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An experimental, cooperative game, and its effects upon the participants' self-concept, self-esteem, and attitudes towards a hyprothetical peer-group

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AN EXPERIMENTAL, COOPERATIVE GAME AND ITS EFFECTS UPON THE PARTICIPANTS' SELF-CONCEPT, SELF-ESTEEM, AND ATTITUDES TOWARD A HYPOTHETICAL PEER GROUP

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APPROVAL SHEET

We the undersigned do certify that we have read this dissertation and that in our individual opinions it is acceptable in both scope and quality as a dissertation for the degree of Doctor of Education.

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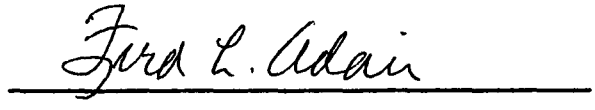

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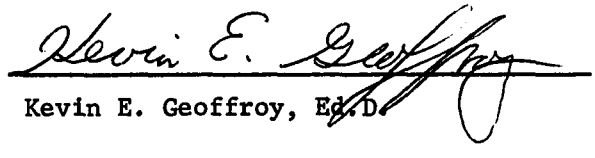

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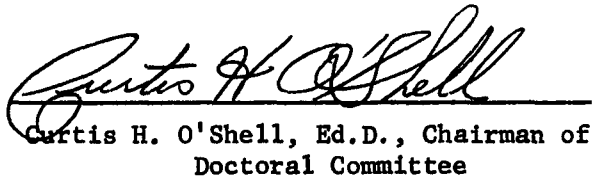

Curtis H. O'Shell, Ed.D., Chairman of
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Table of Contents

List of Tables

AN EXPERIMENTAL, COOPERATIVE GAME AND ITS EFFECTS UPON THE PARTICIPANTS' SELF-CONCEPT, SELF-ESTEEM, AND ATTITUDES TOWARD A HYPOTHETICAL PEER GROUP

Chapter 1

Introduction

One of the primary goals of elementary school counseling is concerned with the development and personal adjustment of the child. In particular, it focuses upon the effect the school learning environment has upon the child's affective development. A major theoretical orientation of the elementary school counselor's role is development, and as such, the counselor looks to theoretical formulations of the field of developmental psychology as a rationale for the functions he performs. Through various guidance techniques, the counselor attempts to implement developmental theory as it applies to the affective needs of the elementary school child (Faust, 1968).

The present study proposes to investigate the effect of one such technique, group guidance, upon the affective need of self-esteem. The theoretical framework for the study is derived from Erik Erikson whose postulates are particularly relevant to the child's need for esteem at this age (Blocher, 1974). In line with Erikson's theory, this study utilizes group procedures designed to reinforce the sense of industry in children. It is hypothesized that reinforcement of the sense of industry will tend to promote greater self-esteem in the child. This study attempts to verify that hypothesis.

Theoretical Framework

Erikson (1950) postulates eight psychosocial stages of human development. At each stage the individual is confronted with

a crisis which he must successfully resolve in order to continue normal human development and to prepare himself to meet the crises of the succeeding stages. Failure to resolve the crisis results in the individual withdrawing to an earlier stage and suffering a loss of ego strength.

The psychosocial stage which is applicable to the elementary school child is characterized by the crisis of industry versus inferiority. The child enters this stage with an enormous curiosity and desire to learn and to know. He is striving for the acquisition of skill. He has reached a point where he is no longer satisfied with just play and make-believe. In line with his interest in becoming an adult, he needs to feel useful and to be able to make things and deal with things that have significance in the adult world. He is now capable of the steady attention and persevering diligence that foster a sense of industry, or what White in Jones (1960) refers to as competence.

During this stage, the child identifies with those who know things and how to do things. He attempts to adjust to the laws of the tool world and to learn to be a producer of things (Erikson, 1950). The skill he acquires and the tools he uses may differ in terms of the culture in which he is trained, but the child's basic need at this stage is to be busy with doing a job and learning to complete it successfully. This is what Erikson means by the term "industry" (Evans, 1967). The child is industrious in applying himself to a task, and he learns a sense of personal recognition by producing things.

If, however, the child does not acquire sufficient skill to produce the things he desires to, or if he does not receive recognition for the things he does produce, he does not develop this sense of industry. Rather, he develops a sense of inadequacy and feels inferior (Erikson, 1950). Children cannot be fooled, however, by empty praise or condescending encouragement. They gain real strength in their self-esteem only from wholehearted and consistent recognition of real accomplishment (White, 1972).

In terms of the polarities of the crisis, then, success at this stage is represented by the industrious child who feels competent and learns a sense of personal recognition on the one hand, and failure is represented by the inferior child who feels inadequate and increasingly useless on the other (Coles, 1970). In order to successfully resolve this crisis in our society, White in Jones (1960) proposes that the child needs to develop several skills. It is not sufficient that the child learn only those skills which enable him to perform basic adult tasks, but also he needs to acquire academic and social skills. He needs literacy skills, or what Erikson terms the tools of our technology, to learn to read and write. He needs to attain a degree of mastery in his schoolwork for this can build firm self-esteem and social approval. Socially, the child needs to learn how to get along in relation to others. He must develop good peer relations; for as the child grows older, the peer group increasingly becomes more important in providing for the dependency, security, affection, and recognition needs of the child.

Participation in peer groups yields a variety of satisfactions, including security, agreeable stimulation, and a feeling of worth in the eyes of others (White, 1972).

Statement of the Problem

The educational objective derived from the above theory is to assist the child by providing opportunities for him to develop a sense of industry or competency (Evans, 1967). Techniques employed to accomplish this objective should, in line with the theory, assist the child in acquiring or improving skills, and provide positive reinforcement to the child for the products he produces (Erikson, 1972). It is also important that procedures be included which will promote a more positive relationship between the child and his peers. Techniques of this nature should help the child effectively resolve the crisis of industry versus inferiority, and should serve to promote strong self-esteem.

The purpose of this study is to investigate the effect of group guidance with an experimental game on the self-esteem of elementary school children. (A description of the game and the game problems utilized in the group guidance procedure are included in Appendix D.) Since the experimental procedure involves both the opportunity for the children to develop skills and provides reinforcement to the children for their competencies, it is proposed that this technique will tend to promote more positive feelings of self-regard among the group members. These feelings, it is assumed, will evidence themselves in the self-reports of the child regarding

his self-concept and self-esteem. "The Piers-Harris Children's Self-Concept Scale" (see Appendix A) and the "Coopersmith Self-Esteem Inventory" (see Appendix B) will be employed as measures of self-concept and self-esteem, respectively, in this regard.

Two hypotheses will be tested to determine the effect of the procedure upon the children's self-evaluations.

Hypothesis I. Group guidance utilizing the experimental game will effect the self-concept of children.

Hypothesis II. Group guidance utilizing the experimental game will effect the self-esteem of children.

To investigate the effect upon the children's attitudes toward a group of hypothetical peers which are described by their competencies and utilized in the solution to the problem situations encountered in the game, a third hypothesis will also be tested.

Hypothesis III. Group guidance utilizing the experimental game will effect the attitudes of children toward a group of hypothetical peers.

The purpose in testing this hypothesis is to determine the possible value of this technique in broadening children's awareness toward peers in terms of the peers' competencies, and approval of those peers based on those competencies. "The Hypothetical Peer Index" (see Appendix C) will be employed as a measure of children's attitudes in this regard.

Definitions

Attitude toward Hypothetical Peers

Attitude toward hypothetical peers is defined operationally as scores on the "Hypothetical Peers Index."

Group Guidance

Group guidance is a process of interpersonal interaction in which leader and group members collaborate for the purpose of providing information to the members of the sort that might change their attitudes and opinions (Gazda, 1969, p. 25).

Hypothetical Peers

Hypothetical peers are caricatures of imaginary elementary school children. Each caricature is described by a competency (i.e., skill) he possesses. There are 20 caricatures included in the game, 10 representing male and 10 representing female children. No two caricatures are described by the same competency.

Role of Facilitator

Role of facilitator is defined by the following set of behaviors: providing verbal and nonverbal reinforcement of the children for their attempts to cooperate with each other and solve the game problems; clarifying the problem situations for the group; and encouraging group examinations of alternative solutions to the game problems offered by various individuals in the group.

Self-concept

Self-concept is a personal perception that is expressed in

the way the individual feels about himself. Operationally, self-concept is defined as scores on the "Piers-Harris Children's Concept Scale."

Self-esteem

Self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself. Operationally, self-esteem is defined as scores on the "Coopersmith Self Esteem Inventory."

Chapter 2

Review of Related Research

A review of reported research studies dealing with the self-evaluations of elementary school students reveals that very few investigations have been made regarding the effect of group guidance procedures on self-concept and self-esteem. None of these studies has attempted to directly relate Erikson's theory to self-concept and self-esteem, nor have they utilized a game similar to the one outlined here in their guidance procedures. Of possible exception are two studies investigating the effects of the "Developing Understanding of Self and Others" (DUSO) guidance materials. The DUSO program utilizes these materials and planned experiences to encourage children to talk about and become more aware of their feelings, goals, values, and behavior (Galina, 1973). However, these studies focus on children's understanding of their feelings and behavior rather than on reinforcement of the sense of industry which is the prime concern here. Similarly, the other studies reviewed utilized procedures geared toward self-understanding and reinforcement of positive self-referent statements. Unlike the DUSO investigations, however, these studies tested the effectiveness of various individual and group counseling procedures. In this sense they differ from both the present study and the DUSO investigations which concentrate on the technique of group guidance.

For purposes of review, the conclusions and results of these

studies are reported as follows in a first section. A second section is also included in which the results of a number of correlational studies are reported. These studies have investigated the relationship among children's self-concept and self-esteem and several other variables relevant to education. They are included here to lend support to the underlying theory of this study that competence and the approval of significant others are related to high self-esteem in children.

Section I

Investigations reported in this section deal with various programs and experimental treatments designed to help students attain a more positive self-regard. They are categorically reviewed here according to the general guidance technique they utilize in their methodology. The following subtitles are employed in the categorization of these studies: Group Guidance, Group and Individual Counseling, Teacher In-Service Training, Instructional Programs, Verbal Reinforcement, and Skill Acquisition.

Group Guidance

Koval (1972) investigated the effects of the DUSO guidance materials on the self-concepts of rural Appalachian students. The subjects were 312 children in grades 1, 2, and 3. At each grade level, two of the classes used the DUSO materials under the direction of a counselor for 10 30-minute sessions over a 10-week period. Following the experimental period, four subtests (self-reliance, sense of personal worth, sense of personal freedom, and feeling of

belonging) of the "California Test of Personality" were administered as a measure of self-concept. Results of the study indicate that participants in the DUSO program are more self-reliant and have a greater feeling of belonging than nonparticipants. They do not, however, have a greater sense of personal worth. Sense of personal freedom tends to increase with grade level independent of DUSO. Koval concluded that both DUSO and grade level affect the self-concepts of Appalachian primary school children.

