be continued upon return to the classroom.

Vogan states that if the improvement of student-teacher relationships is important, then this must be considered in planning and conducting an outdoor education program.

# A STUDY ASSOCIATING SELECTED CONSERVATION UNDERSTANDINGS WITH AVAILABLE COMMUNITY RESOURCES FOR GRADES FOUR THROUGH TWELVE

University Microfilms  
Order #67-13474

By: Roy C. White, Ed. D.  
University of Montana  
1967

## Purpose

White wanted to assist teachers to improve their efforts in conservation and to help them provide students with more direct experiences such as field studies and contact with professional conservationists.

White set out to identify some of the important conservation understandings for children in grades 4 through 12 and to identify some of the resources useful in teaching these understandings.

## Procedure

Two major stages were involved in this study. The first was to identify (using an expert jury) conservation understandings that should be used in the schools at the fourth through twelfth grades. These were categorized thusly: (1) forests, (2) soils, (3) wildlife, (4) grasslands, (5) air, (6) water, (7) minerals, (8) recreation, and (9) general.

The second stage dealt with ways to provide children with direct experiences appropriate for the understandings. Understandings were identified that could appropriately be taught through field trips to natural areas, government institutions, industrial plants, etc. Study sites and resource personnel were identified and described. Free and inexpensive supplementary materials were identified relevant to the various understandings.

## Results and Conclusions

White concluded that a large number of conservation understandings could be taught effectively through direct experiences and that a great variety of community resources, resource persons and supplementary materials are available for teaching conservation understandings.

White's study should be useful as a guide for those responsible for developing or improving study programs in conservation and for classroom teachers in his area of the country generally.

## EVALUATION

## THE EFFECT OF A RESIDENTIAL CAMPING EXPERIENCE ON THE SELF CONCEPT OF BOYS FROM LOW INCOME FAMILIES

University Microfilms  
Order #70-12149

By: Albert Andria Alexander, Ed. D.  
Boston University  
1969

### Purpose

The focus of Alexander's study was to compare the self-concepts of boys from low-income families, half of whom had experienced a camping program.

### Procedure

Boys from Somerville, Massachusetts were selected for this study. Seventy-five boys received a residential camping experience and were matched with 75 boys who did not experience the camping program. Ages ranged from 11 to 15 years. The Tennessee Self-Concept Scale was administered to both groups prior to the camping experience and again six weeks after the experience. Camp counselors rated the campers with behavior rating scale instruments developed by the researcher. Analysis of variance was used.

### Results and Conclusions

A comparison of the pre- and post-tested scores revealed a positive change for each group but there was no significant difference between the two groups. On the behavior rating scale, there was an improvement in social behavior but there was no correlation to the Self-Concept score. Although there was a greater change in self-concept by young campers than older campers the differences were not significant. There appeared to be a decline in the camper's self-concept when measured six weeks after his return home but this was not statistically significant.

The researcher recommended that a similar study be made to compare the self-concept of boys vs. girls of low, medium and high income families. He also suggested that the length of the camping experience be varied and especially recommended that a comparison be made between a residential camp experience and a day camp experience.

A STUDY OF ATTITUDINAL CHANGE IN COLLEGE STUDENTS  
AS A RESULT OF CONSTRUCTIVE PARTICIPATION  
IN AN ENVIRONMENTAL COMMUNITY SERVICE PROJECT

University Microfilms  
Order #72-23846

By: Laurence William Aronstein, Ed. D.  
State University of New York-Buffalo  
1972

Purpose

Aronstein's study sought answers to questions such as: What happens when college students get involved in an environmental community service project? Do the conditions (voluntary vs. involuntary) under which they become involved have a bearing upon what happens? Do the students experience changes in attitude toward themselves, the community, the group, society, or their school? Do students perceive this to be a learning experience or environment?

Procedure

A community service project "Cash for Trash" was the focus of this study. It consisted of work in planning and operating a solid waste redemption center in the Buffalo core area. Student participants were obtained as follows: (a) those in one section of an environmental pollution class were required to participate as a part of course requirements, (b) those in another section of the course were given the option of working in the project, (c) a group of 14 students in independent study programs was recruited to participate on a credit basis, (d) 12 students volunteered to work in the project on a no pay, no credit basis.

Various tests and scales were used on a pre- and post-test basis (i. e., The Purdue Master Attitude Scales: A Scale for Measuring Attitude Toward Any Proposed Social Action, and The Powerlessness Scale). Student logs and record books were kept and analyzed. Some participants were interviewed.

Results and Conclusions

Aronstein's data indicated that the community service project could bring about attitudinal changes in college students. Program participants reported positive attitudinal changes in themselves in

relation to environmental problems, exercising leadership, initiative, self direction, etc. Although no definitive attitudinal changes could be found toward peer groups, the researcher felt that a positive change had occurred. The students experienced a positive change toward the community and the community leaders with whom they worked. The project reinforced the optimism of most students already optimistic about the implementation of societal change, but had little impact on those who were not initially optimistic. And finally, the students grew to prefer outside teaching-learning experiences.

The independent study students gave the most time to the project. Volunteers from the environmental pollution class ranked second, and the least time was given by the non-credit volunteers.

After the project nearly all students expressed a willingness to work in community action projects and a preference for outside of school teaching-learning environments compared to inside environments.

THE RELATIONSHIP BETWEEN SCHOOL CAMPING SOCIAL CLIMATE  
AND CHANGE IN CHILDREN'S SELF-CONCEPTS  
AND PATTERNS OF SOCIAL RELATIONSHIP

By: Jerome Beker, Ed. D.  
Teachers College, Columbia  
1959

Purpose

Purpose of the study was to evaluate the effects of school camping on self-concepts and social relationship of pupils.

Procedure

Seven groups of school campers attending the New York University camp at Sloatsburg, New York, were used as subjects. Comparable groups of non-campers were used as controls. A 56-item check list was devised and used to evaluate pupils' self-concepts. Changes in pupils' social relationships were assessed by means of the Classroom Social Distance Scale. The experimental group and the control group responded to these two instruments immediately prior to and immediately following the school encampment, and ten weeks after the encampment.

Results and Conclusions

The experimental groups attending school camp showed more positive feelings toward themselves after the camp experience than before. These changes were of greater magnitude than those of the non-camper control group.

The patterns of social relationships were influenced in a positive direction. Furthermore, these changes were even greater ten weeks after the camp experience.

SIMULATIONS, CONCERN LEVEL, GRADE LEVEL AND SEX  
AS FACTORS INFLUENCING THE ASSIGNMENT  
OF IMPORTANCE TO ENVIRONMENTAL CONCEPTS

University Microfilms  
Order #72-24288

By: Janice Rae Boone, Ph. D.  
Texas A & M University  
1972

Purpose

Boone wanted to find if the importance attached to various environmental concept statements (based upon an adaptation of Roth's environmental management concepts) by junior high school students was independent of variables such as sex, grade level, environmental concern level, or completion of given instructional programs.

He also wanted to know if the responses of students at this age having completed an environmental instructional program including simulation experiences or problems were more like those of a group of environmentally concerned adults than those of students not having experienced the simulation problems.

Procedures

On a pre- and post-test basis, junior high school students assigned values to the concept statements adapted from Roth. Part of the students experienced an instructional program in ecology and environmental management including two environmental simulations. Part of them received the instructional programs without the simulations, and some students did not participate in the instructional programs. A group of environmentally concerned adults also assigned importance values to the concept statements. Students provided biographical and other data pertinent for the analysis being made. Statistical tests were applied.

Results and Conclusions

Boone concluded that most of the variables studied or combinations of these variables influenced the importance assigned to the concept statements. For instance:

- a. Pupils having experienced the simulations tended to assign higher values to the concept statements than those having the instruction program without simulations or no instructional program at all.
- b. The instructional program (with or without simulation) had a positive impact upon students having a low initial level of environmental concern, but had a negative effect upon those initially having a high level of concern.
- c. Girls assigned higher values to the statements than did the boys, generally.
- d. The pattern of responses of junior high school students to the statements was found to be similar to that of the environmentally concerned adult population.

## A DESCRIPTIVE STUDY OF FOURTH, FIFTH AND SIXTH GRADE STUDENTS' ATTITUDES RELATING TO ENVIRONMENTAL PROBLEMS

University Microfilms  
Order #72-6670

By: Betty Martela Burchett, Ed. D.  
Indiana University  
1971

### Purpose

Burchett set out to explore the factors or variables suitable for further study in fostering positive attitudes in school children toward the solution of environmental problems. This was to be approached by attempting to foster and examine a positive attitude in intermediate grade children through the use of a sequence of positively oriented instructional events or materials. Burchett by closely observing a few children wanted to learn the precise factors responsible for an attitudinal change and the time at which it might occur.

### Procedure

These were set forth by Burchett as the primary procedures in this study:

- a. An instructional package of positively oriented lessons was prepared on selected environmental topics.
- b. A test was prepared containing two parts: (1) a semantic differential portion, and (2) a Likert-type portion,
- c. Three subjects were selected for intensive study, one each from the fourth, fifth and sixth grades. Two had negative attitudes toward environmental problems and the third was noncommittal.
- d. The instructional materials were used by student teachers in the classes in which the pupils were enrolled. Pre- and post-tests were administered.
- e. Anecdotal records were kept and periodic taped interviews were conducted with the three subjects to learn of any attitudinal change.
- f. The tests, interviews, records, etc. were analyzed to find if and when attitudinal change occurred.

## Results and Conclusions

Burchett reported that there was indication of attitudinal change in a positive direction. There was a greater positive influence regarding attitudes about the future environment than the present environment. Although gradual changes were detected in the interviews, it was not possible to identify the precise events which precipitated the changes. Burchett felt that the instruction (using the materials that had been developed) and a variety of other factors affected student attitudes. Pupil participation in solving environmental problems was thought to be an important factor.

Among Burchett's recommendations are: (a) studies should be made of the permanence of attitudinal change resulting from such instruction, (b) study is needed of other factors (i. e. sex, intelligence, social and cultural backgrounds, etc.) bearing upon students' attitudes about environmental problems, (c) further research should be conducted to identify precise factors and events responsible for changing children's attitudes.

A COMPARISON OF THE USE OF OUTDOOR VS. INDOOR  
LABORATORY TECHNIQUES IN TEACHING BIOLOGY  
TO PROSPECTIVE ELEMENTARY TEACHERS

University Microfilms  
Order #71-14522

By: William Harvey Chrouser, Ed. D.  
University of Northern Colorado  
1970

Purpose

Chrouser wanted to compare the conventional indoor laboratory and the outdoor laboratory approaches to biology, using prospective elementary teachers at Colorado State College. Effects to be compared were: understanding the social aspects of science, achievement in selected biological principles, understanding of science as process, and ability in critical thinking.

