A FILM STUDY DEMONSTRATING THE EFFECT OF POSITIVE REINFORCEMENT FOR TEACHING SOCIAL BEHAVIOR TO INNER-CITY PREKINDERGARTEN CHILDREN

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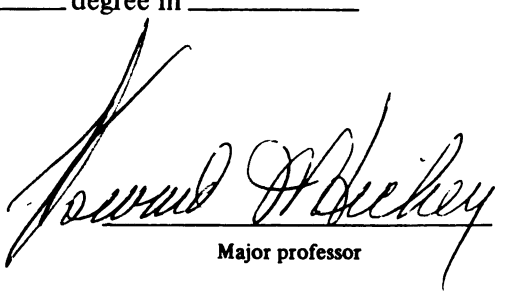

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ABSTRACT

A FILM STUDY DEMONSTRATING THE EFFECT OF POSITIVE REINFORCEMENT FOR TEACHING SOCIAL BEHAVIOR TO INNER-CITY PREKINDERGARTEN CHILDREN

By

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This study investigated the effectiveness of the use of positive reinforcement in the teaching of social behaviors to inner-city prekindergarten children. Three specific social behaviors were examined: (1) taking turns, (2) following directions, and (3) group problem solving. Adult attention was systematically directed toward those children exhibiting desired behavior and withheld as an immediate consequence of undesirable behavior.

A film study showed the effectiveness of positive reinforcement. The use of this film will permit other observers to see the response of the children to adult attention that is directed toward desirable behavior and that this attention is powerful enough to change the undesirable behaviors of the other children. This film can be used as an aid for both parents and teachers for teaching of social behavior to young children.

The data for this study were collected from 37 children enrolled in the Jessie Rouse prekindergarten program in the City of Saginaw School District. This prekindergarten program is

federally funded through Title I of the Elementary and Secondary Education Act and its purpose is to prepare "disadvantaged" children for entry into kindergarten.

A time sample recording technique was employed, in which each session was divided into time periods. All subjects' responses, both positive and negative, were recorded for taking turns, group problem solving, and following directions. Daily percentages were calculated and all data were summarized and placed on charts.

The statistical tests supported the following findings:

1. The number of times children took turns did increase when positive reinforcement was immediately directed toward the children exhibiting the desired behavior.

2. The number of children following directions did increase when positive reinforcement was immediately directed toward the children exhibiting the desired behavior.

3. The number of children participating in group problem-solving sessions did increase when positive reinforcement was immediately directed toward the children exhibiting the desired behavior.

4. Children continued taking turns when positive reinforcement was intermittently directed to the children exhibiting the desired behavior.

5. Children continued following directions when positive reinforcement was intermittently directed to the children exhibiting the desired behavior.

6. Children continued participating in group problem-solving sessions when positive reinforcement was intermittently directed to children exhibiting the desired behavior.

This study found that the use of positive reinforcement was effective in teaching social behaviors to inner-city prekindergarten children. This study also found that adult attention that is systematically directed toward those children exhibiting desirable behavior will be powerful enough to change the undesirable behavior of the other children.

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By

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TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

IDENTIFICATION OF THE RESEARCH PROBLEM

In a Gallup Poll of July, 1976, reported in Phi Delta Kappan (October, 1976), the public identified lack of discipline as the most pressing problem in the schools. Teachers, responding to a similar poll of the National Education Association (1975), felt that disruptive behavior of students was the number one problem in their classrooms.

It is apparent from these results that teachers need to become more involved in teaching desirable social behavior in the classroom. Such instruction should begin when the children first enter school and should be a continuous step-by-step learning process throughout the grades. The study presented in this paper examines the effectiveness of one method of teaching desirable classroom behavior to prekindergarten children.

The desirable behaviors that are to be taught must be decided upon prior to the initiation of the learning experience. Parents and teachers working together can identify and order priorities for those social behaviors they want the children to acquire in the classroom. Once these behavioral objectives have been identified, a particular method can be used to design a learning program to assist the children.