In a replication of this study, Eldridge, Barcikowski, and Witmer (1973) used the DUSO materials with second-grade students. The four measures of self-concept utilized were: the "DUSO Affectivity Device," the "Piers-Harris Children's Self Concept Scale," Holthouse's "Children's Self Concept Index," and the first four subtests of the "California Test of Personality." Subjects participated in 25 30-minute sessions over a 5-week period. Results showed a significant increase in self-concept as measured by the "DUSO Affectivity Device," but no significant increase as measured by the other tests. Further investigation found that correlations between the DUSO test and the other test instruments were low. The authors concluded that these results imply a need for continuous research regarding the effectiveness of this program on the personal and interpersonal relations of children.

Group and Individual Counseling

Frost (1973) compared the effectiveness of individual and group counseling procedures in dealing with 157 fourth-, fifth-, and

sixth-grade students. Subjects received 15 sessions over a 4-month period of either group or individual counseling. Pre- and posttest measures were obtained for both groups and a nontreatment control group on the "Teacher's Behavioral Rating Scale," the "Social Acceptance Scale," and the "Coopersmith Self-Esteem Inventory." Results indicated very little difference between the outcomes of the two counseling approaches, as both improved the personal adjustment, peer acceptance, and self-concept (as measured by teacher's ratings) of students. Both also improved self-concept as reported by the subjects, and this tended to approach significance (.06).

Employing a similar pre- and posttest design, Drowne (1972) compared verbal group counseling, whole class meetings with a counselor, and group counseling using a play media approach with third-grade students. Results, analyzed by Duncan's multiple range test, showed that the play media counseling group produced a statistically significant increase in score change on the self-referent dimension of the "Thomas Self-Concept Values Test" when compared with the classroom meeting counseling group, and on the peer referent dimension when compared with a noncounseled control group. The author concluded that regarding these two aspects of self-concept, play media group counseling may be a superior method in effecting score change with lower elementary school children as compared to verbal counseling approaches.

Investigating a possible halo effect of group participation

upon children's self-perception, Kern, Kelley, and Downey (1973) compared group counseling and halo consultation. Pre- and posttest scores were obtained on the "Walker Behavior Identification Checklist" and the "California Test of Personality" for 54 fourth-, fifth-, and sixth-grade students. The group counseling subjects met for eight sessions in which their feelings were discussed and explored. The halo consultation group spent eight sessions doing a variety of activities (i.e., games, arts, crafts, and records). Results indicate that both approaches improve self-concept to a significant degree (.05) as measured by both test instruments when compared to a noncounseled control group. No significant differences were found between the two treatments.

A number of studies have used various group counseling approaches in attempting to improve the self-concepts of children identified as being low in self-esteem, disadvantaged, underachieving, or mentally handicapped. The results of these studies and their methodological approaches are briefly reviewed as follows.

Altmann and Firnesz (1973) investigated the effects of a decision-making approach to group counseling upon the self-esteem of fourth graders with low scores on the "Coopersmith Self-Esteem Inventory." The technique emphasized a decision-making approach to self-evaluation in which children make trial decisions, confront the consequences of such decisions, and analyze the attitudes underlying their behavior. No significant differences were found on self-esteem as measured by the self-reports of the children, but

teacher's reports on the "Behavioral Rating Form" showed a significant (.01) increase in self-esteem for the counseled students. The authors concluded that increased self-esteem behavior might suggest that the newfound decision-making skills were being practiced and tested by the students outside the counseling sessions, and that this change in behavior resulted in being ranked higher in self-esteem by their teachers.

Short-term intensive group counseling with low self-esteem fifth- and sixth-grade students was investigated by Baty (1969). Counseled subjects met twice weekly for 30-minute sessions over a 6-week period. Results determined by sociometric ratings and counselor evaluations indicated that group counseling significantly (.05) improved the self-esteem of the subjects. The author cautioned, however, that this conclusion was based largely upon subjective research instruments.

With a similar group of low self-concept sixth-grade students, McRae (1972) compared individual counseling of students to counseling and consultation with parents. Results as measured by the "Tennessee Self Concept Scale" shwwed a significant (.01) improvement in self-concept for the counseled students as compared to those students in a control group. The parent consultation group showed no significant improvement.

The effects of group counseling upon the self-concept of disadvantaged elementary school students was investigated by Payne (1970). Subjects were students participating in an Elementary and

Secondary Education Act, Title I, program. Subjects met for 18 sessions in which filmstrips, pictures, problem-completion stories, recordings, and role playing were utilized in discussion. Results indicated a significantly improved (.05) self-concept for the counseled students on the referents Mother, Peer, Self as Subject, and Total Referent as measured by scores on the "Brown IDS Self Concept Referent Test" (acronym not identifiable).

Studies by Cheatham (1968) and White and Allen (1971) investigated group counseling with underachieving elementary school children. Cheatham compared counseling and remedial reading instruction with remedial reading instruction only. Self-concept was measured by the "California Test of Personality" and reading efficiency by "The Nelson Reading Test." Analysis of the data indicated that counseling did not improve reading performance and counseled students tended to decrease in self-concept scores. Cheatham attributed the decrease on self-concept to the possible development of anxious awareness regarding reading and personal inadequacies among the counseled students.

White and Allen (1971) reported one counseling method that was found to be very successful in raising the self-concept scores of underachieving behavior-problem boys. The study compared non-directive verbal counseling to group counseling using an art media approach. Subjects in the art counseling group worked with art materials of their own choosing on short-term tasks stressing the use of art for communication, especially emotional communication.

Subjects were encouraged to verbalize about their art products with a view toward eliciting insightful statements about their feelings and self-descriptions. Posttest scores on the "Tennessee Self Concept Scale" indicated significant (.03) improvement by the art counseling group on Total Positive, Self-Satisfaction, Physical Self, and Social Self as compared to the nondirective counseling group. Follow-up showed that these changes endured for 14 months after the termination of the art counseling sessions.

Group counseling with educable mentally retarded boys was investigated by Mann, Beaber, and Jacobson (1969). There were 36 educable mentally handicapped boys matched on age, Intelligence Quotient (IQ), and socioeconomic status and randomly assigned to either group counseling or noncounseling (library study) treatment conditions. After 12 1-hour sessions, subjects were tested on the "Children's Self Concept Scale" and an anxiety scale. Results confirmed the hypotheses that the counseled students would attain a more positive self-concept and would experience a greater reduction of anxiety than noncounseled students. Difference in scores for the two groups were significant at the .05 level of probability. The authors cautioned, however, that generalizations should not be made because of the smallness of the sample.

Teacher In-Service Training

Although they involved no direct contact with children, studies by Bolea (1968) and Perkins (1958) reported a procedure which had the effect of improving self-concept in children. These studies

investigated the effects of teacher participation in child study programs. In Perkin's investigation, teachers were enrolled for 3 years in a child study program sponsored by the University of Maryland. Their fourth- and sixth-grade classes were administered a Q-sort self-concept scale during the year following the end of the child study program. Analysis of the data indicated that students of those teachers who completed the child study had significantly (.01) better self-ideal congruency than students of teachers who were nonparticipants.

Similarly, Bolea reported that when teachers were involved in a 2-year child study program, the students in their fourth-, fifth-, and sixth-grade classes changed toward a significantly (.05) more positive self-ideal congruence. This change, as measured by scores on a 50-item Q sort and the Science Research Associates (SRA) Junior Inventory did not occur among students in classrooms of non-participating teachers.

Instructional Programs

The effectiveness of classroom discussion and self-knowledge exercises in improving self-concept in children was investigated by several authors. Bouchard (1971), working with fourth-grade students, hypothesized that self-concepts would be improved after 5 weeks of instruction on one or more of four topics: motivation, task orientation, problem solving, and class membership. Comparison of pre- and posttest scores on "Dr. Waetjen's Self Concept as a Learner Scale" revealed a significant increase in positive self-concept for

the class membership (.001) and task orientation (.05) groups. The motivation and problem solving groups showed a tendency toward significant increase but were statistically nonsignificant (.10). The author concluded that the data lend support to the value of utilizing peer group relationships as a method of improving self-concept.

Self-knowledge exercises with low achieving elementary students and with fifth-grade students were investigated by Levy (1972) and Sallade (1972), respectively. Levy worked with 299 students ranging in grade level from one to six, 210 of whom were low achievers. Results of the experiment as measured by scores on the "Piers-Harris Children's Self-Concept Scale" indicated that the self-knowledge exercises group experienced a significant improvement (.01) in self-concept.

Similarly, Sallade (1972) assigned four classes of fifth-grade children to one of two treatments (self-knowledge exercises and discussion or to no self-knowledge exercises and discussion) for 15 sessions. Pretest-posttest score differences on the "Coopersmith Self-Esteem Inventory" revealed a significant (.01) improvement in self-esteem among students in the self-knowledge group as compared to the other treatment group.

Verbal Reinforcement

The effect on fifth- and sixth-grade students' self-esteem level of an implied higher level of peer regard than was perceived by the student himself was studied by Briggs (1971). Subjects in the

experimental group were informed that they had underestimated their real level of peer regard. Comparison of pre- and posttest scores on the "Coopersmith Self-Esteem Inventory" revealed no significant differences between the experimental and control groups. Briggs concluded, however, that the practice effects of the pretest may have influenced the posttest self-esteem scores.

The influence of verbal reinforcement statements by significant others on self-concept was reported in a study by Ludwig and Maehr (1967). After performing a physical fitness set of tasks, subjects were given either approval (group I) or disapproval (group II) statements regarding their performance by a "physical fitness expert," irrespective of the student's actual performance. Tests of general self-concept and preferences for physical activities were administered to all subjects in a pre- and posttest design. Results indicated significant (.05) increases in self-concept and in preference for physical activities for which subjects received approval statements regarding their performance in group I. Group II tended to decrease in self-concept, but the difference was not significant. The authors concluded that the results supported the contentions that self-concept change is a function of the reaction of significant others and that changes in self-concept eventuate in changes in preference and choice.

Skill Acquisition

The study reported here is in line with White's in Jones (1960) theory that competence is related to self-esteem. The investigation by

Koocher (1971) centers on the change in self-ideal congruency of children who learn to swim, whereas they had previously not been swimmers. During a 12-day intensive learn-to-swim camp program conducted by the camp aquatic staff, 19 subjects learned to swim. Pre- and posttest scores on the "Index of Adjustment and Values" were compared. Results indicated a significant increase (.02) in self-ideal congruency for the group of children who learned to swim. The author concluded that the development of competence in an area heretofore marked by failure or avoidance results (at least in the case of swimming) in enhancement of the self-concept. However, he added, these self-concept changes may be viewed as reflecting a somewhat momentary aura about mastery of swimming in the context of the camp experience.