Procedure

Students enrolled in a biology course designed for elementary teachers during the summer and spring of 1969 were divided into two groups; one used the regular indoor laboratory (2 hours per week), and the other used an outdoor or field laboratory. Pre- and post-tests were administered as follows:

- a. Test on the social aspects of science
- b. Methods and Procedures of Science: An Examination
- c. The Watson-Glaser Critical Thinking Appraisal
- d. Understanding of Selected Biological Principles: An Examination.

Analyses were made of students' scores to learn if the two laboratory approaches had different or similar impact.

Results and Conclusions

The analyses of scores (using various statistics including Chi-square and the F test for significance of difference between means) indicated that:

- a. Significant differences occurred in the three areas--(1) science and technology as they interact with society, (2) nature of the scientific enterprise, and (3) social responsibilities of science and scientists--included on the Test of Social Aspects of Science.
- b. The outdoor groups showed a significant difference (.05 level of confidence) in gain in the specific biological principles involved in the laboratory activities, and in understanding science as a process.
- c. No differences were found in the areas of biological principles in general and in critical thinking.

Chrouser's conclusions led him to recommend that the outdoors should be utilized as a laboratory and as a classroom whenever suitable--not only because of the effect on society and the affective domain, but also because of the effect on the cognitive domain.

AN EVALUATION STUDY OF AN EXTRAMURAL  
SCHOOL CAMPING PROGRAM FOR ADOLESCENT  
BOYS IDENTIFIED AS POTENTIAL SCHOOL LEAVERS

University Microfilms  
Order #58-1175

By: Roy Cole, Ed. D.  
Wayne University  
1957

Purpose

Purpose of the study was two-fold: (1) to determine whether a work-learn camp for potential high school dropouts had greater holding power than the regular school program held for a comparable group of potential school leavers who remained in school; and (2) to find out to what extent students might improve in their home, school, and social adjustments following the camp experience.

Procedure

Three sample groups were used in the experiment. One group of potential dropouts participated in the work-learn camp experience, while the other remained in school. The third group, who were judged to be well adjusted to school, also remained in school. The work-learn camp group were in camp for more than half the school year.

Results and Conclusions

Socially desirable attitudes and behavior were changed among the camp group. They demonstrated improved attitudes toward school following the camp experience. There were distinctive differences between the boys in school and in camp, some of which favored the in-school program; i. e., interest in out-of-school activities, and relationships with peers and adults.

Among the three sample groups, completion of high school education was: camp group, 32 percent; comparison group in school, 60 percent; well adjusted group, 97 percent.

A COMPARISON OF SOCIAL, PERSONAL, AND PHYSICAL  
DEVELOPMENT OF MALES AND FEMALES  
EXPOSED TO A DAY CAMP ENVIRONMENT

University Microfilms  
Order #71-15458

By: Benedict Emanuel Coren, Ed. D.  
University of New Mexico  
1970

Purpose

In his study, Coren set out to learn the effects or changes that might occur as a result of a six-week day camping experience on boy and girl participants in regard to social-personal adjustment and physical fitness development.

Procedure

The California Test of Personality and The AAHPER Youth Fitness Test were administered on a before-after basis to:

1. Forty-eight campers (24 male and 24 female) participating in a six-week day camp at Indian Springs Day Camp, Chester Springs, Pa., during the summer of 1970.
2. Seventy non-campers selected randomly from the school district who were not exposed to any organized program during the research period.

An analysis of covariance was made to test the hypotheses that the camp experiences would result in change.

Results and Conclusions

The analysis revealed five significant differences:

- a. Campers made greater progress in social-personal adjustment than non-campers,
- b. Campers made greater development in physical fitness than non-campers,
- c. Girl campers made greater social-personal adjustment than girl non-campers,
- d. Girl campers made greater development in physical fitness than girl non-campers,
- e. Boy campers showed greater physical fitness development than boy non-campers.

## AN EVALUATION OF THE YEAR-ROUND SCHOOL CAMP OF LONG BEACH

University Microfilms  
Order #5025

By: Nadine A. Cragg, Ph.D.  
University of Michigan  
1953

### Purpose

The purpose of the study was two-fold: (1) to determine the effects of a one-week school camp experience on certain aspects of child development; and (2) to appraise the educational results of the camp program as related to the stated objectives of the schools.

### Procedure

Data were obtained from experimental and control groups of 50 sixth graders. Achievement in the areas of language arts, vocabulary, and nature study were compared and analyzed. Pre- and post-camp data were studied to determine changes among the children during the school camp phase of the experiment.

Evaluative techniques used included "Guess Who" responses, sociograms, interviews, rating scales, check lists, questionnaires, wire recordings, and satisfaction-dissatisfaction responses.

### Results and Conclusions

General conclusions were: (1) that the one-week school camp experience did make some definite contributions to educational development according to the stated objectives; and (2) while there were common elements of uniqueness, pupil reaction to the experience was individualistic, enthusiastic and varied. Children at camp showed greater improvement in intellectual development than those who remained in the classroom.

OUTDOOR EDUCATION: A DESCRIPTIVE SURVEY  
OF PROGRAMS AND TRENDS FOR ELEMENTARY SCHOOLS  
IN THE STATE OF MARYLAND

University Microfilms  
Order #72-7599

By: George Anthony Crociocchia, Ed. D.  
George Washington University  
1971

Purpose

Crociocchia's purpose was to identify and study the organized outdoor education programs of the school systems in Maryland and to make recommendations for improving these programs. He described and analyzed their organization, administration, curricula, facilities, personnel and purposes.

Procedures

The superintendents of the 24 school systems in Maryland were the sources of Crociocchia's information about the operation of organized outdoor education programs in the state in 1970-71. Fourteen reported that their school systems sponsored outdoor education programs. Factual and opinionnaire information was gathered from personnel in these programs using questionnaires, visits and interviews. Analyses were made of this information and recommendations were developed.

Results and Conclusions

Among the findings and recommendations made by Crociocchia were:

- a. All 14 school systems sponsoring outdoor education programs plan to continue and, when possible, expand.
- b. Both resident overnight and non-resident day-only programs were provided. Some school systems provided two or more resident programs.
- c. Resident outdoor education facilities should be administered by an outdoor-school principal with complete administrative and supervisory responsibility for the program.

- d. All schools were prevented by insufficient financial resources from initiating new programs or expanding existing programs. The State Department of Education needs to lend more leadership and support for outdoor education.
- e. Curriculum guides on outdoor education vary from system to system; many appear to be but administrative handbooks.
- f. A resident facility is not necessary for a system to have a good outdoor education program.
- g. Most systems utilized the classroom teacher as an instructor at the resident facility or expect the teacher to follow up the experiences once back at the school. Few systems, however, provided sufficient in-service training in outdoor education.
- h. Student fees are the main source of revenue for the resident programs.

Crociochia also pointed out that the University of Maryland had demonstrated willingness to become involved in statewide outdoor education activities and to help to train teachers in outdoor education.

CHANGES IN SELF-CONCEPTS AND SOCIOMETRIC STATUS  
OF FIFTH AND SIXTH GRADE CHILDREN  
AS A RESULT OF TWO DIFFERENT SCHOOL CAMP CURRICULA

University Microfilms  
Order #65-13419

By: Morris Davidson, Ed. D.  
University of California, Berkley  
1965

Purpose

Davidson investigated the relationship between two opposing school camp curricula and measured changes in pupils' social relationships and self-concepts.

Procedure

Two classes of fifth and sixth graders were randomly assigned to two different philosophically oriented school camp programs: one adult centered, the other child centered. Pupils responded to a self-concept check list and to the Classroom Social Distance Scale.

Results and Conclusions

Both encampments produced positive change on the self-concept scale, but on entirely different items. Nevertheless, camper growth in self-concepts did not vary significantly between the two different approaches. Social relationships in both encampments also revealed positive change.

A SURVEY STUDY OF THE COMPARATIVE STATUS  
OF UNDERSTANDING AND REASONING IN  
CONSERVATION CONCEPTS BY NINTH GRADE STUDENTS  
IN THE PUBLIC SCHOOLS OF SOUTH CAROLINA

University Microfilms  
Order #27-22643

By: Albert H. H. Dorsey, Ed. D.  
University of Virginia  
1972

Purpose

The problem in this study was to learn about ninth grade students' understanding and reasoning ability in regard to conservation concepts and principles in various school situations of South Carolina. Dorsey wanted to find if the status of the conservation concepts and principles was independent of community type (urban, suburban, rural), school size (large, small), predominance of race (white, black), and sex (male, female) of student, resulting in a 3-2-2-2 analysis design.

Procedure

Forty-eight schools were selected which would provide for the comparisons needed. Twenty male and 20 female ninth graders were tested in each of the 48 schools using both forms of the Test of Reasoning in Conservation. Analyses were made of the test scores and covariance was calculated to learn if significant differences within and among the groups and conditions existed.

Results and Conclusions

Significant differences were found and t tests were applied to compare all groups and combinations of groups. Some of the differences found were:

- a. There was no significant difference between students in urban and suburban schools, but both scored higher than rural,
- b. Generally, large school students scored significantly higher than those in small schools,
- c. Subjects from predominantly black schools scored lower than those from predominantly white schools,
- d. Males generally scored higher than females.

Dorsey noted that other studies had pointed out that public school students generally exhibit inadequate knowledge of conservation and that greater emphasis has been placed upon renewable resources than other resource bases. Dorsey found nothing to dispute these positions.

Dorsey concluded that students' understanding and reasoning in conservation varies according to school location, school size, etc.; and that programs and instructional methods need to be developed and used to provide for these specific differences. Greater emphasis is needed on the economic, sociological and human aspects of conservation than is currently provided. Additional recommendations dealt with generally improving school programs in conservation.

ASSESSMENT OF STUDENT ATTITUDES AND INVOLVEMENT  
IN THE ENVIRONMENTAL QUALITY PROGRAM OF THE  
MOTT INSTITUTE-OKEMOS SECONDARY SCHOOL PROJECT

University Microfilms  
Order #71-23181

By: John Esparo, Ph. D.  
Michigan State University  
1971

Purpose

The purpose of Esparo's study of the Environmental Quality Program of the Moss Institute-Okemos Secondary School Project was to determine if, during enrollment in the course:

- a. student understanding of what is wanted in life was enhanced,
- b. student ability to use resources was improved,
- c. there was a positive change in student attitudes about school,
- d. the students' awareness of their privileges, their responsibilities as citizens and their participation in citizenship activities increased,
- e. the students' ability to handle evidence and data was increased.

