

IMPROVING THE ACCEPTANCE OF ISOLATED
ELEMENTARY SCHOOL CHILDREN

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A review of appropriate literature indicates that researchers, of varying theoretical backgrounds, have tested a diversity of methods to increase the social acceptance of isolated children. Some base their efforts upon theories of learning--others, upon theories of socialization. These differing techniques seem to affect different elements of the many factors involved in social isolation. A combination of these techniques, therefore, would seem to be more effective in aiding the various types of isolated children typically found in the primary grades.

The purposes of this study were: (1) to develop a program based upon a combination of previously tested techniques, (2) to adapt these techniques for use by school personnel within the classroom situation, (3) to test this program upon an all-black, multi-age kindergarten and a first-grade classroom in an inner-city school, and (4) to evaluate the effectiveness of this program.

The social program tested in this study included three techniques: 1. Children of high and low sociometric status were paired together in class-valued activities that required cooperative interaction. 2. Children lacking in social

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acceptance distributed candy to their classmates. 3. Contingent teacher reinforcement of acceptance-promoting behaviors was employed.

Two classrooms, matched for age and race, took part in the five-week experiment. One classroom served as the control group, the other as the experimental group. A sociometric test, consisting of one work criterion item and one play criterion question, constituted the pre- and post-measurements used in this study.

An analysis of co-variance revealed no significant differences between the experimental and control groups. Correlated t tests, however, showed several significant differences between the pre- and post-sociometric means of the acceptance quartiles of subjects in the experimental group. The increases enjoyed by the low acceptance group were significant at the 0.0019 level of confidence. On the other hand, the subjects in the high acceptance quartile experienced a significant decrease in social acceptance status. This movement was ideal, since this study utilized a sociometric instrument with a limited choosing stipulation.

The social status of subjects in the control classroom remained relatively stable during the five-week interval. No significant differences were found between the pre- and post-sum means of the acceptance quartile groupings of subjects in this class. A rank order correlation between pre- and post-status ranks of control subjects consequently yielded the

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somewhat high coefficient of 0.7516. The stability coefficient obtained from the sociometric data of the experimental group of subjects was 0.5000.

The acceptance-promoting program tested in this study, thus, seemed to be effective. Significant and desirable changes occurred in the experimental group. An analysis of the post-sociometric measurements in the experimental classroom showed that a new group of isolated children was not one of the results of the treatment program. The teacher and teacher's aide involved in the study indicated that they were pleased with the techniques, as well as the results of the program.

Future social scientists who concern themselves with methods of aiding isolates should continue to explore the resources available within the classroom situation. Practicality and simplicity, as well as effectiveness, should be basic considerations in developing acceptance-promoting techniques for school personnel.

The effectiveness of each of the techniques used in this study could be isolated by future investigators. Due to the diversity of conditions and behaviors related to social isolation and acceptance, however, a successful program for instatement of the isolate into group activities will most likely require a combination of methods based on a variety of psychological theories.

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ELEMENTARY SCHOOL CHILDREN

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CHAPTER I

INTRODUCTION AND DISCUSSION OF ISSUES

Introduction

People are involved in groups in every phase of life. Children begin their participation in group life in the family group at birth. Children interact with other children as they develop and become members of peer groups. Children experience the classroom group when they begin school; they continue to encounter the classroom group for many years. The group experience does not end when formal education is terminated and children develop into adults. Adults are still faced with innumerable work and social group situations. Thus, the social psychologists' emphasis upon the basic social nature of human beings is easily comprehended when one considers the life-long participation of man in groups, as well as the social experience of all group encounters.

One's experience in group situations exerts a remarkable influence upon his personality development. The group experience of anyone can be most easily understood in terms of his status within the particular group. Each group has a status structure which can be easily delineated by sociometric measurements. Within this group structure there are people who

are very well-liked and accepted by the majority of the group membership. Other people experience a moderate degree of social acceptance, while some persons in nearly every group obtain very little acceptance from the group members. In addition to its pronounced effect upon the present and future functioning of each individual member, the structure of a group exerts a great influence upon the effective or non-effective functioning of the entire group.

Before examining the factors which necessitate the development of group management techniques to aid isolated children, it is necessary to clarify the concerns of the present study. Groups are formed for many reasons, and the status of individual members varies with differing status criteria. This study is primarily concerned with the classroom group and the social development of children that occurs within the primary school years. In the pre-school, kindergarten, and first grade years of a child's group experience, the plasticity of his personality will seemingly assist in efforts to correct any growth-retarding effects produced by previous group experiences. The experience of a child in his initial group encounters sets the stage for his future social development. Management of the classroom situation must therefore provide conditions which will facilitate a positive atmosphere for the social development of all class members.

Rationale

Information gathered from many studies justifies the development of teacher-implemented methods for use in improving the acceptance of isolated elementary students. Data on the stability of group structures points up the likelihood of an isolate remaining isolated, not only in his present group, but in future groups as well. The status of isolation or low acceptance is a negative factor in a child's social and academic development. Some changes in group management must be instigated, therefore, in order to alleviate the detrimental influence of isolation. The classroom group situation seems to be an appropriate environment for initiating individual and group procedures for improving the acceptance of children left "outside" their group. These are the factors which prompt the present development and evaluation of a program to aid isolated children. Each of these components are to be given further consideration.

Jacob Moreno's (16) "law of the social atom" implies that there is a great possibility of isolates remaining in positions of low social acceptance, not only in their present group, but also in other groups of the future. Yet, there seems to be a small amount of change within group social hierarchies. However, this change does not significantly affect the group structure when it is viewed in its totality. In other words, the positions of individual members change continually, yet the characteristics of the total structure

remain unchanged. In Sociometry of Leadership, Helen H. Jennings (15) regards this change as an "equilibrium in flux" movement. She explains that this phenomena is to be expected, since interaction is not static.

Research investigations examining the stability of group structures over both short and long-range periods uphold Moreno's law. Studies (13, 22, 23) measuring stability of group structures, ranging over one- to five-week periods in a variety of situations and populations, produce stability coefficients ranging from .42 to .97. It seems that group structures are also stable over more extended periods of time. Merl E. Bonney's (4, 5) studies of sociometric status over a four-year period are some of the longest time-span studies available. Among his population of elementary school children, his findings included stability coefficients ranging from .64 to .84 for one year intervals between successive grade levels.

The findings of many other studies bolster the consistency of the relatively stable nature of group structures over extended time periods--in educational settings as well as in populations and settings unrelated to education. Utilizing a sample of thirty-six nursery school children, Northway (19) obtained correlation coefficients of .57 and .56, after time intervals of two and three months respectively. Byrd (8) analyzed the stability of choices given by twenty-seven fourth graders and obtained a stability coefficient of .89 after a two-month interval. Stability coefficients

ranging from .27 for the nursery school to .59 for the fifth and sixth grade classroom resulted from Bronfenbrenner's (6) investigation of an entire elementary school. He allowed a time period of one school semester between his initial and final measurements. Representative of studies conducted with population samples unrelated to the educational situation is that of French (10). His research involved twelve companies of forty-two to fifty-four men each from the Great Lakes Naval Training Station. He found stability coefficients between .46 and .66 after ten-week intervals between tests.

Group structures are remarkably stable. People who lack adequate social acceptance often continue to endure their low status throughout their lives. It is now necessary to consider studies that provide information on the following questions: What are the effects of low acceptance status on isolated individuals?; Do individuals lacking in acceptance differ from highly accepted group members?; Is group productivity and effectiveness hindered by the presence of a condition of low acceptance?

Some psychologists feel that if a child is not accepted by his age mates in the early years of his school experience, he will be unable to develop satisfying interpersonal relationships as he matures. In his study of college students, Zeleny (24) found that persons in the low status grouping "on the average are not highly skilled in interpersonal relationships" (24, p. 200). There seems to be an interaction of

factors between the group and the isolated individual which are related to this inadequacy in social skills. Persons lacking in acceptance are always on the outskirts of their group. They rarely experience success in social situations. In their isolation, they are unable to learn the multitude of social skills ordinarily developed from interaction with agemates.

Buswell (7) even suggests that the position of non-acceptance damages not only the individual child, but also his group. Isolation limits the potential help that the isolated child might give to this group, were he an accepted member. This is apparently what Northway (18) had in mind when she described the condition of low social acceptance as a potential danger to a democratic society. A basic precept of democracy is that the governmental system provides for the actualization and growth of all peoples. Not only does the isolated individual suffer, but the group or society suffers from non-acceptance because it fails to benefit from the individual talents and potential contributions of the isolated person.

The work of Jennings (14) and Moreno (16) indicates quite clearly that one's status of acceptance or rejection by one's agemates is closely related to the adequacy of personality development. Northway reports that "a child's social acceptability is related to the degree and direction of his outgoing energy" (17, p. 3). More recently Hartup

and others (12) provide information on a number of relationships between sociometric status and peer reinforcement. In their study of two classes of pre-school children, some major findings include: (a) social acceptance is significantly correlated with frequency of giving positive reinforcement but not with frequency of giving negative reinforcement; (b) rejection is significantly correlated with giving negative reinforcement but not with giving positive reinforcement (12). This first finding means that well accepted children gave not only many positive responses to others but also a good many negative responses.