Section II

Results of studies reviewed in this section deal with correlations of self-esteem and self-concept with the variables: academic achievement, IQ, sociometric status, and teacher rating. Included among these studies are investigations which suggest an interrelationship amongst these variables with self-concept and self-esteem. As a number of studies have examined multiple correlations of these variables as well as other variables related to children's self-perceptions, the results of studies reported in this section will be reviewed under the following categorical headings: Academic Achievement, Intelligence Quotient, Academic Achievement and Intelligence Quotient, Sociometric Status, Teacher Ranking,

Sociometric Status with Academic Achievement and Intelligence Quotient, Sociometric Status and Personal Adjustment, and Multiple Variables.

Academic Achievement

Caplin (1966) studied the relationship between self-concept and academic achievement with a sample composed of 180 fourth-, fifth-, and sixth-grade students. Self-concept was measured by a self-report technique and achievement by the "Iowa Test of Basic Skills." The correlations obtained between the composite standard scores on achievement and the self-concept scores on the entire instrument was .52; for personal/social qualities .45; and for school-related items .58. All three correlations were significant at or beyond the .001 level of significance. Caplin concluded that even though he found no evidence to show a direct causal relation, one to the other, it seems likely that a higher self-concept may contribute to higher achievement and higher achievement in turn may contribute to a higher self-concept.

Similarly, Campbell (1966) found that fourth-, fifth-, and sixth-grade students' scores (N = 58) on the "Iowa Test of Basic Skills" had a high correlation with their scores on the "Coopersmith Self Esteem Inventory." The data supported the hypotheses that there is a direct, linear relationship between self-concept and school achievement for those students and that specific school-related self-concept is related to school achievement.

Hughes (1968) investigated the relationships among self-concept,

school grades, and reading coping strength. The ability to maintain vigilance, while keeping errors of omission, substitution, and pronunciation at a minimum during reading exercises which included delayed auditory feedback, was designated as reading coping strength. Tests administered to 51 sixth-grade students included the "Tennessee Self Concept Scale" and the "Gray, Durrell, and Spache Reading Tests." Results indicated that self-concept is positively related to school grades and coping strength. Children with more positive self-images tended to deal more effectively with the effects of distraction and to earn higher grades than children with negative self-images.

Age differences in the relationship between self-concept and grade point average was investigated by Bruck and Bodwin (1963). The "Machover Draw-A-Person Test" was adapted and used for evaluation of self-concept. The research group included 300 children in the third-, sixth-, and eleventh-grades. Significant (.01) correlations of .54, .38, and .72 were found between self-concept and grade point average on the third-, sixth-, and eleventh-grades. The authors concluded that these results support the hypothesis that a positive and significant relationship exists between self-concept and grade point average on all grade levels.

The relationship between the academic competence of a child relative to his own potential and the child's evaluation of himself was studied by Peppin (1963). Subjects were 72 sixth-grade students. Overachievers were designated as those who had a total

grade placement on the "California Achievement Test" 6 months or more above expected grade placement. Underachievers were those who scored 6 months or more below. Subjects also responded to the "Behavior Rating Schedule" describing both themselves and their peers. Results indicated that overachievers and underachievers differed significantly (.01) in ratings given themselves and their peers, even when groups were made comparable with regard to scores on the achievement test. Overachievers rated themselves more favorably than they rated their peers, while the reverse was true for underachievers.

Shaw and Alves (1963) found similar significant (.05) differences between male underachievers and achievers. Self-concept was measured by "Bills Index of Adjustment and Values" and achievement by the "California Test of Mental Maturity" for 78 students. Findings indicated that male underachievers reported more negative self-concepts than did achievers and were less self-accepting. In addition, they perceived others as being less self-accepting than did the achieving males.

Several studies have examined the relationship between self-concept and reading achievement at various grade levels. Giuliani (1968) administered the "Metropolitan Readiness Tests" and a self-concept scale to 366 kindergarten children. Results showed that children in criterion groups Superior and High-Normal had significantly (.01) superior self-concept scores than those children in criterion groups Low-Normal and Poor-Risk of the "Metropolitan Readiness Tests."

A significant positive correlation (.01) was obtained between reading readiness and self-concept; i.e., as self-concept increased, reading readiness increased directly.

Utilizing observations, interviews, and projective test materials, Lamy in Gordon (1965) assessed first-grade children's perceptions of their personal adequacy. Correlating this data with "California Reading Test" scores, the author found a significant relationship between self-concept and reading achievement. Lamy concluded that not only does this relationship exist, but that a child's self-concept and the perceptions he holds of himself in relationship to various aspects of his world may be causal factors in his subsequent reading achievement.

Working with 48 third-grade students, Cummings (1971) found evidence to support the existence of relationships between self-concept and reading achievement. Comparison of subjects' reading scores on the "California Reading Tests" and self-concept scores on the "Thomas Self-Concept Values Test" indicated that positive self-concepts were related to adequate reading achievement. Also, children's reading achievement in relation to that of others in their own classroom seemed to be more closely related to their self-concepts than was achievement in comparison to their performance in reading.

A sample of 188 fifth-grade students were administered three self-concept scales and a reading achievement test in a study by Dennerll (1972) investigating the relationship of self-concept and

reading achievement. Consistent with the author's predictions, reading achievement was significantly related to reading self-concept (.005) and to ability self-concept (.05), but was unrelated to global self-concept. It was concluded that, by the preadolescent years, children have differentiated their self-concept into subdimensions related to specific roles, e.g., student, reader. Success and failure in specific areas, e.g., reading, are unrelated to the student's global view of himself, but is related to his view of himself as a reader and as a student.

In a similar study, Stillwell (1966) found a difference between global self-concept and role self-concept as they related to scholastic achievement. Assessment instruments administered to a sample of sixth-grade students included the "California Test of Mental Maturity," the "Metropolitan Achievement Test," and a semantic differential self-concept scale. Global self-concept as measured in the study showed no relationship with achievement scores. Self-concept as a student, however, displayed a highly significant relationship to achievement for boys and a lower, but still significant, relationship for girls. For both sexes, specific role self-concepts as a reader and as an arithmetic student displayed a significant relationship to achievement.

Intelligence Quotient

Ringness in Binter and Frey (1972) studied the relationship between IQ and self-concept in children of low, average, and high intelligence. Subjects were 120 fourth-grade students. Comparison

of students' scores on a self-rating scale and the "Wechsler Intelligence Scale for Children" was made as measures of self-concept and IQ, respectively. The results of his 2-year study indicate that IQ and self-concept are positively related for the average and high intelligence groups. The low intelligence group (retarded students) tended to greatly overestimate their abilities. High intelligence children had the most positive self-concepts. Average intelligence children had the least positive self-concepts. Boys in the average group tended to have the least positive self-concepts of all. An implication of these results is that IQ is an important variable to control for when investigating differences between the self-concepts of children.

Academic Achievement and

Intelligence Quotient

In a study involving 271 fourth- and sixth-grade boys and girls, Bledsoe (1964) found a significant difference (.01) between mean self-concept scores, girls scoring higher than boys. Correlations of scores on a self-concept scale with intelligence ("California Test of Mental Maturity") and achievement ("California Achievement Test") scores were significant (.05) and positive for boys, but not significant for girls. The author concluded that this would seem to indicate that boys perceive the traits and abilities measured by the intelligence and achievement tests as more important in their self-esteem than do girls. Bledsoe added, however, that some of the girls may have rated themselves higher on self-concept due to social desirability.

Utilizing the "Piers-Harris Children's Self Concept Scale" and the "Coopersmith Self-Esteem Inventory," Nelson (1971) examined the relationship between self-concept and IQ and achievement scores of 298 fourth-, fifth-, and sixth-grade students. Nelson found that relationships between self-concept and IQ and achievement were generally low in the positive range, but were statistically significant. Also, teacher judgment was found to be highly successful in separating youngsters who differed in levels of tested self-concept.

Greenman (1972) sampled a group of underachievers ranging in grade placement from first- to sixth-grades, and obtained scores for each child on self-concept, IQ, and achievement. Criteria measures used were: "The Way I Feel about Myself," "Wechsler Intelligence Scale for Children," and the "Stanford Achievement Test." A significant positive relationship with self-concept was found for both IQ and grade point average, but not for the standardized achievement test scores.

Somewhat similar results were found by Butcher (1968) in his study of the relationship of these variables to self-esteem. Butcher administered the "Coopersmith Self-Esteem Inventory" to 120 third-, fourth-, fifth-, and sixth-grade students in four high achieving elementary schools. Standardized achievement and intelligence test data was also obtained for each subject. This investigation found that there is a closer relationship between the IQ and self-concept scores than between the standardized achievement test and composite

self-concept scores. However, there was some indication that there is a relationship between the student's self-concept and achievement even though a significantly close relationship between these two variables could not be substantiated.

Sociometric Status

Several studies have investigated the relationship of a child's self-evaluation with his popularity among his peers. Results of these studies tend to support Coopersmith's (1967) contention that the child's immediate effective interpersonal environment strongly influences the degree to which the child values himself and comes to believe that he is a success or a failure. The importance of peer opinion is also evidenced in the results of a study by Sutton in Binter and Frey (1972). She found that to those persons who offer help in the tasks that merit achievement-recognition, fifth-grade students' (N = 90) choices were 6% for mother, 6% for father, 4% for grandparents, 5% for uncle, 3% for an adult friend, and 76% for age mates.

Beemer (1972) studied the development of self-concepts of 4,941 children and adolescents from the first through the twelfth grades. The self-concept instruments employed in the research numbered three: the "Pictorial Self-Concept Scale," the "Elementary Self-Concept Q-Sort," and the "Adolescent Self-Concept Q-Sort." Findings indicated that peer group contributed heavily to the total self-concepts of children in all three age categories: middle childhood, preadolescence, and adolescence.

Peer popularity as it relates to self-concept was investigated by Guardo (1966). Subjects, 60 sixth-graders, were tested on a self-concept scale and sociometric device, and subdivided into high- and low self-concept groups. A significant positive correlation was obtained between popularity and self-concept. Analagously, Guardo also found that the data revealed a significant negative correlation between self-concept and being unpopular among peers.

Similar results were found by Van Erva (1967) and Reese (1961) in two studies dealing with the relationship of self-concept and sociometric standing. Van Erva administered a true-false type self-esteem inventory and sociometric task to 116 fifth-grade students. The major finding of this study was that of a very high relationship between self-esteem and sociometric standing for both boys and girls.

