8-1-1968

Investigation of attitudinal and behavioral changes of selected sixth grade students who attend an outdoor school

Robert R. Sesar
Portland State University

AN ABSTRACT OF THE THESIS OF

Robert R. Sesar for the Master of Science in Education.

Date thesis is presented August 13, 1968

Title Investigation of Attitudinal and Behavioral Changes of Selected Sixth Grade Students Who Attend an Outdoor School.

Abstract approved [redacted]
Michael Fiasca, Chairman

The out-of-doors is being utilized increasingly by school personnel for developing programs to extend the classroom to include the natural environment. It is hoped that a climate for learning, enriched with direct laboratory experiences, will establish a situation where all students benefit. This study is concerned with the investigation of students' attitudes and self-concepts following such an outdoor school experience.

The students selected for this study attended a sixth grade class from one of the following Oregon schools: Holy Redeemer and George, of Portland; Eastham, located in Oregon City, and Rainier located in the town of Rainier. The test group spent six days at an outdoor school, situated in Colton, Oregon. Data was secured from one-hundred and thirty-

one sixth grade boys and girls from lower to high socio-economic backgrounds.

The instruments used to measure and evaluate the response of the group were: (1) An Attitude Scale, containing sixteen items, that would demonstrate students' values toward the natural environment. (2) A Concept Scale I, with fifteen items, that showed responses to what the students thought of himself. (3) A Concept Scale II, that recorded the students' responses to how they thought others viewed them. This scale contained fifteen items. (4) A diary was constructed to record the unsolicited comments from the students that attended Holy Redeemer School.

The design of the study included testing all the students two weeks before the outdoor experience and five weeks after by means of the Attitude Scale and the two Concept Scales. An item analysis of the students' diaries was made to record any values that may have been mentioned. A statistical level of reliability was calculated on each of the school groups after the posttest.

From the results of this investigation, the following conclusions seemed justified: The experience of the out-door school provides opportunities that affect the attitudes of students toward the natural environment in a positive way. The outdoor school increases relationships that are

conducive to the attainment of favorable self-concepts in the participants. The experience of the outdoor school had a positive, measurable effect, on the students as a group, after a prolonged period of time.

PORTLAND STATE COLLEGE

INVESTIGATION OF ATTITUDINAL AND BEHAVIORAL CHANGES OF SELECTED SIXTH GRADE STUDENTS WHO ATTEND AN OUTDOOR SCHOOL

by

ROBERT R. SESAR

A Thesis

Submitted

in partial fulfillment of the requirements for the

degree of

MASTER OF SCIENCE IN EDUCATION

1968

TO THE OFFICE OF GRADUATE STUDIES:

The Members of the Committee Approve

The Thesis of Robert R. Sesar,

Presented

[redacted]

Michael Fiasca, Chairman

[redacted]

John Schulz

[redacted]

Robert Van Atta

APPROVED:

[redacted]

Frederick J. Cox, Dean of Graduate Studies

Aug 15, 1968

Date

ACKNOWLEDGEMENT

To Dr. Michael Fiasca, chairman of the thesis committee, Dr. John A. Schulz and Mr. Robert O. Van Atta, committee members, the writer wishes to express genuine gratitude for the support and guidance amply provided at successive stages of development of the investigation.

The writer wishes to express sincere appreciation to Dr. Alma I. Bingham and Dr. Dorris May Lee for their appraisals and helpful suggestions.

To the many teachers that participated in this study and the staff at the Regional Outdoor School thanks are extended. The gratitude of the writer is generous in respect to the assistance provided by Richard Togni regarding the statistics of the study.

Heartfelt thanks are expressed, to my daughter, Pamela Gail, for her timely comments and assistance in developing the concept scales.

R.R.S.

TABLE OF CONTENTS

TABLE OF CONTENTS, Continued

LIST OF TABLES

LIST OF TABLES, Continued

CHAPTER I

INTRODUCTION

THE PROBLEM

Statement of the problem

This study seeks to investigate the effect of attendance at the Regional Outdoor School upon sixth grade students' changes in self-concepts and their attitude toward the natural environment.

More specifically, the following hypotheses are to be tested:

1. Students' experiences at the outdoor school will not significantly change their attitude toward the natural environment.
2. The experiences attributed to the outdoor school will not significantly change the student's view of himself.
3. The designed instruments will not be effective in assessing student change.

Background for the study

Most personality theorists believe in a concept of self and they tend to support the notion that the self arises out of social interaction. According to Sullivan (9) a child's earliest appraisal of himself is made up of "reflected appraisals," that is, what others think

and feel about him. The self-concepts of children have been the subject of empirical measurement, but these investigations have mostly been confined to the formal classroom setting.

Many educators are cognizant of the educational implications offered by outdoor schools, and as a result a large number of such schools have been established throughout Oregon during the past ten years. On the basis of subjective evidence public outdoor schools have been judged to be educationally sound, but systematic attempts to evaluate the results of outdoor experiences on the behavior of children have been limited.

Historical overview of public outdoor schools in Oregon

The Outdoor Program in Oregon started in the Spring of 1957. Under the direction of Dr. Irene Hollenbeck, of Southern Oregon College of Education, Ashland, Oregon, the first project was undertaken. A combined fifth and sixth grade class and their teacher from the Westside Elementary School of Medford, Oregon spent a week at Dead Indian Soda Springs Camp, located east of Eagle Point on Little Butte Creek.

To further introduce the outdoor school program to administrators, teachers, and parents, and the general public of Oregon, Dr. Margaret Milliken of Oregon State University, Corvallis, Oregon, promoted a series of pilot

projects in several school districts. In the spring of 1958, the first pilot project started with one sixth grade group from Crook County. They spent five days at Camp Tamarack, a private camp located near Suttle Lake, in the Oregon Cascade Mountains.

Since that time other projects have been conducted by public schools in other parts of the state, e.g., Parkrose, Clackamas, Tillamook, Hebo, McMinnville, Salem, West Linn, Coos Bay, Springfield, Mapleton, Beaverton, Prineville, Clackamas, Canby, Milwaukie, and Bend (34).

The Regional Outdoor School is the first large-scale application of the outdoors as a classroom. This was made possible through the Elementary and Secondary Act of 1965. The application for the Federal Funds under the act was made by the P.A.R.E.T. (Portland Area Resource Education Tour) Committee, a group of state and federal resource agency people, industry representatives, and science educators from Washington, Multnomah, Columbia, and Clackamas Counties.

In the Spring of 1966, five hundred sixth graders from these counties took part in a pilot outdoor school program at Camp Colton, in Colton, Oregon.

In the Fall of 1967, an additional outdoor school was developed on the Sandy River, near Cloverdale, Oregon. During this time there were approximately 1,560 sixth grade students attending the two outdoor schools.

It was the intent of the P.A.R.E.T. Committee that after the Federal financing expired, in the Spring of 1968, the cost of the outdoor program be assimilated into the local school budgets. It was also the intent of the committee that the outdoor program become part of the regular sixth grade curriculum in the public and parochial schools and annually reach all the 16,000 available sixth grade students in the four county area (29).

The nature of outdoor education and the outdoor school

Outdoor education begins when teachers move their students outside the walls of their school to teach those areas of the curriculum which could be taught more effectively in a natural outdoor setting (33, p. 43). Just as other teaching aids have been used to make instruction more meaningful and realistic, so direct experience that involves enjoying, observing, and interpreting natural phenomena can be available. These experiences include field trips, outdoor classrooms, excursions, nature walks, and native materials brought back into the classroom. However, in order to distinguish between outdoor experiences which take place within the time limit of a single day and those that take place over several days and where the student is away from home, the term outdoor school has been applied to the resident experience (2, p. 10).

The twenty-four-hour-a-day experience provides each student with the opportunity to appreciate those intangibles that grow out of close association with his peer group. The resident experience also enables the student to study the interrelationships of man as part of the heavens, the soil, the water, the plants, and the other animals. In other words, the outdoor school establishes a laboratory which enables all students to see, feel, hear, and smell the reality about them.

This environment will not conserve and maintain itself unless people are concerned and become conservation minded first. It then seems imperative that we teach our young citizens ideas and ideals that have established themselves to be worthy. Situations and opportunities must be provided that actively involve students in decision making which will nurture responsibility, pride and self-evaluation (15, p. 13).

This educational medium cannot be conceived as an isolated experience. Preparation for an outdoor school implies many hours of curriculum planning prior to the outdoor experience. Observations and learnings gained in the field are subsequently broadened and deepened upon returning. When the outdoor educational experience is integrated into ongoing classroom programs, a potent educational tool is available to be used in many content areas of the curriculum. Intercultural relations and the human understandings, which are the essence of real

democracy, will inevitably be established when boys and girls have the opportunities to be involved in outdoor experiences (5, p. 15).

Definition of terms

Appraisal. To estimate a value or make a valid judgment.

Attitudinal outcome. The issues, results, or consequences of changes in values, aversions, or attitudes. The widely accepted definition of an attitude as a predisposition to react favorably or unfavorably toward something, under certain conditions is used (20, p. 25).

Classmates. The members of an identified homeroom class.

Natural environment. Natural, in accordance with or determined by nature, everything that is. The word environment is used casually to mean surroundings. Everything outside an organism is its environment (4, p. 32).

Outdoor school. An educational enterprise located in an out-of-doors environment, which provides children with the opportunity to (a) live in a group situation (b) obtain insight into the basic processes of life, and (c) receive guidance (3, p. 1).

Self-concept. Those perceptions, beliefs, feelings, and attitudes which the individual views as part or characteristic of himself.

Self-esteem. Possession of a favorable opinion of the self, a favorable self-concept (7, p. 10).

IMPORTANCE OF THIS STUDY

This study is important to the degree that it accurately measures specific attitudinal outcomes claimed for the outdoor school and analyzes certain valid outcomes in students' self-concepts. Although outdoor schools have gained wide acceptance in their relatively short existence in Oregon, there are many who would question the educational value of this experience.

It seems reasonable to expect that the future of the outdoor school probably rests on demonstrable evidence, rather than on theoretical claims. Hence, there is a real need to know what is being accomplished in accurate terms. This study will be important, primarily, to the extent that it provides accurate information of educational outcomes. In the past most evaluation instruments and methods have been ineffective, or non-existent. Secondarily, this study is important because it will critically apply specific scales, methods, and procedures for the evaluation of the Regional Outdoor

School program now in operation.

SCOPE AND LIMITATIONS OF THIS STUDY

The limitations of this study were defined by the behavioral characteristics to be measured, and the population to be examined. In conjunction with the population to be studied, certain practical factors were taken into consideration. Of greatest importance was quantity. In this study, it seemed desirable to do an intensive investigation with a large population rather than a study using a small control group. Furthermore, it was believed that an experimental school situation could be produced which would be fairly typical of outdoor schools in Oregon. It was possible to accomplish this through the cooperation of the following schools: Rainier Elementary School, Rainier, Oregon; Eastham Elementary School, Oregon City, Oregon; Holy Redeemer and George Schools, in Portland, Oregon.

In the development of the investigation the foregoing factors influenced the decision to omit a highly structured control group approach. The approach used would enable the researcher to explore latent attitudes and self-concepts more exclusively. Therefore, the approach followed was one of descriptive survey.

The specific delimitations of this study were the following:

1. The study was confined to four sixth grade classes.
2. The experimental study was limited in time, commencing on April 8, 1968 and terminating on June 4, 1968.
3. The students were asked to put their names on the three measuring instruments.
4. The results of the study was governed by the sincerity and exactness of the respondents' reactions to the various measuring instruments.

ASSUMPTIONS

The following assumptions pertain to this investigation:

1. The outdoor school experiences of six days duration effect behavioral changes in individual students.
2. The kinds and extent of selected self-concepts and behavioral change can be described, measured, and analyzed through the use of measuring instruments used.
3. Pre-outdoor and post-outdoor experiences are a part of the total outdoor experience.

CHAPTER II

THE SAMPLE

The selection of the schools and the classes who participate in the Regional Outdoor program is determined by the school administration (29).

Holy Redeemer School, with a population of 607, is located in North Portland. The school is in the "Model School" area of the Albina district. The public schools in this area are being partially subsidized by Federal Government funds under Title I; Elementary, Secondary Education Act. Holy Redeemer School receives a small portion of these same funds.

The majority of the students' parents are "blue collar" workers with relatively few "white collar" workers. Most are skilled laborers. There are also a few teachers, one doctor and one attorney represented in the parent group. The average educational status of the adults inside the Parish boundary is at the high school level.

Holy Redeemer School consists of grades one through eight. The sixth grade class that participated in this study is heterogeneously grouped and represents a cross section typical of the school and the community (19).

Rainier Elementary School is located in the town of Rainier, Oregon, population in 1968 was 1202. A modern sawmill employs about 170 of the towns' men. Many of

Rainier's residents cross the Columbia River and work in the industrial plants and sawmills located in Longview, Washington. There are numerous farms near here specializing in truck-farming. Farm forestry, dairying, and beef cattle raising also contribute to the town's economy.

Rainier grade school is composed of approximately 600 children, grades one through eight. It is the only elementary school located in this community. The participants in this study are from a sixth grade class. The students in this class are heterogeneously grouped and represent a cross section of the school and community.

Eastham elementary school, is located in Oregon City, Oregon. It is one of the larger schools in the Oregon City School district. The district has ten elementary schools, two junior high schools, and one senior high school. There are twelve teachers for grades one through six with two classes for each grade level at Eastham. There is one kindergarten teacher, one instructional media teacher, and two teachers for the special education department. The total enrollment is 415 students, grades kindergarten through the sixth.

The school is located in a well established neighborhood and has a student body that is stable, that is, few transfers occur during the school year. The school is located near the downtown area and many students'

parents are professional people. Others work in the down-town stores or one of the large paper mills located in or near this community. The economic level of the families in this area is average. There are a few families who do receive Aid to Dependent Children. The sixth grade class that participated in this study is heterogeneously grouped. The class represents a cross section of the school and no attempt was made to select any of the participants.

George elementary school is located in the St. Johns area of Portland, Oregon. It is a public school and consists of three kindergarten classes and grades one through eight. The total enrollment of George school is 631 students. After completing the eighth grade students attend Roosevelt high school.

George school was a participant in the "Model School" program but because of its boarder line economic status was dropped when the program was curtailed. The economic level of this school district is below average. Most of the students' parents are skilled laborers -- union people. There are very few professional people living in this district.

The students participating in this study are from one of the two sixth grade classes at George school. Although this sixth grade class is heterogeneously grouped approximately one-half of the students are performing

below grade level, academically.

The children in this study are youngsters from low average to moderately well-to-do socio-economic communities. All students attending the second week of the outdoor school participated in the study.

CHAPTER III

RELATED INVESTIGATIONS

In the earlier history of school camping and outdoor education, research was somewhat limited with a few studies beginning to appear by the middle of the nineteen forties.