In his study of fourth grade students, Bonney (3) analyzes sociometric and trait ratings data in order to delineate personality traits of both socially successful and socially unsuccessful children. He concludes that:

. . . the following traits were most important in discriminating between popular and unpopular children from the standpoint of general social acceptance: "leadership," "enthusiasm," "active in recitations," "friendly," "welcomed," "good-looking," "frequent laughter," "happy," and "at ease with adults" (3, p. 469).

Bonney suggests organizing these traits into two syndromes. The first syndrome is composed of strong, aggressive personality traits such as leadership, enthusiasm, daring, and active participation in recitations. The second consists of traits which count the most in direct intimate interpersonal contacts, such as pleasing appearance, cheerful disposition, and friendly attitudes. The most important traits in the

second syndrome are: good-looking, tidy, friendly, frequent laughter, happy and welcomed (3, p. 458). Also of interest are the traits Bonney found to be of least value in discriminating between the popular and unpopular groups. These include: "'bossy,' 'fights,' 'active in games,' 'sense of humor,' and 'older friends'"(3, p. 469).

Bonney's investigation provides other important information about personality differences between children of high acceptance and those of low acceptance. Only when the upper and low fourths in general social acceptance were compared, were statistically reliable differences obtained. Even then, only eleven traits out of a total of twenty showed a reliable difference. Hence, a person working with the students in this study would not readily perceive trait differences between children of high, medium, and low social acceptance (3, p. 470).

In another investigation, Bonney (5) studied the stability of social, intellectual, and academic status in grades two through four, as well as the inter-relationships between these developmental variables. Results indicated that general social acceptance was approximately as constant over the three year study as were IQ's and academic attainment. Correlations were made between the scores of successive grade levels in four measurements: general social acceptance, mutual friendships, intelligence, and academic achievement. The highest relationship appeared between general social

acceptance and mutual friendships; the next highest between intelligence and academic achievement. The most significant data, however, were those showing the consistently low correlations between the two measures of social success, on one hand, and the measurements of intelligence and academic achievement on the other. Bonney (5) found correlation coefficients ranging from .19 to .42. These findings were interpreted to mean that, although there is a slight tendency for those who are superior in intelligence and academic achievement to be superior in social success as well, this tendency is remarkably small. Bonney concluded that:

. . . it cannot be assumed that social success will be a natural consequence of intellectual brightness and academic achievement. Social skills, as well as arithmetic, must be taught. The school which is desirous of educating the whole child must make as definite provisions for the promotion of social acceptance and mutual friendships as for the development of physical and intellectual abilities (5, p. 98).

It is necessary at this point to consider the plausibility of efforts by teachers to promote social acceptance in the classroom situation. The first question to be considered is: Are teachers aware of the social status positions of their students? As mentioned previously, Bonney's (5) research suggests that a teacher or any observer, for that matter, would be unable to delineate the school children of high, medium and low social acceptance on the basis of personality traits, except in cases of pupils who are quite outstanding in positive assets and also those who have striking deficiencies.

A teacher is often aware of obvious cases of non-acceptance in her classroom. A group's rejection of a member sometimes takes patent forms which a teacher cannot overlook. Amidon (1) points out that lack of acceptance is often expressed in circumstances in which children refuse to play with a certain child, ". . . constantly call him names, and in extreme cases, display aggression toward him"(1, p. 412). A teacher is usually cognizant of such cases of isolation. These cases often require disciplinary actions on the part of the teacher.

Lack of acceptance is communicated in a more abstruse manner in some instances. A child who never participates in group activities, yet works and plays well alone is a good example. He achieves in academic work; he is not a source of trouble for the teacher. Hence, she may fail to realize his position. In this case the child is not so much rejected as he is ignored.

Gronlund (11) provides statistical information on the accuracy of teachers' judgments concerning the sociometric status of pupils. His data are based on forty teachers and forty sixth-grade classes. He finds a great amount of variation among teachers in their ability to judge the sociometric status of students in their classes. Correlation coefficients depicting the mean accuracy of each teacher's judgments range from .268 to .838, with an average of .595. Gronlund concludes: "If a teacher is to be effective in aiding

the social adjustment of pupils she must be able to recognize the pupils' present status"(11, p. 347).

Mere observation apparently does not allow a teacher to understand the social status of students. A sociometric test is needed. Sociometric data provide the most complete, accurate picture of a group's social status structure (9). Sociometric measurements can be repeated at intervals to determine the way in which a group is changing and developing.

Can teachers help the socially isolated when they are given sociometric data about the classroom group? Amidon and Hoffman (2) conducted an in-service program to find out whether teachers trained in the use of particular procedures and methods for ameliorating rejected children could better the status of these students in their classes. Their most significant finding was that the status of the children in the experimental group was significantly more likely to improve over the school year than the position of the rejected students in the control group. Thus, teachers can learn the skills needed to improve the acceptance of isolated children.

Significance of Study

Lack of social acceptance is detrimental to both the isolated individual and the group. Social hierarchies are quite stable; thus persons low in acceptance are likely to remain in their unfulfilling status positions. However, group management techniques may be employed to alleviate

the stressful condition of non-acceptance. The isolate may under favorable circumstances be integrated into the group. He can then develop satisfying interpersonal relationships and begin to actualize his potentials. Also, the group can then benefit from the abilities of a once isolated, non-contributing member.

The school is the one institution to which the vast majority of American children are exposed (2, p. 154). Although emphasis is often placed upon academic development in school, it must be realized that every classroom is a miniature society. Much of a child's social development takes place within this classroom society. Inadequate acceptance and social development is an obstacle to academic learning. The teacher is, by circumstance, forced to influence the social development of students. The good teacher is desirous of means to promote a positive effect upon each student's individual social growth.

If teachers are equipped with programs and skills which promote the acceptance of non-accepted children, our schools can become the most important vehicles in ridding our society of the phenomenon of low acceptance. Our country may become a more functional democracy if group dynamics techniques are adopted by the schools and used by teachers.

Few studies dealing with promotion of social acceptance have addressed themselves to a population of black elementary

school children. Many black children live in inner-city areas and attend inner-city schools. Optimum social development is extremely important for these children. Efforts to facilitate the acceptance of isolated children in inner-city school classrooms are probably most fruitful in the primary grades.

It is necessary to integrate isolated black children into their classroom group, whether the membership be all-black, all-white or integrated. Only then can these isolated children begin to develop the social skills needed for their future functioning in society.

A study testing methods to improve the acceptance of isolated children in all-black kindergarten and first-grade classrooms in inner-city schools is a very valid pursuit. According to a 1970 survey (20, p. vi), there are 398,187 black elementary and secondary school children in Texas alone. This minority group comprises 15.4 per cent of the total elementary and secondary school population in Texas (20, p. viii). A 1965 investigation indicates that 94.7 per cent of all first-grade Negro school children in the South and Southwest attended metropolitan area schools, with student enrollments of 90 to 100 per cent Negroid (21, p. 43). The situation in the North is comparable. The majority of black elementary school children attend schools where their ethnic group is in the majority. Thus, methods of promoting

acceptance in the classroom need to be tested with black population samples.

Certain factors, regardless of the racial composition of the classroom group, must be considered in developing a teacher-program which may improve the acceptance of isolated children. Procedures and techniques must be specific and simple; teachers are not trained social psychologists. Teachers must attend to the academic as well as the social development of children; thus the amount of time required and the practicality of the techniques must be given thought. Techniques which are least time-consuming, most practical, and result in the betterment of the greatest number of students are ideal. These factors are basic to the development of the procedures used in this study.

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CHAPTER II

RELATED RESEARCH

Many studies provide information on methods of improving the acceptance status of isolated individuals in their groups. It is possible to categorize these studies in a variety of ways for ease of comprehension. They could be categorized, for instance, according to method, or to age level studied. The method to be used in the present review relates to the theoretical foundations of the techniques employed. This approach seems proper in terms of the general focus of this review.

Numerous investigators report studies in which acceptance-promoting techniques have been tested on populations other than elementary school children. It is the intent of this study to develop and test procedures for use within the elementary classroom situation. Thus, the majority of the studies in this review pertain to techniques suitable for use with isolated elementary students.

Various researchers base their work upon theories of socialization. These investigations assume that the factors related to the condition of isolation involve not only the individual low in acceptance, but also his group. Their efforts, therefore, aim to aid the isolate by placing him

in situations: (a) where he can make a contribution to his group (6, 9, 11, 25); (b) where he will experience success (3, 25), a feeling of superiority (7, 8, 9, 25), and work in cooperative groups (10, 14, 15, 24, 33); (c) where he can learn more about peer group codes (22); and (d) where he can learn social skills through interaction with highly accepted individuals (5, 9, 12).