Utilizing a sociometric scale and "Lipsitt's Self-Concept Scale," Reese obtained data from 408 fourth-, sixth-, and eighth-grade students. Results indicated that acceptance of others, acceptance by others, and acceptance by best friends were curvilinearly related to self-concept scores, with highest peer acceptance being in a group with moderate self-concept scores and lowest in a group with low self-concept scores. In addition, data indicated that acceptance by others was more strongly related to self-concept than was acceptance by best friends.

A comparison of high- and low sociometric status with 220 fifth- and sixth-grade girls was reported in a study by Baron (1951).

He found significant differences between the high- and low-status girls in their responses to items of the "Mental Health Analysis" test. High status girls seldom indicate, it was found, the presence of adverse emotionality or a sense of inordinate emotional demands. They compare themselves favorably with their peers, feel secure in status, enjoy group activities, display symptomatic behavior infrequently, and appear to have established satisfactory home and school relationships. Girls of low status frequently indicate the presence of adverse emotionality and a sense of excessive environmental demands. These feelings are frequently accompanied by a sense of failure of accomplishment. These girls frequently compare themselves unfavorably with their peers, give evidence of difficulty in social relationships, feel they lack status with their age mates, and find school work excessively time consuming.

Swanson (1969) investigated children's acceptance of others, by others, and of self with 35 normal, 35 learning disordered, and 11 emotionally disturbed children. Self-acceptance was measured by the Sense of Personal Worth Scale of the "California Test of Personality." Results indicated that the emotionally disturbed children had significantly lower feelings of self-acceptance than either the normal or learning-disordered children. Additionally, a significant relationship between self-acceptance and acceptance of and by parental figures was also found for the emotionally disturbed children.

Teacher Ranking

Trickett (1969) investigated the interrelationships of self-concept, peer ratings, and teacher ratings for 42 first- and second-graders over a 4-year period. Results indicated that teacher ratings showed a significant relationship to both peer ratings and self-concept. Peer ratings showed a significant relationship to self-concept only when teacher ratings were taken into account. Peer ratings alone did not show a significant relationship to self-concept.

Using a sample of 334 fourth-, fifth-, and sixth-grade students, Herrmann (1971) studied sociometric status and its relationship to teacher approval and disapproval. The major finding of this study was that teacher approval showed a high positive correlation ($r > .80$) with academic competence for both boys and girls. Teacher approval showed a moderate correlation with peer acceptance for both sexes. Teacher disapproval was significantly related to low status for boys, but not for girls.

There are two studies reviewed here which investigated teacher ranking as it relates to student self-concept. Rehm (1971) obtained data on the intelligence, self-concept, and teacher ranking of 52 disadvantaged third-grade children. Positive correlations were found among IQ, self-concept, and teacher ranking for this group of students.

Similarly, Davidson and Lang (1960) investigated data on 203 fourth-, fifth-, and sixth-grade students. The purpose of their

study was to relate children's perception of their teacher's feelings toward them to self-perception, academic achievement, and classroom behavior. The major findings indicated that the children's perception of their teacher's feelings toward them correlated positively and significantly with self-perception. The child with the more favorable self-image perceived his teacher's feelings toward him more favorably. In addition, the more positive the children's perception of their teacher's feelings, the better was their academic achievement and the more desirable was their classroom behavior as rated by the teachers.

Sociometric Status with Academic Achievement and Intelligence Quotient

Stevens (1971) investigated whether children with reading problems were as well accepted by their classroom peers as were other members of that peer group. Subjects were 886 fourth-grade students, 34 of whom were remedial readers (i.e., they had an IQ above 90 and were reading at least 1 year below grade level). Results indicated that remedial readers are not socially well accepted in their classrooms. Significant differences were found between the ratings given remedial readers and their classroom peers, but not between peer ratings and remedial readers self-ratings. The author concluded that this tends to support the opinion that remedial readers are aware of their social standing, and that it differs from that of their nonremedial reading peers.

Academic failure of 2 years of elementary school as it relates to peer rating on the "Pupil Adjustment Inventory" was reported in a study of 29 unsuccessful fifth- and sixth-grade boys by Briggs (1967). The peers perceived the unsuccessful pupils as significantly more withdrawn and more aggressive than successful pupils. Teachers' perceptions of these students concurred with those of the peers, and also saw unsuccessful pupils as lacking in leadership characteristics and being significantly lower in socioeconomic status.

Comparison of "Kuhlman-Anderson IQ" scores and social status scores on the "Cunningham Social Distance Scale" was made by Heber (1956). The subjects were 97 children in third, fourth, and fifth grades. Significant differences on social status were found between high and average IQ groups and between average and low IQ groups. The high IQ group was 6.1 points above the average group in social status, while the average IQ group was 15.7 points above the low IQ group. Heber concluded that children who show considerable deviation in IQ from the group also deviate in social status in the same direction as the IQ deviation.

In a similar study with 308 fourth-grade boys, Erwin (1969) found that students who were above average in popularity are also higher in intellectual ability as measured by the "Lorge-Thorndike Intelligence Test." This relationship was significant at the .01 level of probability. According to teacher, peer, and self-ratings the characteristic, leader, correlated highly with IQ and

with the functions representing intelligence.

Sociometric Status and

Personal Adjustment

Personal adjustment was found to be related to pupils' evaluations of each other in a study by Phillips and De Vault (1955). Correlating scores of 250 third-grade students on the "California Test of Personality" and positive and negative sociometric valuations, they found significant differences among the students. Children with many positive valuations as compared with those with few or no positive valuations had better adjustment in terms of their sense of personal worth, personal freedom, feeling of belonging, and freedom from withdrawing tendencies. Children with few or no negative valuations as compared with those with many negative valuations had better adjustment in terms of their sense of personal worth, feeling of belonging, and freedom from nervous symptoms.

In a similar study with the same standardized test instrument, Dahlke (1953) found that poorly adjusted children tended to be rejected by their peers, whereas well-adjusted children were significantly (.01) more accepted. Children in grades two, four, six, seven, and eight (N = 163) served as subjects in this investigation.

Multiple Variables

Barnard (1972) investigated personality integration as it relates to several variables. Personality integration status was

determined by a composite of peer and teacher ratings of adjustment. Subjects were 242 fifth-grade boys. Results indicated significant differences between high- and low-personality integration groups. The high group reported a more positive self-concept, a more internal locus of control and evaluation, and a more intrinsic motivational orientation than low personality integration subjects.

In another multivariate investigation, Sparling (1968) found that academic achievement and self-esteem are not only related to each other but to mental health as well. Self-esteem, as measured by the "Coopersmith Self-Esteem Inventory," was also significantly related to acceptance received from others, absence of school anxiety, and flexibility of social climate. Subjects for the study were 135 children ranging in grade placement from third through the eleventh grades.

The findings of Sparling's investigation are partially supported by results of two other studies. Felker (1969) found that differences between self and peer ratings of who were the smartest, strongest, and nicest boys, and who were the smartest, prettiest, and nicest girls was related to scores on the "Children's Manifest Anxiety Scale." Results with 38 fifth-grade students indicated that in the group where self-ratings were lower than peer ratings, there was significantly lower anxiety.

Silverman (1964) investigated the relationship between self-esteem and aggression in children. Subjects were administered the "Coopersmith Self-Esteem Inventory" and ratings of aggression were

made by teachers, classmates, and by the subjects themselves. The correlations revealed that there was a negative relationship between self-esteem and aggression. Aggression resulting from affective states of a sort that imply that the individual had lost control over his behavior had the strongest negative relationship to self-esteem.

A final study cited in this section correlates self-concept with several variables investigated in studies previously reviewed here. The study by Williams and Cole (1968) attempted to relate self-concept to several dimensions of the child's experience that are deemed fundamental to effective academic adjustment. It was hypothesized that a child's conception of school would be related to his conception of himself, and thus might be construed as an extension of his self-concept. Subjects were 80 sixth-grade students. Test instruments included the "Tennessee Self Concept Scale," the "California Test of Personality," the "California Short-Form Test of Mental Maturity," an attitude toward school scale, and the reading and arithmetic sections of the "California Achievement Test Battery." Significant positive correlations (.05) were obtained between self-concept and the following variables: emotional adjustment, mental ability, conception of school, social status at school, reading achievement, and mathematical achievement. In the context of the findings, the authors concluded that a productive school experience may be defined as one in which the learner receives consistent, positive communication from the instructor and his

immediate academic peer group concerning his ability and achievement. Few factors, they suggest, are more fundamental to a child's success and happiness than his evaluation and acceptance of himself.

Chapter 3

Methodology

Subjects and Procedures for Data Collection

The population for this study consisted of third-, fourth-, and fifth-grade pupils attending a private elementary school in Virginia. All of the subjects were Caucasian. Both boys and girls were included in the population. A random sample of 12 children at each grade level was drawn from those students who volunteered for the study (N = 56; 14 third graders, 19 fourth graders, and 23 fifth graders). Each of these subjects was then randomly assigned to one of two groups, treatment or control, according to his grade level. Prior to the experiment each child involved in the study was administered both the "Piers-Harris Children's Self Concept Scale" and the "Coopersmith Self-Esteem Inventory."

The "Piers-Harris Children's Self Concept Scale" consists of 80 first-person declarative statements to which the child responds "yes" or "no." The items are declarative sentences, slightly more than half of which are worded to indicate a negative self-concept. The scale was standardized on 1,183 children in the fourth through twelfth grades of one Pennsylvania school district. Studies of concurrent validity indicate that scores on the scale have a significant correlation (.68) with scores on the "Lipsitt Children's Self-Concept Scale" (Mayer, 1965) and with big problems on the "Science Research Associates Junior Inventory" (Cox, 1966). The internal consistency

of the scale ranges from .78 to .93, and the test-retest reliability coefficients after a 4-month interval ranged from .71 to .77 (Bentler, 1972).

The "Coopersmith Self-Esteem Inventory" consists of 50 scored items which the subject checks as being "like me" or "unlike me." The items are declarative sentences, approximately two-thirds of which are worded to indicate negative self-esteem. Landis (1972) investigated the validity of the inventory and reported significant correlations between scores on the inventory and scores on "Waejten's Self Concept as a Learner Scale" for total scores (.79), and the constructs: achieving in school (.68) and relating to others (.58). Coopersmith (1967) reported the test-retest reliability after a 5-week interval with a sample of 30 fifth-grade children as .88, and the reliability after a 3-year interval with a different sample of 56 children as .70. Spatz and Johnston (1973) reported in a study of 600 fifth-, ninth-, and twelfth-grade students that the inventory shows internal consistency reliability for fifth-graders (.81), and for ninth graders (.85) and twelfth graders (.79) as well.