A school camp was conducted with Life Camps, Incorporated in 1945. During the regular school year one fifth grade class and one seventh grade class spent three weeks at outdoor camps. Sixty-two pupils of both sexes were accompanied by their teachers. These students lived in eight small units of seven or eight students. Each unit did its own cooking and developed its own daily program.

Tests in nature study, science, vocabulary, arithmetic, and an interest inventory were constructed and administered. Students were also studied by means of observations, questionnaires, and interviews. Parents, teachers, and supervisors were polled for their opinions. All testing and evaluation was done prior to camp and immediately after returning.

Groups tests consisted of an experimental group and a control group. The control group closely approximated the experimental group in intelligence quotient, age, and academic achievement. Students were matched on the basis of age, sex, intelligence quotient, and reading ability (21).

The result from the data gathered is as follows:

1. Gains from initial to final testing favored the experimental group in six of the ten comparisons. Two of the gains, both favoring the experimental group, were statistically significant. They were: interest inventory for the seventh grade students and vocabulary for the fifth grade students.

2. After camp testing the experimental groups scored higher on eight of the ten comparisons. Five of the differences, all favoring the experimental group, were statistically significant. They were: interest inventory for seventh grade students and nature study, vocabulary, arithmetic, and interest inventory for the fifth grade students.

3. The most striking result attained was the improved personal-social relationships among the students as well as considerable learning about nature and outdoor living.

4. Reports of observations. Observers commented positively and favorably on the camping experience as providing a means of educational, personal, and social development vastly richer than the usual school program.

5. Pupil questionnaires showed the campers were overwhelmingly pleased with the outdoor experience and cited numerous instances of vital learning and social and emotional growth.

6. Parents enthusiastically endorsed the program and favored its being incorporated in the regular school curriculum.

7. Teachers and supervisors involved in the experiment were in unanimous agreement that it was a significant experience that all school children should have (26).

"Cragg's study (12) attempted to determine the development of the sixth grade campers as compared with non-campers and to appraise the educational achievement of the camp program in terms of the educational school objectives.

The tools of evaluation used by Cragg were the following:

1. Tests that include nature study and vocabulary. Two equivalent groups--experimental and control--were tested before and one week after the outdoor experience.

2. Essays. Camp essays were written before and after camp. Three professors read and rated the essays on a ten point scale with reference to spelling, vocabulary, style, interest value, and number of activities mentioned.

3. Check lists of learnings. At the close of camp, 167 children checked the "things" learned at camp, the things already learned before camp, and the things not done or learned to do.

4. Sociograms. Campers named three best friends before and after camp, and four weeks later.

5. "Guess Who" responses. Pupils in the classroom named the aggressive children and the withdrawn children before and after camp.

6. Rating scales. Counselors rated children on social growth and maturity. Warner's short-form socialization scale was used before and after camp. Gains and losses were computed on a five interval scale for maturation of self-reliance, acceptance of responsibility, initiative, cooperation, mixing ability, efficiency, personal qualities, health habits, and participation.

7. Campers wrote down all the "things" that made them happy and all the "things" that made them unhappy immediately following camp and four weeks later.

8. Recordings. The last day at camp discussion centered around "What has this week meant to you?" Recordings were made and studied.

9. Questionnaires were sent to parents of campers to determine the learnings visible to the parent as well as a listing of the most valuable learnings.

The general conclusions of the Cragg study were outlined as follows:

I. In spite of the shortness of the period, the one-week experience at the Long Beach School Camp made some definite contributions to the educational development of the children according to the stated objectives:

   A. Intellectual development

      1. The children who had the camp experience showed greater improvement than those who remained in the classroom.

      2. The intense enjoyment of the children might lead to pursuance of such interest in leisure-time activities, but conclusion on this point can be merely conjectural.

   B. The improvement of social relationships

      1. The camping experience contributes to the improvement of social relationships among children, but produces no change in certain aspects of the social development of some children, and causes losses in others.

      2. Certain children maintain leadership and certain children remain social isolates regardless of their environment.

   C. The Camping experience produced a strong emotional impact in the joy and enthusiasm aroused in the children.

II. The experience holds elements of uniqueness common to many of the children, but the reaction to the experience is varied, individualistic, and enthusiastic. Experiences at camp which hold significance for the children tend to

retain this significance over a period of time" (12, p. 31).

Johnson (12) 1955, attempted to: 1. Develop techniques to appraise changes in achievement, interest, behavior, and social status in junior high school students who had experienced one week of public school camping. 2. Establish criteria to evaluate the effectiveness of the appraisal techniques. 3. Apply each appraisal technique in school camping situations. 4. Evaluate the effectiveness of each separate technique.

The procedure to develop answers were sought in the following ways:

1. General literature of general education as well as camping and outdoor education was surveyed.
2. Appraisal instruments were developed in conformity with established criteria.
3. Appraisal instruments that were developed were applied in the San Diego public school camping program. One group was experimental and the other was the control or non-camper group.
4. The information elicited by these techniques was studied and evaluated.

The conclusions of this study indicate that changes do occur in pupil interest, pupil behavior traits, and

group cohesion, but the assessment of these changes by the use of semi-objective techniques is of questionable practical value. The changes that occur in students' behavior may have long-term significance in the life of the pupil. The immediate evidence relating to change is too subtle and intangible to be identified by teachers' grades, an activity check list, a "guess who", peer-rating questionnaire, or a sociometric questionnaire situation (26).

Davidson (11) in 1965, used two encampments to conduct his appraisal of fifth and sixth grade students' self-concepts and sociometric status. Encampment I did not stress problem solving or were the students involved in any decision making. At very best, the student's involvement could only be described as a pseudo-democratic process. The adult leadership made most of the major decisions.

Encampment II was less structured. The students participated in the camp decisions. Group decision making, group discussion, problem solving, and creativity were all significantly characteristic of this camp.

The groups closely approximated each other in age, academic achievement, intelligence quotient, numbers, and sex. The students were also matched on the basis of their social-economic background.

Before and after the outdoor experience each student was asked to complete these three evaluation scales:

1. Self-concept check list. The students were asked to mark their response to statements under columns titled: This is very much like me; A little bit like me; Not like me at all. This scale was composed of fifty-six statements: i.e., I have a good mind. I have little self-control. I am afraid of many things.
2. California F scale. This scale was composed of twenty-nine questions and the students circled one of six choices: Strongly disagree; Disagree somewhat; Disagree a little; Agree a little; Agree somewhat; or Agree strongly. Examples are: Human nature being what it is, there will always be war and conflict; People can be divided into two distinct classes, the weak and the strong; and, If people would talk less and work more, everybody would be better off.
3. Camper evaluation form. Almost always; Sometimes; and, Almost never; were the choices given the students on this scale. This scale was composed of twenty statements e.g., I

did the chores only because I was forced to do them. I felt that I had the right to be an individual. I felt wanted and needed.

The data gathered from this research demonstrates:

1. Children from lower socio-economic backgrounds tend to respond "better" to camping programs that are highly structured.
2. Boys seem to adapt better to camp life than the girls. Many girls remained apprehensive during the total camp session.
3. The structure of encampment I produced significant differences in the students' responses to leadership than the structure of encampment II.
4. In both encampments some students showed a definite shift in response and some students showed no shift in response.
5. The over-all responses on the self-concept list of both encampments, when compared, showed little or no significant differences.
6. Students tend in a systematic way to respond differently to a check list given to them before and after an outdoor experience.
7. Outdoor experiences may be able to start, in some children, a process of change, both in

personality and in attitudes toward age-mates and adults.

8. More investigation is needed in all aspects of outdoor education.

The Division of Curriculum and Instruction of the Milwaukee Public Schools in 1967, in order to evaluate their outdoor schools, developed and administered questionnaires (30). It was felt that a series of questionnaires plus a pre and post test would evaluate the project's objectives:

1. To teach the elements of democratic living through group living, planning and sharing.
2. To provide direct experiences in the natural and biological sciences.
3. To teach the importance of and appreciation for natural resources.
4. To provide the opportunity for meaningful work experiences.
5. To teach skills involved in outdoor recreation, such as fishing, camping, boating and hiking.
6. To provide opportunities for fun and for students to assume responsibility and self-reliance.

A pupil questionnaire on the camping experience was administered to five randomly selected classes. The

five classes included 158 pupils who had attended one of the camping sessions. The research design used to evaluate this project was of two types:

1. A one group experimental given a pretest and posttest.
2. Descriptive; using pupil, teacher, parent and administrator questionnaires.

An attitude scale was also devised to assess pupil attitudes toward camping skills, self, peers, working together and the use of natural resources.

A questionnaire was sent to the parents of these 158 pupils in order to ascertain their feelings toward the outdoor experience. Twelve principals were also randomly selected to rate the project.

The data collected by the various questionnaires were analyzed by tabulating the response to each question. Implications were then drawn regarding the value and extent of the program by analyzing the consensus of opinion of the various groups questioned. These results are subjective in nature and may reflect personal bias. From an analysis of the data obtained:

1. Children improved in social living, working together in small groups, and assuming responsibility.
2. Teachers felt a closer pupil-teacher relationship and were positive in their evaluation.

3. There was improvement in social development, home-school relations, and out-of-school activities.
4. Achievement and attitudinal changes revealed statistically significant, positive results.
5. This program is fulfilling its objectives and is making an impact on the lives of these children.

CONFLICTING VIEWS

Not all camping enthusiasts accept the notion inherent within the whole concept of outdoor group living, that social, emotional, and physical health will be affected in a positive way.

Rademacher (31), in his article entitled "The Child's Readiness for Camp", accepts the idea that occasional separation of parent and child for the good of each is sound mental hygiene, but cautions that "the fact remains there are still far too many children sent to camp who spend miserable days, not just merely homesick, but bored, rebuffed, indifferent, and hurt, and have gained nothing from the experience" (31, p. 135).

Gumprecht (22) warns that case studies investigating common emotional disturbances of children at camp seem to indicate that some children, because of early social pressures may develop an unduly strict superego, and be

forced into neurotic behavior patterns under the impact of increased social pressures of camp life. Gumprecht and Rademacher do agree that camping is too valuable an experience to deprive any child of it. Improvements made by many children while in camp indicates that a therapeutic instrument is available and that it is the adult's responsibility to make use of it. Gumprecht also points out that it is the task of the administrators to establish an environment that will help children form wholesome relationships and to make constructive and mature adjustment to reality.

Redl (32) also seriously questions some of the conveyed values of camping. Discussing the psychopathological problems of camping, he underscores some of the risks associated within our concept of democracy with its strong belief in group life. He asserts that "like all good things, even group life has its drawbacks and limitations". The adjustment to camp life, which must take place, is not always easy and often conflicts produced by the need for this outbalances the values to be derived from the camps accomplishment. For example Redl states that city children have heard about storms, animals, nature, and have used them as props in their day dreams and nightmares. What contacts they have made with nature usually were in broad daylight and under the

guidance of their parents. Suddenly all nature is let loose on the student's half forgotten childhood anxieties, fantasy fears and real discomfort are mixed into a frightening blend. The result is that many children are frightened at camp most of the time. Redl was concerned, as was Gumprecht, with the child's "readiness" to profit from a camping experience.

Harms (23) feels that the behavior testing in camp situations by American psychologists of twenty years ago has done nothing more than to direct the original camping impulses into a blind alley. Camping psychology under the conditions of test sheets, competition, and "good camping marks" was in reality a psychology without a camper. He and his followers believe this first relationship between psychology and camping was wrong and almost tragic. Harms suggests that only recently has there emerged a real camping psychology which emphasizes the fact that real camping psychology does not grow from the physical, nor even from the mental camping needs as perceived by early camping psychologists. He bases his new psychology in the "troubles" of even a fairly normal child who comes from a city environment, parental protection, or overprotection. According to Harms, this new camping psychology deals with the real child and attempts to see the psychological problems which arise on all sides.

Harms concludes, in regards to camping life itself, we must consider not only the individual aptitudes of each child but also his reaction to the new environment and his assimilation of the factors offered as being healthful. Several different types of camps suggest themselves, which must include in their program psychologic supervision as well as educational assistance.

RELATED READINGS

The related readings selected for this section represents some of the research that have been conducted in the area of self-concepts. They were chosen for their relevance to the present study and for there methodological implications.

Gladys Jenkins (17, p. 2.) points up the fact that so often a child's picture of himself may not be a true one. His self-concept may have come to him through grownups who themselves see him through blinders. This author also reminds us that only as a child learns to like himself can he reach out successfully into the school and the community.

Ira J. Gordon (17) in a series of articles; "The Role of Self-Estimates in Behavior," How Self-Concepts Come About," and "How Adults Can Estimate Children's Self-Concepts," discusses individual ways in which children develop their concept of "the self."

She states that self-concepts are constantly forming and that any single, specific concept is not formed by a single event; it is the result of the mixing of many forces, physical, environmental and psychological. Since the child is growing and is constantly being exposed to new experiences his "self" is not static. It

is constantly in the process of organizing, of taking on new feelings, attitudes, and ideas. Self-concepts are affected by growth and experience and are influenced by forces acting upon the child as well as being forces themselves (17, p. 8).

Gordon also feels when youngsters reach the pre-adolescent years that the importance of adults as shapers of attitudes diminishes. What the "gang" or peers think of him assumes increasing significance. Youth, at this age, are moving toward independence from adults and since they are not mature enough to really be on their own, they use the "gang" as a source of strength in working through their new relations with adults. "These groups," state Gordon, "also serve as places where exploratory needs can be met, where information can be exchanged, and where ideas and skills can be tested" (17, p. 15). These early years are of vital importance in setting the general direction. School and peer experiences act to supplement the original concepts. Many children who lack the skills that adults value are able to achieve in those areas of life which peers value (17, p. 16.).

The author, in his summary, sees the adult as an estimator of the child's self-concepts but in doing so should ask himself two questions as a way of beginning

to see the child as the child sees himself. "First, how must the child be perceiving his situation at the moment that causes him to believe this behavior is right? Second, how must he feel about himself?" (17, p. 24).

From a review of more than 300 published studies and 120 unpublished doctoral dissertations, Wylie (10) concluded that research evidence about self-concept supports the following generalizations:

1. One's self-concept is shaped through interaction with others.
2. One's self-concept influences his interaction with others.
3. A child's self-concept is similar to the view of himself which he attributes to his parents.
4. One's body characteristics which are highly valued enhance his self-regard; his body characteristics which are lowly valued undermine his self-regard.
5. The extent to which failure or success changes one's self concept is tied up inextricably with: (a) Certain personality characteristics, (b) The extent to which one values the source of his failure or success. (c) The extent to which he feels that the source of information is viewed as adequate.