Procedure

Students enrolled in the Environmental Quality Program completed (on a pre- and post-test basis) the School Inventory Test, which measured the extent to which attitudes toward school are positive or negative, and the Secondary School Project Questionnaire--written for this course and study to assess student reaction to the course, activities and the accomplishment of course objectives.

A Project Interview Schedule was developed by Esparo to assess course impact on the parents of the students and community people. The data were statistically analyzed.

Results and Conclusions

Esparo reported:

- a. Students' understanding of what they want in life increased (.03 level of confidence).

- b. Ability to use resources increased during the term (.01 level).
- c. Awareness of the privileges and responsibilities of citizens and participation in citizen activities increased during the first term of the course (.06 level of confidence). Additionally, 73 percent of the students reported an increase in their citizenship participation.
- d. Students' reactions to the course were very positive.
- e. The nature of student activities outside of school changed significantly (.001 level).
- f. Nearly all (88 percent) of the students identified those characteristics of the course which the planners, teachers and administrators considered to be unique. Evidence indicated the students were perceptive enough to recognize the characteristics of different learning models in which they are involved.

THE EFFECTS OF A SUMMER CAMP  
ARITHMETIC ENRICHMENT PROGRAM

University Microfilms  
Order #24466

By: Forrest F. Evans, Ed. D.  
George Peabody College for  
Teachers  
1957 .

Purpose

This study investigated the effects of a six-week summer camp arithmetic enrichment experience on the achievement of 30 elementary school boys.

Procedure

Subjects in the experimental and control group were paired according to chronological age, arithmetic achievement scores, and I. Q. The Stanford Achievement Test in Arithmetic was used for both pre- and post-testing. Over 115 different enrichment experiences were engaged in by the experimental group. Each boy's experiences were recorded in a daily log. The  $t$  Test for statistical significance was run at the conclusion of the camp period.

Results and Conclusions

A statistically significant difference favored the experimental group in every measured aspect. The experimental group showed a significantly smaller loss of measured arithmetic ability over the summer period as compared to the control group.

The findings pose interesting implications for educators proposing year-round school programs.

THE NATURAL SCIENCE MUSEUM  
AS A TEACHING RESOURCE FOR BIOLOGY

University Microfilms  
Order #6315

By: Marion Luhman Gilbert, Ph. D.  
University of Nebraska  
1962

Purpose

Gilbert wished to determine if and in what way guided museum tours were of value in teaching certain aspects of biology and in creating interest in the biological sciences.

Procedure

A group of 112 high school biology students made four trips to the University of Nebraska State Museum. A comparable control group was taught the same subject matter through conventional methods. Gilbert administered the Nelson Biology Test and an instrument he constructed on a pre- and post-test basis to both groups. In addition, pupils and teachers of both groups completed questionnaires relative to their previous museum attendance, their attitudes, and their interests relating to the field trips.

Results and Conclusions

There was no significant difference between the field trip and control groups on the Nelson Biology Test. A highly significant difference in favor of the field trip group was obtained on Gilbert's instrument that dealt with the specific units of study, however.

Although most of these pupils had previously visited a natural history museum, they were of the opinion that all biology classes should visit one as a part of their studies. Dissatisfaction was expressed by many pupils about the limited period of time they were allowed on the field trips. The teachers agreed that the museum tours were valuable.

Gilbert concluded that half-hour tours of a natural history museum can make possible significant gains in achievements in the areas in which the museum is a rich resource. He concluded that such trips help to make biology more realistic, increase knowledge and appreciation of the environment, and create interests. He emphasized the need for preparation and followup activities, adequate time for the observations, and preparation of the teachers for the tours.

# A STUDY OF ATTITUDE CHANGES AS A RESULT OF OUTWARD BOUND MOUNTAIN SKI SCHOOL, C-60

By: James H. Gillette  
University of Northern Colorado  
1971

## Purpose

Gillette's purpose was to learn if attitudinal changes concerning personal values, social and political issues and physical stress occurred as a result of the Outward Bound Mountain Ski School, C-60, held near Salt Lake City, January 4 through January 25, 1971. Thirty-four participants were involved. This was a test of the observations, statements and claims concerning positive attitudinal change appearing in the literature.

## Procedure

Sixty statements were selected from a larger list concerning personal values, social and political issues and physical stress, each representing attitudes that had been said to change as a result of Outward Bound Programs. These were printed individually on cards and the Q-Sort technique was employed to learn the priorities given to the attitude statements by the participants of the school on a pre- and post-test. Various statistics were utilized to learn if there was a significant difference in the importance attached to each statement or value as a result of the experience.

## Results and Conclusions

Nine of the sixty variables changed placement between pre- and post-test on the Q-Sort in a statistically significant manner as measured by the t Test (10 percent level of confidence). Four of these involved a positive move in placement and five became less important to the participants.

The variables changing in importance were: (a) assuming initiative, (b) changing pace, (c) doing as others do, (d) teaching that emphasizes lectures, (e) being concerned with overpopulation, (f) being democratic,

(g) sharing, (h) supporting law in a liberal manner, and (i) supporting minority group actions in their attempt to attain equality.

Fifty-one variables did not change in a statistically significant manner. With only 15 percent of the variables changing, Gillette doubted the influence of the school upon attitudinal change, concluding that it may be a personal thing which does not normally occur in 21 days.

He stated that this research tended to refute the observations, reports and statements concerning positive attitudinal change as reported in the literature resulting for this kind of school. Participants in the Outward Bound Ski School, C-60, may have changed in some ways but this research indicates that attitudes remained relatively stable.

## CONSERVATION UNDERSTANDINGS IN THE INTERMEDIATE GRADES

University Microfilms  
Order #6352

By: George Portsmouth Graff, Ph. D.  
Ohio State University  
1962

### Purpose

Graff set out to identify the resources concerning conservation that Ohio children in grades four, five and six considered to be important, and the extent and source of their understanding of these resources.

### Procedure

Graff had 2,232 pupils write essays entitled "What Conservation Means to Me" and provide biographical data and information about the sources of their conservation understandings. The essays were examined for mention of various types and categories of resources. Analyses were made about the depth of understanding indicated in the themes. The data were categorized and analyzed according to grade level, parent occupation, community size, etc. The pupils' teachers supplied information about their own exposure to conservation courses and workshops.

### Results and Conclusions

Plants, animals, soil, and water were mentioned most often by the pupils. About one-fifth of them indicated understanding in only one of these areas, two-fifths in two areas, one-fifth in three, and about one-tenth mentioned all four. Minerals, recreation, human resources, etc., were infrequently mentioned.

The number of resources mentioned increased as the pupils in rural areas grew older; but in the cities and suburbs, the greatest numbers were mentioned by fifth graders. Children of professional and business men indicated greater understanding of the resources than did the children of farmers and laborers.

The school was seen as the principal source of conservation understanding, books were second, and parents and the home were third. Some children cited television as an important source.

Pupil conservation understandings were related to the exposure of their teachers to special conservation schools and courses, curriculum programs and inservice conservation training independent of their teachers' university courses in zoology and botany. Reading ability did not appear to be related to the pupils' depth of conservation understanding.

## DEVELOPMENT OF AN INSTRUMENT FOR EVALUATING RESIDENT OUTDOOR EDUCATION LABORATORY SCHOOL PROGRAMS

University Microfilms  
Order #67-1114

By: Helen E. Grilley, Ed. D.  
Colorado State College  
1966

### Purpose

Grilley wished to develop and validate an instrument useful for evaluating resident outdoor education laboratory school programs. A jury of experts was used for validating this instrument.

### Procedure

Grilley used survey forms pertaining to curricular experiences and the principles of the resident outdoor education laboratory school programs as well as the suggestions of consultants at Colorado State College to provide data for constructing the evaluative instrument. This instrument contained seven sections: (1) principles, (2) objectives, (3) teaching methods, (4) pre-planning principles, (5) curriculum objectives, (6) procedures for follow-up, and (7) evaluation methods.

The instrument was applied to 16 selected resident outdoor education laboratory school programs. Directors of these programs made judgments (always, frequently, never, and does not apply) about each of the items used on the instrument.

### Results and Conclusions

A majority of the directors approved the (1) principles, (2) objectives (3) teaching methods, (4) pre-planning principles, (5) procedures for follow-up, and (6) evaluation methods items as they were presented. These, therefore, were retained on a revised version of the instrument. With respect to the seventh area (curriculum objectives), a majority of the program directors approved all of the (a) language arts, (b) health, safety and physical education, (c) art, (d) music, (e) science, (f) social studies objectives, and six of the seven arithmetic objectives. Those receiving majority approval were retained on the revised instrument.

PROBLEM TENDENCIES IN CHILDREN AND TYPES OF BEHAVIOR  
PROBLEMS MANIFESTED BY CHILDREN DEEMED ACCEPTABLE  
AS CAMPERS IN ORGANIZED RESIDENT SUMMER CAMPS  
AS REPORTED BY CAMP DIRECTORS

University Microfilms  
Order #70-26420

By: Arnold H. Grossman, Ph. D.  
New York University  
1970

Purpose

In initiating this study Grossman hypothesized that despite the professed goals of summer camping such as personal development, emotional growth and social relationships, the majority of camp directors prefer and select children with few behavior problems or manifesting withdrawal behavior in preference to children with problems that are apt to disturb day-to-day operations.

Furthermore, he hypothesized this behavior is more frequent among directors of independent camps than directors of organizational camps because they have greater freedom to select the children they want as campers. Grossman set forth to investigate children considered acceptable by camp directors for participation in summer camping programs.

Procedure

Eighty-two independent camp directors and 92 organizational camp directors completed his survey instrument and provided data about the behaviors they considered acceptable for admission to their camps. The instruments used, adapted versions of the Haggarty-Olson-Wichman Schedule B, Behavior Rating Scale, and E. K. Wichman's "Schedule B-R," were designed to deal with the problem tendencies of children and the degree of seriousness perceived of some 30 withdrawal and attacking types of behavior. Statistical analyses were made to find if the directors of the independent camps gave different responses than the directors of the organization camps, and if certain behaviors were more (or less) acceptable in one circumstance than the other for camp admission.

## Results and Conclusions

Grossman found support for his hypothesis that camp directors prefer to select children with few overt behavior problems or those who manifest withdrawal types of behaviors. He found no difference between the attitudes expressed by independent camp directors and those expressed by organization camp directors.

This study reinforced Grossman's observations that to a large extent the operation of the camp is the goal, campers being the means to attain the goal. He maintains that this is a reversal of what the situation should be and criticizes the tendency of many camp directors to feel that camp should be for children who will not disturb the complacency around them and to select children who are not likely to do so.