Each treatment and control group met with the experimenter for 12 sessions. Each session was 30 minutes in length, and each group met twice weekly for a period of 6 weeks. At the end of the 6-week period subjects in both the treatment and control groups were again administered the self-concept scale and the self-esteem inventory. The "Hypothetical Peer Index" was also administered at

this time. Scores from these instruments and Intelligence Quotient scores (which were obtained from school records) provided the data for statistical treatment and analysis.

Procedures for Control and Treatment Groups

The subjects in the control groups met for 12 periods supervised by the experimenter. The sessions were held in the school library. The subjects were informed by the experimenter that the purpose of the sessions was for the children to work without the assistance of an adult. Subjects were limited to a choice of three activities: working on classroom assignments, reading library books and materials, and playing games (commercially prepared games such as checkers, "Password," "Monopoly," et cetera) which were provided for the sessions. The subjects were allowed to work independently or with each other as they so chose. The experimenter provided no verbal reinforcement to the subjects for any of the activities they performed.

The subjects in the treatment groups participated in 12 group guidance sessions with the experimenter. The purpose of the sessions was to provide the subjects an opportunity to improve their problem solving, decision making, and interpersonal communication skills in a cooperative task. For this purpose a game which centers on the competencies of children was utilized in the guidance procedures.

The experimenter conducted the sessions and assumed the role of facilitator relative to the subjects' playing of the game.

Subjects were verbally reinforced by the experimenter for cooperating with each other, making group decisions, solving the game problems, and talking about and giving evidence of their own individual competencies. All three treatment groups completed the game problems successfully.

The experimental game is a problem-solving game based on the utilization of the competencies of children. The game board is an island where the subjects and a group of hypothetical peers (represented by 20 caricatures) are held captive by pirates. A map of the island indicating the prison, jungle, rivers, mountains, the water hole, the native village, and shoreline is included in the game materials. The map is divided into eight pieces corresponding with the eight problem situations (of an escape-survival nature) encountered by the subjects during the game. The subjects accumulate the map pieces by solving the game problems. As the subjects solve each problem they are rewarded with the next piece of map indicating their proposed escape route from the pirates.

The object of the game is to escape from the island. In order to achieve this end, the subjects as a group assume a leadership role relative to the hypothetical peers and cooperatively plan the escape. The subjects are encouraged to openly express their individual ideas and to listen attentively to each other's ideas regarding possible solutions to the game problems. The subjects are required to arbitrate any differences of opinion regarding these proposed solutions and to come to unanimous agreement regarding the

final solutions they present. The solution to each problem entails the accomplishment of specific tasks which the subjects achieve by demonstrating that someone in the hypothetical peer group possesses the particular skills requisite to the accomplishment of the task. As the game proceeds, the subjects lead the group across the island to board a ship and thereby successfully escape the pirates. In order to obtain passage on the ship, however, each subject must produce evidence of one competency he has developed (i.e., something he has made or done). The presentation of these products by the subjects completes the game.

The following is an outline of the 12 sessions in terms of the topic or issue that was discussed:

a. Session 1--Introduction of group members and discussion of their competencies.

b. Session 2--Presentation of hypothetical peers (caricatures) and their competencies.

c. Session 3--Introduction to and explanation of the game.

d. Session 4--Problem one "The Prison."

e. Session 5--Problem two "The Jungle."

f. Session 6--Problem three "The River."

g. Session 7--Problem four "The Mountain Pass."

h. Session 8--Problem five "The Water Hole."

i. Session 9--Problem six "The Native Village."

j. Session 10--Problem seven "The Landing Site."

k. Session 11--Problem eight "The Merchant Ship."

1. Summary of sessions 1 through 11 and discussion of the group members' opinions of the guidance experience.

Chapter 4

Results

Procedures for Statistical Analysis

Hypotheses I and II were tested by the statistical procedure of analysis of covariance (Li, 1964, Ch. 19). IQ and pretest self-concept scores were assigned as covariates in testing Hypothesis I. Similarly, IQ and pretest self-esteem scores were assigned as covariates in testing Hypothesis II. The assignment of these covariates was for the purpose of reducing error variance (Kerlinger, 1964). Posttest self-concept and self-esteem scores were used as the dependent variable in testing Hypothesis I and II, respectively. Comparison in each case was made between treatment group scores and control group scores.

Hypothesis III was tested by the statistical procedure of the Student's *t* test (Li, 1964, Ch. 8). Subjects' scores on the "Hypothetical Peer Index" were compared both between treatment groups and control groups for all three grade levels, and across grade levels.

For purposes of analysis and interpretation of the data, the criterion level chosen to determine statistical significance was the .05 level of confidence. This criterion level applied to the statistical inferences made regarding all three of the hypotheses tested.

Hypothesis I

The first hypothesis stated that group guidance utilizing the experimental game will affect the self-concept of children. The hypothesis was tested by the statistical procedure of analysis of covariance. Subject's intelligence quotient and pretest self-concept scores were assigned as covariates. The results of the analysis of covariance are summarized in Table 1. No significant difference was found between the treatment and control groups on posttest self-concept scores. Subject's grade level and the interaction of group (treatment versus control) and grade level also showed no significant differences.

Pre- and posttest mean self-concept scores tended to rise in both groups, with the exception of the fifth-grade treatment group which showed a mean decrease of 3.5 points. A further analysis of these pre- and posttest mean differences was performed using the statistical procedure of the Student's t test. The results of this analysis are summarized in Table 2. No significant differences were found between treatment and control groups for any one grade level or for all three grade levels combined.

These results indicate that the first hypothesis was not supported. It is concluded that group guidance utilizing the experimental game did not significantly affect the self-concept of children.

The F ratio (21.338) for the regression was found to be significant at the .001 level of confidence (see Table 1). This

TABLE 1

Analysis of Covariance: Posttest Self-concept Scores with Intelligence Quotient and pretest Self-concept Scores as Covariates

Source of variation	Sum of squares	Degrees of freedom	Mean square	*F* ratio	*p* less than
Within cells	1,027.987	28	36.714		
Regression	1,570.506	2	785.253	21.388	.001
Group	60.058	1	60.058	1.636	.211
Grade level	161.062	2	80.531	2.193	.130
Group X grade level	38.835	2	19.417	0.529	.595

TABLE 2

Students' t Test of Pre- and Posttest Self-concept Score Mean Differences

Grade level	Treatment group	Control group	Degrees of freedom	t	p[a]
Third	.167	2.833	10	-0.718	[b]
Fourth	8.833	7.333	10	0.306	[b]
Fifth	-3.500	0.667	10	-1.381	[b]
Third, fourth, fifth	1.833	3.611	34	-0.691	[c]

[a] Not significant.

[b] $p = .05$ where $-2.228 < t < 2.228$ with 10 degrees of freedom.

[c] $p = .05$ where $-2.034 < t < 2.034$ with 34 degrees of freedom.

indicates that the covariates, intelligence quotient and pretest self-concept scores had a significant relationship to the subject's posttest self-concept scores. It is concluded that the assignment of these variables as covariates served to significantly reduce error variance in the analysis of covariance that was performed.

Hypothesis II

The second hypothesis stated that group guidance utilizing the experimental game will affect the self-esteem of children. The hypothesis was tested by the statistical procedure of analysis of covariance. Subject's IQ and pretest self-esteem scores were assigned as covariates. The results of the analysis of covariance are summarized in Table 3. A significant difference (.022) was found between the treatment and control groups on posttest self-esteem scores. A significant difference (.036) was also found for grade level. No significant difference was found for the interaction of group (treatment versus control) and grade level, however, although the difference tended to approach significance (.097).

An examination of these differences relative to pre- and posttest mean self-esteem scores indicated that posttest self-esteem scores tended to decrease for the treatment group in all three grade levels. Posttest self-esteem scores tended to rise, however, for the control group with the exception of the third-grade control group which showed a mean decrease of three points. A further analysis of pre- and posttest mean differences was performed using the statistical procedure of the Student's *t* test. The

TABLE 3

Analysis of Covariance: Posttest Self-esteem Scores with Intelligence Quotient and Pretest Self-esteem Scores as Covariates

Source of variation	Sum of squares	Degrees of freedom	Mean square	*F* ratio	*p* less than
Within cells	1,730.320	28	61.797		
Regression	3,380.340	2	1,690.170	27.350	.001
Group	361.550	1	361.550	5.851	.022
Grade level	463.206	2	231.603	3.748	.036
Group X grade level	313.661	2	156.830	2.538	.097

results of this analysis are summarized in Table 4. A significant difference between the treatment and control groups was found when scores for all three grade levels were combined ($p < .05$). A significant difference was also found for fourth-grade students ($p < .05$), but no significant difference was found for either third-grade or fifth-grade students.

These results indicate that the second hypothesis was supported. It is concluded that group guidance utilizing the experimental game did significantly affect the self-esteem of children. Also, the effect seems to be more pronounced with children in the fourth grade than with children in the third or fifth grades.

The F ratio (27.350) for the regression was found to be significant at the .001 level of confidence (see Table 3). This indicates that the covariates, IQ and pretest self-esteem scores had a significant relationship to the subject's posttest self-esteem scores. It is concluded that the assignment of these variables as covariates served to significantly reduce error variance in the analysis of covariance that was performed.

Hypothesis III

The third hypothesis stated that group guidance utilizing the experimental game will affect the attitudes of children toward a group of hypothetical peers. The hypothesis was tested by the statistical procedure of the Student's t test. The results are summarized in Table 5. No significant difference was found between treatment and control groups for any one grade level, or for all

TABLE 4

Students' *t* Test of Pre- and Posttest Self-esteem Score Mean Differences

Grade level	Treatment group	Control group	Degrees of freedom	*t*	*p*
Third	-5.667	- 3.000	10	-0.544	[a]
Fourth	-2.333	11.000	10	-2.734	.05[b]
Fifth	-2.333	4.333	10	-1.237	[a]
Third, fourth, fifth	-3.444	4.111	34	-2.438	.05[c]

[a] Not significant.

[b] $p = .05$ where $-2.228 < t < 2.228$ with 10 degrees of freedom.

[c] $p = .05$ where $-2.034 < t < 2.034$ with 34 degrees of freedom.

TABLE 5

Students' t Test of Hypothetical Peer Index Scores

Grade level	Treatment group	Control group	Degrees of freedom	t	p[a]
Third	45.500	39.167	10	1.362	[b]
Fourth	43.667	42.833	10	0.209	[b]
Fifth	42.167	42.667	10	-0.145	[b]
Third, fourth, fifth	43.778	41.556	34	0.983	[c]

[a] Not significant.