6. Social desirability in our culture is seen as having much in common with health over sickness, well-being over maladjustment. The influence of social desirability is so great that one must be confronted with the "Ideal Self," and the "Actual Self."

According to Combs (1a, p. 50-54) a child may see himself in many ways according to the structure of the situation in which he finds himself. Feelings of worth must be supported by positive interaction between himself and others.

Maslow (6, p. 3) presents these assumptions concerning the self:

1. Each of us have an essential biologically based inner nature, which to some degree is "natural."
2. Each person's inner nature is in part unique to himself.
3. This inner nature is good or neutral rather than bad.
4. This inner nature is not strong and overpowering, it is weak, delicate, subtle and easily overcome by habit, cultural pressure, and wrong attitudes toward it.

He also presents forty-three "self-psychology" propositions important to the educator (6, p. 177-200).

In summation of these propositions he points out it is best to bring out and encourage, to recognize this inner nature, rather than to suppress or repress it. The child must give up being good out of fear and must be good because he wishes to be. He must discover his own conscience and give up his parents as the only ethical guide.

Sears (7, p. 10) sees the child making judgments about the self in relation to problems and tasks of development. The self-concept represents expected success to meet these problems and tasks. The self-concept is complex, made up of many "facets" with each differing in importance from the others. Expectancies are learned from these facets so the individual can predict success or failure in connection with behavior that pertains to a given facet. Expectancies that have been acquired can be changed according to "principles of learning." One will strive hard to protect a good self-concept and will select those behaviors which preserve or enhance it.

"The opinion an individual has for himself is clearly an important component of his behavior", says Stanley Coopersmith (18, p. 86-107) in his study on self-esteem. Using teacher's reports, clinical tests, interviews with parents, and self evaluations the author and his associates reported these findings concerning self-concepts in middle-class, urban boys, age 10 to 12.

1. Children with a high degree of self-esteem are expressive individuals and tend to be successful both socially and academically.
2. They show little destructiveness in early childhood and are little troubled by feelings of anxiety.
3. They appear to trust their own perceptions and have confidence that their own efforts will meet with success.
4. They are less frequently afflicted with fatigue, headaches, insomnia, and intestinal upset.
5. They tended to be optimistic, expressive, and able to take criticism.

In contrast to the boys with high esteem the boys with low self-esteem:

1. Presented a picture of discouragement and depression.
2. They felt isolated, unlovable, and incapable of expression themselves.
3. They were fearful of angering others and felt fearful of exposing themself.
4. In a group they remained in the shadows, sensitive to criticism, self-conscious, and preoccupied with inner problems.

The author's exploration of the factors that lead to the development of high self-esteem in children produced a number of contradictions of popular beliefs.

1. No consistent relation between children with high self-esteem and physical attractiveness, the size of the family, or the occupation of the mother were found.
2. The individual with a high self-esteem is almost as high in low social classes as it is in the higher social classes.
3. Children tended to gauge their individual worth primarily in their own interpersonal environment.

Looking into the backgrounds of the boys Coopersmith notes that the boys with high-esteem experienced well-defined constitution for behavior but also by a democratic spirit. The parents established the principles and defined the powers and responsibilities. The parents showed deep interest in the children, they were open to persuasion and willing to allow the children a voice in the making of family plans. The guidance provided by well defined rules of expected behavior, the nonpunitive treatment, and respect of the children's views contributed greatly to the boy's high self-esteem.

The findings from these studies indicate that children develop self-trust, venturesomeness and the ability to

deal with adversity if they are treated with well-defined standards of values. It also appears that the development of independence and self-reliance is fostered by a well-structured, demanding environment rather than an unlimited permissiveness in an unfocused way. In conclusion, the author invites further exploration into the rules and limits on behavior that can contribute most effectively to build youngster's self-esteem.

In summation of some of the related readings Kelly (1a, p. 9-20) states that the self has to be achieved, that is, it is not given. The child is given the "equipment" and the environment but the self is achieved through social contact which has to be understood in terms of others.

Maslow (1a, p. 34-39) feels if given a chance the normal child under normal conditions, if given a free choice, will choose what is good for his growth. This "implies" that the child knows better than anyone else what is good for him. The "self" grows into adulthood only partly by discovery or uncovering and acceptance of what is "there" beforehand but partly the self is a creation of the person himself.

Combs (1a, p. 50-63) sets forth the proposition that children learn who they are and what they are from the ways in which they have been treated by those who surround

them. The self, as we know it, is learned. Children discover their self-concepts from their experiences and not from telling.

Even though the outdoor school has become an important addition to the basic school curricula, there is still lack of agreement concerning the impact of this experience on the emotional well-being of children. The major purpose of this investigation will be to determine if there are any consistent and prolonged changes in children's self-concepts and their attitude toward the natural environment after taking part in an outdoor school for a given period of time.

CHAPTER IV

DESIGN OF THE STUDY

Camp Colton, located in Colton, Oregon has served as a base for the Regional Outdoor School for the past three years. Classes of sixth graders attend this school during the months of September, October, April, and May. Usually four sixth grade classes attend the outdoor school at one time. The students arrive on Sunday evening and depart Friday afternoon of a given week. The encampment is highly structured, that is, the adult leadership makes all the major decisions. The students are not involved in any of the camp's planning sessions and have very little unstructured time. See Table 1, "Daily Schedule and Bugle Calls" and the "Weekly Schedule," Table 2.

Development of Instruments

Seeking an instrument which would examine self-concepts a systematic study of words and terms used by sixth grade students was explored. One-hundred and eight sixth grade boys and girls were asked to respond, in writing, to the question, "What word or group of words would you use if someone were to ask you to talk about yourself?" Appendix A shows the form that was used. Appendix B shows a list of the words and the frequency that each word occurred.

TABLE 1

DAILY SCHEDULE AND BUGLE CALLS

7:00 A.M.	Bugle	Reveille
7:20	Bugle	Chopsticks, Flag & Weather Crews Report
7:40	Bugle	Morning Colors
7:50		Breakfast
8:30		Daily Duties
8:50		Cabin Clean-up
9:15	Bugle	Inspection of Cabins - Cabins clear of people
9:30		Field Study
12:00 Noon	Bugle	Chopsticks Report to Dining Hall
12:15 P.M.		Noon Meal
1:15		Quiet Time & Showers
2:00	Bugle	Field Study
4:45	Bugle	Recreation
5:45	Bugle	Chopsticks, Flag, & Weather Crews Report
6:00	Bugle	Evening Colors
6:15		Evening Meal
7:15		Teacher Evaluation with Students & Junior Counselor Evaluation
8:00	Bugle	Campfire
9:00		Bedtime
9:15	Bugle	Tattoo
9:20	Bugle	Taps
9:30		Staff Briefing - Director meets with Sr. Counselors, Resource Coordinators, Teachers, and Junior Counselors

TABLE 2

WEEKLY SCHEDULE

Plot & Class	Time Period	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Class I Red	9:30 12:00		Orient-ation Water	Soils	Plants	Wildlife	Overview
	2:00 4:30	To Camp-get Settled	Water	Soils	Plants	Wildlife	Home
Class II Orange	9:30 12:00		Orient-ation Soils	Plants	Wildlife	Water	Overview
	2:00 4:30	To Camp-get Settled	Soils	Plants	Wildlife	Water	Home
Class III Green	9:30 12:00		Orient-ation Plants	Wildlife	Water	Soils	Overview
	2:00 4:30	To Camp-get Settled	Plants	Wildlife	Water	Soils	Home
Class IV Yellow	9:30 12:00		Orienta-tion Wildlife	Water	Soils	Plants	Overview
	2:00 4:30	To Camp-get Settled	Wildlife	Water	Soils	Plants	Home

From this initial survey a list was compiled using only the students' words or terms, Appendix C. One hundred and five other sixth graders, from different schools, were asked to check each word that they would use when talking about themselves. Next to each word is a number representing the frequency with which each word was marked.

An item analysis of the words submitted by the students was made to select those terms or words most commonly used. Then, after a study of the related research, observations of children in conversation, and consulting with specialists in the field of reading, the students' vocabulary responses seemed suitable for use in devising two concept scales:

1. Concept Scale I, Appendix D, summarizes what the student thinks of himself.
2. Concept Scale II, Appendix E, surveys what the student thinks others think of him.

To determine the coefficient of reliability of these two scales they were administered to twenty-five sixth grade students on successive days. The test-retest method was used (1, p. 80). Concept Scale I has a reliability of .65 and Concept Scale II has a reliability of .85.

In searching through the literature for unstructured methods of exploring attitudes, one frequently came across

reference to the incomplete sentence test (7). Its advantages lie in the lack of rigid "yes" or "no" answers and seemed valuable as a device for eliciting attitudes toward the natural environment.

Exploring the thinking behind the incomplete sentence test a diary was constructed on multi-colored 5 x 8 cards. Approximately ten lines were drawn on each card. The diary consists of forty-five pages. On the front page the words, "This Diary Belongs To_____," was printed. On the next page, near the top left corner the words, "Your comments" were inscribed.

It was expected that a content analysis of the unsolicited comments of the students, one week before the outdoor school, the week during the outdoor school, and a follow-up of one week after a return to the classroom would yield data which would serve to validate answers related to the attitude scale. In this way the total scales would serve as an integrating force which would establish reliability as well as validity for the data revealed in all three scales. The students at Holy Redeemer School participated in this phase of the study.

An attitude scale was designed to reflect the childrens' feelings toward the natural environment. By using the subject matter areas taught at the Regional Outdoor School; soil, wildlife, plants, water, and man, (34)

it was ascertained that a scale could be developed that would indicate and measure the child's feelings. In other words, the students would have to respond to statements that reflect an attitude toward the natural environment.

In the self-rating column the students were asked to pick one of three responses; "care," "don't care" or "am undecided." Since children of this age tend to pick a middle response, or to rate themself average, it was felt that this method would give a better distribution of scores. The responses labeled "care" is given a score of 3; "don't care" 1, and "am undecided" a score of 2. See Appendix F. A high score would indicate a favorable attitude toward the natural environment. By using a test-retest method the reliability coefficient of this scale was calculated at .87 (1, p. 80).

After analyzing the responses given by the test-retest groups it was felt that satisfactory results were obtained. Very little or no revision was necessary.

These three scales were administered to the groups two weeks prior to and five weeks after the outdoor experience by the researcher. It was expected that individual and group analyses would be made of the types of responses made by the participants.

CHAPTER V

ANALYSIS OF DATA

All four classes were administered the attitude scale and the two concept scales two weeks before and five weeks after the outdoor experience. An individual item analysis, Tables 6 through 17, was tabulated on each class. A school, group analysis, for clustering of the responses was also compiled showing the means, Tables 3, 4, and 5. In the present investigation it was felt that any consistent difference between the pretest scores and the posttest scores should reflect the influence of the outdoor school.

Attitude scale toward the natural environment

Can a six day outdoor experience exert a difference on the attitude of sixth graders toward the natural environment? How does a student at this age feel about his responsibilities in regards to natural resources? In order to probe further into these self-centered questions an attitude scale, using sixteen items, was employed, Appendix F.

One of three responses was possible: "I care," "I don't care," and "I'm undecided." A numerical value of three was given to the first response, one to the second, and a value of two to the "undecided" choice. A shift from a higher number to a lower number was recorded as a negative move and a shift from a lower number to a higher

number was considered as a positive move. This procedure was in accord with the statistical process applied to the data.

The number differention of shifts on each student and on each item for the four schools were recorded, Tables 6, 9, 12, and 15. It was assumed that shifts due to chance factors would be equally divided between the positive and negative responses. As is usual, and this also applies to the other two scales, when scores are already high in the pretest it is difficult to show a gain in the posttest.

There are many research situations in education and psychology which involve the correlation difference between two means. The situation chosen for this study was one of correlated samples, that is, the members of two sample groups may be paired on the basis of one or more characteristics such as a pretest and posttest. This correlated design may be evaluated for a significant difference between the two means by the formula

$$t = \frac{X_1 - X_2}{\sqrt{\frac{d^2}{N(N-1)}}}$$

where $d^2 = D^2 - \frac{(D)^2}{}$. The N is the number of pairs

and D is the difference between the scores for each pair. The expression $X_1 - X_2$ is equivalent to $\frac{D}{N}$ (9a, p. 141).

Concept Scales I and II

The method used in attempting to identify change in self-concepts follows an assumption that consistent changes in the way children feel about themselves would be reflected by consistent changes in their responses. The pretest provided a basis from which the results of the posttest could be compared. The individual change that took place during the six weeks between the first and second administration of the scales are presented in Tables 7, 8, 10, 11, 13, 14, 16, and 17. One of the important questions to be answered in this study is whether changes resulting from the outdoor experiences are maintained after a considerable time lapse.

One of three responses was possible in Concept Scale I: "This is very much like me," given a value of three, "A little bit like me," given a value of two, and "Not like me at all," given a value of one. A check in the first column on items 3, 4, 6, 7, and 14, would mean a reversal of the above procedure, Appendix D. Tables 7, 10, 13, and 16 illustrate the individual change for each student and each item.

In Concept Scale II, Appendix E: "Most of the time" was given a value of three, "Some of the time" a value of two, and a value of one was given to "Seldom." A check in the first column on items 11 and 15 would mean a reversal of this procedure. Consequently, in some cases a negative shift was statistically a positive one. This seems to be in line with good test procedure, since negatively worded items may tend to remove a degree of suggestibility and to minimize the tendency of subjects to check a single column that seemed always to indicate the best answer. Since all the data have been tabulated in positive and negative shifts the reader need not consider the direction of the wording of any items in interpreting the meaning of the data.

The number of positive and negative shifts on each item for the four schools were recorded, Tables 8, 11, 14, and 17. A group analysis was also compiled for each school, Tables 4 and 5. The .05 level of significance was chosen since it is conventionally accepted as the level of probability for rejecting a null hypothesis. Statistically, no attempt was made to differentiate between individual items.

The possibility was always present that the subjects might attempt to distort their answers on the instruments.

Since the children were asked to put their names on the scales this chance of distortion may have been increased. The researcher suggests that any distortion that might occur would be irrelevant because the purpose of the research was an attempt to study changes in self-concepts without specific regard to the students correspondence with reality.

The possibility may still remain that the children misrepresented their feelings about themselves. If this were a consistent factor, its influence would tend to be canceled out, since the data measured only shifts between totals rather than responses on any single item. Table 18 is a compilation of the t scores on the Attitude and Concept Scales I and II.