# A STUDY OF THOSE EXTRA-CURRICULAR ACTIVITIES WHICH CONTRIBUTE TO NATURE AND CONSERVATION EDUCATION IN CERTAIN LIBERAL ARTS COLLEGES

University Microfilms  
Order #10584

By: John Alfred Gustafson, Ph. D.  
Cornell University  
1954

## Purpose

Gustafson wanted to study the extra-curricular activities in several liberal arts colleges thought to contribute to nature and conservation education. He described in detail the outdoor extra-curricular programs at Dartmouth College and Bowdoin College. He also studied in detail the career and methods of William G. Vinal of the University of Massachusetts as an illustration of the approach of one individual to conservation and nature education. Gustafson believed that extra-curricular activities properly administered and set up could contribute heavily to appreciation of the natural world and the need for conservation that might not ordinarily be obtained through the usual course work.

## Procedure

The activities and efforts of the various organizations, clubs and extra-curricular groups were analyzed in detail. Gustafson submitted questionnaires to alumni, faculty administrative personnel and students of Dartmouth and Bowdoin. Former students of William Vinal were asked to evaluate his teaching. Data from these instruments and other sources were quantified when appropriate, analyzed and set forth.

## Results and Conclusions

Gustafson provided a detailed description of the programs at the two schools and found that the great majority of his respondents were satisfied with them. Nearly all approved the methods used by Vinal. The principal criticism noted was the tendency for some groups at Dartmouth to become inbred and to take on a narrow program and a narrow appeal.

Recommendations were made for improving the extra-curricular programs and suggestions were set forth that could be helpful to personnel

in other institutions. Gustafson concluded that intimate contact with the outdoors, competent instruction in natural history, and the choicest esthetic experiences coupled with the relaxing and recreating qualities of outdoor living constituted the best means by which college students may acquire a conservation conscience.

## SHORT FIELD UNITS IN CONTRAST TO THE LONG FIELD TRIP AS A VEHICLE FOR TEACHING BIOLOGY TO PROSPECTIVE ELEMENTARY TEACHERS

University Microfilms  
Order #63-2827

By: Paul Egan Hafer, Ph. D.  
Cornell University  
1962

### Purpose

Hafer wished to know if short field trips (of approximately 30 minutes) with definite limited purposes would be as effective and more convenient or easier to provide than longer field trips in teaching biology to prospective elementary teachers.

### Procedure

Hafer's experiment was conducted at University College, Potsdam, New York, in 1960-61. Six biology sections (294 students) were divided into two groups. Comparability of the groups was indicated by a pre-test (no significant difference in group means was revealed by t).

The two groups followed the same topical outline and visited the same nearby field sites. The three control sections participated in the traditional two-hour field trip, but the experimental sections visited the areas in four half-hour field trips. Afterwards, post-tests were administered to both groups. In the spring the groups were reversed and the process repeated. Instructors and students were asked to evaluate the approaches with respect to interest, attention span, etc. Their impressions were gathered by Hafer using anecdotal records, conferences and a short questionnaire.

### Results and Conclusions

No difference was found in the post-test scores of the two groups. However, short trips were favored by the students when interest, attention span, and comfort in cold weather were considered. Longer field trips were favored because of time losses, continuity, and scheduling. Hafer saw a number of cognizant responses on the student questionnaires that gave evidence of their appreciation for the values of out-of-doors experiences in teaching.

## AN ANALYSIS OF THE DEVELOPMENT AND USE OF OUTDOOR LABORATORIES IN TEACHING CONSERVATION IN PUBLIC SCHOOLS

University Microfilms  
Order #58-928

By: Clyde W. Hibbs, Ph. D.  
University of Michigan  
1957

### Purpose

The extent of development and use of outdoor laboratories for teaching conservation by public schools was the primary objective of the study. The study incorporated three parts, namely, the need for teaching conservation in the schools and the opportunities needed for such teaching; the factors to consider in procuring and developing laboratory areas; and the use made of the laboratory areas. From this study, guiding principles could be formulated.

### Procedure

Schools in North Carolina, West Virginia, Ohio, and Michigan were queried by mail, then personal follow-up visits were made by the investigator. Data were classified and sifted to allow for the development of the set of guiding principles.

### Results and Conclusions

Suggestions for the development of outdoor laboratory areas are given with the main emphasis upon the use of committees and the personal involvement of as many persons who would likely use the facilities. Non-school members of the committees should be selected on the basis of the ability of the individual to contribute to the work of the specific committee. Of the ten guiding principles formulated by the investigator, the first and foremost is that the primary function of the outdoor laboratory is to provide learning opportunities necessary in implementing a sound conservation education program.

A REPORT OF AN OREGON SCHOOL CAMP WITH  
PROGRAM EMPHASIS UPON OUTDOOR SCIENCE EXPERIENCES

University Microfilms  
Order #19-2513

By: E. Irene Hollenbeck, Ed. D.  
University of Colorado  
1958

Purpose

The dual objective of this study was to determine the extent and kinds of outdoor science experiences provided to Oregon school age children, and to determine the feasibility of providing for outdoor science experiences through a school camping program.

Procedure

A survey of outdoor science experiences was made of seniors in selected high schools in the state. Results indicated few such experiences; therefore the investigator set up a pilot program of camping for fifth or sixth grade students so an evaluation of their outdoor experiences could be made.

Results and Conclusions

The results of the study indicated that little provision had been made for outdoor learning experiences in Oregon schools. Through an analysis of established camps' records, as reported by pre-camp and post-camp sociometric tests, interest inventories, and through artistic representations of children; through opinionnaires from parents and participants; and through interviews with teachers, administrators and other resource persons, it was reported that a school camping program would enhance the development of science learnings. The investigation resulted in recommendations that school camping programs should be encouraged in Oregon.

## AN EVALUATION OF CONSERVATION EDUCATION IN RELATION TO THE TOTAL PROGRAM OF EIGHT SCHOOL CAMPS

University Microfilms  
Order #59-2133

By: William L. Howenstine, Ph. D.  
University of Michigan  
1959

### Purpose

The researcher set out to assess the status of conservation education in a selected group of eight school camps. He was particularly interested in determining the emphasis given to conservation education as contrasted with other subject fields, and examining the relationships existing between conservation education and the employment status of camp leaders.

### Procedure

The researcher spent approximately one week observing the program in each school camp. A descriptive record and time study were made of all activities observed. These activities were then analyzed on the basis of (1) amount of time devoted to each school subject, (2) the subject content of the activities, and (3) the emphasis given to different methods of instruction by different groups of leaders.

Staff members were also interviewed and responded to a selection device to identify the relative importance which they gave to 28 potential objectives for school camping.

### Results and Conclusions

School camp staff rated social objectives and those dealing with conservation and natural science significantly higher than the others. Conservation education as a specific objective was rated very high. Despite the high rating that conservation education received as an objective, observation of camp activities revealed little activity dealing with conservation education. Howenstine concluded that conservation activity was small in quantity and poor in quality. Much attention, however, was given to natural science in the school camp programs.

A QUANTITATIVE AND QUALITATIVE STUDY OF FACILITIES  
FOR SCHOOL CAMPING AND OUTDOOR EDUCATION  
ON STATE OWNED LANDS IN ILLINOIS

By: Florence M. Hulett, Ed. D.  
University of Oregon  
1960

Purpose

The purpose of this study was to evaluate the quantity and quality of facilities for school camping and other outdoor education on state owned lands in Illinois. Facilities studied include parks, forest preserves, and state conservation areas. The main object was to formulate a checklist of evaluative criteria.

Procedure

All areas were personally visited by the writer where data were collected on historical and scientific significance, surface water features, wooded areas, wilderness areas, wildlife, soil and topography, natural beauty and appeal, freedom from natural hazards, service, recreational, educational, and cultural facilities.

Results and Conclusions

All surveyed areas had facilities for some phase of outdoor education with 83 percent having picnic and camping facilities. It was found that no public school in Illinois was more than 40 miles from a state owned facility for school camping and outdoor education. Parts of south central Illinois have access to federal forest lands. Recommendations were made for the way those facilities could be used by public schools as well as by teacher-training institutions.

## PERSONALITY FACTORS AND THEIR RELATIONSHIP TO ADJUSTMENT IN A CAMPING SITUATION

University Microfilms  
Order #68-4780

By: Samuel Janus, Ph. D.  
New York University  
1967

### Purpose

The purpose of this study by Samuel Janus was to find if the personality factors of female college sophomores were related to adjustment in a resident camping situation. Janus wanted to know whether and to what extent camp adjustment was predetermined by pre-existing personality factors outside the control of the camp management.

### Procedure

Ninety-four female college students (ages 18-20) in the New Jersey State School of Conservation Program participated in the study. One week prior to camp all students were tested for the personality factors under investigation, and after one week at camp they completed the camp adjustment instruments developed for this purpose.

Among the instruments used were: two camp adjustment scales; a peer rating scale measuring social aspects of adjustment; Barron's Ego-Strength Scale; and three sub-scales of the Edwards' Personal Preference Schedule.

### Results and Conclusions

Several hypotheses were tested using the Pearson Product Moments test of correlation, but in most cases no correlation was found for the hypotheses. The differences lacked significance or were in a negative direction. Several other statistical tests were applied and some provided support for one or more of the hypotheses relating to the correlation between given personality factors and camp adjustment.

Janus reported although separate personality characteristics may be significant by themselves, generally the ego strengths and flexibility of the individual, openness to new experiences, and the absence of commitment to particular personality demands are the factors that reflect upon camp adjustment.

# AN EVALUATION OF A SEMI-OBJECTIVE METHOD FOR APPRAISING SELECTED EDUCATIONAL OUTCOMES OF SCHOOL CAMPING

By: Tessa Mae Johnson, Ph. D.  
University of Southern California  
1957

## Purpose

This is an attempt to (1) develop certain techniques to appraise changes in achievement, interest, behavior, and social status in junior high school pupils who experienced one week of school camping; (2) establish criteria to evaluate the effectiveness of these appraisal techniques; (3) apply these techniques to a specific school camping program; and (4) evaluate the effectiveness of each separate technique and method as a whole in terms of the information derived from these applications.

To develop an appraising instrument, the following questions must be answered: What are the objectives of general education? What is the potential of camping in relation to these objectives? What techniques might be used for appraisal? What criterion is appropriate for effective evaluation? To what extent does this criterion operate when applied to a specific school camping program?

## Procedure

Johnson studied literature relating to objectives of education and the place of camping in such a program as well as reviewing studies on criterion for evaluation or appraising a secondary school camping program. She then developed appraisal instruments that utilized teacher and student evaluation and then administered them to groups in the San Diego, California, schools. The criterion list in Chapter Three is very complete:

She used teachers' grades in general and social sciences, and citizenship; a self-rating activity check list of pupil interests; a peer-rating "guess who" questionnaire of pupil behavior traits; and a sociometric questionnaire of social status, all as data-gathering instruments.