Another group of studies (20, 23, 24, 25, 27) utilizes counseling techniques in an effort to improve the acceptance of isolated children. Both individual counseling and group discussion methods (25, 27) are probed.

Learning theories are the basis of techniques tested by a third body of research examinations. Some of these techniques revolve around principles of reinforcement. The effectiveness of teacher reinforcement is the concern of many studies (1, 4, 13, 16, 17, 18, 19). A few investigators (19, 26, 28, 31) combine material rewards and teacher reinforcement. The development of other techniques in this area is based upon the learning theories of classical conditioning (19, 21) and modeling (30).

Procedures used in a number of studies are based upon an amalgamation of theories. The eclectic approach taken by some of these researchers (2, 4, 5, 29) consolidates socialization and learning theory methods.

Studies in each of these areas are discussed. Investigations particularly relevant to the selection of the methods tested in this study are given extensive

consideration. Those studies offering methods especially suitable for aiding isolated children in the primary grades are most thoroughly discussed.

In the area of socialization-based methods, Merl E. Bonney provides several helpful suggestions about aiding isolated children. Bonney reports that, in order for children to gain acceptance, they must learn the "art of friendly intercourse"(7). A child who feels that he possesses some kind of superiority in a group will most likely be in a better frame of mind to learn friendly behaviors. Giving isolated children the opportunity to "identify themselves with an activity which serves to give them a greater sense of importance"(8) may thus be of benefit to them.

Northway (25) recommends a similar type of treatment for the "socially ineffective" isolate. She suggests that this type of child should be given legitimate forms of social responsibility in the school. Concomitant with this aspect of treatment, the "socially ineffective" child's undesirable behaviors should be given as little attention as possible (25, p. 16).

In the same vein, Aspy (3) feels that the teacher may aid students by gearing specific academic work to the individual child's level. In this way the child can experience success in his academic efforts. Aspy contends that success experiences produce positive self-concepts. By providing success experiences a teacher can have a positive effect on

a child's thoughts about himself. It seems that if a child can learn to like himself due to his achievement in academic pursuits, he can also learn to like himself more if he experiences success in social situations.

A child's ability to make appreciated contributions to his group appears to be related to his acceptance status. A number of studies provide techniques for aiding isolated children in developing this ability. Northway (25) advocates this approach in efforts to help the "socially uninterested" type of isolate. Whatever this child's primary interest may be, it can be directed into some form of social participation where it will be appreciated by the group. If the individual's talent or interest is valued by the group, he will experience success in a group situation and is more likely to gain acceptance.

Bonney (6) and Lund (22) provide studies in which this technique, along with many others, has been employed. Bonney (9) states that if a child is placed with others who do not accept him very well, association with them may help him to become more accepted. Bonney warns, however, that increased acceptance is not likely to be the result unless the unaccepted child has a valued contribution to make toward whatever the group is doing.

Brooks (12) paired highly accepted children with lowly accepted children. These pairs acted as "interaction partners" over a period of five weeks. The second-grade pupils

were paired by the teacher and experimenter in all types of classroom activities. Of the seven children found to be isolated on the initial sociometric test, four made gains in acceptance, two did not change in status, and one child decreased in acceptance status.

This technique of directed interaction is of value in that it can be implemented by teachers within the classroom situation. Only 57 per cent of the children in Brook's study, though, gained in acceptance. Perhaps more children lacking adequate acceptance could be helped if this technique were combined with others.

Barclay (5) also reports having used this pairing technique. In his study, high and low sociometric status children were paired in twosomes for the purpose of competitive task-oriented assignments. In this type of situation, cooperation was mandatory for winning. Pairings of this nature would seem to involve some risk. The isolated child's performance in this pairing could possibly harm rather than aid his status. Such a risk could be diminished by readying the low acceptance child in the pairing for his performance. Role playing could prove useful in preparing the isolated child for a successful rendition.

Moates (24) used activity group counseling in an effort to improve the peer acceptance, self-concept and grade-point average of disadvantaged seventh-grade Negro children. Sixty children were divided into two matched groups. The thirty

children in the experimental group were divided into groups of ten and received twenty sessions of activity group counseling. Results indicated that activity group counseling tended to produce positive changes in both peer acceptance and self-concept. Change in grade-point average was found to be negligible.

Cox (14) found play therapy to be of value in improving the sociometric status and individual adjustment of a group of Australian orphans. The fifty-two children in this study were between the ages of five and thirteen. They were divided into experimental and control groups, and then into three age groups. Each of the age groups was composed of nine children. The experimental groups experienced ten weeks of play therapy. The basic aim of the play therapy was to "alter certain relevant aspects of the environment so that the individual would be changed by absorption of such 'environmental influence'" (14, p. 355). The psychotherapeutic techniques used in this study were similar to those advocated by Axline. The sociometric test and the Thematic Apperception Test, the criterion of individual adjustment, were repeated ten weeks after the play therapy sessions were terminated. The experimental groups obtained a significantly higher adjustment level than did the control groups.

Techniques of increased mutually-shared participation with other children and parental assistance on particular problems were used by Bonney and Perry (11) in their efforts

to aid socially isolated second-grade pupils. The isolates were chosen on the basis of sociometric measurements and teacher nominations. These researchers employed mutually-shared participation in activities that required cooperative efforts. Direct conferences, which involved the parents of lowly accepted children, and notes, written by the teacher as well as the isolate evaluating his behavior for the particular day, were among the other methods used. The teacher, parents, and experimenters worked with these children over a period of six months. Bonney and Perry reported, however, that the home situations of the isolates did not improve. Perhaps this was a major factor in their results. The three pupils with whom they worked did not show a decrease in personal-social adjustments. In fact a few individual gains were made. Yet, Bonney and Perry concluded:

It seems likely that group socializing experiences and the development of social skills will seldom produce noticeable or measureable effects in personality improvement except in those individuals who have a fairly high degree of internal psychological resources (11, p. 19).

In a recent study, Bonney (6) used seventeen different kinds of socializing experiences in an effort to aid third through sixth-grade pupils in the lowest quartile of social acceptance in the classroom groups. The socializing techniques experienced by the lowly accepted children in this study included: cooperative efforts with two or more classmates, class dramatization of role playing, bringing and

sharing an object with the class, special class assignments by the teacher, successful part in a talent or hobby show, being seated with chosen others, class discussion of personal-social problems, and individual play therapy or counseling sessions. The teacher also held individual conferences with the isolates and praised them in front of the class for their successes.

Parents of the isolates were interviewed. Suggestions about how the parent might help the child were made. Parents were also encouraged to invite other children into the home, so that their lowly accepted child might develop some satisfying interpersonal relationships.

All of the group findings in this comprehensive effort are insignificant. A few individuals did, however, gain in acceptance status. How can these results be explained? Bonney (6) suggests that the social behaviors of the isolated children may have changed, but the way in which the classroom group perceived them did not change. Thus, aiding children low in acceptance involves not only the change of observable behaviors, but also the perceptions of the group members regarding the isolates. Evans (15) states that children take on the characteristics expected of them. This "reputational factor" is an obstacle that must be recognized and dealt with in future efforts to aid isolated children.

Lund's (22) primary effort in promoting the acceptance of isolated sixth grade students was to increase the knowledge that the least-accepted children had of the codes and customs of their peer group. The role of the teacher was to provide help through a socially-oriented curriculum, through counseling, and through classroom management procedures. Lund also seated least-accepted children near children most likely to accept them or children from whom they could learn acceptable peer standards. The least-accepted children were given valued positions of responsibility and helped to make acceptable contributions to the classroom group. Personal problems were discussed in individual conferences. Lund reports that she also met with the parents of the least-accepted children. Results indicate that three children gained considerable acceptance from the peer group, two showed a very slight increase, and one showed no improvement in sociometric position.

Bonney and Burlison (10) formed sociometric play groups in four physical education classes in an overcrowded elementary school. One of the main problems in this school was Anglo-Chicano cultural conflicts. Team spirit and organization improved and fights decreased after the sociometric groups were formed. But this group reassignment technique did not improve the position of seriously maladjusted students. Perhaps more would have been accomplished if

sociometric groupings had been supplemented by other socializing techniques (10).

Zeleny (33) combined sociometric groupings with "continued practice in interpersonal relations with a consciousness of goals to be attained" and "personal guidance interviews for individual assistance." The results of his study with a college student population were perplexing. While some students gained in acceptance, others did not. Some of the students even decreased in acceptance status.

Several investigators have studied the effects of individual and group counseling on peer relations. Mayer and others (23) compared the effectiveness of counseling and selected guidance techniques upon the social status of fifth- and sixth-grade students. The criteria used were sociometric status and teacher rating of students' social skills. The subjects were selected from students who were in the lower half of their classes in sociometric status and who indicated that they wanted to get along better with their peers. An equal number of students from seven different classrooms was randomly assigned to each of three treatment conditions: counseling, teacher-guidance, and control. Pre-sociometric test results were not made available to the teacher.