TABLE 3

PRETEST AND POST-TEST RESPONSES OF SIXTH GRADE STUDENTS
TO ATTITUDES TOWARD THE NATURAL ENVIRONMENT

	Holy Redeemer						George					
	Pretest			Post-test			Pretest			Post-test		
Item	3	2	1	3	2	1	3	2	1	3	2	1
1.	27	3	5	29	0	6	28	0	1	27	0	2
2.	26	2	7	25	2	8	27	2	0	26	1	2
3.	10	7	18	22	5	8	9	14	6	29	0	0
4.	10	13	12	20	5	10	21	6	2	25	3	1
5.	9	4	22	13	2	20	10	5	14	5	2	22
6.	13	6	16	10	5	20	7	10	12	29	0	0
7.	21	5	9	26	5	4	21	5	3	29	0	0
8.	16	9	10	24	1	10	20	7	2	19	2	8
9.	21	3	11	24	2	9	24	1	4	29	0	0
10.	32	1	2	33	1	1	29	0	0	29	0	0
11.	24	6	5	29	3	3	27	2	4	26	3	0
12.	13	10	12	23	6	6	22	5	2	28	1	0
13.	21	7	7	25	4	6	28	0	1	16	4	9
14.	8	6	21	16	4	15	12	6	11	16	4	9
15.	24	3	8	21	6	8	21	6	2	27	0	2
16.	10	9	16	19	3	13	28	1	0	27	0	2
Mean												
Class Mean	34.97			37.85			41.44			43.38		

TABLE 3 CONTINUED

PRETEST AND POST-TEST RESPONSES OF SIXTH GRADE STUDENTS
TO ATTITUDES TOWARD THE NATURAL ENVIRONMENT

	Eastham						Rainier						Total Item Scores	
	Pretest			Post-test			Pretest			Post-test				
Item	3	2	1	3	2	1	3	2	1	3	2	1	Pre.	Post
1.	26	2	3	25	4	2	30	4	2	32	2	2	362	364
2.	26	4	1	26	3	2	23	5	8	26	2	8	348	345
3.	22	4	5	28	1	2	17	13	6	22	4	10	285	343
4.	22	3	6	25	4	2	18	12	6	18	8	10	307	327
5.	10	4	17	9	8	14	10	7	19	10	4	22	229	229
6.	9	5	17	18	5	8	10	5	21	7	3	26	235	272
7.	19	1	11	23	2	6	20	6	10	23	3	10	310	343
8.	13	7	11	27	2	2	13	9	14	17	7	12	287	317
9.	18	1	12	19	2	10	13	3	20	15	2	19	291	311
10.	30	0	1	30	0	1	35	0	1	33	2	1	384	384
11.	26	6	4	31	0	0	26	6	4	30	2	4	354	401
12.	22	4	5	25	2	4	17	6	13	19	5	12	304	335
13.	27	2	2	31	0	0	26	8	2	29	3	4	352	344
14.	11	8	12	16	5	10	12	4	20	17	4	15	241	278
15.	18	5	8	20	5	6	24	7	5	23	3	10	325	327
16.	15	3	13	19	4	8	15	5	16	18	7	11	385	319
Mean													37.40	39.99
Class Mean		38.06			44.00			35.94			36.53			

TABLE 4

PRETEST AND POST-TEST RESPONSES OF SIXTH GRADE STUDENTS
TO CONCEPTS OF WHAT THEY THINK OF THEMSELF
CONCEPT SCALE I

	Holy Redeemer						George					
	Pretest			Post-test			Pretest			Post-test		
Item	3	2	1	3	2	1	3	2	1	3	2	1
1.	22	11	2	22	13	0	14	13	2	10	19	0
2.	27	7	1	28	7	0	19	9	1	28	1	0
3.	24	9	2	21	11	3	12	14	3	1	27	1
4.	27	5	3	23	8	4	19	6	4	25	3	1
5.	17	11	7	20	8	7	8	17	4	6	21	2
6.	19	12	4	13	20	2	14	12	3	12	15	2
7.	28	6	1	24	8	3	21	6	2	17	11	1
8.	25	9	1	22	8	5	7	21	1	8	20	1
9.	6	18	11	13	19	3	6	12	11	2	12	15
10.	21	13	1	21	9	5	15	13	1	20	8	1
11.	18	15	2	19	14	2	11	18	0	9	20	0
12.	23	10	2	24	10	1	11	18	0	9	20	0
13.	13	19	3	23	10	2	4	22	3	4	24	1
14.	18	12	5	13	13	9	23	6	0	17	11	1
15.	6	17	12	9	19	7	4	17	8	9	18	2
Mean												
Class Mean		36.77			36.90			35.00			35.14	

TABLE 4 CONTINUED

PRETEST AND POST-TEST RESPONSES OF SIXTH GRADE STUDENTS
TO CONCEPTS OF WHAT THEY THINK OF THEMSELF
CONCEPT SCALE I

	Eastham						Rainier						Total Item Scores	
	Pretest			Post-test			Pretest			Post-test				
Item	3	2	1	3	2	1	3	2	1	3	2	1	Pre.	Post
1.	15	16	0	18	13	0	12	23	1	17	18	1	320	328
2.	25	5	1	21	10	0	21	14	1	20	15	1	350	358
3.	15	15	1	17	12	2	23	12	1	19	15	2	329	312
4.	16	14	1	17	12	2	20	15	1	21	11	4	335	337
5.	17	12	2	16	13	2	9	18	9	12	20	4	291	301
6.	11	15	5	19	10	2	9	23	4	11	17	8	299	303
7.	16	9	6	19	9	3	24	12	0	24	9	3	342	336
8.	17	13	1	13	17	1	10	24	2	17	19	0	316	315
9.	4	13	14	4	11	16	3	9	24	5	15	16	221	236
10.	21	10	0	18	12	1	20	12	4	21	14	1	333	334
11.	14	16	1	4	17	0	9	26	1	11	24	1	310	282
12.	23	8	0	18	13	0	16	19	1	18	18	0	332	330
13.	9	21	1	12	18	1	7	22	7	8	26	2	281	303
14.	20	8	3	18	11	2	17	16	3	15	17	4	329	309
15.	4	17	10	2	21	8	3	14	19	2	16	18	230	249
Mean													35.25	35.34
Class Mean		35.84			35.03			33.47			34.33			

TABLE 5

PRETEST AND POST-TEST RESPONSES OF SIXTH GRADE STUDENTS
TO CONCEPTS OF WHAT THEY THINK OTHERS THINK OF THEM
CONCEPT SCALE II

	Holy Redeemer						George					
	Pretest			Post-test			Pretest			Post-test		
Item	3	2	1	3	2	1	3	2	1	3	2	1
1.	3	26	6	14	16	5	1	17	11	7	16	6
2.	21	11	3	26	7	2	18	9	2	27	1	1
3.	22	10	3	27	7	1	13	13	3	17	1	2
4.	19	13	3	24	10	1	11	15	3	25	3	1
5.	12	15	8	19	12	4	4	16	9	20	8	1
6.	23	11	1	31	4	0	21	8	0	26	2	1
7.	15	16	4	27	7	1	7	20	2	24	3	2
8.	18	15	2	23	12	0	21	7	1	17	12	0
9.	13	16	6	19	13	3	5	2	3	24	5	0
10.	21	13	1	25	10	0	13	14	2	21	8	0
11.	26	5	4	23	6	6	15	11	3	17	9	3
12.	15	18	2	22	11	2	13	14	2	26	3	0
13.	26	8	1	23	11	1	15	12	2	26	2	1
14.	23	10	2	26	9	0	13	14	2	19	9	1
15.	18	13	4	16	14	5	18	9	2	21	4	4
Mean												
Class Mean		36.43			38.97			34.86			39.51	

TABLE 5 CONTINUED

PRETEST AND POST-TEST RESPONSES OF SIXTH GRADE STUDENTS
TO CONCEPTS OF WHAT THEY THINK OTHERS THINK OF THEM
CONCEPT SCALE II

	Eastham						Rainier						Total Item Scores	
	Pretest			Post-test			Pretest			Post-test				
Item	3	2	1	3	2	1	3	2	1	3	2	1	Pre.	Post
1.	5	16	10	5	16	10	15	11	10	4	16	16	249	245
2.	17	14	0	15	16	0	20	15	1	21	14	1	332	350
3.	22	7	2	19	12	0	17	16	3	19	13	4	325	319
4.	12	15	4	13	14	4	10	20	6	11	20	5	298	324
5.	9	13	9	12	13	6	12	15	9	13	18	5	274	310
6.	21	8	2	17	12	2	18	18	0	20	14	2	342	351
7.	11	18	2	13	17	1	10	18	8	11	20	5	289	328
8.	12	16	3	13	16	2	12	17	7	14	17	5	312	322
9.	8	18	5	11	17	3	11	17	8	10	20	6	281	314
10.	20	10	1	18	12	1	17	18	1	15	20	1	328	339
11.	19	9	3	22	5	4	19	12	5	18	14	4	326	325
12.	15	9	7	16	12	3	12	18	6	12	22	2	300	331
13.	19	12	0	21	9	1	18	16	2	21	11	4	335	346
14.	17	14	0	16	15	0	17	18	1	19	16	1	327	340
15.	19	8	4	23	7	1	13	16	7	14	16	6	313	320
Mean													35.35	37.13
Class Mean		35.93			36.32			34.08			34.31			

TABLE 6

INDIVIDUAL ANALYSES -- ATTITUDE SCALE -- HOLY REDEEMER

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
1 - Laurie	0	0	0	-1	+2	-2	0	+2	0	0	+2	+1	-1	0	-1	+2	+4
2 - David	-2	-2	+2	+2	0	+1	0	0	0	0	0	+2	0	+1	+1	+2	+7
3 - Brian	-2	+2	0	0	-2	-2	+2	0	0	0	+2	0	-2	-1	-1	0	-4
4 - Jack	+2	0	0	+2	0	0	0	+2	+1	0	+1	+1	0	0	0	-1	+8
5 - Gregory	0	0	-1	+1	+1	0	+1	+1	0	0	0	+1	+1	0	0	0	+5
6 - Joe	0	0	0	0	+2	+2	+2	+2	+2	+2	0	0	+2	0	0	+2	+16
7 - Nancy	0	0	+1	-1	0	0	+1	0	0	0	0	0	0	0	0	+1	+2
8 - David M	0	0	+2	+2	+1	0	0	0	0	0	0	+1	0	+2	0	0	+8
9 - Donald	+1	0	0	0	-2	0	0	+1	0	+1	+1	0	0	-2	0	0	0
10 - David B	-2	0	+2	0	+2	+2	+2	+2	+2	-2	0	+2	0	-2	+2	+2	+12
11 - Julie	0	0	+2	+1	0	0	0	0	0	0	0	0	+2	0	-1	+1	+5
12 - Ed	0	-1	0	0	-1	-2	0	-2	0	0	0	0	-1	+2	-2	-2	-9
13 - Terry	0	0	0	-1	-1	-2	0	-1	-2	0	-1	+1	-1	+1	+2	-1	-6
14 - Tom	0	0	+2	+2	+2	+2	+2	+2	+2	-1	+1	-1	-1	+2	0	+2	+16
15 - Mike R	-2	0	0	+2	0	0	-1	0	+2	0	-2	+2	+2	+2	-1	0	+4
16 - Steve	0	0	0	0	-2	-2	0	+1	0	0	+1	+1	+1	0	0	0	0
17 - Rose	0	0	+2	+1	0	0	-1	+1	0	0	0	0	0	+1	-1	0	+3
18 - Mary	0	0	+2	0	+2	+1	0	0	0	0	0	0	0	0	0	+2	+7
19 - Don	0	-2	0	-1	0	0	+2	+1	+2	0	0	-2	-2	+2	-2	0	-2
20 - Kathleen	0	+2	+1	+1	-1	+2	0	0	+1	0	+1	+2	0	+2	+1	0	+13
21 - Donna	0	-2	+1	+2	0	-2	0	0	0	0	-2	+2	+1	0	-2	+1	-1
22 - Faith	0	0	+2	-1	0	0	0	0	0	0	+1	0	+2	+1	0	+1	+6
23 - Robert C	+1	0	-1	-2	-2	0	0	-2	-2	0	0	-2	0	0	-2	-2	-14
24 - Kathy B	0	0	+2	+2	+2	-2	0	0	0	0	0	0	+1	+2	0	0	+7
25 - Judy	0	+1	0	-1	0	0	+2	-2	-2	0	0	+1	-2	0	+2	0	-1
26 - Joe D	0	-2	+2	-1	0	-1	-1	0	0	0	0	+1	0	0	0	+2	0

TABLE 6 CONTINUED

27 - Cathy S	0	0	+2	+1	+2	0	0	0	+2	0	0	0	+1	0	0	+1	+9
28 - Francis	0	-2	-2	-2	-2	-2	-2	+1	-2	0	-2	0	+2	-2	-2	+2	-15
29 - Connie	0	0	+1	+1	0	0	0	0	0	0	0	0	0	+1	0	0	+3
30 - Kathy	0	0	0	0	0	-2	0	0	0	0	0	0	-1	0	+2	0	-1
31 - Wayne	0	0	0	0	+1	0	0	0	0	0	0	+1	0	0	0	0	+2
32 - Dennis S	0	+1	0	+1	+2	+1	-1	+1	+1	0	+1	0	0	0	+2	0	+9
33 - Peter	+2	0	0	0	0	0	0	0	0	0	0	0	+2	0	-2	+1	+3
34 - Joe B	+1	+2	+1	0	0	0	0	0	-1	+2	+1	+2	0	+1	0	0	+9
35 - Dennis F	+2	+1	-1	+1	0	+1	0	0	-1	0	+2	0	0	+1	+2	0	+8
Total	+1	-2	+22	+12	+6	-7	+8	+10	+5	+2	+7	+16	+6	+14	-3	+16	+113

TABLE 7

INDIVIDUAL ANALYSES -- CONCEPT SCALE I -- HOLY REDEEMER

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - Laurie	0	0	0	-1	0	0	0	0	-1	0	+1	0	+1	-1	+1	0
2 - David	+1	0	-2	-2	+1	0	-2	0	+2	0	0	0	+1	0	0	-1
3 - Brian	0	-1	0	0	+1	-1	+1	-1	+1	-2	0	-2	-2	-1	+2	-5
4 - Jack	0	0	0	-1	-1	+1	0	0	-1	0	0	0	0	-2	0	-4
5 - Gregory	+2	0	-2	-2	+2	+1	-1	0	0	0	+1	0	+2	0	0	+3
6 - Joe	0	0	-1	0	0	0	0	0	0	0	0	0	0	-1	+1	-1
7 - Nancy	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	+1	0
8 - David M	0	0	+1	+2	+1	+1	+1	0	+2	+1	+1	+2	0	+1	0	+13
9 - Donald	0	0	0	-1	0	-1	-1	-1	0	-1	-1	+1	+1	0	0	-4
10 - David B	0	0	-1	0	-1	0	-2	0	0	0	0	+1	0	-1	0	-4
11 - Julie	-1	0	0	0	-1	0	0	0	+1	0	0	0	+1	0	+1	+1
12 - Ed	-1	-1	0	0	-2	-1	0	-2	0	+1	0	-1	0	0	+1	-6
13 - Terry	0	-1	-1	0	+2	0	-1	-2	0	-1	-1	0	-1	0	-1	-7
14 - Tom	+1	+1	-1	0	+1	-1	+1	-1	+1	+1	+1	+1	+1	+1	0	+7
15 - Mike R	-1	0	0	+2	-1	-1	0	-1	+1	0	0	0	-1	0	0	-2
16 - Steve	0	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	-2
17 - Rose	0	+1	0	0	0	0	0	0	-1	0	0	0	+1	0	0	+1
18 - Mary	-1	0	0	0	0	0	0	+1	+2	+1	0	0	0	0	0	+3
19 - Dan	0	-1	0	0	0	0	-1	-1	0	-1	0	-1	0	0	0	-5
20 - Kathleen	+2	0	-1	0	+1	+1	0	0	+1	-1	0	+1	+2	-1	+2	+7
21 - Donna	-1	0	0	0	0	0	0	0	+1	0	0	-1	-1	-1	0	-3
22 - Faith	0	0	+1	-1	+1	0	0	0	0	+1	0	0	+1	0	0	+1