## Results and Conclusions

With matched groups of campers and non-campers, it was found that teachers' grades were not significant as a measure of change in pupil

achievement in general science, social science, or in citizenship. The pupil self-rating activity check list gave data that was statistically significant, as did the "guess who" questionnaire. There was little increase, if any, in the acceptance of an individual during the one week experience. Group cohesion significantly increased during the stay in camp. It was found that although these evaluatives met the criterion as an appraisal instrument, they were too time consuming for practical routine use.

## AN EVALUATION OF AN INTERDISCIPLINARY PROGRAM IN AN ELEMENTARY TEACHER-EDUCATION PROGRAM

By: Joseph A. Kalla, Ed. D.  
University of Wyoming  
1972

### Purpose

The purpose of this study was to measure the effects of an experimental interdisciplinary outdoor education program on selected students enrolled in the two year elementary education teacher preparation program at the University of Saskatchewan, Regina Campus.

### Procedure

Seventy-six second year students were used in the study. The control group consisted of 39 students in one class, while 37 students in another class were the experimental group. Both classes had the same instructors and a common schedule of five teaching methods classes.

The experimental group participated in a four-day outdoor education experience off-campus. An Education Attitude Index, developed by the researcher, was used to measure various student perceptions on a before and after basis.

### Results and Conclusions

The control group appeared to develop a less favorable attitude toward conditions that existed in the professional program than did the experimental group. The outdoor education program had no statistically significant effect on student to student relationships. It did appear to cause a favorable change in students' attitudes toward what should be desirable conditions in an elementary school. The program did contribute to favorable changes in student attitudes on three of the four scales related to conditions that existed in professional education classes.

A STUDY OF THE EXPERIENCES OF CAMPING  
FOR THE PURPOSE OF POINTING OUT WAYS IN WHICH  
A SCHOOL CAMPING PROGRAM MAY SUPPLEMENT  
THE ELEMENTARY SCHOOL AT THE SIXTH GRADE LEVEL

University Microfilms  
Order #25-496

By: Viola K. Kleindiest, Ed. D.  
New York University  
1957

Purpose

This study represents a determination of the potential of camp experiences as means of attaining objectives of the sixth grade curriculum. Objectives of the elementary program at the sixth grade level must be identified and then camping experiences that could contribute to the achievement of these objectives must be described and evaluated. After an evaluation, guidelines for the operation of school camping programs could be developed.

Procedure

A review was made of pertinent literature involving objectives of education, descriptions of camp experiences, and principles of school camping. Both state and national objectives, descriptions, and principles were submitted to a jury of experts for judgments.

Results and Conclusions

Camping programs offer significant opportunities in meeting school objectives especially in the area of social living, appreciation, and communication. Guiding principles include the responsibility of offering more than just the three R's, activities selected and administered according to approved principles; it must functionalize the curriculum and offer vital living-learning experiences for the children as well as for the teachers involved.

## EFFECTS OF SCHOOL CAMPING ON SELECTED ASPECTS OF PUPIL BEHAVIOR -- AN EXPERIMENTAL STUDY

By: Herman C. Kranzer, Ed. D.  
University of California at  
Los Angeles  
1958

### Purpose

The purpose of this study was to measure objectively the effects of a five-day resident camping experience of two sixth grade classes in Pennsylvania as compared to one class which did not experience the camping activities. Aspects considered were social, emotional, intellectual, physical, and democratic group living. A second purpose was to generalize about the improvement of instruction by teachers who had undergone the camping experience.

### Procedure

Three classes of sixth graders were utilized in this study with two classes receiving a camping experience. Instruments for objectively measuring the effects of the experience include Woods' Behavior Preference Record, Haggerty-Olson-Wichman Behavior Rating Schedule, and sociograms. Instructional improvement was evaluated by Baxter's Rating Scale of the Teacher's Personal Effectiveness, and by observations and opinions of teachers, student teachers, parents and visitors.

### Results and Conclusions

Social and democratic behavioral changes took place more rapidly during a camping program than during a regular school classroom program. Boys seemed to profit more than girls. Low mental ability students showed a slight improvement in critical thinking. The number of isolates tended to increase beyond what would normally be found in the classroom.

Ratings by adults generally favored camping as increasing group acceptance, better motivation, and stimulation of classroom work. Adult ratings were generally higher than ratings from the test instruments; thus the standardized instruments available may not be very valid in measuring a change that takes place in the short period of one week.

THE COMPARATIVE EFFECTS OF THREE AND SIX WEEK PERIODS  
OF RESIDENTIAL CAMPING ON PHYSICAL FITNESS  
AND ADAPTIVE BEHAVIOR IN CHILDREN AND YOUTH  
WITH BRAIN DYSFUNCTIONS SYNDROMES

University Microfilms  
Order #72-20643

By: Claudette B. Lefebvre, Ph.D.  
New York University  
1972

Purpose

This program was set up to compare the effects of a three week and a six week camping program on the physical fitness and adaptive behavior of youth with brain dysfunction syndromes.

Procedure

Sixty-four subjects ranging from 7 to 21 years of age with the following diagnostic categories were selected: mental retardation, minimal brain dysfunction syndrome, cerebral palsy, epilepsy, emotionally disturbed, and multiple handicaps. Thirty-two of these subjects were assigned to the three week camp and the rest to the six week camp program.

Students were evaluated on the Hayden Test of Physical Fitness for the Mentally Retarded and on Parts I and II of the Adaptive Behavior Scale as a pre-test and post-test. Fischer's Test for matched pairs and the analysis of covariance were the statistics used.

Results and Conclusions

A measured performance increase in physical fitness and adaptive behavior was found statistically significant for both groups as was the reduction of personality and behavior disorders.

Those experiencing the six week camping program were significantly superior in adaptive behavior but not in physical fitness or maladjusted behavior. The hypothesis of greater physical fitness during the first half of a six week program was rejected. No significant differences were found for differences in ages or sex.

Implications from this study are that a program of residential camping should be included in a comprehensive educational and treatment service program for youth with brain dysfunction syndromes.

## CAMPING AND EDUCATION

McCall Company  
New York, 1930

By: Bernard S. Mason, Ed. D.  
Ohio State University

### Purpose

Here is a Redbook award winning inquiry into the educational aspects of summer camping from the camper's point of view. Mason wanted to learn what boys and girls thought about (1) the effects of camping on personality and character; (2) camp leadership; (3) use of camper time; and (4) the activities in camping programs.

### Procedure

Mason interviewed 93 boys and girls attending 91 private summer camps. These children were all of those from a residential area of Columbus, Ohio, that had attended summer camp. In each interview of about two hours, Mason privately talked over the camping experiences of his subject and drew them out in regard to various concerns, interests, etc.

### Results and Conclusions

Mason's findings are reported in number and percentage tables. Each item is discussed in detail and related to other studies and Mason's own previous experience.

Mason found that (1) the moral tone was high at these camps; (2) smoking, swearing, and gossiping were the only undesirable results to which campers referred; and (3) campers saw social adjustment, proper physical habits, and development of self reliance as important gains. Work and loss of honors were considered to be the most effective punishments. Most dreaded was loss of swimming privileges.

Campers preferred counselors who (1) were friendly and approachable; (2) were strict and maintained order; (3) participated with the camper; (4) were sympathetic and understanding; (5) were fair; (6) were efficient; (7) were athletic; (8) were not bossy; and (9) were not unnecessarily severe.

Mason found that nearly all campers (1) were required to work on a definite schedule, (2) had all the time to themselves they wanted, and (3) preferred to schedule their time in camp, but wanted some choice as to the activities comprising it; and that older boys thought they should have greater freedom from compulsory activities. In general, less compulsion, but not less schedule, was desired.

Mason stressed the role of interest in selecting camp activities and concluded that many "high interest activities" were not being universally used -- that more varied programs were needed. Swimming was the most popular activity and nature lore rated relatively low. The joy of personal achievement was clearly emphasized. Campfires were found to be popular, but Indian dancing and the Council Ring were not used extensively.

Mason maintained that the needs and wishes of campers are critical factors in successful camping programs. If they are met, the experience is apt to be very satisfying; if not, disappointment and frustration result. The primary compulsion in planning and developing camping programs, says Mason, is the compulsion of interest.

## CONTRIBUTIONS AND POTENTIALITIES OF SCHOOL CAMPING

By: Eloise McKnight, Ed. D.  
Teachers College, Columbia  
1952

### Purpose

The purposes of this study were to (1) point out the values and potentials of educational camping; (2) show how camping can be an integral part of the educational program; (3) emphasize concepts and principles maximizing the value of camping experiences; and (4) provide assistance for those initiating camping programs.

### Procedure

McKnight surveyed the relevant literature, conducted interviews with many specialists and educators, made inquiries of state departments about programs in operation, examined brochures, reports and unpublished materials, and spent six weeks in research at National Camp collecting data for this study.

### Results and Conclusions

McKnight outlines the factors and trends in American life affecting school camping. The potential of school camping for meeting modern needs is discussed at length. The educational concepts and principles underlying camping programs are analyzed and illustrations of ways schools utilize camping as an integral part of the school curriculum are provided. Finally, recommendations regarding legalities, finance, facilities and equipment, leadership, programs, etc., are set forth. McKnight states that there can or should be no set pattern; each school should consider a variety of possibilities as it develops its own program.

McKnight makes these points: (1) the gains made by children in school camping are not merely the outgrowth of getting children into a camping situation; the quality of leadership and program in which they participate are the two major factors in providing them; (2) activity for activity's sake is to be avoided; each experience should be carefully measured against standards and goals set in the beginning of the planning;

(3) mere accumulation of isolated facts or activity for activity's sake has little place in a curriculum designed to make an individual more capable of dealing with future life situations; (4) in the final analysis the primary goal of any school camping project is the production of desirable changes in the individual; the facilities, activities, acquisition of knowledge and skills are important only as a means by which these changes can be produced.

A STUDY OF SCHOOL CAMPING  
WITH SPECIAL EMPHASIS ON PROGRAM OBJECTIVES,  
CURRICULUM, ADMINISTRATION AND EVALUATION

Anderson Memorial Library  
University of Houston

By: Nathan Hale Pepper, Ed. D.  
University of Houston  
1952

Purpose

Pepper set out to analyze school camping programs to: (1) identify their objectives and contributions; (2) identify and describe existing practices; (3) demonstrate the relationship between school and camp curricula; and (4) evaluate programs by determining what parents, children and teachers consider to be valuable about school camping programs.