[b] $p = .05$ where $-2.228 < t < 2.228$ with 10 degrees of freedom.

[c] $p = .05$ where $-2.034 < t < 2.034$ with 34 degrees of freedom.

three grade levels combined.

These results indicate that the third hypothesis was not supported. It is concluded that group guidance utilizing the experimental game did not significantly affect the attitudes of children toward a group of hypothetical peers.

Chapter 5

Discussion of Results and Recommendations

Summary

The purpose of this study was to investigate the effect of group guidance with an experimental game on the self-regard of elementary school children. The effect of playing the experimental game upon children's attitudes toward a hypothetical peer group was also investigated. The theory base for the study was derived from the theoretical formulations of Erikson (1950) and White in Jones (1960). According to these formulations, if the elementary school-age child perceives himself as being an effective producer of things and receives wholehearted and consistent recognition for his accomplishments from significant others (notably, his parents, teachers, and peers), then the child learns a sense of personal recognition and firm self-esteem.

The treatment used in this study involved the opportunity for children to do the following: demonstrate problem solving, decision making, and communication skills in a cooperative task; give evidence of an object the individual child had produced or a skill that he had achieved; and to receive positive verbal reinforcement from an adult (the experimenter) for the solving of the game problems and for the individual product or skill each child gave evidence of having achieved. In line with the theory base, it was assumed that this treatment would tend to promote more positive feelings of self-regard

among the children, since it offered the children the opportunity to manifest their skills and to receive positive recognition for their accomplishments from an adult school authority figure. It was further assumed that these feelings would evidence themselves in the self-reports of children on self-concept and self-esteem rating scales.

The results of the study indicate that the treatment did not significantly affect children's self-concepts when compared to self-concepts of children in a control group situation. It was further indicated that the playing of the experimental game did not significantly affect children's attitudes toward a hypothetical peer group. However, the results did indicate that there was a significant difference between the treatment group and the control group children's levels of self-esteem. The difference was more pronounced for the fourth-grade children than for the third- or fifth-grade children. Generally, the control group tended to increase in their level of self-esteem, whereas the children in the treatment group tended to decrease. In other words, the treatment appeared to have the effect of lowering the level of self-esteem for the treatment group as compared to the control group.

Discussion of Results

These results would seem to imply that the theoretical formulations which form the theory base for this study are erroneous, or at least partially so, as regards children's feelings of self-esteem. However, before statements regarding the validity of these

formulations can reasonably be inferred from the results obtained in this study, several questions should be considered: Did the treatment adequately reflect the theory? How well did the test data gathered in the study reflect those aspects of self-regard which relate to a sense of industry? How well constructed was the experimental design of the study in terms of controlling for the independent variable? An attempt to answer these questions is offered under the subheadings: Treatment, Test Data, and Design of the Study.

Treatment

The theory states that positive self-regard will result if two conditions are met: the child sees himself as having accomplished some task; and the child is consistently reinforced for his accomplishment by significant others (notably, his parents, teachers, and peers). Generally, the treatment would appear to have met these two conditions. However, no data were obtained regarding the way the individual children perceived their group's successful completion of the game. Therefore, it cannot be determined whether an individual child perceived himself as having made an accomplishment or whether he attributed the group's accomplishment solely to other children in the group. Similarly, no data were obtained as to the number of positive verbal reinforcement statements made by the experimenter. Moreover, no determination was made of whether these statements were directed toward the group, a few individual children, or spread equally among all the children. Another consideration

would be the number of reinforcement statements the children made to each other during the treatment sessions, and whether such statements were positive or negative. The importance of the peer group as a reinforcing agent is pointed out in the theory (White in Jones, 1960). Therefore, there is some question as to the degree to which the children received positive reinforcement.

Although the treatment could generally be said to reflect the theory, there is still some doubt as to the extent to which the treatment met the two conditions specified by the theory. It would seem necessary to obtain data regarding the individual's perception of his contribution to the group's accomplishment of the game task, and data regarding the number, quality, and source of reinforcement statements during the treatment sessions, before it can be determined whether or not the treatment adequately reflected the theory.

Test Data

For purposes of evaluation, global scores of self-concept and self-esteem were utilized. These scores reflected the child's perception of how he felt about himself generally. Those items in the scales which centered upon the child's perception of himself as an achiever or producer of things were not scored separately. In other words, the self-concept and self-esteem scores which were obtained should be interpreted as being indicative of the individual's global self-evaluation rather than his estimation of his ability to perform in a specific role.

Since the theory concentrates on the child as a producer of

things, it would seem more advantageous in testing the theory to obtain data from the child regarding his role self-evaluation as an achiever, rather than to obtain only a global self-evaluation score. Therefore, it would appear necessary to gather data regarding the children's role self-evaluations as achievers before it can be determined whether their test scores adequately reflected the sense of industry stipulated in the theory. Global scores of self-concept and self-esteem alone would not seem to be a sufficient criterion for making broad inferences regarding the validity of the theory.

Design of the Study

The experimental design of the study required that the children in the treatment group cooperate with each other in the solution of the game problems and make group decisions. Whereas it can be said that sufficient cooperation occurred in all three treatment groups such that each group successfully completed the game, no data were gathered regarding the degree of cooperation manifested by the groups. Similarly, no objective data were obtained regarding the presence of conflict in the groups. The presence of conflict in the group situation may be an important consideration in this study, as it was observed by the experimenter that conflict among group members existed, particularly so within the fourth-grade treatment group.

It is possible that this conflict among group members may have had a deleterious effect upon the group's cooperative

functioning. It is likewise possible that conflict within the group may have resulted in the introduction of negatively reinforcing verbal statements into the group sessions. Such statements may have had an inhibitory effect upon the cooperation of the group members, and may have offset any positively reinforcing statements made during the sessions.

It would seem that in as much as the design did not provide for the accumulation of this data, the design had only limited control of the treatment conditions. It would seem necessary to obtain this data before it could be said that adequate control of the independent variable was attained.

In summary, although the results of the statistical analyses of the data would tend to indicate some error in the theoretical formulations underlying this study, three factors seem to imply that an adequate evaluation of the validity of the theory base cannot reasonably be inferred from these results. First, the adequacy of the experimental treatment in reflecting the theory has not been firmly established. Second, the self-concept and self-esteem data gathered were global in nature, and therefore, did not exclusively center upon those aspects of self-regard which relate specifically to the sense of industry. Third, the design of the study provided for only limited control of the dependent variable. In view of these factors, it is concluded that the results of this study do not provide an adequate basis for judging the validity of the theory.

Recommendations

The following recommendations are offered regarding further research with the guidance procedures employed in this study:

a. The treatment should more adequately reflect the theory base. It is suggested that objective data be obtained regarding the children's perception of the guidance experience, the number, quality, and consistency of verbal reinforcement statements which occurred during the sessions, the degree to which each child felt a personal sense of achievement in his group's successful completion of the game, and how the children perceived the role of the group facilitator. This additional data can be used to more adequately determine the degree to which the treatment reflects the theory, and to suggest ways of improving the treatment.

b. Tests which center on the role self-concept of the child as a producer of things should be used instead of more global self-concept instruments. Alternative forms of these tests should be utilized to avoid test sensitization when a pre- and posttest design is employed.

c. The design of the study should exercise more control over the independent variable. Procedures for minimizing conflict and maximizing cooperation among the group members would seem imperative in this regard. Practice in cooperative decision making and the establishment of rules prohibiting verbal conflicts among the group members should be instituted prior to the playing of the game.

d. Other variables significantly related to self-concept

should be introduced into the experimental design. In addition to intelligence quotient and pretest self-evaluation scores, measures of teacher ranking, peer rating, and academic achievement should be employed as covariates in analyzing the posttest self-evaluation scores.

e. The sample size should be increased. A larger sample than the one employed in this study would tend to increase the power of the statistical tests and the generalizability of the results obtained.

Finally, in addition to incorporating the changes outlined into a replication of this study, one other suggestion is made. The sample used in this study was drawn from a population of Caucasian children in a private elementary school. In order to determine the utility of the guidance procedures employed in the study for counseling elementary school children, it would seem advisable to select samples of students drawn from a more culturally diverse population such as that commonly found in a public elementary school. Also, children identified as having low self-concepts, and children having high self-concepts should be treated separately in order to assess the value of this technique with different samples within the school population.

APPENDIXES

Appendix A

THE PIERS-HARRIS CHILDREN'S SELF CONCEPT SCALE

(The Way I Feel About Myself)

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THE WAY I FEEL ABOUT MYSELF

NAME . . . . . .

AGE . . . . . GIRL OR BOY. . . . . .

GRADE . . . . . SCHOOL . . . . . .

DATE . . . . . .

Here are a set of statements. Some of them are true of you and so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do not circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My classmates make fun of me . . . . . yes no
2. I am a happy person . . . . . yes no
3. It is hard for me to make friends . . . . . yes no
4. I am often sad . . . . . yes no
5. I am smart . . . . . yes no
6. I am shy . . . . . yes no
7. I get nervous when the teacher calls on me . . . . . yes no
8. My looks bother me . . . . . yes no
9. When I grow up, I will be an important person . . . . . yes no
10. I get worried when we have tests in school. . . . . yes no
11. I am unpopular . . . . . yes no
12. I am well behaved in school . . . . . yes no
13. It is usually my fault when something goes wrong . . . . . yes no
14. I cause trouble to my family . . . . . yes no
15. I am strong . . . . . yes no
16. I have good ideas . . . . . yes no
17. I am an important member of my family . . . . . yes no
18. I usually want my own way . . . . . yes no
19. I am good at making things with my hands . . . . . yes no
20. I give up easily . . . . . yes no

21. I am good in my school work . . . . . yes no
22. I do many bad things . . . . . yes no
23. I can draw well . . . . . yes no
24. I am good in music . . . . . yes no
25. I behave badly at home . . . . . yes no
26. I am slow in finishing my school work . . . . . yes no
27. I am an important member of my class . . . . . yes no
28. I am nervous . . . . . yes no
29. I have pretty eyes . . . . . yes no
30. I can give a good report in front of the class. . . . . yes no
31. In school I am a dreamer . . . . . yes no
32. I pick on my brother(s) and sister(s) . . . . . yes no
33. My friends like my ideas . . . . . yes no
34. I often get into trouble . . . . . yes no
35. I am obedient at home . . . . . yes no
36. I am lucky . . . . . yes no
37. I worry a lot . . . . . yes no
38. My parents expect too much of me . . . . . yes no
39. I like being the way I am . . . . . yes no
40. I feel left out of things . . . . . yes no