TABLE 7 CONTINUED

23 - Robert C	+1	0	+1	0	0	0	0	0	0	0	0	0	+1	+1	+1	+5
24 - Kathy B	0	0	+1	+1	0	+1	0	0	0	0	0	0	+1	0	0	+4
25 - Judy	0	0	0	-2	+1	-1	0	+1	+1	-1	0	+1	+1	0	0	+1
26 - Joe D	0	+1	+1	+1	-1	-1	0	0	0	0	0	0	0	0	-1	0
27 - Cathy S	0	+1	0	0	0	0	0	0	+1	-1	0	-1	+1	0	0	+3
28 - Francis	0	+2	0	0	0	+2	0	0	0	0	0	0	0	0	-2	+2
29 - Connie	-1	-1	-1	0	0	-1	-1	0	+1	-1	0	-1	0	-1	+1	-6
30 - Kathy	0	0	0	0	-2	0	0	-2	0	-2	0	0	-1	+2	0	-5
31 - Wayne	+1	+1	-1	0	0	0	0	+1	0	+1	0	+1	+1	-1	0	+4
32 - Dennis S	0	0	+1	-1	0	0	0	+1	+1	+1	-1	+1	0	-2	+1	+2
33 - Peter	0	0	0	0	0	-2	0	0	0	0	0	0	0	-2	0	-4
34 - Joe B	0	0	0	0	-2	-1	+2	+1	0	0	0	0	+1	0	0	+1
35 - Dennis F	0	0	0	0	-1	+1	0	0	0	0	0	0	0	0	0	+2
Total	+2	+2	-6	-5	+1	-4	-4	-7	+13	-4	+1	+2	+11	-9	+8	+1

TABLE 8 CONTINUED

23 - Robert C	0	0	0	0	0	0	0	+1	+1	+1	0	+1	0	0	+1	+5
24 - Kathy B	+1	0	0	+1	0	0	+2	0	0	0	0	0	0	0	0	+4
25 - Judy	0	0	0	0	+1	0	0	0	+1	+1	0	0	0	0	+1	+4
26 - Joe D	0	-1	-1	+1	0	0	0	+1	0	-1	0	-1	-1	-1	-1	-5
27 - Cathy S	+1	0	+1	+1	+1	0	0	-1	0	0	0	0	-1	-1	0	+1
28 - Francis	0	+2	0	0	0	0	0	0	+2	0	0	+1	0	0	0	+5
29 - Connie	0	0	0	0	0	0	0	-1	-2	0	-1	0	-1	0	-1	-6
30 - Kathy	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0
31 - Wayne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 - Dennis S	0	0	0	0	0	0	0	0	0	0	-2	0	0	0	0	-2
33 - Peter	0	0	0	0	0	+1	+1	+1	0	0	0	+1	0	0	0	+4
34 - Joe B	0	0	0	0	+1	0	+1	+1	+1	0	0	0	0	0	-1	+3
35 - Dennis F	+1	0	0	-1	+1	0	0	0	0	0	0	0	-1	0	0	0
Total	+12	+6	+7	+7	+11	+9	+15	+7	+9	+5	-7	+7	-3	+5	-3	+87

TABLE 8

INDIVIDUAL ANALYSES -- CONCEPT SCALE II -- HOLY REDEEMER

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - Laurie	0	0	0	0	+1	0	+1	0	0	0	+1	0	0	0	0	+3
2 - David	0	-1	-1	0	0	0	+2	+1	0	0	0	-2	0	0	0	-1
3 - Brian	-1	-2	0	0	+1	+2	-1	0	+1	0	-2	-2	-2	0	+1	-5
4 - Jack	0	0	+1	-1	0	0	+1	0	+1	+1	0	+1	0	0	+2	+6
5 - Gregory	0	+1	0	+1	+2	-1	+1	-1	-1	0	-1	-1	0	+1	-1	0
6 - Joe	+1	+1	0	0	+1	+1	+1	0	+1	+1	0	+1	+1	0	0	+9
7 - Nancy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1
8 - David M	+2	+1	+2	+2	+2	+1	0	+1	0	+1	0	+2	+2	+2	0	+18
9 - Donald	0	0	+1	+1	0	+1	0	0	0	0	-1	0	-1	-1	0	0
10 - David B	0	+1	+1	0	0	+1	+2	0	+1	0	0	+1	0	+1	-1	+7
11 - Julie	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	+1
12 - Ed	+1	+2	+1	+1	+1	0	+1	+1	0	0	0	+1	0	0	0	+9
13 - Terry	+1	0	0	0	0	0	-1	0	0	0	0	0	-1	0	0	-1
14 - Tom	-1	+1	+1	+1	0	+1	+1	0	+1	+1	0	+1	+1	+1	0	+9
15 - Mike R	0	0	0	0	-1	0	0	0	0	0	0	+1	0	0	0	0
16 - Steve	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	-1
17 - Rose	0	0	+1	0	+1	0	0	0	0	0	0	0	0	0	+1	+3
18 - Mary	+1	0	0	+1	0	0	+1	+1	0	0	0	0	0	+1	0	+5
19 - Dan	+1	0	-1	-1	-1	0	0	0	+1	0	-2	+1	0	0	-1	-3
20 - Kathleen	+1	0	0	+1	+1	+1	+1	+1	+1	+1	0	+1	+1	+1	-2	+9
21 - Donna	+1	+1	0	-1	-1	+1	+1	+1	0	-1	0	0	0	0	+1	+3
22 - Faith	0	0	+1	0	+1	0	0	0	0	0	+1	0	0	+1	0	+4

TABLE 9

INDIVIDUAL ANALYSES -- ATTITUDE SCALE -- GEORGE SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
1 - James	0	0	+1	0	+1	-1	0	0	0	0	0	0	0	-1	0	0	0
2 - Steven	0	0	0	+2	+1	0	+1	0	0	0	0	+2	0	+1	0	0	+7
3 - Kathy	0	0	0	+2	+2	-1	0	0	-2	0	0	0	0	+1	0	0	+2
4 - Donald	0	0	+1	0	+2	0	+1	0	0	0	0	0	0	0	-1	0	+3
5 - David	0	+1	+1	0	+2	0	0	0	0	0	0	0	0	-1	0	0	+3
6 - Gaylen	0	0	+1	+1	0	-1	0	0	0	0	0	0	0	0	0	0	+1
7 - Lynette	0	0	+1	-1	0	0	0	0	0	0	0	+1	0	0	0	0	+1
8 - Michelle	0	0	+1	0	0	-1	+2	+1	-1	0	+1	+1	0	0	0	0	+4
9 - Larry	0	-1	+1	0	0	0	0	+2	0	0	0	+1	0	0	+2	0	+5
10 - Kathy	0	0	+1	+1	+2	-1	0	+1	0	0	0	0	0	0	0	0	+4
11 - Tommy	0	0	+1	0	+2	-1	0	0	0	0	0	0	0	-2	0	0	0
12 - Sue	0	0	0	+1	+1	-2	+1	+1	0	0	0	0	0	0	0	0	+2
13 - Pam	0	0	+1	0	0	-2	0	0	-2	0	0	0	0	0	0	0	-3
14 - Steven	0	0	0	0	-1	-2	0	0	-2	0	0	-1	0	-2	0	0	-8
15 - Gordon	0	0	0	0	+1	+1	+1	0	0	0	0	0	0	+1	0	0	+4
16 - Roger	0	0	0	0	+2	0	0	0	0	0	0	0	0	0	0	0	+2
17 - Virginia	0	0	0	0	0	0	0	0	0	0	0	+2	0	+2	0	0	+4
18 - Eddie	0	+1	0	+1	+1	+2	0	+1	0	0	+1	-1	0	+2	+1	0	+9
19 - Dave	0	0	0	0	0	-2	0	0	0	0	0	0	0	+2	0	0	0
20 - Susan	0	0	+2	0	+2	0	0	+1	0	0	0	0	0	0	0	0	+5
21 - Stephane	0	0	+2	0	+2	-2	+2	0	0	0	0	0	0	0	0	0	+4
22 - David C	+2	0	+1	0	+2	0	0	0	+2	0	0	0	0	0	+2	0	+9

TABLE 9 CONTINUED

23 - Candice	0	0	+1	0	+2	+2	0	0	0	0	0	0	0	0	0	0	+5
24 - Nancy	0	0	+1	0	0	-1	0	0	0	0	0	0	0	0	+1	0	+1
25 - Julie	0	-2	+2	0	+2	0	0	0	+2	0	0	0	+2	+2	-2	-2	+4
26 - Robin	-2	0	+2	0	0	0	+1	+2	-2	0	0	0	0	+1	+1	-2	+1
27 - Randy	0	0	+1	+1	+2	+1	0	+1	-1	0	0	+1	-1	0	+1	0	+6
28 - Diana	-2	-2	+2	0	0	-1	+2	+1	-2	0	0	0	0	-1	+1	+1	-1
29 - Richard	0	0	+2	0	0	0	0	0	-1	0	0	0	0	+2	0	0	+3
Total	-2	-3	+26	+8	+28	-12	+11	+11	-9	0	+2	+6	+1	+7	+6	_3	+75

TABLE 10

INDIVIDUAL ANALYSES -- CONCEPT SCALE I -- GEORGE SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - James	0	0	+1	0	-2	0	0	-1	0	0	0	0	0	-1	+1	-2
2 - Steven	0	0	0	0	0	0	0	0	-1	+1	0	0	0	-1	0	-1
3 - Kathy	0	0	+1	+2	-1	0	0	+1	0	0	-1	0	0	0	0	+2
4 - Donald	+1	0	-1	0	0	0	-1	-1	0	+1	0	0	0	-1	+1	-1
5 - David	-1	0	0	0	0	0	0	0	0	0	+1	0	0	0	0	0
6 - Gaylen	0	0	0	0	+1	-1	0	+1	-1	0	0	0	+1	0	+1	+2
7 - Lynette	-1	0	0	0	0	+1	+1	0	0	+1	0	0	0	0	0	+2
8 - Michelle	0	+1	+1	0	0	0	-2	0	0	0	0	0	0	-1	-1	-2
9 - Larry	0	0	-1	0	+1	-1	0	0	-2	0	+1	0	0	0	+2	0
10 - Kathy	0	+1	0	+1	0	0	0	0	0	0	+1	0	0	0	0	+3
11 - Tommy	-1	0	0	+1	-1	0	+1	0	-1	0	+1	0	0	+1	+1	+2
12 - Sue	-1	0	-1	0	-1	0	0	0	+1	0	0	0	+1	+1	+1	+1
13 - Pam	+1	0	-1	0	0	0	0	+1	0	0	0	+1	0	-1	+2	+3
14 - Steven	0	+2	-1	0	+1	0	0	0	-2	0	0	0	0	0	-2	-3
15 - Gordon	0	+1	-1	0	0	0	-1	0	-1	0	0	0	0	0	0	-2
16 - Roger	0	0	0	+2	0	0	0	0	-1	-1	0	-1	0	0	+1	0
17 - Virginia	-1	0	+1	+2	0	0	0	+1	0	0	0	-1	0	0	+1	+3
18 - Eddie	+1	0	-2	0	-2	0	-1	0	-2	0	0	0	0	+1	-2	-7
19 - Dave	-1	+1	-1	0	+1	0	-1	-1	+1	0	-1	-1	0	-2	0	-5
20 - Susan	-1	0	0	0	0	0	+2	-1	0	+1	-1	0	0	+1	0	+1
21 - Stephane	0	0	-1	0	+1	0	0	-1	+1	+1	-1	0	0	-1	+1	0
22 - David C	+1	+1	-1	0	0	0	-1	0	0	0	0	0	-1	0	0	-1

TABLE 10 CONTINUED

23 - Candice	0	0	-1	0	0	-1	0	0	0	0	-1	0	+1	-1	+1	-2
24 - Nancy	+1	+1	0	0	0	0	-1	+1	+1	0	0	+1	+1	-1	0	+4
25 - Julie	0	0	-1	0	+2	0	0	0	0	0	0	0	0	-1	+1	+1
26 - Robin	-1	+1	0	0	0	0	-1	0	0	0	0	-1	-1	0	0	-3
27 - Randy	0	0	0	0	0	0	0	0	-2	0	0	0	0	0	+1	-1
28 - Diana	0	+1	0	+1	0	+1	0	0	-1	0	0	0	0	0	0	+2
29 - Richard	+1	0	0	0	0	0	0	+1	+2	+1	-1	0	0	0	+1	+5
Total	-2	+10	-9	+9	0	-1	-5	+1	-8	+5	-2	-2	+2	-8	+11	+1