Procedure

Data were obtained by reviewing relevant publications and reports, and personally visiting school camping programs. Pepper devoted three months to personal visits and spent several days to two weeks at each place. He used a questionnaire to elicit organizational data, participated in the programs, and asked parents, teachers, and pupils to react to their camping experiences.

Results and Conclusions

Pepper concluded camping should supplement classroom instruction, and there are values in camping which cannot be experienced or taught anywhere but in an outdoor environment. He found school camping was making significant contributions to: (1) social living; (2) healthful living; (3) purposeful work experiences; (4) recreational living; and (5) outdoor education or appreciation of nature. These were emphasized in the objectives set forth for the camping programs. He also found that they had a definite contribution to make in all the school subject areas.

The "administrator" was found to be of basic importance in developing and maintaining an effective and efficient program. He was also found to be the person expected to provide leadership in developing interest in a program--laymen being inadequate in this regard. Pepper saw a need for a close relationship between the total school program and the camp program.

Pepper's principles of school camp organization call for a simple organizational plan in which much authority and responsibility is delegated to individual campers.

Pepper found remarkable agreement among opinions of campers, parents and teachers regarding the values of school camping. Among the most important to campers were: (1) learning to get along with other students; (2) making new friends; (3) manners; and (4) social relationships. Parents agreed that camp contributed much to their children's education, whereas teachers pointed to values such as: (1) responsibility; (2) cooperation; (3) friendships; (4) community responsibility; and help provided in such areas as Biology, Erosion, Wildlife, English, and Arithmetic. Pepper recommended that more schools include camping in their educational programs and offered guidelines and recommendations for developing and operating such programs.

A CLOSE VIEW OF THE 1952-53 CAMPING PROGRAM  
OF VERONA SCHOOL, BATTLE CREEK, MICHIGAN,  
AS A GUIDE TO FUTURE ACTION

Advanced School of Education  
Columbia University

By: Lawrence W. Rhoades, Ed. D.  
Teachers College, Columbia  
1953

Purpose

This study was designed to be an intensive survey of the school camping program of the Verona School in Battle Creek, Michigan, and to identify ways and means to reinforce its strong or correct its weak points. Rhoades' purpose was to help teachers and pupils in this school realize more fully the educational possibilities of the Clear Lake Camp and to make recommendations to other schools undertaking similar ventures.

This study was undertaken because: (1) some teachers seemed hostile toward the camping program; (2) some pupils lacked enthusiasm for the program; and (3) some parents were expressing doubts.

Procedure

This study dealt largely with the reactions of persons (teachers, counselors, pupils, and parents of pupils) participating in the Verona School camping program at Clear Lake Camp in December 1952. The sixth grade pupils were interviewed before and after camp in regard to their experiences and findings. Sociometric tests were given to find if and how camping affected the social relationships within the several classes. Case studies were made of all pupils and parents of the participating sixth grade pupils who were interviewed. The work and reactions of the teachers and counselors before and after camp were recorded and analyzed.

Results and Conclusions

Rhoades listed 11 points of focus dealing with such areas as normal or abnormal behavior of pupils at camp, attitude changes of parents and pupils toward camp, changes in pupil-teacher relationships at camp, and sociometric shifts within the classes after camp.

He provided a number of suggestions for improving the camping activities he believed would help future teachers and pupils enjoy more effective camping experiences. These resulted from interviews and statements by pupils in regard to what they gained or enjoyed most at camp and/or what they disliked.

Rhodes reported that Verona teachers were pleased by the positive reactions to this particular camping session in such areas as educational, social, and recreational activities, health, safety, and eating and sleeping conditions.

He listed 20 conclusions and made 16 recommendations to help improve the use of Clear Lake Camp that might be of interest to those in other sections of the country planning similar programs.

ENVIRONMENTAL KNOWLEDGE AND OPINION SCALES --  
NEED, DESIGN AND USE: A FACTOR ANALYTIC STUDY  
IN TEST CONSTRUCTION

University Microfilms  
Order #72-16649

By: Donald Campbell Riblet, Ed. D.  
The University of Florida  
1971

Purpose

The purpose of this study was to design two testing instruments, one to measure college student knowledge of environmental problem areas, the other to determine subsets of environmental opinion.

Procedure

Riblet described the statistical methodology and the computer techniques used in developing the Environmental Awareness Scale and the Environmental Opinion Scale.

Results and Conclusions

Items that survived both the factor analysis and the subsequent definition of knowledge and opinion subsets were listed. Riblet recommended that the improved versions of the testing instruments be employed to construct profiles of student knowledge and student opinion. Another recommendation was that these profiles be used as guides to the individualization of instruction and to improve group instruction.

A COMPARISON OF ASPIRATIONS WITH ACHIEVEMENTS  
IN A GROUP OF SELECTED MICHIGAN PUBLIC SCHOOL CAMPS

University Microfilms  
Order #21385

By: Paul Ernest Rupff, Ed. D.  
Michigan State University  
1957

Purpose

This study was to determine what was being achieved by selected Michigan school districts operating camps for short periods of camping. In effect, Rupff hoped to determine the extent to which the aspirations or objectives of such programs were being achieved.

Procedure

Objectives for short-term camping programs were identified by examining the literature and established educational criteria for such areas as self realization, human relationships, economic efficiency, and civic responsibility. Separate questionnaires were prepared for administration to children, parents and teachers of such programs to determine what they perceived to be the outcomes. Those questionnaires were administered to 254 sixth graders, 173 parents, and 21 teachers in the programs being studied. Eighteen school administrators were interviewed about their perceptions of the value of their school camping programs.

Results and Conclusions

Boy campers' responses were similar to those of girl campers except in regard to work tasks and attitude toward teachers after camp. In general, they reported eating new foods, observing safety rules, and learning about nature. They reported an increased need for friends and the need for skills in getting along with others. They stated they enjoyed camp very much.

Parents tended to agree with the children. Teachers, however, seemed more enthusiastic about the attainment of educational aims than either the children or parents.

In his interviews with superintendents, Rupff found their aspirations for school camping differed sharply from those of the teachers. Teachers emphasized program and curriculum, but superintendents emphasized the administrative aspects. Except for finance, most of the superintendents know little about the details of camping programs or what was being done. All of those with programs believed that the camp was achieving good results in science teaching, health and safety, development of personality, and special democratic values.

Rupff concluded that part-time camping in Michigan was achieving its aims to a reasonable degree, but attention was needed in regard to uniform definitions, development of teaching methods, interpretation of values, and improved financial support. He recommended that school camping aims be redefined in terms of the outdoor setting and that teaching methods center around exploration and problem solving.

## AN ADMINISTRATIVE GUIDE FOR INITIATING RESIDENT OUTDOOR EDUCATION IN THE PUBLIC SCHOOLS

University Microfilms  
Order #66-2665

By: Frank Graff Schafer, Ed. D.  
Teachers College, Columbia  
1965

### Purpose

The primary purpose of Schafer's study was to develop guidelines for the initiation and operation of outdoor education programs. These were to be based upon the author's professional experience, the literature, professional opinion and current practice.

### Procedure

After reviewing the literature, Schafer constructed a survey instrument and opinionnaire. Using this, he obtained information from personnel in 172 resident outdoor education programs in the United States.

### Results and Conclusions

Schafer took the position that assessment or evaluation was needed in regard to all school activities in order to ascertain their real values. He maintained that resident experiences could provide unique contributions if they are thoroughly planned prior to operation and if they are based on sound educational goals and standards.

Ninety percent of the programs that Schafer identified for use in this research were in five states where substantial support was being received from universities, legislatures, school districts, etc.

These are among the guidelines that Schafer proposed: (1) Initiatory planning must be supported by administrators and teachers and be broadly based. New practices should be tried out in pilot programs and continuing programs of in-service training are required. (2) Programs should be seen as integral parts of the total school operation. (3) Leaders should have teaching skill, content knowledge, and previous experience in such programs. Employment of a specialist should be considered, and participating teachers and administrators should have reduced loads and/or extra salary for this work. (4) School districts should consider the joint operation of regional outdoor schools, or leasing facilities in order to provide better programs and to reduce costs. Pupils should bear a portion of the financial costs. (5) Objective evaluation techniques consistent with maintaining a flexible program should be used.

## EDUCATION AND THE SUMMER CAMP -- AN EXPERIMENT

Teachers College  
Contributions to Education: #390

By: Lloyd Burgess Sharp, Ph. D.  
Teachers College, Columbia  
1930

### Purpose

Sharp's study was primarily a plan for the reorganization of Life's Summer Camps as educational enterprises and the operation of them for four years, making applications and recommendations as warranted from the program in operation.

### Procedure

Sharp's analysis of agency camping provided perspective. Subsequently, he synthesized the aims and purposes of camping and education into one document and then developed specific recommendations to make the Life Fresh Air Farms into truly educational enterprises. Among his recommendations were these: (1) one person should direct the entire program; (2) camping should replace the expression "fresh air"; (3) special efforts should be made to increase the returnee rate from summer to summer; (4) children should be accepted only from organizations doing follow-up; (5) financing should be a year in advance; (6) buildings and equipment should be renovated and improved; and (7) record and bookkeeping should be revamped. Upon approval of his plans and recommendations, Sharp developed detailed working plans and educational programs for the camps so as to attain the educational objectives he had previously set forth.

### Results and Conclusions

After operating the camps for four years, Sharp reported that substantial progress had been made. Food standards were being met, financial contributions had greatly increased, holding and retention power had increased, the number of applicants was much greater than the number of vacancies, and the educational program was under way. He recommended that in the future: (1) the children should stay at the camps for more than two weeks; (2) the camping season should be lengthened and the camps opened weekends and holidays; and (3) additional camps should be opened to accommodate various age groups of children and adults.

# THE EDUCATIONAL EFFECTIVENESS OF THE TRAVELING SCHOOL CAMP

By: Merlin J. Shaw, Ed. D.  
University of California

## Purpose

Purpose of the study was to describe, analyze and evaluate a traveling school camp planned according to criteria developed from principles of education related to extended school trips and school camping.

## Procedure

The case study portion of the study involved identifying educational objectives and policies applicable to school trips and school camping, selecting criteria for a traveling school camp, recording events during various stages of the traveling school camp, and evaluating the project by applying the criteria and analyzing the data.

A comparative study was also undertaken to measure changes in a control and experimental group. Subjects were two groups of 30 high school students, 16 to 18 years of age. They were matched in pairs on the basis of age, sex, grade average, personality, socioeconomic level, etc.

Data were gathered on a before and after basis from a number of sources including: student diaries, tape recordings, motion pictures, sociometric tests, Remmer's Attitude Scale for Measuring Attitude Toward Races and Nationalities, the California Test of Personality, The Cooperative American History Test, and the Allport-Vernon-Lindzey Study of Values.