41. I have nice hair . . . . . yes no
42. I often volunteer in school . . . . . yes no
43. I wish I were different . . . . . yes no
44. I sleep well at night . . . . . yes no
45. I hate school . . . . . yes no
46. I am among the last to be chosen for games . . . . . yes no
47. I am sick a lot . . . . . yes no
48. I am often mean to other people . . . . . yes no
49. My classmates in school think I have good ideas . . . . . yes no
50. I am unhappy . . . . . yes no
51. I have many friends . . . . . yes no
52. I am cheerful . . . . . yes no
53. I am dumb about most things . . . . . yes no
54. I am good looking . . . . . yes no
55. I have lots of pep . . . . . yes no
56. I get into a lot of fights . . . . . yes no
57. I am popular with boys . . . . . yes no
58. People pick on me . . . . . yes no
59. My family is disappointed in me . . . . . yes no
60. I have a pleasant face . . . . . yes no

61. When I try to make something, everything seems to go wrong . . . . . yes no

62. I am picked on at home . . . . . yes no

63. I am a leader in games and sports . . . . . yes no

64. I am clumsy . . . . . yes no

65. In games and sports, I watch instead of play . . . . . yes no

66. I forget what I learn . . . . . yes no

67. I am easy to get along with . . . . . ves no

68. I lose my temper easily . . . . . yes no

69. I am popular with girls . . . . . yes no

70. I am a good reader . . . . . yes no

71. I would rather work alone than with a group . . . . . yes no

72. I like my brother (sister) . . . . . yes no

73. I have a good figure . . . . . yes no

74. I am often afraid . . . . . yes no

75. I am always dropping or breaking things . . . . . yes no

76. I can be trusted . . . . . yes no

77. I am different from other people . . . . . yes no

78. I think bad thoughts . . . . . yes no

79. I cry easily . . . . . yes no

80. I am a good person . . . . . yes no

Score: _____

Appendix B

The Coopersmith Self-Esteem Inventory[1]

Please mark each statement in the following way: If the statement describes how you usually feel, put an X in the column, "Like Me." If the statement does not describe how you usually feel, put an X in the column, "Unlike Me." There are no right or wrong answers.

		Like Me	Unlike Me
1.	I spend a lot of time daydreaming.	_____	_____
2.	I'm pretty sure of myself.	_____	_____
3.	I often wish I were someone else.	_____	_____
4.	I'm easy to like.	_____	_____
5.	My parents and I have a lot of fun together.	_____	_____
6.	I never worry about anything.	_____	_____
7.	I find it very hard to talk in front of the class.	_____	_____
8.	I wish I were younger.	_____	_____
9.	There are lots of things about myself I'd change if I could.	_____	_____
10.	I can make up my mind without too much trouble.	_____	_____

[1]From The Antecedents of Self-Esteem by Stanley Coopersmith. W. H. Freeman and Company, Copyright © 1967.

		Like Me	Unlike Me
11.	I'm a lot of fun to be with.	_____	_____
12.	I get upset easily at home.	_____	_____
13.	I always do the right thing.	_____	_____
14.	I'm proud of my school work.	_____	_____
15.	Someone always has to tell me what to do.	_____	_____
16.	It takes me a long time to get used to anything new.	_____	_____
17.	I'm often sorry for the things I do.	_____	_____
18.	I'm popular with kids my own age.	_____	_____
19.	My parents usually consider my feelings.	_____	_____
20.	I'm never unhappy.	_____	_____
21.	I'm doing the best work that I can.	_____	_____
22.	I give in very easily.	_____	_____
23.	I can usually take care of myself.	_____	_____
24.	I'm pretty happy.	_____	_____
25.	I would rather play with children younger than me.	_____	_____
26.	My parents expect too much of me.	_____	_____
27.	I like everyone I know.	_____	_____
28.	I like to be called on in class.	_____	_____
29.	I understand myself.	_____	_____
30.	It's pretty tough to be me.	_____	_____
31.	Things are all mixed up in my life.	_____	_____
32.	Kids usually follow my ideas.	_____	_____

		Like Me	Unlike Me
33.	No one pays much attention to me at home.	_____	_____
34.	I never get scolded.	_____	_____
35.	I'm not doing as well in school as I'd like to.	_____	_____
36.	I can make up my mind and stick to it.	_____	_____
37.	I really don't like being a boy--girl.	_____	_____
38.	I have a low opinion of myself.	_____	_____
39.	I don't like to be with other people.	_____	_____
40.	There are many times when I'd like to leave home.	_____	_____
41.	I'm never shy.	_____	_____
42.	I often feel upset in school.	_____	_____
43.	I often feel ashamed of myself.	_____	_____
44.	I'm not as nice looking as most people.	_____	_____
45.	If I have something to say, I usually say it.	_____	_____
46.	Kids pick on me very often.	_____	_____
47.	My parents understand me.	_____	_____
48.	I always tell the truth.	_____	_____
49.	My teacher makes me feel I'm not good enough.	_____	_____
50.	I don't care what happens to me.	_____	_____
51.	I'm a failure.	_____	_____
52.	I get upset easily when I'm scolded.	_____	_____
53.	Most people are better liked than I am.	_____	_____

		Like Me	Unlike Me
54.	I usually feel as if my parents are pushing me.	_____	_____
55.	I always know what to say to people.	_____	_____
56.	I often get discouraged in school.	_____	_____
57.	Things usually don't bother me.	_____	_____
58.	I can't be depended on.	_____	_____

Appendix C

Hypothetical Peer Index

Directions:

Here is a list of children who like to do certain things. After the description of what each child likes to do there are three blank lines. These blank lines fall into three columns titled "very much"; "OK"; and "not very much." You are to decide how you would feel about having each of these children as one of your group of best friends. Mark your answers with an "X" on the blank line under the column which tells best how you feel. There are no right or wrong answers. Please mark only one blank line for each description.

	A child who likes	Very much	OK	Not very much
1.	Flying kites and making them.	_____	__	_____
2.	Mechanics and fixing machines.	_____	__	_____
3.	Fishing and hunting.	_____	__	_____
4.	Gardening and studying about plants.	_____	__	_____
5.	Singing and making up songs.	_____	__	_____
6.	Cooking and baking.	_____	__	_____
7.	Whittling and carving wood.	_____	__	_____
8.	Studying rocks and collecting fossils.	_____	__	_____
9.	Practicing first aid.	_____	__	_____

	A child who likes	Very much	OK	Not very much
10.	Art, drawing, and modeling with clay.	_____	__	_____
11.	Sewing and making clothes.	_____	__	_____
12.	Studying about the stars and planets.	_____	__	_____
13.	Handcrafts.	_____	__	_____
14.	Tumbling and doing gymnastic tricks.	_____	__	_____
15.	Studying insects and what they do.	_____	__	_____
16.	Playing chess, checkers, and strategy games.	_____	__	_____
17.	Building things out of wood.	_____	__	_____
18.	Hiking and exploring nature.	_____	__	_____
19.	Acting and writing stories and plays.	_____	__	_____
20.	Studying about animals and raising pets.	_____	__	_____

Appendix D

Description of the Experimental Game and Problem Situations

This is a problem-solving game based on the utilization of the competencies of children. The game board is an island where the children and a group of hypothetical peers (represented by caricatures) are held captive by pirates. The object of the game is to escape from the island. In order to achieve this end, the children as a group assume a leadership role relative to the hypothetical peers and cooperatively plan the escape. There are eight problem situations (of an escape--survival nature) encountered in the course of the game. The solution to each problem entails the accomplishment of specific tasks which the children achieve by demonstrating that someone in the hypothetical peer group possesses the particular skills requisite to the accomplishment of the task. As the game proceeds, the children lead the group across the island to board a ship and thereby successfully escape the pirates. In order to obtain passage on the ship, however, each child must produce evidence of one competency he has developed (i.e., something he has made or done). The presentation of these products by the children completes the game.

The Game

Introduction

This is a game designed to see how well you can cooperate with each other and make group decisions. During the game eight problem situations will be presented to your group. Your job will be to cooperate with the other members of your group in solving these problems. Through discussion your group is to arrive at a solution to each problem and present it to the group adviser. The group adviser will judge how well your solution solves the problem. The group adviser can answer questions about the problem situations but is not allowed to make any decisions for the group. The problems must be solved in order, starting with problem one. When all eight problems have been solved the game ends and your group will have successfully accomplished their mission.

How to Solve the Problems

Each problem situation requires that certain tasks be accomplished. Specific skills are necessary to perform each of the tasks. The skills that you will utilize are your cooperation, communication, and decision making skills. You and the members of your group are to act as leaders for the 20 imaginary children represented by the picture cards. Each of these imaginary children has some skills of his own, but he and the other children have chosen your group to act as leaders for them, and they depend upon you to help them solve the problems. They will follow your orders

and use their skills to accomplish the tasks you assign to them. To solve the problems then, your group merely has to show that each problem task is assigned to one or more of the imaginary children. You must be sure, however, that the child has the skills necessary to accomplish the task. When your group has shown that each problem task can be accomplished by one of the children, then you have solved the problem and can proceed to the next problem.

Problem One: The Prison

Situation

Your group and the twenty imaginary children are being held captive on a tropical island by a band of pirates. The pirates intend to sell all of you into slavery. They plan to take you to a slave market tomorrow morning. At noon, Yojimbo, the pirate's native servant, delivers a secret message to you when he brings your lunch to the hut where you are imprisoned. The message reads as follows:

> Tomorrow pirates take you away on ship. Make you slaves. You need to escape tonight. Yojimbo make map for you to find Chief Mobutu. He help you escape from island. Map in pieces. Each piece hidden along trail to Mobutu's village. Pirates have party tonight. They want you to entertain them. Yojimbo needs four children to help him entertain pirates. During entertainment others can make escape. Yojimbo bring four entertainers to place where river from jungle cross sand to ocean. Meet there at midnight

for further instructions. Yojimbo come for the four entertainers at sundown. Rest escape after we leave.

Tasks

Draw the pirate's attention away from the prison hut so that you and the children can escape.

Select four children to help Yojimbo entertain the pirates.

Escape and find the spot where you will meet with Yojimbo at midnight.

Problem Two: The Jungle

Situation

Yojimbo leads all of you into the jungle to the edge of a large swamp. He tells the other children to rest, and calls your group over to explain what you are to do. He says that Mobutu's village is a 5-day journey from where you are now located. Yojimbo has placed pieces of the map at specific spots along the way. Each piece marks the spot where the next piece of map can be found. You must gather food along the way and rest only when necessary. You must not build fires until after you cross the mountains, otherwise, the pirates might find you and recapture you. He gives you the first piece of map. The map indicates that you are to follow the edge of the swamp until you reach a large grove of venus fly traps. There you will also find coconut palms and banana trees. Near the edge of the swamp is an old dead oak tree. Bees have built a hive in one of its hollows. The next piece of

map is carved in a limb of the tree directly above the bee hive. You are to leave at sunrise from your present campsite to find this place and the next piece of map.