TABLE 11

INDIVIDUAL ANALYSES -- CONCEPT SCALE II -- GEORGE SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - James	0	0	+1	+1	+2	+1	0	-1	0	0	-1	+1	0	-2	-2	0
2 - Steven	0	0	+1	0	0	-1	0	0	0	+1	0	0	+1	0	0	+2
3 - Kathy	+1	0	0	0	+1	+1	0	+2	+1	0	-1	0	+1	0	0	+6
4 - Donald	0	0	0	0	+1	+1	+1	-1	+1	0	0	0	+1	-1	0	+3
5 - David	+1	0	-1	+1	+1	0	0	0	0	+1	0	0	0	+1	0	+4
6 - Gaylen	+1	+1	-1	-1	-1	0	0	0	0	0	-1	+1	0	+1	-2	-2
7 - Lynette	0	+1	-1	+1	0	0	+1	-1	+1	-1	0	+1	+1	0	0	+3
8 - Michelle	+1	+1	0	+1	-1	0	+1	-1	+2	+1	0	+1	0	-1	0	+5
9 - Larry	0	0	+1	0	+1	0	0	0	+1	0	0	+1	0	0	0	+4
10 - Kathy	0	0	0	+1	0	+1	0	0	0	0	0	+1	0	+1	+1	+5
11 - Tommy	0	+1	+1	+1	+1	0	-1	0	+1	+1	0	0	+1	+1	0	+7
12 - Sue	+1	+1	+1	+1	+1	+1	+1	0	+1	0	+2	0	+1	+1	+1	+13
13 - Pam	+1	0	0	0	+2	0	+1	+1	+1	+1	0	0	+1	+1	+1	+10
14 - Steven	0	+1	-1	0	0	+1	0	0	+1	0	0	0	0	0	0	+2
15 - Gordon	0	0	0	+1	+2	+1	+1	-1	+1	+1	0	+1	0	0	0	+7
16 - Roger	+1	0	0	0	+1	0	+1	0	+1	+1	+1	0	0	0	0	+6
17 - Virginia	0	0	0	0	+2	0	+1	0	+1	0	0	0	0	-1	0	+3
18 - Eddie	0	+1	0	+2	+1	-1	0	0	+1	+1	0	+2	0	+1	+2	+10
19 - David	0	+1	0	0	+2	0	0	0	+1	0	-1	+1	0	0	0	+4
20 - Susan	+1	0	0	+2	+2	0	0	0	+1	0	+1	+1	0	+1	0	+9
21 - Stephane	+2	0	0	0	+1	0	+1	0	+1	0	0	+1	0	0	0	+6
22 - David C	+1	0	0	+1	+1	0	+1	0	+1	0	-1	0	+1	+1	-1	+5

TABLE 11 CONTINUED

23 - Candice	0	+1	0	+1	0	0	+1	-1	0	0	0	0	0	-1	0	+1
24 - Nancy	+1	+1	0	+1	+1	0	+1	0	0	0	0	-1	+1	0	-2	+3
25 - Julie	0	0	+1	+1	+1	0	+1	+1	+1	0	+1	+1	+1	0	+1	+10
26 - Robin	-1	0	0	-1	0	0	+1	0	0	0	-1	0	0	+1	0	-1
27 - Randy	0	0	0	0	+1	0	+1	0	+1	+1	0	+1	0	0	0	+5
28 - Diana	0	0	+1	0	+1	0	+1	-1	0	0	0	0	0	+1	+1	+4
29 - Richard	0	+2	+2	+2	0	-1	+2	0	+2	+2	+1	+2	+2	+2	+1	+19
Total	+11	+12	+5	+16	+24	+4	+17	-3	+22	+10	0	+15	+12	+7	+1	+153

TABLE 12

INDIVIDUAL ANALYSES -- ATTITUDE SCALE -- RAINIER SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
1 - Roseanna	0	0	0	0	0	0	0	+1	0	0	+2	0	0	+2	0	+1	+6
2 - Sherry	-1	0	0	0	0	0	0	0	-1	0	-2	0	0	-2	0	-2	-8
3 - Gary	-1	0	0	+1	0	0	0	0	0	0	0	+1	0	+1	0	0	+2
4 - Daniel C	0	0	-1	-2	0	0	0	0	0	0	+1	0	0	0	0	0	-2
5 - Earl K	0	0	0	0	0	0	+1	+1	0	0	0	-1	0	+1	0	0	+2
6 - Norman H	0	-1	0	0	0	0	0	-1	-1	0	0	0	0	0	0	0	-3
7 - Dixie T	0	0	0	+1	-2	0	-1	+1	0	0	0	+1	0	-2	+1	0	-1
8 - Christina	0	0	+1	0	0	0	0	-1	0	0	0	0	0	+2	-1	0	+1
9 - Ron B	0	0	0	0	0	0	-1	0	-2	+2	0	0	0	0	0	+2	+1
10 - David S	0	-2	0	0	0	0	+2	+2	+2	0	0	0	0	0	0	0	+4
11 - Julie L	0	0	-1	-2	0	-1	-1	-2	-2	0	0	-2	-1	-2	-2	0	-16
12 - James C	0	0	0	0	0	0	0	0	0	0	+1	0	0	0	0	0	+1
13 - Rodney R	0	+1	0	0	0	-2	+1	-1	+2	0	0	+2	0	0	0	0	+3
14 - Donna Y	0	+2	0	0	0	-1	0	0	+2	-1	0	0	0	0	-2	+1	+1
15 - Eric B	0	0	0	-2	0	-2	+1	0	-1	0	0	0	0	0	0	0	-4
16 - Debbie C	0	0	0	+1	0	+1	0	+1	-1	0	0	0	+1	+1	-1	-1	+1
17 - Mike	-1	-2	+1	+1	-1	0	0	0	-1	0	0	+1	0	+1	+1	0	0
18 - Jesse	+1	+1	-1	-1	-1	0	0	0	0	0	+1	0	0	-1	0	0	-1
19 - Alvin E	0	+1	0	+1	0	0	0	+1	0	0	+1	0	0	0	0	+1	+5
20 - Gilbert	0	0	0	0	0	+1	0	0	0	-1	-1	0	0	0	0	-1	-2
21 - Donnika	0	0	+1	0	+1	-1	0	+1	0	0	0	0	+1	0	0	+1	+4
22 - Allan D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 12 CONTINUED

23 - Wallace	0	+2	0	0	+1	-1	0	+1	0	0	+1	-1	0	0	-2	+1	+2
24 - Linda H	0	0	0	0	0	0	0	0	-2	0	-2	-1	0	+2	0	0	-3
25 - Sherri J	+2	+2	+2	0	0	0	0	-2	0	0	0	0	+2	0	0	+2	+8
26 - Penny K	0	0	0	-1	-2	0	0	+2	-2	0	0	+1	+2	0	0	0	0
27 - Jim F	-1	-1	-2	-2	-1	+1	0	0	0	0	0	0	0	0	0	+1	-5
28 - Greg B	+2	+2	0	-1	0	0	-2	+2	+2	0	+2	+1	0	0	0	+2	+10
29 - Tom M	0	0	0	+1	-2	2	+2	-1	+2	-2	0	0	-2	+2	-1	+1	0
30 - Marla	0	0	-1	0	-2	0	+1	0	+2	+2	-2	-2	-1	0	+1	0	-2
31 - Dennis B	+1	0	0	-1	+1	0	0	0	0	0	+1	0	0	0	+1	0	+3
32 - Jerry	0	0	+1	+1	0	-2	+2	+2	+2	0	0	+2	0	+2	0	0	+10
33 - Susanne	0	0	0	0	0	-1	-1	0	0	0	0	0	+1	0	0	-1	-2
34 - Joyce	0	+2	0	0	0	+2	0	0	+2	0	0	0	0	+2	0	0	+8
35 - Mike S	0	+2	0	0	+1	0	+1	0	0	0	0	+1	0	-1	+1	0	+5
36 - Bonnie B	0	0	+1	-2	+2	0	-2	0	0	0	-1	0	0	0	-2	0	-4
Total	+2	+9	+1	-7	-5	-8	+3	+7	+3	0	+2	+3	+3	+8	-6	+8	+24

TABLE 13

INDIVIDUAL ANALYSES -- CONCEPT SCALE I -- RAINIER SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - Roseanna	0	0	0	0	+1	-1	0	-1	0	0	0	-1	0	-1	0	-3
2 - Sherry	0	0	0	+1	+1	0	-1	0	0	+1	0	-1	+1	0	0	+2
3 - Gary	0	0	-1	0	0	+1	0	0	+2	0	0	0	+1	0	0	+3
4 - Daniel C	-1	0	0	0	0	-1	+1	+1	0	0	+1	-1	0	0	-1	-1
5 - Earl K	0	0	0	0	0	0	0	+1	0	0	0	0	0	0	0	+1
6 - Norman H	+1	0	0	0	0	-1	-1	0	+1	0	0	0	0	0	0	0
7 - Dixie T	+1	+1	0	0	0	-1	0	+1	0	+1	0	+1	+1	0	0	+5
8 - Christina	0	0	0	-1	0	0	0	0	0	0	0	+1	+1	0	0	+2
9 - Ron B	0	0	0	0	+2	0	0	0	0	0	0	0	0	+1	0	+3
10 - David S	+1	+1	0	0	-1	0	0	0	0	0	0	+1	+1	0	0	+3
11 - Julie L	0	-1	0	0	+1	+1	0	0	0	-1	0	0	0	+1	0	+1
12 - James C	0	0	0	0	0	+1	+1	+1	0	0	0	0	0	+2	0	+5
13 - Rodney R	0	-1	0	0	+1	0	0	+1	0	0	-1	0	0	0	0	0
14 - Donna Y	+1	0	0	0	0	+1	0	0	0	0	0	0	+1	-1	0	+2
15 - Eric B	+1	0	0	0	0	+1	0	+1	0	0	0	0	0	+1	0	+4
16 - Debbie C	0	0	0	+1	-1	-1	0	0	0	0	0	-1	0	0	-1	-3
17 - Mike	0	0	-1	0	+2	-2	-1	+1	-1	+1	0	+1	0	-2	0	-3
18 - Jesse	0	0	0	0	0	+1	0	0	0	0	0	0	0	0	0	+1
19 - Alvin E	0	0	0	0	+1	0	0	0	0	0	0	0	0	0	0	+1
20 - Gilbert	0	0	0	0	+2	+1	0	0	0	+1	-1	0	-1	-1	0	+1
21 - Donnika	0	0	-1	0	0	0	0	0	0	-1	0	0	0	+1	0	-1
22 - Allan D	0	0	+1	-1	0	0	0	+1	0	+1	0	+1	0	-1	0	+2

TABLE 13 CONTINUED

23 - Wallace	+1	-1	0	0	0	+1	0	+1	+1	+1	+1	0	0	0	0	+5
24 - Linda H	0	+1	0	0	0	+1	0	-1	+1	0	0	+1	0	0	+1	+4
25 - Sherri J	0	+1	+1	+1	+1	0	+1	0	0	0	+1	0	+1	-1	0	+6
26 - Penny K	-1	0	-1	-2	0	0	0	0	0	0	0	0	0	-1	+1	-4
27 - Jim F	0	0	0	+1	0	0	0	0	0	0	0	0	0	+1	0	+2
28 - Greg B	0	0	0	0	-1	-1	0	0	0	0	0	0	-1	0	0	-3
29 - Tom M	0	0	0	0	0	0	0	0	+1	0	0	0	+1	0	0	+2
30 - Marla	+1	0	-1	0	0	0	+1	0	0	0	0	0	0	+1	0	+2
31 - Dennis B	0	0	-1	-1	+2	0	+2	0	0	+1	0	0	0	0	0	+2
32 - Jerry	+1	0	0	0	0	-1	-2	+1	+1	+1	0	0	0	0	0	+1
33 - Susanne	-1	0	0	-1	0	-1	-1	0	0	-1	0	0	-1	0	-1	-7
34 - Joyce	0	0	0	+1	0	-2	0	+1	+1	0	+1	0	0	+1	0	+3
35 - Mike S	0	0	+1	0	+1	+1	0	0	+1	-1	0	0	0	+1	+1	+5
36 - Bonnie B	0	0	-1	+1	-1	0	-1	0	+1	0	0	+1	+1	-2	0	-1
Total	+5	+1	-4	-1	+11	-2	-1	+9	+9	+4	+2	+3	+7	0	0	+43

TABLE 14

INDIVIDUAL ANALYSES -- CONCEPT SCALE II -- RAINIER SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - Roseanna	-1	0	-1	0	0	0	-1	+1	0	-1	0	0	-1	-1	0	-5
2 - Sherry	0	+1	0	0	0	-1	0	0	+1	0	0	-1	0	0	0	0
3 - Gary	0	0	-1	+1	0	0	+1	0	0	0	0	0	0	+1	0	+2
4 - Daniel C	-1	-1	0	-1	-1	0	0	0	0	0	0	-1	-1	0	-2	-8
5 - Earl K	0	0	0	0	+1	0	+1	0	0	0	0	0	-1	0	+1	+2
6 - Norman H	0	0	0	-1	+1	0	+1	0	0	0	0	0	-1	0	0	0
7 - Dixie T	0	0	+1	0	+1	0	-1	0	0	+1	0	0	0	+1	0	+3
8 - Christina	0	0	0	0	+1	0	0	-1	+1	0	0	+1	0	0	-1	+1
9 - Ron B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 - David S	0	0	0	+1	+1	+1	+1	+1	-1	+1	0	0	+1	+1	0	+7
11 - Julie L	+1	0	0	0	+1	0	+1	0	0	-1	0	-1	0	0	0	+1
12 - James C	-1	-1	-1	0	+1	+1	0	+1	-1	0	0	0	-2	-1	-1	-5
13 - Rodney R	0	0	0	0	-1	-1	+1	-1	0	0	+2	0	0	-1	+1	0
14 - Donna Y	0	-1	-1	0	0	0	0	0	-1	0	0	0	0	0	0	-3
15 - Eric B	0	0	+1	0	0	0	+1	0	0	0	0	0	0	0	0	+2
16 - Debbie C	0	0	0	0	-1	0	0	0	-1	0	0	+1	+1	0	0	0
17 - Mike	0	+1	+1	0	0	0	0	+1	0	+1	0	0	+1	0	-1	+4
18 - Jesse	+1	0	+2	+1	0	0	0	0	+2	0	0	0	0	-1	0	+5
19 - Alvin E	0	0	0	+1	0	+1	0	0	0	0	0	0	0	+1	0	+3
20 - Gilbert	0	-1	0	0	+1	-1	-1	0	-1	0	+2	0	+2	-1	+2	+2
21 - Donnika	-1	-1	-1	-1	0	-1	0	0	0	0	-1	0	0	0	0	-6
22 - Allan D	0	0	-1	0	+1	+1	0	+1	0	-1	0	0	0	+1	+1	+3

TABLE 14 CONTINUED

23 - Wallace	0	+1	0	0	+1	0	+1	+1	0	0	0	+1	+1	0	0	+6
24 - Linda H	0	0	-1	0	+1	-1	0	+1	0	0	0	0	0	+1	0	+1
25 - Sherri J	+1	+1	+1	0	0	+1	0	-1	0	-1	0	+1	+1	0	0	+4
26 - Penny K	0	+1	-1	-1	0	-1	-2	0	+1	-1	-1	0	-2	-1	0	-8
27 - Jim F	0	0	0	0	0	+1	0	0	0	0	0	+1	+1	-1	0	+2
28 - Greg B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1
29 - Tom M	+1	+1	0	+1	0	0	0	0	0	0	0	0	0	+1	+1	+5
30 - Marla	0	0	0	+1	+1	0	0	0	+1	0	0	+1	0	0	0	+4
31 - Dennis B	+1	0	0	0	0	0	0	0	0	0	0	0	0	+1	0	+2
32 - Jerry	0	0	+1	+1	-1	0	0	0	+1	0	0	+1	+1	+1	+1	+6
33 - Susanne	0	0	0	0	-1	+1	0	+1	0	0	-1	0	0	+1	0	+1
34 - Joyce	0	0	0	-1	-1	0	+1	0	+1	0	0	-1	0	0	+1	0
35 - Mike S	+1	0	+1	+1	0	0	+1	+1	0	+1	0	+1	+1	+1	0	+9
36 - Bonnie B	+1	0	+1	-1	-1	0	0	-1	-1	0	-1	0	0	0	+1	-2
Total	+3	+1	+1	+2	+5	+1	+5	+5	+2	0	0	+4	+2	+2	+3	37