## Results and Conclusions

The study showed substantial student growth in: attitude toward school work, American History scores, and personal and social adjustment. Girls improved most in school relations and social skills, while boys showed greatest improvement in social skills and family relations. Religious tolerance also improved.

Shaw concluded that in addition to academic progress achieved through school camp studies, the traveling school camp has a valuable contribution to make to social and total student adjustment.

THE EFFECT OF AN OUTDOOR EXPERIENCE  
ON SIXTH GRADE STUDENTS' COGNITIVE UNDERSTANDING  
OF ECOLOGICAL CONCEPTS

By: Donald P. Slater, Ed. D.  
University of New Mexico  
1972

Purpose

The purpose of this study was to determine the extent of change in sixth grade pupils' cognitive understanding of specific ecological concepts before and after an exploratory field trip experience.

Procedure

The subjects, a class of sixth graders, were observed before and after experiencing an exploratory field trip to three ecological zones in the Sandia Mountains, New Mexico.

Slater used the Florida Taxonomy of Cognitive Behaviour and a Campbell and Stanley Time Series Research Design to measure changes in pupils' cognitive understanding of three ecological concepts. Pre- and post-trip observations were tested for significant change.

Results and Conclusions

A change in students' understanding of the three ecological concepts was found to be significant at the .05 level. Significant gains in cognitive understanding of ecology were achieved as a result of the exploratory field trip experience.

THE USE OF A COMPARATIVE ANALYSIS AS AN EVALUATION  
OF A JUNIOR HIGH SCHOOL CONSERVATION EDUCATION PROGRAM

University Microfilms  
Order #72-3706

By: Myron Lee Solid, Ph. D.  
University of Colorado  
1971

Purpose

Two Colorado communities were studied to determine the existence and extent of differences in knowledge and attitudes related to conservation of natural resources. One community had a conservation education program as part of the school curriculum; the other did not.

Procedure

A questionnaire was administered to adults and junior and senior high school students in each of the two communities. The questionnaire was designed to provide a measure of conservation knowledge, attitudes toward conservation, and a measure of receptiveness to clubs and organizations which exist for the promotion of conservation. The collection of data included observation and informal interviews with residents of both communities.

Results and Conclusions

General results of this study indicated that more favorable attitudes about conservation and greater conservation knowledge at all levels were demonstrated by the community that had a conservation education program.

AN EVALUATION OF ATTITUDINAL OUTCOMES  
OF FIFTH AND SIXTH GRADE STUDENTS  
FOLLOWING A PERIOD OF SCHOOL CAMPING

University Microfilms  
Order #60-2638

By: Genevieve C. Stack, Ph. D.  
University of Oklahoma  
1960

Purpose

The purpose of this study was to assess attitudes toward selected concepts of school, teachers, self, classmates, friends, and school camping possessed by fifth and sixth grade pupils before and after a school camping experience.

Procedure

Data were obtained from 44 boys and 44 girls from a lower-middle socioeconomic background who spent one week at Clear Lake Camp, Dowling, Michigan.

Results and Conclusions

Findings included analysis of changes in sociometric choices, and changes in attitudes. Among the conclusions were: (1) the school camp experience does provide unique opportunities for effecting social change, particularly in regard to racial cleavage; (2) teacher-pupil rapport was improved; (3) values of associations and relationships over those of the ego-concept were increased.

THE EFFECTS OF PHYSICAL SKILLS AND ACADEMIC  
SELF CONCEPTS ON GENERAL SELF CONCEPT AND ACADEMIC  
ACHIEVEMENT IN A SUMMER CAMP ENVIRONMENT

University Microfilms  
Order #69-20936

By: David Townsend Steel, Ed. D.  
Michigan State University  
1969

Purpose

The purpose of this study was to determine the effects of two educational treatments on academic achievement and general self concept of educable mentally retarded adolescents in a summer camp environment.

Procedure

Sixty-two educable mentally retarded adolescents were used in the sample. The control and experimental groups of 31 students were randomly selected. The experimental group attended a four week summer camp. The control group did not attend camp. The experimental group was divided into two sub-groups; one received educational treatment designed to improve their self concept of physical skills, and the other received treatment designed to improve academic self concepts. The control group and the two experimental sub-groups were evaluated on a pre- and post-camp basis and one semester after the summer camp experience.

Results and Conclusions

Among Steel's conclusions were: (1) Providing experiences to improve either academic self concept or physical skills self concept does result in greater immediate gain in general self concept for the educable mentally retarded adolescent than does providing no treatment. The gain was lost, however, after one semester. (2) Treatments designed to improve academic self concept and physical skills self concept did not result in an increase in academic achievement either immediately following the treatment or after one semester. The physical skills self concept group did show a greater academic achievement gain over one semester than did the academic self concept group.

A CRITICAL EVALUATION OF CAMP TOKHIR:  
AN ENVIRONMENTAL THERAPY LABORATORY  
FOR COMMUNICATIVE DISORDERED CHILDREN

University Microfilms  
Order #72-29561

By: Steven D. Wadsworth, Ed. D.  
Brigham Young University  
1972

Purpose

Wadsworth set forth two purposes for this study: (a) to analyze the efficiency of Camp Tokhir and (b) to learn the interrater reliability among classroom teachers, remedial teachers, and camp clinicians who evaluate the children.

Procedure

A newly developed profiling instrument, the Assessment of Developmental Stature and Progress Chart, was used to measure camp effectiveness. This instrument, designed for use with pre-school and school-age children, measured nine competency areas arranged according to behavioral development. Pre- and post-camp evaluations were conducted.

Results and Conclusions

Wadsworth concluded that there was no significant difference between the raters, suggesting high interrater reliability using the Assessment of Developmental Status and Progress Chart. He reported that the differences between pre- and post-camp evaluations were significant for all nine development areas measured by the instrument.

CROSS-MEDIA INSTRUCTIONAL RESOURCE KIT  
FOR SECONDARY SCHOOL SENIORS PREPARING TO VISIT  
INDEPENDENCE NATIONAL HISTORICAL PARK

University Microfilms  
Order #68-14467

By: Robert Zoob West, Ed. D.  
University of Pennsylvania  
1968

Purpose

The intent of this study was to organize, develop and appraise instructional resource materials in preparation for senior class visits to Independence Park in Philadelphia.

Procedure

A prototype instruction media kit was developed and field tested in 14 out-of-state schools. The kit consisted of three sub-kits: (1) materials for bulletin board display, (2) materials for individual study and (3) slides with tape narration. Questionnaires and an objective test were used to determine the kit's usefulness. Both teachers and students were surveyed on a pre- and post-visit basis.

Results and Conclusions

Among the principal findings were that the kit was useful in preparing for visits to Independence Park and that many individual kit options carried the same potential usefulness as others. It was recommended that (1) another tryout be made with a modified kit and a larger number of schools when the Park was nearer completion and (2) some nonschool agencies should produce a cross-media kit of useful instruction materials for groups planning to visit the Park.

THE IMPACT OF THE PUBLICATIONS AND ACTION PROGRAMS  
OF THE STATE COMMITTEE ON CONSERVATION EDUCATION  
OF THE MICHIGAN COOPERATIVE CURRICULUM PROGRAM

University Microfilms  
Order #68-7756

By: June Shelander Brown Wilson, Ph. D.  
University of Michigan  
1967

Purpose

The plan of this study was to review and evaluate the impact of the publications and action programs of the State Committee on Conservation Education in Michigan.

Procedure

Evaluatory instruments were sent to 61 members of the State Committee on Conservation Education during the years of 1959-1961; to 307 participants in a state leadership conference on conservation education held in 1960; and to 91 volunteers from later state leadership conferences. All individuals were sent the Guide to Teaching Conservation And Resource-Use in Michigan, a 151-page bulletin published in 1960 by the Michigan Department of Conservation and Public Instruction. Each member was asked to complete an evaluatory instrument after a one-year period had elapsed from time of receiving the Guide.

Results and Conclusions

Responses indicate that at least 18 activities suggested in the Guide were carried out by more than 4,400 individuals who used more than 2,400 copies of the Guide. Teachers believed that all teachers should have some in-service work with the Guide before being "turned loose" with it. The Guide was used mostly in science and conservation classes. It was used little, if any, by social studies teachers. Administrators found the Guide helpful for in-service work and curriculum planning. Others found the Guide useful for curriculum work, especially in developing awareness of the assistance available from the various state agencies.

Overall this study indicated that there was a significant relationship between (1) administrative support and changes in teacher behavior, (2) use of consultants and teacher behavior, (3) use of in-service programs

and change in teacher behavior and (4) administrative support of teaching methods different from those in use.

All evaluators suggested that the Guide needed to be revised and updated to deal with current problems and concerns.

## OUTDOOR VERSUS INDOOR LEARNING IN ELEMENTARY SCHOOL SCIENCE

University Microfilms  
Order #71-16686

By: Ronald C. Wise, Ed. D.  
Pennsylvania State University  
1970

### Purpose

This study was designed to examine and compare achievement of students taught science by three different approaches: direct experience (T1), outdoor classroom (T2) and indoor classroom (T3).

### Procedure

This experimental study involved 261 fifth grade pupils (three classes, each from a different school). Three weeks of instruction were followed by a three-week retention period without instruction. Pupils were pre-tested, post-tested and retention tested with the Science Achievement Test. Analysis of variance was used to analyze test scores to determine effects of the three treatments on knowledge, comprehension and retention of the science content. Analysis of variance of pre-tested scores for the three treatment groups established that each class was similar in knowledge and comprehension of the selected science content.

### Results and Conclusions

The first two null hypotheses were not rejected.

1. There will be no significant difference among the three treatment means on either the post-test or retention scores concerning science knowledge.
2. There will be no significant difference among the three treatment means on either the post-test or retention scores concerning science comprehension.
3. There will be no significant difference among the three treatment means on student observations.

Even though gains among the three treatments were not statistically significant, examination of the mean scores revealed that the

direct experience treatment group performed as well, if not better than the outdoor and indoor classroom groups on both the post-test and retention test. The three t-tests did reveal that significantly more of the direct experience students had made outdoor observations than either of the other two groups.