Subjects assigned to the counseling group received both individual and group counseling. Each group of four or five subjects met in forty-five minute sessions, twice a week, for three weeks. Group counseling was followed by six individual

counseling interviews in which subjects met with their counselor once a week for thirty minutes.

Subjects in the teacher-guidance treatment group were identified to the classroom teacher. The counselor met with the teacher and suggested "the utilization of positive reinforcement and seating changes" (23, p. 362). Other teacher-counselor discussions consisted of efforts to clarify and understand the subject's behavior.

The mean sociometric gain score and the mean social skills gain score were higher for the subjects in the counseling group than for subjects in either the teacher-guidance or control group. Both of these differences, though, were found to be statistically insignificant (23). In a similar study conducted by Kranzler and others (20), statistically significant gains in sociometric status were found among subjects in the counseling treatment group.

The results of counseling efforts to improve acceptance status of isolated individuals are as mixed as those of socialization efforts. In a review of group procedures used in schools from 1953 to 1963, Shaw and Worston conclude that group procedures offer at least a partial solution to increased effectiveness and size of the school population reached (27, p. 32).

On the other hand, many of the studies employing methods based upon theories of learning are designed to aid only one isolated child. This is especially true of studies which

utilize systematic teacher reinforcement as the sole technique. These studies typically demarcate isolation in terms of behavior. Isolate behaviors is defined as a low rate of interaction. Teacher reinforcement is circumscribed as any type of teacher attention, such as smiling, talking, attending and touching.

Buell and others (13) report success in their attempt to increase a three-year old child's rate of social contact with other children by increasing the child's use of outdoor play equipment through teacher reinforcement. This study demonstrates what other behavior changes may take place in the course of behavior modification aimed at a single response. The use of teacher attention to produce situations where peer reinforcement for social interaction is likely to occur is possibly of great value. An isolated child whose problem is not only a low rate of interaction, but perhaps also a high rate of socially inappropriate behaviors would require more extensive treatment.

Isolate behavior was modified by Allen and others (1) in a study which employed teacher attention as a reinforcer. Teacher attention was given, consequent upon interaction with another child, and withheld consequent upon solitary play or attempted interaction solely with an adult. Their subject was a four-year-old nursery school child. Harris and others (18), Flanders and Havumake (16), and Lott and Lott have also reported information which supports the effectiveness

of teacher praise and attention in controlling attitudes and behaviors. On the other hand, Goodwin and Krumboltz (17) found that teaching teachers how to reinforce behavior does not seem to be effective by itself.

Tiritilli (31) considered the modification of isolate behavior from a different point of view. He attempted to improve a five-year-old isolate's rate of interaction by systematically reinforcing the isolate's classmates for responding affirmatively to positive statements about the isolate. He based his efforts upon the theory that verbal behavior can be conditioned and that verbal behavior can control its non-verbal counterpart. Although the isolate's rate of interaction increased initially, it dropped almost to baseline at the end of the fifteen-day treatment period.

How are these results to be explained? The conditioned verbal behavior of the non-isolate subjects in the study initially controlled the non-verbal counterpart, since the isolate's rate of interaction increased. Why did this rate drop? Skinner (28) states that for a behavior to be maintained or increased it has to be reinforced. If the reinforcement is withheld, then the behavior will extinguish. Since interaction with the isolate was not reinforcing, the non-verbal counterpart of the conditioned verbal response extinguished.

Efforts similar to those of Tiritilli (31), Buell and others (13), Allen and others (11), and Harris and others (18)

are likely to aid many isolated children over any extended time period. This seems to be true because no effort is made to improve the quality of the child's social skills. Many isolated children do not have the social skills needed to qualify their interaction as reinforcing to those interacting with them. Procedures similar to Tiritilli's might prove useful in dealing with the "reputational factor" (6) in isolation.

Yet, Tiritilli's procedures are very time-consuming. The method of contingent teacher attention is also rather time-consuming, especially during reinforcement periods. If more than one child improved from these efforts or if one child's improvement could be demonstrated to be of a lasting nature, perhaps the end would justify the means.

Kirby and Toler (19) developed another learning theory-based technique designed to minimize the time and effort required of the teacher. The goal of this study was to increase the rate of interaction between a five-year-old boy and his nursery school classmates. The isolate was persuaded to pass out choices of candy to his classmates. He was subsequently given a nickel, candy, and praise from his teacher when he finished the task.

This technique provided three possibilities for improvement. By strengthening the isolate's interaction behavior in the candy distribution situation, it was possible that the behavior would generalize to other situations. The isolate's

peers might react to being given candy in a socially-reinforcing manner. This would further strengthen the isolate's interaction behavior. This part of Kirby and Toler's (19) strategy was similar to the previously-mentioned study by Buell and others (13). A third possibility was that through his pairing with a primary reinforcer such as candy, the isolate would obtain reinforcing properties for his peers so that they would be more likely to interact with him (19).

Results of this study indicated that this technique is effective. During the baseline period, the subject spent a mean of 13 per cent of his time with other children. The mean amount of time spent with other children by the isolate during the reinforcement period was 68.8 per cent. During the reversal period, the mean percentage of time spent with other children decreased to 30.8 and increased again during the second reinforcement period to 60.2. Kirby and Toler divided the time spent with other children into specific categories. "Proximity and cooperative play showed the most change" (19, p. 312). Toward the end of the experiment, manipulatory motor activity increased. Verbalization remained very low throughout all phases of the study.

Kirby and Toler concluded that:

As a method for modifying social behavior, utilizing material and possible peer reinforcement contingencies, this study demonstrated a practical alternative to the exclusive use of "teacher attention" (19, p. 314).

Reynolds and Risley (26) have also employed both material and social reinforcers in a study of a young child. They found that it was the material rather than the social reinforcement which maintained the behavior of the disadvantaged child in this study. Thus, it was probably best that the isolate in Kirby and Toler's (19) study be given a nickel and candy in addition to teacher praise subsequent to his passing out candy.

It is unfortunate that social acceptance was not also measured in the Kirby and Toler (19) investigation. Such an additional criterion would have been helpful in delineating the effectiveness of this technique as mentioned in terms of classical conditioning theory. If the pairing of an isolated child with a primary reinforcer such as candy could result in a more positive view of the isolate by his peers, this technique could possibly be of value in working with isolated children whose behavioral problems include other phenomena than a low rate of interaction.

The last study to be discussed in the area of learning theory-based studies was founded upon modeling theory. Tasch (30) tested the hypothesis that pre-school children will imitate the friendly or pro-social behavior of an adult model. The study involved seventy-two disadvantaged Negro pre-school children in a summer Head Start program. Results indicated that high self-esteem children were attracted to the model and imitated her verbal instructions. The low self-esteem

children were not drawn to the model and did not imitate her to any significant degree. Although the findings may be contaminated by the uncontrolled factor of intelligence, the plausibility of Negro children who are low in esteem or social acceptance learning friendly behavior through methods of modeling appears questionable.

Other inquiries into the alleviation of isolation have tested a number of techniques from the previously-mentioned areas. Williams and others (32) evaluated several different treatments designed to facilitate the integration of racial isolates in a junior high school. Four different types of treatment were tested over a four and one-half month period. The treatment conditions were teacher reinforcement, peer reinforcement, role modeling, and group process. These researchers used both sociometric and peer interaction rates as criteria.

At the end of the experimental period, the treatment groups did not differ in amount of gain at the .01 probability level. The peer reinforcement group made the greatest gains on the behavioral interaction criterion, but ranked fourth on total racial isolation changes as measured by the sociometric device. On the other hand, the Group Process subjects ranked first on sociometric changes and fourth on behavioral interaction changes. The authors suggested an explanation for these differences in treatment effects. Feelings about members of the other race were emphasized in the

Group Process group. This approach would be more likely to produce changes in feelings. In contrast, the Peer Reinforcement program focused on positive behavioral interaction between isolates and members of the other race; therefore, it would be more likely to produce changes in behavior.

Promoting the acceptance of racial isolates is a very challenging area. Current information on the social identity of Negro pre-schoolers indicates that there are and will be difficulties in this query (29). Perhaps the Group Process and Peer Reinforcement methods used in the Williams and others (32) study can be integrated into one program. Both the observable behavior and the covert feelings of racial isolates need to be changed in order to achieve the highest quality of integration and acceptance.

Barclay (4) tested several kinds of treatments in an effort to aid isolates in three fifth-grade classes. Selective reinforcement procedures was the condition of treatment in one of the classes. In another class, the teacher was changed. A third class experienced several types of planned intervention techniques. These techniques included the intervention of two school psychology interns for three days during the five week period of treatment. The teacher in the planned intervention group was instructed in methods of using selective reinforcement procedures with low social desirability status children. In addition, the teacher was requested to appoint children of low acceptance as hall

monitors, allow them to run errands, and to praise them for achievement-oriented behavior. Sociodrama, small group work, and systematically formulated games were other techniques utilized in the eclectic approach of the planned intervention treatment.