TABLE 15

INDIVIDUAL ANALYSES -- ATTITUDE SCALE -- EASTHAM SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
1 - DeLores	0	0	0	0	+1	-1	0	+1	0	0	0	0	0	+1	0	0	+1
2 - John M	0	0	0	0	0	+1	0	+1	0	0	+1	0	0	+1	0	+2	+6
3 - Peter	0	0	0	0	0	+1	0	+2	0	0	0	+1	0	+2	0	0	+6
4 - Gary	0	0	+2	0	0	-2	+2	0	-2	0	+2	0	+2	-2	+2	0	+4
5 - Billie	0	0	0	-1	+2	+2	0	+1	-1	0	0	-1	0	0	0	-2	0
6 - Rose Mary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 - Brian	0	0	-1	0	0	0	0	+1	+2	0	+1	-1	0	-1	0	0	+1
8 - Mark B	0	0	0	0	0	+1	0	0	0	0	0	0	0	+1	+2	+1	+5
9 - Kirk	0	0	0	0	0	0	0	0	+1	0	0	+2	0	0	0	+2	+5
10 - Debby	0	+1	-1	+1	0	+2	+2	+1	+1	0	+1	0	0	+2	-1	+1	+10
11 - Kathy	0	0	0	+1	+1	+2	+2	0	0	0	0	0	0	0	0	0	+6
12 - Andy L	+1	0	+1	+2	0	0	+2	+2	+2	0	0	-2	+2	+2	0	+2	+14
13 - Annette	0	0	0	0	+2	+2	0	0	0	0	0	0	0	-2	0	0	+2
14 - Steven	-1	0	0	0	+1	0	-1	0	0	0	0	0	0	0	0	0	-1
15 - Larry W	+1	0	0	-1	0	-1	0	+2	0	0	0	-1	+1	-2	0	0	-1
16 - Donnie N	0	-1	+2	0	0	0	+2	0	0	0	0	0	0	0	-2	0	+1
17 - Jody	0	0	0	0	-2	0	0	0	0	0	0	0	0	0	+1	0	-1
18 - Adele	0	0	+2	+2	0	+2	0	+2	+2	0	0	0	0	0	+2	0	+12
19 - Patty K	0	0	0	0	-1	-1	0	+1	0	0	+1	0	0	0	0	-1	-1
20 - Norman J	0	0	0	0	0	+2	0	+1	0	0	0	-1	0	+1	0	-2	+1
21 - Carol	0	+1	0	+2	-2	0	+2	+2	0	0	0	0	0	+1	0	+1	+7
22 - Fred	0	0	+1	0	0	0	+1	+1	0	0	0	+2	+2	0	+1	+2	+10

23 - Allyson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24 - Bruce	0	-1	+2	+1	+1	+1	-2	+2	0	0	0	+2	0	0	+1	0	+7	
25 - Janice	-1	0	+1	0	-1	0	0	+1	0	0	0	0	+1	0	0	-1	0	
26 - Terry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
27 - Dale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28 - Cindy	0	0	0	+1	0	+2	-1	0	+2	0	0	+1	0	+1	0	+2	+8	
29 - Greg	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	-2	0	-3	
30 - Ronnie	0	0	0	-1	-1	+2	0	0	0	0	0	0	0	+2	+1	0	+3	
31 - Andy D	0	-1	0	0	-1	+2	0	+2	0	0	+1	+2	0	0	-1	+2	+6	
Total	0	-1	+9	+7	0	+16	+9	+23	+7	0	+7	+4	+8	+7	+4	+9	108	

TABLE 16

INDIVIDUAL ANALYSES -- CONCEPT SCALE I -- EASTHAM SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - DeLores	0	0	-1	0	0	0	+2	-1	-1	0	0	0	0	0	0	-1
2 - John M	+1	0	+1	+1	+1	+1	0	0	0	0	0	0	0	-1	0	+4
3 - Peter	-1	0	0	0	-2	0	0	0	0	0	0	0	0	-1	-1	-5
4 - Gary	+1	0	0	0	-1	0	0	-1	0	0	-1	-1	-2	0	0	-5
5 - Billie	0	0	-1	0	0	+1	0	0	0	0	0	0	0	0	0	0
6 - Rose Mary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1
7 - Brian	0	-1	0	-2	+1	0	0	0	0	-1	-1	-1	0	-1	0	-6
8 - Mark B	0	0	0	0	0	0	0	+1	0	0	0	0	+1	0	0	+2
9 - Kirk	+1	-1	+2	0	0	0	0	0	+1	0	0	0	0	0	0	+3
10 - Debby	0	0	0	0	+1	0	+1	0	+1	0	0	0	0	0	+2	+5
11 - Kathy	0	0	0	0	0	+1	0	0	0	0	0	+1	+1	0	0	+3
12 - Andy L	+1	+1	-1	0	0	0	0	0	0	0	0	0	+1	0	0	+2
13 - Annette	+1	0	-1	0	+1	0	0	0	0	0	0	0	0	+1	0	+2
14 - Steven	+1	0	0	-1	0	+1	-1	-1	0	-1	0	0	0	0	0	-2
15 - Larry W	-1	+1	0	0	-1	0	+1	-1	-1	0	0	-1	+1	0	0	-2
16 - Donnie N	0	-1	0	+1	0	+1	+1	0	0	0	0	-1	0	0	-1	0
17 - Jody	-1	-1	0	+1	0	0	0	0	-1	-1	0	0	0	0	0	-3
18 - Adele	+1	+1	0	0	0	+2	+2	0	0	+1	+2	0	-1	0	+1	+9
19 - Patty K	0	0	0	0	-1	0	0	0	0	0	0	0	0	+1	0	0
20 - Norman J	-1	-1	0	0	0	0	+2	-1	-1	0	0	-1	0	-1	0	-4
21 - Carol	0	0	0	0	0	0	0	0	-1	0	0	0	+1	0	0	0
22 - Fred	0	0	0	0	0	0	0	0	+2	0	0	0	0	0	+1	+3

23 - Allyson	0	0	0	+1	0	0	0	0	+2	-1	0	0	0	0	0	+2
24 - Bruce	0	0	0	0	0	0	0	+2	0	0	0	0	0	0	0	+2
25 - Janice	0	0	0	0	0	+1	0	0	0	0	0	0	0	0	0	+1
26 - Terry	0	0	0	-2	0	+2	-1	0	-1	0	0	0	0	0	0	-2
27 - Dale	0	-1	0	0	0	0	0	0	0	-1	0	0	0	0	0	-1
28 - Cindy	0	0	+1	+1	0	0	0	0	0	0	+1	0	0	0	0	+3
29 - Greg	0	0	0	0	-1	+1	-2	-2	-2	-2	-1	-1	-1	+1	-1	-11
30 - Ronnie	0	0	0	0	0	0	+1	0	0	0	0	0	+1	0	0	+2
31 - Andy D	0	0	+1	0	+1	0	0	0	0	0	+1	0	+1	0	0	+4
Total	+3	-3	+1	0	-1	+11	+6	-4	-2	-6	+1	-5	+3	-1	0	+3

TABLE 17

INDIVIDUAL ANALYSES -- CONCEPT SCALE II -- EASTHAM SCHOOL

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1 - DeLores	0	0	0	-1	0	0	0	0	-1	-1	0	-1	0	+1	0	-3
2 - John M	+1	0	-1	0	+1	+1	+1	+1	+1	+1	0	+1	+1	0	0	+8
3 - Peter	0	-1	0	0	0	0	+1	-1	0	0	0	0	0	0	0	-1
4 - Gary	0	0	0	+1	0	0	-1	+1	0	-1	0	+1	0	0	+2	+3
5 - Billie	0	0	0	-1	0	0	-1	+1	+1	0	0	0	0	0	0	0
6 - Rose Mary	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1
7 - Brian	-1	-1	-1	-1	0	-1	0	-1	0	-1	0	-1	0	-1	0	-9
8 - Mark B	+1	0	0	0	+1	0	+1	0	+1	+1	0	0	0	+1	0	+6
9 - Kirk	0	0	0	0	0	0	0	+1	0	0	0	0	0	0	+1	+2
10 - Debby	0	0	-1	-1	0	0	+1	-1	-1	-1	+1	0	-1	-1	0	-5
11 - Kathy	+2	0	+2	+1	+2	-1	0	0	0	0	0	+2	0	+1	0	+9
12 - Andy L	+1	0	0	0	+1	+1	+1	+1	0	+1	0	0	0	0	0	+6
13 - Annette	-1	+1	-1	+1	-1	+1	0	0	+1	+1	0	+2	0	0	+1	+5
14 - Steven	0	0	0	-1	-1	-1	-1	0	+1	-1	0	0	0	-1	0	-5
15 - Larry W	0	0	-1	0	0	-1	+1	0	0	0	-1	0	-1	0	+1	-2
16 - Donnie N	-1	0	-1	-1	0	-1	0	0	0	0	0	0	0	-1	0	-5
17 - Jody	0	0	0	+1	-1	0	0	0	0	0	-1	0	0	+1	0	0
18 - Adele	0	0	+1	0	+1	+1	0	+1	+1	0	0	+2	+1	0	0	+8
19 - Patty K	0	0	0	0	0	-1	-1	0	-1	0	0	-1	0	0	0	-4
20 - Norman J	-1	0	0	-1	-1	-1	-1	+1	-1	-1	0	-1	0	0	+1	-6
21 - Carol	0	0	0	+1	0	0	+1	+1	+1	0	0	0	0	0	0	+4
22 - Fred	0	0	+1	+1	+2	-1	0	0	0	0	0	0	0	0	0	+3

23 - Allyson	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1
24 - Bruce	0	0	0	0	+1	0	0	0	0	0	0	0	0	0	0	+1
25 - Janice	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	-1
26 - Terry	0	0	0	0	0	0	+1	0	0	0	0	0	0	0	0	+1
27 - Dale	0	0	0	0	0	0	+1	0	0	0	0	0	0	+1	0	+2
28 - Cindy	0	0	0	+1	0	0	-2	0	0	0	0	0	0	0	0	-1
29 - Greg	-1	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	-2
30 - Ronnie	0	0	0	0	0	0	0	0	+1	0	+1	+1	0	0	0	+3
31 - Andy D	+1	0	+1	+1	+1	0	+1	-1	+1	0	+1	0	+1	0	+1	+8
Total	0	-2	-1	+1	+6	-4	+2	+4	+4	-2	+1	+5	+1	+1	+7	+23

TABLE 18

t SCORES ON THE ATTITUDE SCALE AND
THE TWO CONCEPT SCALES

Schools	N-1 df	Attitude Scale t Scores	Level of Sign.	Concept I Scale t Scores	Level of Sign.	Concept II Scale t Scores	Level of Sign
Holy Redeemer	34	4.60	>.001	8.97	>.001	6.08	>.001
George	28	5.23	>.001	7.50	>.001	10.70	>.001
Eastham	30	4.80	>.001	5.68	>.001	3.25	>.01 <.001
Rainier	35	1.00	>.4 <.3	8.28	>.001	4.97	>.001

.05 -- level of significance for rejecting a null hypothesis.

Level of Sign. -- Level of Significance.

The diary

One week before the students, at Holy Redeemer School, attended the outdoor school they were each given a diary and asked to record their comments about the "things" they thought were interesting. They were also told that the diaries would be collected one week after they returned from the outdoor school. No attempt was made to remind the students of this responsibility or were they told how or when to make an entry.

Twenty, or forty-five percent, of the diaries were returned to the writer at the designated time.

	Before the Outdoor School	During the Outdoor School	After the Outdoor School
The number of students writing in their diaries,	20	16	5.
The number of words used by the group,	6,501	2,393	541.
The number of words used by the group that pertained to the school or a school activity,	3,182	2,128	148.

A word analysis was made in an attempt to record any patterns or frequencies concerning students' values. Table 19 illustrates the frequency of the unabridged values mentioned by the students.

TABLE 19

FREQUENCY DISTRIBUTION OF VALUES MENTIONED BY STUDENTS ONE WEEK BEFORE THE OUTDOOR SCHOOL EXPERIENCE, DURING THE WEEK OF SCHOOL, AND ONE WEEK AFTER THE SCHOOL

Values	Times Mentioned Before	During	After
Campfire is very good		1	
Didn't like "plant teacher"	1	1	
Don't like camp - school	1	1	
Excited about going to the outdoor school	8	1	
Enjoyed the teachers or counselors		4	
Fun school	1	5	
Fun to do things		3	
Fun getting ready for the school	4		
Feeling mighty low	1		
Food is good		2	
Field studies are fun		7	
Glad to get out of school	1		
Got in trouble (in class)	3		
Helping others is fun	1		
Keen school		1	
Learned a lot		1	
Looking forward to meet wonderful people	1		
Missed home		1	
Made new friends		1	
Not fun being a hostess		1	
Nothing much today	1		4
Pretty good school		2	
Plant study is boring		1	
Real nice		1	
Real happy place	1	1	
Surprised that teachers could laugh		1	
Sorta like school			1
Satisfied with myself		1	
Sad to leave the school		1	
Thankful for the wonderful teacher		1	
Water study was fun		1	
Wildlife study was best		2	
Wonderful experience		1	
We are lucky kids		1	

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study constitutes an attempt to explore and measure attitudes prior and subsequent to an outdoor school program. The study was an investigation of: the attitudes of students toward the natural environment, what the student thought of himself, and what the student thought others thought of him.

Data was secured from 131 sixth grade boys and girls ranging from lower to high socio-economic backgrounds. The test group spent six days at an outdoor school, located in Colton, Oregon.

The study concerned itself with investigation of the following hypotheses:

1. Students' experiences at the outdoor school will not significantly change their attitude toward the natural environment.
2. The experience attributed to the outdoor school will not significantly change the student's view of himself.
3. The self-concept of the student as he thinks others view him will not be significantly changed by the outdoor experience.

