

**Attitudinal Changes in Selected 6th Grade Students
Participating in the Indianapolis Public Schools
Residential Outdoor Education Program,
Spring, 1972**

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Abstract

The problem for this investigation was to appraise selected attitudinal changes in 6th grade students participating in a residential outdoor education program. Data were obtained for the investigation from a "semantic differential" type instrument designed for this study. A pre-test/post-test design was used and the differences between the scores for each class of students compared. The results of the study indicated that some significant student attitudinal change occurred.

Introduction

Residential outdoor education programs are conducted in several school systems in Indiana. The objectives of these programs may vary from school system to school system, but in addition to learning school subject matter (such as science, conservation, mathematics, English, art) some type of positive attitude change is anticipated.

An attitude is a way of feeling about something or someone. For this investigation examples of positive attitudinal change include such feelings as a student liking school better after the residential experience than before it, and a student respecting the teacher more after the residential camp than before attending the camp.

Although attitudinal changes are anticipated and desired by school systems conducting residential outdoor education programs, few attempt to systematically evaluate the success of their program in this regard. There have been, however, several studies conducted in other states concerning student attitudinal change as a result of residential outdoor educational programs.

Davidson (1) investigated the relationship between school camp curricula and measured changes in pupils' social relationships and self-concepts. He concluded that the programs produced positive change on both the self-concept scale and the social relationships scale.

Johnson (2) appraised changes in achievement, interest, and social status of junior high school students who experienced 1 week of school camping. She found that there was little increase in the acceptance of an individual during the 1-week experience. Group cohesion, however, significantly increased during the stay in camp.

Kleindiest (3) studied the potential of school-camp experiences as means of attaining objectives of the 6th grade curriculum. She found that these residential programs offered significant opportunities in meeting school objectives especially in the area of social living, appreciation, and communication.

Kranzer (4) found that social and democratic behavioral changes take place more rapidly during a camping program than during a regular school classroom program. Boys seemed to profit more than girls. Low mental ability students showed a slight improvement in critical thinking. The number of isolates, however, tended to increase beyond what would normally be found in the classroom. Kranzer also reported that ratings by adults (teachers) generally favored camping as increasing group acceptance, better motivation, and stimulating classroom work. Adult ratings were generally higher than ratings from his test instruments; thus the instruments being used to evaluate school camping may not be valid in measuring a change that takes place in such a period as short as 1 week.

Stack (5) studied attitudes toward selected concepts of school, teachers, friends, and school camping possessed by 5th and 6th grade pupils before and after a school camping experience. Among her conclusions were: 1) the school camp experience does provide unique opportunities for effecting social change, particularly in regard to racial cleavage, and 2) teacher-pupil rapport was improved.

These studies seem to indicate that school camping does influence student attitudes in a number of ways. Many of these changes would have a direct influence on the student's education and social life.

Methodology

This particular investigation measured selected attitudinal changes in 6th grade students participating in a residential outdoor education program at Bradford Woods during the spring, 1972. Students in the program attended schools from the inner-city and outer-city of Indianapolis, Indiana. The program was one school-week long (5 days). Classroom teachers and non-school resource people served as instructors for the camp.

The residential outdoor education program involved 16 different groups during the 6 weeks it was conducted. Each group was assigned a number (1 through 16) and a table of random numbers used to select the four groups of students for this study. Each group had 20 participants equally divided between boys and girls. Pre-testing was conducted on Monday morning of the camp and post-testing on Friday afternoon of the camp. A teacher was present to assist students with reading difficulties. A "semantic differential" type instrument was used to collect data for the investigation. The "concepts" used in the instrument were selected because they represented what Indianapolis 6th grade teachers had indicated to the investigator were objectives of the residential program. The pairs of adjectives used to rate the concepts were selected from other "semantic differential" type instruments.

The semantic differential is not an instrument in the same sense that the College Board Exams is an instrument. It is rather a technique, just as multi-choice questions or essay-type questions are techniques. In its most common form, it consists of presenting the student with a concept consisting of a word or a phrase. The student rates

the concept on a series of bipolar scales which are listed beneath the concept. Usually the bipolar scales have five to seven rating points. The ends of the bipolar scales are defined by a pair of adjectives. A single instrument usually consists of 10 to 20 concepts; each of which is rated on approximately 15 to 30 scales.

A pre-test/post-test design was used and the differences between the pre-test and the post-test ratings for each group of students determined. A t-test was computed between these ratings to determine the significance of the differences. The 0.05 level of confidence was predetermined to be an acceptable level to indicate significance difference. Differences between pre-test and post-test ratings were recorded for the following 10 "concepts."