Results suggested that strategies of planned intervention in elementary school classrooms can result in improved attitudes on the part of the students. The mean scores of the children in the intervention group were higher on the criteria of sociometric measures and attitude measures relating to the peer dimension of happy. While the evidence from this study was not overwhelming, Barclay stated:

It would appear that brief interventions may result in differences in operant behavior which could then lead to gradual changes in personality (4, p. 245).

Barclay concluded that behavior can be changed by school personnel, if they are aware of the behavior they want to change and if they know how to apply "social behavioral learning theory" (4, p. 247).

Amidon and Hoffman (2) provide a rather comprehensive list of methods to be used by the classroom teacher in aiding socially isolated or rejected children. The teacher should work first to build an accepting classroom climate by communicating genuine acceptance of all of her students. Group techniques are to be used in helping the child who is not accepted. Possible group methods include assigning the isolate to a work group, organizing informal games and group

activities, discussing problems of attitudes and behavior and analyzing incidences through role playing. In addition, the teacher may take specific direct short-term action to influence the position of the rejected student. Some techniques in this area are teacher praise directed toward the isolate, giving isolate the responsibility for attending to classroom duties, leading discussions about the ways in which people differ, and conferring individually with the isolate about his isolation.

According to Amidon and Hoffman (2), a number of methods are to be avoided. The teacher should not set the isolate or any other student apart from the group by referring to an obvious difference he or she may display. Forcing others to accept the isolate in play and work groups is also undesirable. Finally, increased acceptance is unlikely to be the result if a teacher punishes children or makes them feel guilty because they do not accept a child.

Examples of a holistic approach to aiding isolated children are presented in these last few studies. Both group methods and individual techniques are employed. Theories supporting these methods include socialization and learning theories. It seems that some technique which will deal with the perceptual factors in isolation should serve as a supplement to group and individual methods. Perhaps greater effectiveness will result when some of the best techniques from each theoretical line of thought are combined in an attempt to aid isolated elementary students.

Both the teacher and the school counselor or psychologist should take part in implementing the procedures of an eclectic approach. Hopefully, the role of the school psychologist or counselor will require a minimum amount of time. This will make it possible for the school psychologist or counselor to reach more children in isolated positions in their classroom group.

On the basis of the information provided by the studies just reviewed, the following hypotheses are stated for this study:

1. The pre- and post-treatment sociometric scores of subjects in the experimental group will differ significantly from those of subjects in the control group.

2. The mean number of total choices (i.e., the sum of work and play choices) received by the subjects in each of the acceptance quartiles in the control classroom on the post-treatment sociometric measurement will not differ significantly from the mean number of total choices received by these groups of subjects on the pre-treatment sociometric measurement.

3. The sociometric status ranks of the subjects in the experimental group will be less stable than that of the subjects in the control group.

4. The mean number of total choices (i.e., the sum of work and play choices) received by the subjects in the high

acceptance quartile, next-to-highest acceptance quartile, and next-to-lowest acceptance quartile in the experimental classroom on the post-treatment sociometric measurement will not differ significantly from the mean number of total choices received by these groups of subjects on the pre-treatment sociometric measurement.

5. The mean number of total choices (i.e., the sum of work and play choices) received by the subjects in the low acceptance quartile in the experimental classroom on the post-treatment sociometric measurement will be significantly higher than the mean number of total choices received by this group of subjects on the pre-treatment sociometric measurement.

6. Each of the children in the experimental low acceptance quartile will receive at least one more choice on either the work or play criteria on the post-sociometric measurement than each did on the pre-sociometric measurement.

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CHAPTER III

METHODS AND PROCEDURES

Description of Measuring Instrument

The sociometric test used in this study was designed by the author. This instrument consisted of two questions. These questions were: (1) What three children in your class would you like to work with? (2) What three children in your class would you like to play with after school? A copy of this instrument can be seen in Appendix I.

Since the area of interest in this study was social acceptance, only positive questions were asked. The age and cultural background of the subjects were considered in designing the two questions. The first question was intended to tap preferences for work situations, while the second was stated in such a way as to draw upon a more personal preference: that of preferred children for interpersonal relationships in social situations.

Subjects

Two multi-age kindergarten-first-grade classrooms were studied. These classrooms were drawn from an inner-city school. The student enrollment in this school was 95 per cent Negroid; the other 5 per cent was Caucasian. All subjects in the two classrooms who participated in this study

were black children. One classroom consisting of twenty-seven children served as the control group. The other classroom also had twenty-seven children, and served as the experimental group. One child in each of the classrooms was omitted from the study due to excessive number of absences. Each of these two children was absent from school 40 per cent of the time in the six-week period preceding the initial sociometric measurements.

The mean age of the control group subjects was 6.745 years. The experimental classroom's mean age was 6.898. These mean ages were not found to differ significantly using the t tables in McGuigan (3). The experimental and control groups were thus comparable in terms of age as well as number of pupils enrolled and racial composition. The groups were also similar in sex enrollment. After the omission of children with immoderate absentee records, the control group consisted of thirteen boys and thirteen girls, while the experimental group included fourteen girls and twelve boys.

Procedure

The names of every child in each of the two classes were written in random order on a blackboard for the initial sociometric test. The experimenter led a class discussion on preferences. Best-liked foods and television shows served as an introduction to the idea of classmates that each student liked best.

The subjects in each group were randomly divided into three groupings. The teacher was assigned to one group; the teacher's aide was in charge of another, and the experimenter worked with the third grouping. The teacher, teacher's aide, and experimenter sat in a position where all of the names on the board could be seen. Each child was conferred with individually by either the teacher, teacher's aide, or experimenter and asked to respond to the questions on the sociometric test. Games were played within each of the groupings while these data were collected from each individual student.

The initial measurements were analyzed, and the social hierarchy of each class was delineated. The group structures were divided into quartiles according to degree of individual acceptance status. In both the experimental and control group, the highest quartile consisted of the six students who received the highest total number of choices. In forming these groups, play and work choices were combined. The two middle quartiles consisted of seven students each in both the experimental and control groups. The six students who received the least number of choices composed the lowest acceptance quartile in the experimental and control group.

The teacher and the teacher's aide of the control group received no feedback information about the initial sociometric measurements. In addition the teacher and teacher's

aide in the experimental classroom were advised to refrain from talking to the teachers of the control group about any of the procedures to be implemented in their classroom.

The experimenter arranged a conference with the teacher and teacher's aide in the experimental classroom. In this conference, the experimenter provided the information and materials necessary to initiate the treatments of the program. The group structure of the classroom was discussed.

The behavioral problems, academic achievement levels, home situations, and talents or interests of the children low in acceptance were analyzed. The students whom the low acceptance children chose, as well as the students who chose the low acceptance children, were discussed in this meeting.

The teacher and the aide were given the following hand-out:

PROJECT ACCEPTANCE

You are probably aware of children in your class who are not accepted very well by their classmates. These children who lack social acceptance are in a rather uncomfortable situation. Research indicates that their predicament has a negative effect upon both their social and academic development. They will probably grow up to be rather maladjusted adults unless something is done immediately to help them out of this condition of non-acceptance.

We have developed some procedures that we believe will improve the acceptance of these "isolated" children. Our plan is called Project Acceptance. Your part in Project Acceptance is very important. We will supply you with all of the needed materials and be available for conferences at any time.

The two basic procedures in our plan will extend over a five week period--the treatment period. Before and after the treatment period, the experimenter will take some measurements. This will require approximately 40 minutes on each of the measurement occasions. The experimenter will

provide feedback on the group structure of your classroom from these measurements.

Your part in the first procedure in Project Acceptance is to find a time when the class as a whole is working well. At this time you call one of the children aside. The child you call aside (to pass out candy) will be one of the children in your class who is lacking in acceptance. The experimenter will provide you with a calendar schedule suggesting which child should pass out the candy each day during the five-week treatment period. After you have called the child chosen to pass out candy aside, you can give him the following instructions:

Here are two different kinds of candy. I want you to pass them out to the other boys and girls. I want you to ask each boy and girl which kind of candy they want. Then, reach into the paper bag and get it for them. It is very important that you ask them what kind of candy they want, either a piece of chocolate or caramel. After you have given one piece of candy to everybody, bring the rest back to me and I will give you two pennies and some candy. If you do a good job I will let you pass out the candy again sometime soon.

After giving the instructions, we would like you to practice the procedure with the child to make sure that he understands how he is supposed to pass out the candy. Then, say something like the following to the class: "Class, I am very proud of you. You are working very well together. I have some candy here and I am going to let _____ pass it out because he/she has been especially nice today (it would be good if you could sub in a particular behavior exhibited on that day by the child passing out candy). There are two kinds of candy, chocolate and caramel. Each of you may have one piece of candy."

After the candy has been passed out and the child returns to you, you should give him verbal praise, two pennies, and a piece of candy. Then, you may have the "daily assistants" for the day collect the candy wrappers.

The "daily assistants" are a part of the second procedure in Project Acceptance. This second procedure involves the pairing of a lowly accepted child with a highly accepted child. Here is a list of the "high" (Group I) and "low" (Group II) children in your class.

