The Effect of an Outdoor Education Program on Student Attitudes and Academic Grades

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by

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Abstract

The purpose of this study was to measure the effectiveness of an outdoor education process in changing attitudes of students, increasing their academic grades in environmental education and to determine the positive attitudes achieved by students involved in an informal educational experience. Changes in self-concept and attitudes towards school, teachers, and the environment were examined within and between a group of students experiencing regular classroom instruction and a group of students experiencing instruction out-of-doors. The study also examined the cognitive learning in environmental education between the same two groups. The last part of the study measured the positive attitudes of students involved in an informal outdoor education experience and compared them to a group of students involved in a formal, structured outdoor education experience.

Fifty students were involved in the study of the changes in attitudes and cognitive learning. These were students taking Biology 200 at Sisler High School in Winnipeg. The treatment group consisted of twenty-five students and the control group was made up of twenty-five students. The treatment group received their instruction in the classroom. Both groups were pre- post-tested for changes in attitudes towards themselves, school, teachers and the environment, before and after experiencing the appropriate teaching processes. Both groups

were also pre- post-tested on environmental knowledge. The informal group was made up of twenty Grade X, XI, XII students who were members of an outdoors club. They were given an attitude test and compared to the treatment group.

The survey of student attitudes was designed to measure self-concept, and attitudes towards school, teachers and the environment. A cognitive test was designed to measure environmental knowledge.

The results indicate that there is no significant difference in changes in attitudes between groups experiencing classroom instruction and those experiencing instruction in the outdoors. The outdoor instruction did significantly improve cognitive learning of environmental knowledge when compared to the increase in environmental knowledge experienced by the group taught in the classroom. Those students involved in an informal outdoor education program exhibited positive self-concepts, and attitudes towards school, teachers, and the environment.

Acknowledgements

I would like to thank Professor Stu Seim, chairman of the thesis committee, for his help, guidance and patience in completing this study. The writer is also indebted to Dr. Murray MacPherson and Dr. Phil Husby for their participation on the thesis committee.

Dedication

This thesis is dedicated to my son, Darren. It is hoped that his education will be exciting, challenging and based on the philosophy of outdoor education.

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CHAPTER I

Introduction

A review of the literature has shown that there is a need to provide empirical data concerning how an outdoor education program, as part of the curriculum, can affect concepts, attitudes and emotions.

Robert and Sonia Vogl (1974, p. 54), in their research analysis of outdoor education in relation to environmental quality, found that George W. Donaldson (1972), in his paper "Research in Outdoor Education," stated that there was a need in the following areas:

> Empirical studies of exemplary design applied to large populations;
>
> Studies which distinguish between cognitive and effective domains;
>
> Studies of the interests and attitudes of learners; individual growth, especially self-concept; the nature of learning in non-resident programs; the unique needs of inner-city youth in outdoor education. (pp. 9-10)

In addition, authors such as Miller (1972, p. 104), Blackwood (1972, p. 128), Pullias (1972, p. 12), and Smith (1972, p. 12) suggest that by providing a direct, participatory program, the acquisition of knowledge and skills will be enhanced.

Teachers, in providing residential and non-residential experiences for students, have been concerned that these experiences are educationally sound and provide for the growth of the students involved. The teachers' evaluations of these programs have been based on personal, subjective observations which may allow personal biases to creep in. Expansion of school curricula and content has placed a premium on time allocation within the school day. As teachers and administrators become more involved with school programming and are deemed more responsible and accountable for programming, it is necessary for them to provide empirical justification for changes in both the program and the teaching process. Outdoor education is a process that requires this empirical justification, as it tends to place more of a demand, than in-class experiences, on teacher-student school time, teacher preparation time, and education funding.

This study examined (a) the attitudes of students toward themselves, their teachers, the school and their environment, (b) the capacity of an outdoor education program to increase their knowledge of environment problems and management, (c) the capacity of an outdoor education process to change the attitudes of students toward themselves, their teachers, the school and their environment.

Need for the Study

An informal survey of camping and outdoor experiences of Sisler High School students in Grades X, XI, XII had been

made for three years (1971, 1972, 1973). This informal survey of the outdoor recreation skills and knowledge of the students was undertaken to determine (a) the experiences and skills the students possessed in outdoor recreation, (b) the training and its source that the students had in outdoor recreation, (c) the environmental and survival knowledge students possessed, and (d) the attitude of students toward their natural environment. A total of 329 students were surveyed.