- | | |
|-------------------------------------|----------------------------------|
| 1. Enjoying the Outdoors | 5. Knowing about Manners |
| 2. Learning about Nature | 6. Being Polite and Courteous |
| 3. Learning about Natural Resources | 7. Being a Good Citizen |
| 4. Getting Along with Teachers | 8. Getting Along with Classmates |
| | 10. Learning about Science |

Students rated each "concept" on the same series of 15 bipolar scales, each scale having five rating points. The 15 pairs of adjectives that made up the bipolar scales are:

- | | |
|---------------------------|-----------------------------|
| 1. Important—Unimportant | 9. Relaxing—Tiring |
| 2. Valuable—Worthless | 10. Clear—Mysterious |
| 3. Exciting—Boring | 11. Refreshing—Unpleasant |
| 4. Interesting—Dull | 12. Joyful—Gloomy |
| 5. Simple—Difficult | 13. Comforting—Threatening |
| 6. Beneficial—Useless | 14. Productive—Unproductive |
| 7. Stimulating—Monotonous | 15. Safe—Risky |
| 8. Easy—Hard | |

In the directions to students rating the "concepts" they were asked to mark (X) in one of the boxes between the words. For example:

Eating Your Supper

Good Bad

If a student thought that eating his supper (the "concept") was a good thing to do he marked in one of the boxes close to the word "Good." If he felt that eating his supper was a bad thing to do he marked in a box close to the word "Bad." For purposes of determining mean ratings, the box closest to the positive adjective was rated a 5 and the box closest to the negative adjective was given a 0 rating. The other four boxes were rated 4, 3, 2, and 1, respectively. These numerical ratings were not printed on the rating instrument completed by students.

Results and Discussion

When mean ratings were computed for each student group on all the "concepts" it was found that two groups rated the post-test significantly higher than the pre-test. One other group rated the post-

test higher than the pre-test, but not significantly higher. The fourth group rated the pre-test and the post-test the same. Table 1 presents the actual mean ratings (on a scale 0 to 5).

TABLE 1. Mean pre-test and post-test ratings.

Students Group	Mean Ratings		Significant at 0.05 level
	Pre-test	Post-test	
Group 1	3.3	3.6	Yes
Group 2	3.6	3.7	No
Group 3	3.6	3.6	No
Group 4	3.9	4.1	Yes

These data would seem to indicate that the residential outdoor education program had more positive effects on student attitudes about the 10 phrases selected for the study, than negative effects. Table 2 presents data on the difference between the pre-test and post-test ratings by the student groups for each "concept" or phrase.

Table 2 shows 27 incidences in which students increased their rating of a "concept" or phrase on the post-test over the pre-test. This indicates a more positive feeling toward those phrases. Fourteen of the 27 increases were statistically significant. In seven cases students decreased their rating of a "concept" or phrase on the post-test from the pre-test. This indicates a more negative feeling toward those phrases. Two of the seven decreases were statistically significant. In six incidences students rated concepts the same on both pre-test and post-test.

TABLE 2. Differences between post-test ratings compared to pre-test ratings by student groups for each phrase. (A plus indicates an increase, a minus indicates a decrease, and a zero indicates no change.)

Phrase	Student Groups			
	Group 1	Group 2	Group 3	Group 4
1. Enjoying the Outdoors	+	+	○	+
2. Learning about Nature	+	○	+	+
3. Learning about Natural Resources	+	+	○	+
4. Getting Along with Teachers	+	+	—	—
5. Knowing about Manners	+	+	—*	+
6. Being Polite & Courteous	+	+	○	+
7. Being a Good Citizen	+	○	+	+
8. Getting Along with Classmates	+	+	—	○
9. Being Away from Home	+	—*	+	+
10. Learning About Science	+	—	—	+

*Indicates significant change at 0.05 level of confidence.

Student groups one and four had far more increases in ratings on the post-test than decreases. Phrases one, two, three, five, six, seven, and nine had more increases in ratings on the post-test than decreases and same ratings combined.

From the data presented in Tables 1 and 2, it was concluded that student groups one and four benefited more from the residential outdoor education program than groups two and three with regard to changing attitudes on the phrases used on the rating instrument. Possible reasons why this occurred are as follows:

- 1) Student groups came to residential outdoor education program with different academic backgrounds.
- 2) Student groups came to residential outdoor education program with different home experiences.
- 3) Some classroom teachers teaching in the program are better able to teach in a residential outdoor education program than others.
- 4) Some outside resource people teaching in the program are more effective instructors in a residential outdoor education program than others.
- 5) The phrases and values rated in this investigation were held in higher regard by some student groups and their teachers than other groups and teachers.

Conclusions

The major conclusion drawn from this study was that residential outdoor education programs do not always result in a positive attitudinal change for all students. A great deal depends on the organization and administration of the program, the backgrounds and interests of teachers and students, and the facilities of the camp to make it an effective means for significantly changing student attitudes.

Literature Cited

1. DAVIDSON, MORRIS. 1965. Changes in self-concepts and sociometric statue of fifth and sixth grade children as a result of two different school camp curricula. Unpublished Ph.D. Dissertation, Univ. Cal., Berkeley. 154 p.
2. JOHNSON, TESSA MAE. 1957. An evaluation of a semi-objective method for appraising selected educational outcomes of school camping. Unpublished Ph.D. Dissertation, Univ. S. Cal, Los Angeles. 123 p.
3. KLEINDIEST, VIOLA K. 1957. A study of the experiences of camping for the purpose of pointing out ways in which a school camping program may supplement the elementary school at the sixth grade level. Unpublished Ph.D. Dissertation, New York Univ. 110 p.
4. KRANZER, HERMAN C. 1958. Effects of school camping on selected aspects of pupil behavior—an experimental study. Unpublished Ph.D. Dissertation, Univ. Cal., Los Angeles. 138 p.
5. STACK, GENEVIEVE C. 1960. An evaluation of attitudinal outcomes of fifth and sixth grade students following a period of school camping. Unpublished Ph.D. Dissertation, Univ. Okla. 149 p.