Group I	Group II
a	1
b	2
c	3

One way in which these children can be paired is in that of acting as "daily assistants." The psychologist or counselor will provide you with a calendar schedule suggesting the high-low pair to act as "daily assistants" each day during the five-week treatment period. We would like you to use this pair in every way possible, such as erasing the board, sharpening pencils, cleaning parts of the room, running errands, passing out and collecting materials, etc. We would like you to record the number of activities the assistants are paired in each day. You can record this on the calendar schedule of "daily assistants."

Another way in which these low children will be paired with the high children is in a "show-and-tell" type activity. The content of each of these pairings will be based upon special talents or abilities of the low child involved in the pairing. The experimenter will take care of these pairings, as well as the teaching needed to ready the children for presentations. Six different pairs will make one presentation each during the five week period.

In addition to these pairings, we encourage you to pair any low child with any high child in any situation where the low child will be perceived as positive and successful by other children observing the paired activity. We suggest that you try to pair low children with as many different high children as possible. That is, we would like you to refrain from pairing any low child with the same high child for more than two activities per day. Our rationale is that we would like the low children to benefit from the high acceptance of all of the high children. The experimenter will provide you with weekly charts, so that you may keep a record of your pairings.

An extremely important aspect of Project Acceptance is your verbal and non-verbal praise in both of the two procedures, as well as on any other appropriate occasion. We would like you to give praise or attention (smiling or looking at or touching) in response to any positive statement about or action toward a low child by any child; any positive statement interaction between a low child and another child, and any appropriate social or academic behavior exhibited by the low child. Please try to either praise or ignore the particular behavior immediately after it occurs. Also, please try to be consistent in rewarding behaviors that need to be increased and ignoring behaviors that need to be eradicated.

The experimenter will check with you often and be available for consultation whenever you might need assistance. Your suggestions about the effectiveness of Project Acceptance will be appreciated.

This handout included a brief rationale, specific directions for implementing the procedures, and a list of the children in the highest and lowest quartiles of acceptance. In addition to this information sheet, the teacher and aide were given charts for recording their pairings and calendar-schedule charts suggesting children to be used in the candy distribution and daily assistants' activities each day during the five-week treatment period. Copies of these charts are included in Appendix II. The instructions to be given to the child distributing the candy were fashioned after those by Kirby and Toler (2). The daily assistants' pairings were styled similarly to those of Brooks (1).

The experimenter provided the teacher and aide with an assortment of Brach candies and fifty pennies. The candies were contained in small brown paper bags. The importance of the isolate asking each classmate "Which kind of candy would you like?" was stressed.

The experimenter arranged for a period each Thursday to work with the high-low pair of students to be involved in the show-and-tell pairing for each of the five weeks of treatment. Friday was determined as the day for show-and-tell presentations. The experimenter also decided with the teacher and aide that chart records would be collected by the experimenter and that teacher-aide/experimenter conferences would be held on Fridays after school.

The experimenter designed the show-and-tell activities according to the information about the talents and interests of the least-accepted children obtained from the teacher and aide. Each of the activities involved one pair of students, except for one game which was designed to utilize two pairs of students. The show-and-tell activities consisted of a pantomime, an exercise, a game, an ecology program and practicum, and a song and dance activity. Role playing was used in preparing the high-low pair of students for their presentation. When necessary the low acceptance status child was coached individually in an effort to assure his successful performance.

The experimenter suggested various activities that would be appropriate for the teacher-based pairings of low and high sociometric children with the teacher and teacher's aide in the experimental classroom. Suggestions included creative and social activities (such as music, art, physical exercise, dance, and games) and academic activities (such as math, reading, and puzzle completions). Other recommended areas for pairings were as hall monitors and field trip partners. The experimenter stressed the importance of choosing activities which would facilitate successful performance by the low acceptance child in the pairing.

The teacher and aide were instructed in principles of contingent reinforcement. Specific behaviors to be praised

and to be ignored were delineated. Immediacy and consistency of reinforcement were emphasized.

The sociometric test was again administered at the end of the five-week period in the same fashion as the pre-sociometric data had been collected.

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CHAPTER IV

RESULTS, DISCUSSION, AND RECOMMENDATIONS

Results

An analysis of the pre- and post-sociometric data revealed several interesting findings. The social structure of the control group remained relatively stable during the five-week interval between sociometric testings. On the other hand, a number of significant changes occurred in the experimental classroom during the treatment period. Results indicated that subjects in the experimental high acceptance quartile decreased in social status, while every subject in the experimental low acceptance quartile increased in social acceptability.

Four of the six hypotheses set forth in this study were supported by the data. The first hypothesis was:

(1) The pre- and post-treatment sociometric scores of subjects in the experimental group will differ significantly from those of subjects in the control group.

A two-way design of analysis of co-variance was used in testing this hypothesis. No significant findings resulted from the analysis of co-variance treatment. The first hypothesis, therefore, was one of the hypothesis that was not supported. The analysis of co-variance was of value in that it provided control over initial differences between the experimental

and control groups. When these initial differences were controlled, there were no significant differences within or between the groups of subjects.

Yet, small groups were used in this study. In each of the classrooms, there were four quartiles of subjects. Two of these quartile groupings contained seven subjects and two contained six subjects. Changes between pre- and post-sociometric scores within such small groups may be hidden by a group statistic like analysis of co-variance. For this reason, the present study made three hypotheses that could be tested by t tests.

Correlated t tests seemed to be a more appropriate statistic. Six group means for each of the eight quartiles of subjects were determined. These included each group's average number of choices received on: (1) the work criterion on the pre-sociometric test and on the post-sociometric test; (2) the play criterion on the pre-sociometric measurement and on the post-sociometric measurement; and (3) the sum of the play and work criteria on the pre-sociometric test, as well as on the post-sociometric test.

Twenty-four correlated t tests were performed between these pre- and post-treatment means. Winer's Statistical Principles in Experimental Design (16) served as the source book for the correlated t tests, as well as the analysis of co-variance design used in this study. The twelve t tests presented in Table I were performed on the control group data.

TABLE I

LEVELS OF SIGNIFICANCE OF DIFFERENCES BETWEEN THE PRE- AND POST-TREATMENT PERIOD MEANS OF PLAY CRITERION, WORK CRITERION, AND SUM OF THESE CRITERIA IN THE FOUR QUARTILE GROUPINGS* IN THE CONTROL CLASSROOM

Quar- tile Group- ing	Cri- ter- ion	Pre- test Mean	Pre- test sd	Post- test Mean	Post- test sd	<u>t</u>	P
High (N=6)	Work	6.00000	1.24691	5.33333	1.50555	1.19523	0.2856 N.S.
	Play	4.83333	1.16905	4.33333	2.87518	0.45964	0.6651 N.S.
	Sum	10.83333	1.16905	9.66667	2.80476	0.93375	0.3933 N.S.
Mid High (N=7)	Work	4.00000	1.00000	3.57143	1.81265	0.70065	0.5098 N.S.
	Play	3.42857	0.97590	3.85714	1.34519	-0.89113	0.4072 N.S.
	Sum	7.42857	0.78680	7.42857	1.98806	0.00000	1.00000 N.S.
Mid Low (N=7)	Work	1.71429	1.25357	1.85714	1.06904	-0.28098	-.7882 N.S.
	Play	2.85714	1.34519	2.71429	1.49603	0.19365	0.8528 N.S.
	Sum	4.57143	1.51186	4.55143	2.29907	0.00000	1.0000 N.S.
Low (N=6)	Work	0.33333	0.51640	1.33333	1.03280	-3.87298	0.0117
	Play	0.83333	0.75277	1.00000	0.89443	-0.30715	0.7711 N.S.
	Sum	1.16667	0.75277	2.33333	1.21106	-1.65916	0.1580 N.S.

*N=26.

The second hypothesis was the first of three hypotheses evaluated by the results of t tests. It stated that:

(2) The mean number of total choices (i.e., the sum of work and play choices) received by the subjects in each of the acceptance quartiles in the control classroom on the post-treatment sociometric measurement will not differ significantly from the mean number of total choices received by these groups of subjects on the pre-treatment sociometric measurement.

The data in Table I supported this hypothesis. As shown by the P column in Table I, none of the pre- and post-test sum means of any acceptance quartile grouping in the control classroom differed significantly.

Table I also indicated that the pre- and post-test work means found for the low acceptance quartile of subjects in the control class differed significantly. The control group teacher had to leave two weeks after the pre-sociometric measurements were taken. This teacher change perhaps contributed to the work status increase in the low acceptance grouping. Barclay reported that ". . . teacher change can affect test scores on psychometric criteria over a short period of time"(1, p. 246).

The overall sociometric status structure of the control classroom, however, remained relatively stable. A rank order correlation between pre- and post-status ranks yielded a stability coefficient of .7516. When the factors of teacher change and age of the population studied were taken into account, this stability coefficient appeared to be rather high.