The questionnaire portion of this informal survey is found in the Appendix A, with the percentage responses to each item. Following is a brief summary of information obtained from this survey.

The informal survey was undertaken to gather information on the camping and outdoor experiences of the students at Sisler. The researcher believed that it was necessary to gather information on the knowledge and experiences of the students, so that a research program could be established. This was necessary to avoid duplication of the content taught during the research study.

It was found that 79% of the students sampled do go camping; 56.5% with their families and 81.5% with friends. In addition, 70.5% stated that they would like to learn more about camping. This percentage indicates that many students in Sisler are experiencing a camping situation.

Part B of the survey covered boating and swimming experience. The percentage owning boats was 19.7%. Of that

19.7%, 55.3% owned power boats.

In response to swimming ability, 79.5% of the students felt that they could swim reasonably well or better and this corresponds to the 77.5% that have taken swimming lessons.

Part C of the survey covered hunting and firearm safety. Thirty percent of the respondents hunted, but only 17.3% had taken a hunter safety program.

Part D was a questionnaire of outdoor lore, testing both knowledge and attitude. Seventy-five percent of the students answered the questions correctly. As a result, it can be assumed that the majority of students surveyed had a basic knowledge of outdoor lore and a positive attitude toward the environment.

The results of the informal survey indicated that there was an interest by the students in participating in outdoor activities. At the time of the informal survey, the researcher was also incorporating the process of teaching outside the classroom into the regular classroom procedures. It was noticed that interest in the academics seemed to be improving, and there was an increased enthusiasm and participation on the part of the students. Based on this information, the researcher decided that a formal research study of the effectiveness of an outdoor education program related to student attitudes and learning was necessary.

Definition of Terms

Outdoor education. "is a means of approaching

educational objectives through guided direct experience of the outdoors, using as learning material the resources of the environment." (National Association for Outdoor Education, Great Britain, Advertisement Brochure).

Environmental education. "is aimed at producing a citizenry that is 'knowledgeable' concerning the bio-physical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution." (Environmental Education, 1972).

Attitude. "a readiness to react toward or against some situation, person or thing, in a particular manner." (Good, 1959).

Effect, simple. "the effect of an experimental factor under controlled conditions, that is, with other factors held constant." (Good, 1959).

Self-concept. The view a person has of himself. "Those parts of the phenomenal field which the individual has differentiated as relatively stable and definite parts or characteristics of himself." (Good, 1959).

Statement of the Problem

The purpose of this study was to measure the effectiveness of an outdoor education process in changing attitudes of students and increasing their academic grades in environment education. The study also examined the positive attitudes achieved by students involved in an informal educational experience.

Statement of Hypotheses

General Hypothesis I

Students taught environmental education utilizing outdoor education procedures, will show no significant change in attitude when compared to students taught environmental education in the classroom.

Specific Hypotheses

a. Students taught environmental education utilizing outdoor education procedures, will show no significant change of attitude toward their school when compared to students taught environmental education in the classroom.

b. Students taught environmental education utilizing outdoor education procedures, will show no significant change in their self-concept when compared to students taught environmental education in the classroom.

c. Students taught environmental education utilizing outdoor education procedures, will show no significant change of attitude toward their teachers when compared to students taught environmental education in the classroom.

d. Students taught environmental education utilizing outdoor education procedures, will show no significant change of attitude toward the environment

when compared to students taught environmental education in the classroom.

General Hypothesis II

Students taught environmental education utilizing outdoor education procedures, will show no significant improvement in academic scores in biology class when compared to students taught environmental education in the classroom.

General Hypothesis III

Students taking part in an informal outdoor experience will not exhibit a positive self-concept.

General Hypothesis IV

Students taking part in an informal outdoor experience will not exhibit a positive attitude toward their school.

General Hypothesis V

Students taking part in an informal outdoor experience will not exhibit a positive attitude toward their environment.

General Hypothesis VI

Students taking part in an informal outdoor experience will not exhibit a positive attitude toward their teachers.