INDEX  
AUTHOR AND TITLE

## AUTHOR INDEX

### Page

- 96 Alexander, Albert Andria - The effect of a residential camping experience on the self concept of boys from low income families
- 27 Ambry, Edward J. - An investigation of the administrative problems related to resident outdoor education programs in certain public elementary and secondary schools
- 2 Archard, Merrill H. - Recommendations for the administration of the New Paltz State Teachers College School Camp
- 97 Aronstein, Laurence William - A study of attitudinal change in college students as a result of constructive participation in an environmental community service project
- 3 Bain, Charles M. - Camping education for the public schools of Jefferson County, Kentucky
- 99 Beker, Jerome - The relationship between school camping social climate and change in children's self-concepts and patterns of social relationship
- 46 Bellisario, Joseph - E. Laurence Palmer: His contributions to nature, conservation, and science education
- 57 Berger, Harriet J. - A plan for developing competencies for leadership in school camping and outdoor education for elementary education students
- 100 Boone, Janice Rae - Simulations, concern level, grade level and sex as factors influencing the assignment of importance to environmental concepts
- 102 Burchett, Betty Martela - A descriptive study of fourth, fifth and sixth grade students' attitudes relating to environmental problems
- 58 Carter, Doris Marie - Visual environmental education: The use of vision as the primary sensory mode of perception employed in the teaching of the fundamentals of environmental education
- 60 Christie, Robert M. - An examination of the outdoor teaching practices of outdoor teachers in selected school camps interpreted by interaction analysis
- 28 Christman, John H. - The administration of a public elementary school camping and outdoor education program
- 104 Chrouser, William Harvey - A comparison of the use of outdoor vs. indoor laboratory techniques in teaching biology to prospective elementary teachers
- 4 Colaw, Frank Edwin - Establishment of an outdoor education program for Unified School District #345 with maximum use of federal or private funds
- 106 Cole, Roy - An evaluation study of an extramural school camping program for adolescent boys identified as potential school leavers

- 107 Coren, Benedict Emanuel - A comparison of social, personal, and physical development of males and females exposed to a day camp environment
- 6 Craddock, Arnold - A suggested school camping program for Kanawha County sixth grade
- 108 Cragg, Nadine A. - An evaluation of the year-round school camp of Long Beach
- 109 Crociocchia, George Anthony - Outdoor education: A descriptive survey of programs and trends for elementary schools in the state of Maryland
- 62 Cyphers, Vincent A. - A study to determine the significant outdoor experiences for elementary teachers
- 111 Davidson, Morris - Changes in self-concepts and sociometric status of fifth and sixth grade children as a result of two different school camp curricula
- 112 Dorsey, Albert H. H. - A survey study of the comparative status of understanding and reasoning in conservation concepts by ninth grade students in the public schools of South Carolina
- 114 Esparo, John - Assessment of student attitudes and involvement in the environmental quality program of the Mott Institute-Okemos Secondary School Project
- 116 Evans, Forrest F. - The effects of a summer camp arithmetic enrichment program
- 7 Ferris, David Louis - A desirable outdoor education program for adult education centers
- 48 Fitzpatrick, Clinton N. - Philosophy and goals for outdoor education
- 9 Fredette, Barbara Wagner - An organized program relating art and the environment through color slides and accompanying script
- 29 Freeberg, William H. - Law and liability of municipal, charitable and private corporations for conducting recreation camps
- 117 Gilbert, Marion Luhman - The natural science museum as a teaching resource for biology
- 118 Gillette, James H. - A study of attitude changes as a result of Outdoor Bound Mountain Ski School, C-60
- 30 Gilliland, John W. - A study of administrative factors in establishing a program of school camping
- 120 Graff, George Portsmouth - Conservation understandings in the intermediate grades
- 122 Grilley, Helen E. - Development of an instrument for evaluating resident outdoor education laboratory school programs
- 123 Grossman, Arnold H. - Problem tendencies in children and types of behavior problems manifested by children deemed acceptable as campers in organized resident summer camps as reported by camp directors

- 125 Gustafson, John Alfred - A study of those extra-curricular activities which contribute to nature and conservation education in certain liberal arts colleges
- 127 Hafer, Paul Egan - Short field units in contrast to the long field trip as a vehicle for teaching biology to prospective elementary teachers
- 50 Hammerman, Donald R. - A historical analysis of the socio-cultural factors that influenced the development of camping education
- 63 Hammerman, William M. - An investigation of the effect an outdoor education experience has upon elementary education students' understanding of how learning is facilitated
- 11 Hanson, Walter Victor - A guide for the administration of school camping in California public elementary schools
- 13 Hartshorn, Marion - Model for a dual programmed summer day camp for mentally retarded children
- 64 Hauserman, Billy D. - The effect of an orientation to the outdoors on teaching behavior in the classroom
- 31 Hebel, Everett Louis - Camping in New Jersey: Suggested organizational and administrative procedures for conducting school camping programs
- 65 Heppel, Ruth - Determining changes college students undergo in selected categories as a result of the school camping experience
- 128 Hibbs, Clyde W. - An analysis of the development and use of outdoor laboratories in teaching conservation in public schools
- 129 Hollenbeck, E. Irene - A report of an Oregon school camp with program emphasis upon outdoor science experiences
- 14 Homan, Paul Barringer - Educational specifications for the outdoor school
- 130 Howenstine, William L. - An evaluation of conservation education in relation to the total program of eight school camps
- 66 Hug, John Wallace - Analysis of the factors which influence elementary teachers in the utilization of outdoor instructional activities
- 131 Hulett, Florence M. - A quantitative and qualitative study of facilities for school camping and outdoor education on state owned lands in Illinois
- 67 Ingmanson, Dale Eugene - Use of near shore marine environment as a field laboratory by science teachers and students
- 132 Janus, Samuel - Personality factors and their relationship to adjustment in a camping situation
- 133 Johnson, Tessa Mae - An evaluation of a semi-objective method for appraising selected educational outcomes of school camping
- 135 Kalla, Joseph A. - An evaluation of an interdisciplinary program in an elementary teacher-education program

- 136 Kleindiest, Viola, K. - A study of the experiences of camping for the purpose of pointing out ways in which a school camping program may supplement the elementary school at the sixth grade level
- 137 Kranzer, Herman C. - Effects of school camping on selected aspects of pupil behavior--an experimental study
- 37 Lantz, Everett Deimer - A prospectus for the administration of college and university camps
- 13// Lefebvre, Claudette B. - The comparative effects of three and six week periods of residential camping on physical fitness and adaptive behavior in children and youth with brain dysfunctions syndromes
- 51 Lewis, Charles Albert - Factors influencing the development of outdoor education
- 68 Little, Warren Masters - A survey on training programs for auxiliary school personnel in environmental education in New England with emphasis on the role of environmental aides
- 69 Lowen, Georgianna Heywood - A study of elementary education majors' knowledge of conservation concepts and democratic processes at the University of Southern Mississippi
- 70 Lyons, Kathleen Pauline - A descriptive study of prospective elementary teachers' attitudes relating to environmental problems
- 71 MacMillan, Dorothy Lou - A survey of the duties and responsibilities of professional school camp directors and counselors in a selected group of California camps
- 15 Margulis, J. D. - A study of existing public school sponsored camping programs in New York State and an analysis of factors which might encourage the development of additional camping programs in the public elementary schools of New York State
- 139 Mason, Bernard S. - Camping and education
- 73 McCormick, Florence R. - The outdoor laboratory: In-service education in the processes of science
- 141 McKnight, Eloise - Contributions and potentialities of school camping
- 74 McNamara, Eugene Stephen - A comparison of the learning behaviors of eighth and ninth grade ESCP earth science students: One half experiencing laboratory investigations in the indoor environment, the other half experiencing laboratory investigations in the outdoor environment
- 75 Miles, William Raymond - Environmental conservation education in Minnesota's colleges and universities
- 76 Modisett, Sandra Ann - A pattern of curricular experiences in outdoor education

- 77 Morrison, Edward Bottom - A comparison of the effects of teaching a twelfth grade government and sociology class in an environment saturated with study trips and resource speakers with the effects of a traditional course of government and sociology when both are offered in a voluntary summer school program
- 79 Mouser, Gilbert Warren - A study of opportunities for leadership training in outdoor education
- 143 Pepper, Nathan Hale - A study of school camping with special emphasis on program objectives, curriculum, administration and evaluation
- 33 Philpott, Frank Excell - School camping in Florida: A guide for local school administrators in planning, establishment and administration of school camping programs
- 35 Pick, Diane Carol - College and university outdoor education centers-- present status and recommendations for the future
- 81 Presnell, William - The development and evaluation of an audio-taped program of instruction in learning concepts of ecology and conservation
- 83 Pulliam, Mabel Gertrude - An analysis of selected outdoor education programs and recommendations for curriculum and in-service education for the outdoor education program of the Jefferson County, Colorado, public schools
- 84 Reed, Alden Merle - Utilization of community resources by public elementary school teachers
- 86 Rhead, Raymond Elmo - A proposed interdisciplinary approach to an outdoor education program in the professional teacher preparation curriculum at Weber State College
- 145 Rhoades, Lawrence W. - A close view of the 1952-53 camping program of Verona School, Battle Creek, Michigan, as a guide to future action
- 147 Riblet, Donald Campbell - Environmental knowledge and opinion scales--need, design and use: A factor analytic study in test construction
- 36 Rillo, Thomas J. - A preliminary definition of the role of the outdoor education coordinator in representative public school outdoor education programs
- 52 Rogers, Martin Humann - Principles and functions of outdoor education
- 88 Ronfeldt, Leo Leonard - A determination of basic urban environmental understandings important for inclusion in the elementary school curriculum
- 89 Roth, Robert E. - Fundamental concepts for environmental management education (K 16)
- 148 Rupff, Paul Ernest - A comparison of aspirations with achievements in a group of selected Michigan public school camps

- 150 Schafer, Frank Graff - An administrative guide for initiating resident outdoor education in the public schools
- 151 Sharp, Lloyd Burgess - Education and the summer camp -- an experiment
- 17 Sharron, Mark M. - The problems of environmental management: A manual designed for group discussion, including a preliminary program of evaluation
- 152 Shaw, Merlin J. - The educational effectiveness of the traveling school camp
- 90 Shelar, Eugene - A study of the use that is being made of the out-of-doors in teaching in the public schools and in the teacher training schools
- 18 Skelton, Marion A. - A programmed guide to selected spring wild flowers of North America
- 154 Slater, Donald P. - The effect of an outdoor experience on sixth grade students' cognitive understanding of ecological concepts
- 38 Smith, Lenore C. - An investigation of personnel practices and program organization in public school camping and outdoor education
- 155 Solid, Myron Lee - The use of a comparative analysis as an evaluation of a junior high school conservation education program
- 39 Squires, John L. - Standards for school camp programs
- 156 Stack, Genevieve C. - An evaluation of attitudinal outcomes of fifth and sixth grade students following a period of school camping
- 40 Stagner, Ishmael W. II - School laws affecting certain aspects of outdoor education in the United States
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