The stability coefficient obtained in the experimental class was .5000. These stability coefficients provided support for the third hypothesis of this study. This hypothesis stated that:

(3) The sociometric status ranks of the subjects in the experimental group will be less stable than that of the subjects in the control group.

The experimental group's stability coefficient was lower than that of the control group's. It was therefore assumed that a greater amount of change occurred within the social structure of the experimental classroom.

These stability coefficients were determined from a method suggested by Weinburg (15). Using the t tables of McLamar (10), they were not found to differ significantly. The stability coefficient of .5000, however, suggested that changes occurred in the experimental classroom's social hierarchy. Results of t tests provided information on the nature of these changes.

The results of t tests conducted on data collected from the upper-three quartile groupings in the experimental classroom are presented in Table II. The fourth hypothesis is assessed by these results contained in Table II. This hypothesis states that:

(4) The mean number of total choices (i.e., the sum of work and play choices) received by the subjects in the high acceptance quartile, next-to-highest acceptance quartile, and next-to-lowest acceptance quartile in the experimental classroom on the post-treatment sociometric measurement will not differ significantly from the mean number of total choices received by these groups of subjects on the pre-treatment sociometric measurement.

As can be seen in Table II, this hypothesis is only partially supported. The findings presented in Table II are in agreement with the hypothesis in that the pre- and post-treatment means found for the subjects in the two middle quartiles in the experimental classroom do not differ significantly.

TABLE II

LEVELS OF SIGNIFICANCE OF DIFFERENCE BETWEEN THE PRE- AND POST-TREATMENT PERIOD MEANS OF PLAY CRITERION, WORK CRITERION, AND SUM OF THESE CRITERIA IN THE UPPER THREE QUARTILE GROUPINGS* OF THE EXPERIMENTAL CLASSROOM

Quar- tile Group- ings	Cri- ter- ion	Pre- test Mean	Pre- test sd	Post- test Mean	Post- test sd	t	P
High (N=6)	Work	7.66667	2.94392	6.16667	3.37145	1.96396	0.1067 N.S.
	Play	3.66667	1.36626	2.83333	1.16905	1.53574	0.1852 N.S.
	Sum	11.33333	2.87518	9.00000	3.57771	2.76699	0.0295
Mid High (N=7)	Work	2.28571	1.38013	1.71429	0.95119	1.00000	0.3559 N.S.
	Play	4.14286	1.06904	3.85714	1.06904	0.42008	0.6891 N.S.
	Sum	6.42857	1.13389	5.57143	1.13389	1.27920	0.2481 N.S.
Mid Low (N=7)	Work	1.71429	0.75593	2.42857	1.39728	-1.98680	0.0941 N.S.
	Play	2.85714	0.69007	2.57143	1.98806	0.31109	0.7663 N.S.
	Sum	5.57143	0.53452	5.00000	2.38048	-0.47834	0.6493 N.S.

*N=20.

However, Table II also indicates that the mean amount of total number of choices received by subjects in the high acceptance group decreased significantly during the treatment period. This finding does not support the prediction in the third hypothesis that concerned the experimental high acceptance quartile.

This unanticipated finding merits discussion. The sociometric instrument used in this study calls for a limited number of choices from each subject (i.e., three choices for work and three choices for play). When the number of choice responses is set, one subject's increase or decrease in sociometric status necessarily effects the status of other subjects.

In this study, the subjects in the experimental high acceptance quartile decreased in choice status. Who received the choices lost by these subjects on the pre-sociometric measurement? As can be seen in Table II, the subjects in the middle quartiles of acceptance did not receive an increased number of choices on the post-test.

Evaluation of the fifth hypothesis of this study provided an answer to the above question. This hypothesis stated that:

(5) The mean number of total choices (i.e., the sum of work and play choices) received by the subjects in the low acceptance quartile in the experimental classroom on the post-treatment sociometric measurement will be significantly higher than the mean number of total choices received by this group of subjects on the pre-treatment sociometric measurement.

As shown by Table III, this hypothesis was supported. The difference between the pre- and post-sum means was significant at the 0.0019 level of confidence, as reported in the P column in Table III.

TABLE III

LEVELS OF SIGNIFICANCE OF DIFFERENCE BETWEEN THE PRE- AND POST-TREATMENT PERIOD MEANS OF PLAY CRITERION, WORK CRITERION, AND SUM OF THESE CRITERIA IN THE LOW QUARTILE GROUPING* OF THE EXPERIMENTAL CLASSROOM

Quar- tile Group	Cri- ter- ion	Pre- test Mean	Pre- test sd	Post- test Mean	Post- test sd	\bar{t}	P
Low	Work	0.66667	0.51640	2.00000	1.09545	-2.39046	0.0624 N.S.
	Play	1.16667	1.16905	2.66667	1.21106	-3.50325	0.0172
	Sum	1.8333	0.98319	4.66667	1.96638	-5.93666	0.0019

*N=6.

According to Table III, subjects in the low acceptance quartile showed a significant increase not only in mean number of choices on the work and play criteria combined, but also on the play criterion alone. The increase from pre- to post-means on the work criterion alone approached significance, as indicated by the P of 0.0624 reported in Table III.

The choice losses came from the subjects who could best afford a decrease in status. The choice gains were made by subjects who needed increased acceptance the most. This was the ideal change in this study because the sociometric instrument used in the measurements had a limited choosing stipulation.

This finding is seen as extremely important to the evaluation of the present study. If the majority of choice losses had come from subjects in either the next-to-highest or next-to-lowest acceptance quartiles, a new group of isolates might have been the result. Such was not the case in this study. Only two subjects received fewer than three choices on the post-sociometric test. Both of these subjects were accorded two choices. One of these subjects was in the low acceptance quartile. Although he received only two choices on the post-sociometric test, this was an increase over the one choice he received on the initial measurement.

Table III indicates that the subjects in the experimental low acceptance quartile made marked status gains as a group during the treatment period. It is of interest to know the distribution of increases among the individual low acceptance children. In fact, this information is necessary in order to evaluate the sixth hypothesis of this study.

This final hypothesis states that:

(6) Each of the children in the experimental low acceptance quartile will receive at least one more choice on either the work or play criteria on the post-sociometric measurement than each did on the pre-sociometric measurement.

Table IV presents the pre- and post-work, play, and sum of work and play scores of these subjects. According to Table IV, the sixth hypothesis is supported. Each subject increased at least one choice on either the work or play criteria during the five-week treatment period.

TABLE IV

PRE- AND POST-WORK, PLAY, AND SUM OF WORK AND PLAY
SCORES OF ALL SUBJECTS IN THE EXPERIMENTAL
LOW ACCEPTANCE QUARTILE

Subject	Pre-Work	Post-Work	Pre-Play	Post-Play	Total	
					Pre-	Post-
A	0	4	3	3	3	7
B	1	2	2	4	3	6
C	1	2	1	4	2	6
D	0	1	1	2	1	3
E	1	2	0	2	1	4
F	1	1	0	1	1	2
Totals	4	12	7	16	11	29

The data in Table IV also indicate that every child received more total choices on the post-sociometric measurement than on the pre-test. Such results appear remarkable when compared with the findings of studies (3, 4, 5, 8, 9, 17) with similar goals. The average amount of increase in total number of choices received by low acceptance children who experienced the treatment procedures is three choices per child.

Even when increases in play or work choices are considered separately, Table IV points out that the majority of these children still enjoyed increases. Five of the six children symbolized in Table IV increased in number of choices received on the work criterion alone, and one on

the play criterion alone. The number of work criterion choices received by Subject F in Table IV did not increase or decrease. Such was also the case with Subject A of Table IV on the play criterion.

The results reported in Tables III and IV indicate the effectiveness of the techniques used to promote the acceptance of subjects in the experimental low acceptance quartile. Exactly what did the individuals in this grouping experience do during the treatment period? The pairing occasions encountered by each of these subjects are summarized in Table V.

TABLE V
NUMBER OF PAIRINGS EXPERIENCED BY SUBJECTS IN THE
EXPERIMENTAL LOW ACCEPTANCE QUARTILE*
DURING THE TREATMENT PERIOD

Subject	Teacher Pairings	Daily Assistant's Pairings	Show-and-tell Pairings	Total
A	47	23	1	71
B	46	16	1	63
C	27	20	1	48
D	39	24	1	64
E	39	16	1	56
F	50	24	1	75

*N=6.

Averaging of information presented in Table V results in the following means: (a) 41.33 teacher-based pairings, (b) 20.50

paired activities as daily assistants, and (c) 1.00 show-and-tell activities. In summary, each of the six subjects was involved in an average of 62.83 pairings during the five-week experiment.

It was possible to analyze the way in which the low acceptance child was seen in the teacher-based pairings since she was instructed to record this data on each of her pairings. Children from the low quartile grouping were seen "positively" by classmates observing the paired activity in 94.2 per cent, "okay" in 4.4 per cent, and "negatively" in 1.4 per cent of the 248 teacher-based pairings. It is important to point out that 76.1 per cent of the pairings in which the low acceptance child was perceived by observers in non-positive ways involved Subject D of Tables IV, V, and VI. At the onset of treatment procedures this child exhibited an extremely high rate of disruptive behaviors. The teacher reported a decrease in these socially inappropriate behaviors toward the end of the experimental period. Also of anecdotal importance is that one high-acceptance pupil started choosing Subject F of Tables IV, V, and VI for a reading and dancing partner during the fourth week of treatment.