Instruments of appraisal used to measure and evaluate the response of the test group were:

1. A sixteen item Attitude Scale toward the natural environment.

2. Concept Scale I, indicating how the student thinks of himself which contained fifteen items.
3. Concept Scale II, indicating how the student thinks others view him, which also contained fifteen items.
4. A Diary that one group kept their comments in one week before the outdoor school, the week during the school, and one week after their return.

The design of the study included testing all the students before and after the outdoor experience by means of the three scales. An analysis of the students' diaries was made to record any values that may have been mentioned. A statistical measure of reliability was calculated on each of the three scales.

Summary of findings

The findings presented here were gained through analysis of the data from the students' responses to questions contained on the survey scales. The t score statistical technique was applied to each group representing the four schools to determine if there was a significant difference in mean responses, Table 18.

This study revealed that the experience of the outdoor school did significantly change the attitude of the test group in respect to their attitude toward the natural environment. The group from George School exhibited an

attitude change significant beyond the .001 level. The group from Holy Redeemer and Eastham also displayed a level of change greater than .001 significance, thereby the groups rejected the null hypothesis. For the Rainier group the null hypothesis was accepted. The discrepancy in these results cannot be accounted for by the investigator, Table 12. Visual examination of this same table reveals an extreme negative move of one student which would influence group performance. Further analysis show that one-half of this group moved in a negative direction or had no change in attitude after the outdoor experience.

The experiences attributed to the outdoor school significantly changed the self-concept of the test group in a positive way. The change in, "How the student viewed himself," proved to be significant well beyond the .001 level of significance thus the null hypothesis is rejected. All the participating groups ranked beyond the .001 level of significance. It is interesting to note that the t score values obtained from these scales are closely in agreement.

With the exception of the test group from Eastham a high degree of agreement may also be observed with respect to the t score values representing the concept, "How the student thinks others view him." In each case the null hypothesis was rejected, Table 18.

Of lesser significance to the evaluation of the findings is the analysis of the diaries. Although a sufficient number were returned, and the initial enthusiasm seemed encouraging, it soon became apparent that this loosely structured method of soliciting comments from students did not produce the desired outcomes. The tendency for students to respond to something "new" may be responsible for their initial concern and excitement. See page 79 and Table 19.

Conclusions

Judging from the results of this study, the following conclusions seemed justified:

1. The experience of the outdoor school provides situations that affect childrens' attitudes toward the natural environment in a positive way.
2. The outdoor school increases the value of relationships that is conducive to the attainment of a favorable self-concept.
3. The effect of the outdoor school pertaining to specific attitudes and self-concepts of the test groups proved to be measurable by the scales which were constructed.

Recommendations

1. Additional studies should be carried out to determine the value of sociometric information

in identifying desirable and productive attitudes.

2. Ways and means of investigating childrens' individual self-concepts and attitudes over long periods of time should be explored.
3. Outdoor school programs should be further investigated to determine the unique contributions to younger boys and girls.

Much more investigation is needed in all aspects of outdoor education in Oregon. Hopefully, others will undertake the task of ferreting out additional information that will enlighten educators to the implications offered by outdoor schools. Even on a theoretical level outdoor experiences may be able to start in some children a process of change both in attitudes toward himself and toward the environment in which he lives.

BIBLIOGRAPHY

Books

1. Bernstein, Allen L. A Handbook of Statistical Solutions for the Behavioral Sciences. Holt-Rinehart and Winston, Inc. 1964.

1a. Combs, Arthur W. "A Perceptual View of the Adequate Personality." Perceiving, Behaving, Becoming. ASCD Yearbook, 1201 Sixteenth St., N.W., Washington, D.C., 1962.

2. Hammerman, William and Donald. Teaching in the Outdoors. Burgess Publishing Co., Minneapolis, Minnesota, 1964.

3. Irwin, Frank L. The Theory of Camping. A.S. Barnes and Company. New York, 1950.

4. Kolb, Haven and Associates. High School Biology-BSCS Green Version. Rand McNally and Company. Chicago, Illinois, 1963.

5. Manley, Helen and Drury, M.F. Education Through School Camping. C. V. Mosby Company, St. Louis, 1952.

6. Maslow, Abraham H. Toward a Psychology of Being. D. Van Nostrand Company, Inc. Princeton, New Jersey. 1962

7. Sears, Pauline S. and Sherman, Vivian S. In Pursuit of Self-Esteem. Wadsworth Publishing Company, Belmont, California, 1966.

8. Smith, Carlson, Donaldson and Masters, Outdoor Education. Englewood Cliffs, New Jersey, Prentice-Hall, 1963.

9. Sullivan, H. S. The Meaning of Anxiety in Psychiatry and In Life. William Alanson White Institute of Psychiatry, New York, 1948.

9a. Wert, James E., and Associates. Statistical Methods in Education and Psychological Research. Appleton-Century-Crofts, Inc, New York, 1954.

10. Wylie, Ruth. The Self-Concept, A Critical Survey of Pertinent Research. Lincoln, University of Nebraska Press, 1961.

Unpublished Doctoral Dissertations

11. Davidson, Morris. Changes in Self-Concepts and Sociometric Status of Fifth and Sixth Grade Children as a Result of Two Different School Camp Curricula. University of California, 1965.

12. Johnson, Tessa Mae. An Evaluation of a Semi-Objective Method for Appraising Selected Educational Outcomes of School Camping. University of Southern California, Los Angeles, 1957.

13. Kranzer, Charles H. Effects of School Camping on Selected Aspects of Pupil Behavior-An Experimental Study. University of California, Los Angeles, 1958.

14. Stack, Genevie. An Evaluation of Attitudinal Outcomes of Fifth and Sixth Grade Students Following a Period of School Camping. University of Oklahoma, 1960.

Periodicals and Pamphlets

15. Brandwein, Paul. "Conservation", The Science Teacher. Volume 34, Number 4, April, 1967.

16. Childhood Education., Volume 44, Number 2. Association For Childhood Education International, Washington, D.C. 1967.

17. Children's Views of Themselves. Association for Childhood Education International. 3615 Wisconsin Avenue, Northwest. Washington, D.C., 1959.

18. Coppersmith, Stanley. "Studies in Self-Esteem." Scientific America. Volume 218, Number 2, February 1968.

19. Criteria For Evaluation of Catholic Elementary Schools. Holy Redeemer School, 127 North Portland Blvd. Portland, Oregon. May 19, 1967.

20. Foshay, Arthur W. and Associates. Children's Social Values. New York Bureau of Publications, Teacher's College, Columbia University, 1954.

21. Gilbert, H. B. and Wrightstone, J. W. "Education's New Look: Camping." School Executive. 67:31-4, June, 1948.

22. Grumprecht, Helmuth. "Common Emotional Disturbances of Children at Camp." Nervous Child. Volume 6, Number 2, April, 1947.

23. Harms, Ernest. "Camping for What?" Nervous Child. Volume 3, Number 3, April, 1944.

24. Journal of Outdoor Education. Volume 2, Number 2 Illinois University, DeKalb, Illinois, 1968.

25. Lewin, Herbert S. "Changes of Attitude Subsequent to Camp Experience." Nervous Child. Volume 6, Number 2, April, 1947.

26. Life Camps Inc. "Basic Issues in Camping and Outdoor Education." Extending Education, 111:1-8 November, 1946.

27. Means, Richard L. "Why Worry About Nature?" Saturday Review. December 2, 1967.

28. Outdoor Education in Oregon Schools. State Department of Education, Salem, Oregon, 1968.

29. Proposal For Operation Grant, Title III, Regional Outdoor Program, P. O. Box 9172, Portland, Oregon, 1965.

30. Providing Enrichment Opportunities Through Camping and Other Similar Activities-Elementary Program Evaluation. Milwaukee Public Schools, Milwaukee, Wisconsin. September 6, 1966 - June 16, 1967.

31. Rademacher, Everett. "The Child's Readiness for Camp." Nervous Child. Volume 6, Number 2, April, 1947.

32. Redl, F. "Psychopathologic Risks of Camping." Nervous Child. Volume 6, Number 2, April, 1947.

33. Sharp, Lloyd B. "Basic Considerations in Outdoor and Camping Education." National Association of Secondary School Principals. The Bulletin. Volume 147, May 1947.

34. The Teacher's Handbook For the Outdoor School. Regional Outdoor School, 1441 S.E. 122nd Ave. Portland, Oregon, 1965.

APPENDIX A

INITIAL STUDENT SURVEY SHEET

Suppose you were asked to talk about yourself. Would you please make a list of the words that you would use.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

APPENDIX B

INITIAL STUDENT WORD LIST SURVEY

One-hundred and eight sixth grade boys and girls were asked to respond to the question: "What word or group of words would you use if someone were to ask you to talk about yourself?" The frequency that each word occurred is included in parenthesis.

adventurous
always in trouble
afraid
aggressive (2)
active (2)

bossy (2)
bold
brilliant
brat
beautiful (2)
bad (4)

confident
clever
cool (7)
crazy (2)
coordinated (3)
critical
cute (7)
cheerful
clean (7)
clumsy (2)
courteous (4)
cheat
competitive (3)
conceited (2)
curious
cooperative (2)

different (2)
dumb (3)
don't like to work
like to do things

extraordinary

famous
fantastic
faithful
friendly (11)
funny (3)
fun (2)
fun to be with
frustrated easily (2)

gay
generous
goofy (2)
groovey (9)
great (7)
good (6)
good worker
get along (2)
good looking
get work done

humorous (2)
hippish
helpful (2)
happy (3)
hate school

intelligent (14)
imaginative
important
interesting (2)

likeable (2)
mighty
mean
mad (2)
make friends easily

neat (8)
nice (14)
not smart (2)
nervous (2)

perfect
particular
polite (5)
popular
playful
pretty
participate in activities

reliable

sweet
smart (19)
spoiled
supreme
scientific
stupid (3)
sympathetic
sense of humor (3)
skillful
shy (10)
snooty
slow moving

trustworthy
talented
tuff (8)
talkative (4)
trouble (3)
temper (2)
try hard (2)

wishy-washy
wonderful
weak
witty (2)
well organized

queer
ugly (3)
quiet(3)
unkind (2)
kind (6)
unliked

APPENDIX C

INITIAL STUDENT LIST

Dear Student,

Read each word or phrase carefully. Put a mark ( ) by each word that you think you would use when talking about yourself. Remember, only mark the words you would use in talking about yourself.

Thank you.

---

80 active
17 aggressive
18 afraid
9 always in trouble
17 bossy
9 beautiful
5 bad
16 bold
27 cool
22 cute
50 courteous
82 clean
14 competitive
2 cooperative
21 conceited
21 clumsy
24 confident
33 different
12 dumb
12 don't like to try new things
78 friendly
37 funny
23 frustrated easily
41 fun to be with
21 groovey
17 great
53 good
13 goofy
68 get along
40 gay
74 happy
65 helpful
33 humorous
40 intelligent
20 important
22 interesting
59 likeable
9 mad
57 make friends easily
62 nice
55 nest
17 not smart
26 nervous
66 polite
19 popular
58 participate in new activities
40 reliable
40 smart
13 spoiled
33 shy
10 stupid
19 sympathetic
21 tough (tuff)
1 trouble
63 try hard
54 talkative
59 trustworthy
29 temper
9 witty
15 ugly
26 quiet
6 unkind
33 kind
11 unliked
32 well organized
9 wishy-washy
0 snooty
47 skillful

APPENDIX D

CONCEPT SCALE I

Dear Student,

All you have to do is read each statement and put a mark ( ) in the column to show the way you feel. Mark the statements quickly because there are no right or wrong answers.

Thank you for your help.

	This is very much like me	A little bit like me	Not like me at all
1. I have self-control.			
2. I am trust-worthy.			
3. I am afraid of many things.			
4. I am awkward and clumsy.			
5. I am confident, not shy or timid.			
6. I often feel left out of things			
7. There is not much use for me to try hard.			
8. I am fun to be with.			
9. I am a leader.			

	This is very much like me	A little bit like me	Not like me at all
10. I make friends easily.			
11. I can solve problems by myself			
12. I have a good sense of humor.			
13. My decisions are usually right.			
14. I just cannot face failure.			
15. I am an important person in my classroom.			

APPENDIX E

CONCEPT SCALE II

Dear Student,

All you have to do is to read each statement and put a mark ( ) in a column to show the way you feel. Mark the statements quickly because there are no right or wrong answers.

Thank you for your help.

	Most of the time	Some of the time	Seldom
1. People think of me as being important.			
2. My classmates trust me.			
3. Most people like me.			
4. My classmates have confidence in me.			
5. People respect me.			
6. My teacher understands me.			
7. People think that I am helpful.			
8. My teacher thinks that I try hard.			
9. My classmates think I am polite.			

	Most of the time	Some of the time	Seldom
10. Other children my age enjoy being with me.			
11. Classmates make fun of me.			
12. Other children my age think I'm reliable.			
13. Classmates think I am friendly.			
14. Other students think I am friendly.			
15. Most people wish that I were different.			

APPENDIX F

OUTDOOR SCHOOL

Dear ______________________,
(print your name)

Please read each statement and put a mark ( ) above one answer to show how you feel. Mark the statements quickly because there are no right or wrong answers. Thank you for your help.

- -

1. I ________ care ________ don't care ________ am undecided whether other people or myself take special care of trees and wild animals.

2. I ________ care ________ don't care ________ am undecided whether other people or myself pick up paper that other people throw around.

3. I ________ care ________ don't care ________ am undecided whether other people or myself collect all the fossils from one area.

4. I ________ care ________ don't care ________ am undecided whether other people or myself remove sand from the beaches to fill lowlands.

5. I ________ care ________ don't care ________ am undecided whether other people or myself collect snails and starfish from the seashore.

6. I_____ _____ _____whether
care don't care am undecided
other people or myself use a spray to kill all the mosquitoes in one area.

7. I_____ _____ _____whether
care don't care am undecided
other people or myself burn garbage and trash in the out-of-doors.

8. I_____ _____ _____whether
care don't care am undecided
other people or myself paint or carve names or initials on rocks.

9. I_____ _____ _____whether
care don't care am undecided
other people or myself remove cans and bottles from rivers, lakes, or from along highways.

10. I_____ _____ _____whether
care don't care am undecided
other people or myself pour waste water into streams, rivers, or lakes.

11. I_____ _____ _____whether
care don't care am undecided
other people or myself cut or paint names on signs or trees.

12. I_____ _____ _____whether
care don't care am undecided
other people or myself build a "swimming hole" by daming a stream.

13. I_____ _____ _____whether
care don't care am undecided
other people or myself kill off all the mountain lions in a park area.

14. I_____ _____ _____ whether
care don't care am undecided
other people or myself remove old rotten logs from a park.

15. I_____ _____ _____ whether
care don't care am undecided
other people or myself keep on the trail when walking in the woods.

16. I_____ _____ _____ whether
care don't care am undecided
other people or myself pick wild flowers from a forest.