Tasks

Follow the edge of the swamp, making sure you don't get lost in the jungle and that the path you take is safe to follow.

Find the grove of venus fly traps.

Get food and see that everyone is fed.

Get the next piece of map and make a copy to carry with you on your journey.

Problem Three: The River

Situation (Part I)

The map and instructions indicate that you are to travel straight north until you reach a large waterfall. Above the waterfall is a footbridge. On the other side of the bridge is a large stone under which you will find the next piece of map.

Right now, all of you are tired from your journey and need rest. While resting you must protect yourselves from the hot sun. It will be dark before you can start on the next part of your journey, so you will have to find your way at night.

Tasks

Build shelters from the sun.

Determine how you can find your way at night.

Situation (Part II)

When you arrive at the waterfall you discover that the

footbridge has collapsed and pieces of it have washed up on the riverbank. As you look upstream you notice that in spots the coconut palms and other trees bend out over the river almost touching each other. Thick vines dangle from their branches to the ground. The current is swift and swimming across the river would be dangerous. In addition, some of the children don't know how to swim.

Tasks

Gather food for the children and yourselves.

Determine a way to get across the river.

Build anything you need to help you get across the river.

Gather any materials you need for building.

Problem Four: The Mountain Pass

Situation (Part I)

It is nearly sundown by the time you and the children have all successfully crossed the river. The long march through the jungle and the river crossing have tired your group, and many of the children are exhausted. You find the next piece of map scratched into the underside of the large stone. The map indicates that you are to travel up into the mountains to the cabin of an old hermit named Captain Jack. Yojimbo has left the next piece of map with him.

Tasks

Make a copy of the map to carry with you.

Make camp here and provide shelter from the cold night air.

Get water to carry with you on your journey into the mountains.

Select a safe path to follow and care for any accidents to your group and the children along the way.

Situation (Part II)

You arrive at Captain Jack's cabin shortly after midday. The cabin is old and in need of repair. The door latch is broken, the roof leaks, and several boards are missing from the front porch. The garden fence has fallen down in some places and the goats have gotten in and eaten some of the vegetables. Captain Jack, himself, is in need of some repair also. His clothes are tattered and he has a sprained ankle.

Captain Jack is a clever old fellow. He knows that you need food and drink as well as the map which will lead you through the mountain pass. He also knows that you are in a hurry. He decides to bargain with you for what you need. The bargain is as follows. In exchange for food and drink, you must repair his cabin, fence, and clothes; weed the garden; milk the goats; treat his sprained ankle; and make a crutch for him to lean on while his ankle heals. After all these chores have been taken care of he will give you the map, but only if some one of you can defeat him in a game of chance.

Tasks

Get food and drink by performing the jobs Captain Jack wants completed.

Gather and prepare the food and see that everyone is fed.

Defeat Captain Jack in the game of chance so that you can obtain the next piece of map.

Problem Five: The Water Hole

Situation (Part I)

After spending the night at Captain Jack's cabin, you continue your journey early the next morning. Traveling through the mountains is slow and dangerous. It will take you most of the day to get through the mountains, and carrying extra supplies will slow you down. Therefore, you must gather food along the way. Captain Jack says there are many berry bushes and much small game along the trail. The map indicates that once you pass through the mountains you are to find a water hole. The trail to the water hole is marked by small piles of pumice which Yojimbo has set out for you.

Tasks

Gather food and see that everyone is fed.

Make sure that the trail you take is a safe one and that any injuries to your crew are properly cared for.

Find the trail of pumice rocks and follow them to the water hole.

Situation (Part II)

As you come in sight of the water hole it is approaching sunset. Bramble bushes and palm trees outline the glistening pool. Several wild dogs have gathered around the water hole to drink and

you can hear them barking and growling at each other. Occasionally, you can see fish jump after insects lying on the water surface. Your map indicates that Yojimbo has carved the next piece of map on a coconut shell and that the shell is submerged on the bottom of the water hole.

Tasks

Reach the water hole and make camp there, taking care that you neither harm the wild dogs nor frighten them into attacking you and the children.

Get the next piece of map.

Get food and see that everyone is fed.

See that everyone rests and is protected from the cold night air.

Problem Six: The Native Village

Situation (Part I)

The map indicates that you are to travel straight south until you reach a lagoon. You are then to follow the shore line of the lagoon toward the mountains until you reach Mobutu's village. It is very hot and dry on this part of the island and you will need to carry water with you. You want to start your journey before sunrise in order to avoid the heat of the sun during the late morning and the afternoon.

Tasks

Find your directions and plot your course for the village.

Get containers to carry water in for your journey.

Find the lagoon and Mobutu's village.

Situation (Part II)

As your tired, hungry crew approaches the village, a band of native warriors carrying spears come out of the high grass and encircle you. They take away your map pieces and other things you have collected on your journey. They lead you into the village and bring you to Chief Mobutu. Mobutu asks you who you are and why you have come to his village. He examines the pieces of map and asks how you got them. You try to explain, but Mobutu doesn't understand your language very well and looks at you suspiciously.

Task

Communicate with Mobutu and the villagers. Help them understand the events that have happened to you and ask them to assist you in escaping from the island.

Problem Seven: The Landing Site

Situation (Part I)

When Mobutu understands your story, he orders the other villagers to prepare a feast in your honor. During the feast he calls your group aside and explains that a merchant ship will sail near the island at noon tomorrow. He draws a map on the ground to indicate the place where you may signal the ship. In order to reach this place safely and in time you must leave tonight and travel south through the jungle. It would be dangerous to follow the shore line of the island because the pirates have sent a hunting party to recapture you. This band of pirates is now camped

on the high ground overlooking the five large rocks which mark the coast line south of the village.

After your meeting with Mobutu, you rejoin the others for the feast. While eating you remember that it is customary to offer gifts to a native chief in gratitude for his hospitality.

Tasks

Make a copy of the map to carry with you.

Make gifts to offer to Mobutu for his hospitality.

Find your way through the jungle at night to the landing site.

Situation (Part II)

You arrive at the landing site shortly after sunrise. At this spot the shore line is very flat and sandy. The wind is also very strong here. You and the children are very hungry from your long and tedious journey. There is some dry wood on the beach, but not enough to build a signal fire.

Tasks

Gather food and see that everyone is fed.

Build something with which you can signal the merchant ship.

Problem Eight: The Merchant Ship

Situation

After receiving your signal the merchant ship stops and sends a landing party ashore to take you and the children off the island. When everyone is aboard the ship, the captain, Lord Wilbur, calls you to his quarters and demands that you pay for your passage.

He says that he holds your group personally responsible for the payment of passage for yourselves and all of the children as well. Since you do not have any money, he decides to make a bargain with you. The terms of the bargain are as follows: Lord Wilbur will transport you and the children to safety. In exchange for this service each member of your group will present him with something you have made or demonstrate a skill you have. You will also explain how you have made this thing or developed this skill so that he can teach the members of his crew to produce these things for him.

Tasks

Decide what each member of your group can make.

Present what you have made or demonstrate the skill you have developed to the members of your group and the group leader and explain it.

Epilogue

Now that you have solved all eight problems and escaped from the island the game is ended. You and the other members of your group, through cooperating and communicating with each other, have made good decisions, and have successfully completed your mission. Congratulations on a job well done!

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Abstract

AN EXPERIMENTAL, COOPERATIVE GAME AND ITS EFFECTS UPON THE PARTICIPANTS' SELF-CONCEPT, SELF-ESTEEM, AND ATTITUDES TOWARD A HYPOTHETICAL PEER GROUP

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The purpose of this study was to investigate the effect of group guidance with an experimental game on the self-regard of elementary school children. The effect of playing the experimental game upon participants' attitudes toward a hypothetical peer group was also investigated. The theory base for the study was derived from the theoretical formulations of Erikson and White. According to these formulations, if the elementary school-age child perceives himself as being an effective producer of things and receives wholehearted and consistent recognition for his accomplishments from significant others (notably, his parents, teachers, and peers), then the child learns a sense of personal recognition and firm self-esteem.

The playing of the game involved the opportunity for the participants to do the following: demonstrate problem solving, decision making, and communication skills in a cooperative task; give evidence of an object the individual participant had produced or a skill that he had achieved; and to receive positive verbal reinforcement from an adult (the experimenter) for the solving of the game problems, and for the individual product or skill of which each child gave evidence. In line with the theory base, it was assumed that this treatment would tend to promote more positive feelings of self-regard among the participants, since it offered them the opportunity to manifest their skills and to receive positive recognition for their accomplishments from an adult school authority figure. It was further assumed that these feelings would evidence themselves in the self-reports of the participants on self-concept and self-esteem rating scales.

Three hypotheses were tested:

I. Group guidance utilizing the experimental game will affect the self-concept of children.

II. Group guidance utilizing the experimental game will affect the self-esteem of children.

III. Group guidance utilizing the experimental game will affect the attitudes of children toward a group of hypothetical peers.

A random sample of 12 subjects at each grade level was drawn from 56 third-, fourth-, and fifth-grade private school students who had volunteered for the study. Each subject was then randomly assigned according to his grade level to one of two groups, treatment or control. The treatment groups met with the experimenter for 12 half-hour sessions of group guidance utilizing the experimental game. The control groups met for 12 half-hour sessions of independent activity (study, reading library materials, and playing commercially prepared games) under the supervision of the experimenter. The duration of the experimental period was 6 weeks.

Prior to and immediately following the experiment, the "Piers-Harris Children's Self Concept Scale" and the "Coopersmith Self-Esteem Inventory" were administered to all subjects. Intelligence quotient (IQ) data were obtained from school records. Hypotheses I and II were tested by analysis of covariance using pretest self-concept and self-esteem scores (in addition to IQ scores) as covariates, respectively. Hypothesis III was tested by Student's t-test comparing control versus treatment groups' scores on an attitude scale administered at the end of the experiment. Results indicate that neither Hypothesis I nor Hypothesis III were supported. Hypothesis II was supported ($p < .05$), but further analysis indicated that the playing of the experimental game tended to result in a decrease in participants' self-esteem when compared to the self-esteem of the control group subjects.

As the results tended to imply that the theory base was erroneous, the results were discussed in terms of the adequacy of the study as a basis for making inferences regarding the theory. It was concluded that since it was not clear that the treatment conditions and test data obtained adequately reflected the theory, and that the design of the study did not provide adequate control of the independent variable, reasonable inferences regarding the validity of the theory could not be drawn from these results alone. Recommendations for improving the study were suggested.