Table VI shows that every child in the experimental low acceptance quartile passed out candy to his classmates on at least three occasions. Subject E of Table VI participated in the candy distribution activity only three times because

of absences. It was possible for each child to pass out candy four times during the 25-day period.

TABLE VI
NUMBER OF TIMES SUBJECTS IN THE EXPERIMENTAL LOW
ACCEPTANCE QUARTILE DISTRIBUTED CANDY

Subject	Number of Times Distributed Candy
A	4
B	4
C	4
D	6
E	3
F	4

Subject D of Table VI was given the role of candy distributor one extra day because he had more difficulty in participating successfully in paired activities, and because of the possibility that his being paired with a primary reinforcer (candy) would positively affect his peers' perception of him.

Discussion

The combination of three different procedures based on a diversity of theories about behavior seems to be the primary reason for the successfulness of this study. Researchers basing their efforts solely upon reinforcement techniques (6, 14) or exclusively upon socialization experiences (3, 4, 5, 8, 9, 17) do not report comparable findings.

Results of the effectiveness of the pairing technique when used alone are reported by Brooks (5). Four out of seven isolated children increased in acceptance status during a five-week period of paired activities with highly accepted children. When the present study added the techniques of contingent teacher reinforcement and candy distribution, 100 per cent of the low acceptance children increased in acceptance status.

The chief value of pairing low and high acceptance status children seems to be the opportunity it provides for positive interaction (5). An isolated child is placed in a situation where he can experience cooperative efforts (2) and success in an activity which involves another peer. There is also the possibility that the child lacking in acceptance will learn appropriate social skills from the high acceptance model. He can then use his social skills with other peers and perhaps experience more satisfaction in his interpersonal relationships. In addition, the subjects in this study were paired together in activities which required responsibility and were valued by the classroom group. The pairing technique accomodates the provision of many socialization experiences. All of the possible functions of this technique are probably major factors in the results of the present study.

The candy distribution activity can also be seen as a means of creating a situation where positive interaction is

likely to occur. Since most children react favorably to being offered candy, it is quite possible that the social isolates in this study experienced peer as well as teacher reinforcement for their positive verbal interactions with peers. This technique was fashioned after one used by Kirby and Toler (7) to aid a single isolate.

Another possible function of the candy distribution activity is drawn from a classical conditioning paradigm. The isolate is seen as a possible conditioned reinforcer and the candy as a primary reinforcer in this model. Through the pairing of the two, perhaps the classmates came to see the isolate more positively. The pairing of a high and low acceptance child also lends itself to this type of theoretical analysis. The combination of these two possibilities of classical conditioning seemingly helped to reduce the "reputational factor" (3) which contributed to the low acceptance status of the isolated children in this study.

The use of contingent reinforcement techniques by the teacher may have also helped in the way of improving the reputation of the isolated children since she was instructed to reinforce positive statements about any of the isolates by their classmates. In addition, this operant technique probably aided the children lacking in acceptance by increasing their rates of appropriate social and academic behavior and decreasing their rates of undesirable behaviors.

Contingent reinforcement was included as a procedure in this study because it seems to be a necessity in aiding certain isolated children. Perhaps "socially uninterested" isolates and even "recessive" isolates (11) could have been helped by the pairing and candy distribution techniques alone. Yet efforts to aid isolated children must also apply to the "socially uninhibited" child who suffers from a lack of acceptance. Until his socially inappropriate behaviors are decreased, they will prevent him from learning more desirable behaviors and gaining acceptance from his classmates. It was therefore necessary to instruct the teacher to ignore undesirable behaviors and to reward desirable behaviors (13).

The teacher and teacher's aide in the experimental classroom verbalized many positive statements about the program. They indicated that the procedures did not take time away from regular classroom activities, but actually facilitated their teaching efforts.

The intention of this study was to develop a combination of techniques that would aid all types of children who lack adequate social acceptance. Results indicate that this goal was generally accomplished. More extensive testing is undoubtedly needed, however, before a more conclusive statement can be made.

Recommendations

Future social scientists who concern themselves with methods of aiding social isolates should continue to explore

the resources available within the classroom situation. Practicality and simplicity, as well as effectiveness, should be basic considerations in developing acceptance-promoting techniques for school personnel. A behavioral curriculum type of approach to the writing up of these techniques is ideal.

The techniques tested in this study have been written in curriculum format and presented to educators for extended pilot testing. This social behavior program includes a teacher packet which contains a brief rationale, specific instructions for implementing techniques, and charts for recording information; and a school psychologist or counselor packet containing a rationale, evaluation procedures, and lesson plans suggesting activities for show-and-tell pairings. The functions of the school psychologist or counselor in this program have been kept to a medium.

Future developers of behavioral programs should also try to minimize the active duties of the school psychologist or counselor. The less participation required by the school psychologist or counselor, the more time he or she will have to implement these programs and function as a consultant. More classrooms can be worked with and more isolated children can be helped to attain adequate acceptance status in this way. Shaw and Worsten (12) point out the importance of reaching as many children as possible.

The techniques utilized in this study should be tested more extensively in all-black kindergarten and first-grade classrooms in inner city schools. The effectiveness of the present combination of procedures in classrooms composed of all-white children, all-Chicano children, and children of mixed cultural-racial backgrounds would also be an interesting area for future research.

More studies evaluating the effectiveness of the pairing technique as a single method would be of value. It is possible that the present study might have obtained results similar to those found if the pairing technique alone had been used. The subjects in Brooks' (5) study experienced an average of 26 pairings per child during the five-week "interaction period." The subjects in the present study participated in an average of 62 pairings each, also during a five-week period of time. Perhaps the increased intensity of the pairing technique was a major factor in the increased effectiveness.

Contingent teacher reinforcement of all acceptance-promoting behaviors is a final area recommended to future investigators. These experimenters should not restrict their efforts to increasing an isolate's rate of interaction with peers. Other behaviors contribute to the condition of non-acceptance.

All of the conditions of social isolation and the varying behaviors exhibited by children lacking in social

acceptance should be considered in developing acceptance-promoting techniques for the classroom situation which will aid the vast majority of isolated students. Effecting such a diversity of conditions and behaviors will most likely require methods based on a variety of psychological theories.

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APPENDIX I

SOCIOMETRIC TEST DESIGNED BY PATRICIA J. FALLIS

My name is _____.

1. What three children in your class would you like to work with?

2. What three children in your class would you like to play with after school?

APPENDIX II

CHARTS USED IN PROJECT ACCEPTANCE

Teacher and Teacher's Aide Pairing Record Chart*

Low child	Mon.	Tues.	Wed.	Thurs.	Fri.	
a	1-P**					
b						
c						
d						
e						
f						
High child	1	2	3	4	5	6

*Five of these record charts were given to the teacher and teacher's aide (i.e., one chart for each week in the treatment period). The instructions were to pair any high child with any low child in any activity that the low child will be seen positively in by observing children.

**Record the number corresponding to the child paired with and a brief description of activity paired in. Also, please note P (positive), N (negative), or OK (okay) in regard to how low child was seen by others observing paired activity.

"Daily Assistants" Schedule Chart*

Monday	Tuesday	Wednesday	Thursday	Friday
a-1 <input type="checkbox"/>	b-2 <input type="checkbox"/>	c-3 <input type="checkbox"/>	d-4 <input type="checkbox"/>	e-5 <input type="checkbox"/>
f-6 <input type="checkbox"/>	a-2 <input type="checkbox"/>	b-3 <input type="checkbox"/>	c-4 <input type="checkbox"/>	d-5 <input type="checkbox"/>
e-6 <input type="checkbox"/>	f-1 <input type="checkbox"/>	a-3 <input type="checkbox"/>	b-4 <input type="checkbox"/>	c-5 <input type="checkbox"/>
d-6 <input type="checkbox"/>	e-1 <input type="checkbox"/>	f-2 <input type="checkbox"/>	a-4 <input type="checkbox"/>	b-5 <input type="checkbox"/>
c-6 <input type="checkbox"/>	d-1 <input type="checkbox"/>	e-2 <input type="checkbox"/>	f-3 <input type="checkbox"/>	a-5 <input type="checkbox"/>

*Please record the number of activities in which each pair of daily assistants participate.

"Show-and-Tell" Schedule Charts

Monday	Tuesday	Wednesday	Thursday	Friday
				a-6
				b-5
				c-4
				d-3
				e-2
				f-1

Candy Distribution Schedule Chart

Monday	Tuesday	Wednesday	Thursday	Friday
a	b	c	d	e
f	a	b	c	d
e	f	a	b	c
d	e	f	a	b
c	d	e	f	a

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