There is general agreement among educators that one of the primary functions of prekindergarten, Head Start, and kindergarten is to foster in each child those social behaviors that will contribute to a desirable learning environment. However, there is little direction in the literature as to the most effective method of teaching desirable classroom social skills. Many writers subscribe to the mental-hygiene approach, which is based on a combination of psychoanalytic theory and child-centered therapy principles. Yet, this provides little direction for the teacher who must deal with children exhibiting disruptive behaviors such as hitting, kicking, spitting, and taking another child's toys. Landreth (1942) advised limiting adult attention to a minimum but offering suggestions to the child. When in doubt, he said, do nothing unless the child is hurting himself or others. Read (1955) suggested talking with the child about his feelings and sublimating those feelings through vigorous activities. Montessori (1912) suggested that disciplinary problems can theoretically be settled by offering the right activities at the right time and that anything of a coercive nature should be avoided since all growth is to be voluntary.

As Whiting (1958) pointed out:

> Various positions have been taken as to the major determinants of a child's behavior. Gesell and Piaget, taking a developmental point of view, say the most important thing to know in order to predict a child's behavior is how old he is; Freud and his followers would insist that the most important determinant of a child's behavior is his life history, especially his relationship with his father and mother; the learning theorists would insist that a knowledge of previous

> rewards and punishments for the particular behavior in question is what is needed. The Gestalt school, as exemplified by Lewin, Baldwin and Wright would take a historical approach and insist that knowledge of the situation that is, the setting and instigation is the thing to have; and of course, the anthropologists would insist that if you don't know what society the child is a member of, you can't predict a thing (p. 3).

Research concerned with the process of learning is divided into three general areas: primary learning, secondary learning, and social learning. Although this paper is concerned with the latter, the basic principles and concepts of social learning are developed during the primary learning stage.

Pavlov viewed learning as essentially a process of stimulus substitution. A stimulus was chosen which could be counted on to evoke a response. This was then paired repeatedly with a neutral or conditioned stimulus until the latter gained power to evoke the response.

Thorndike, Hull, Skinner, Miller, and Spence had a different view of learning, generally referred to as the reinforcement theory of learning. This theory emphasizes motivation and reward. Rather than controlling the response and changing the stimulus as Pavlov did, the stimulus is held constant and the response is permitted to vary freely. This type of theory views learning as a process of response selection. Reward following a correct performance is held to be crucial in this theory. Rewards or reinforcements take several forms: (1) positive and negative, (2) extrinsic and intrinsic, and (3) primary and secondary.

Using some combination of such guidance precepts, teachers have reported success in teaching social behaviors to prekindergarten children. However, adherence to the same teaching principles has not always been helpful in eliminating many undesirable behaviors. Indeed, it is usually not at all clear what conditions and principles may or may not have been operative. All of these precepts have in common the adult behaviors of approaching and attending to a child. Therefore, it seems to this writer that a first step in developing possible explicit criteria for teaching desirable social behavior is to study the precise effects that adult attention can have on certain behaviors.

Classrooms are social situations, and each child must adapt to this social environment if he is to be successful in school. For years, teachers have been using the system of rewards and punishments to control undesirable behaviors and have gotten almost nowhere. Skinner (1971) said it is true people work for pleasure and to avoid pain.

> What we have found in the laboratory is that the important thing is not the magnitude of what you get but the conditions under which you get it--the relationship between the consequences of behavior and the behavior. We call it the contingencies of reinforcement: How is a reinforcer contingent upon the behavior? If the contingencies are good, the behavior will be strengthened. If they're bad, you can reward and punish as much as you like and you'll get nowhere. You've neglected the contingencies.
>
> Teachers must recognize what they are doing, which is reinforcing the children, and then note what behavior it's contingent upon. By doing that they can develop great power to manage a classroom, for example. You want kids to come to school, sit down, study and learn something. If you make the proper reinforcers contingent on those behaviors, you'll get them. You don't need to threaten, you don't need to send

> them to the principal for a spanking. Nothing of that sort. You just get the results by reinforcement (Ravis, 1971, p. 21).

In order to develop an effective program of positive reinforcement, the teacher must be aware of the physical, emotional, and cognitive needs of the children in his classroom. Culturally deprived children present many unique problems in these cases.

Many culturally deprived children come to school ill-prepared and find the school ill-prepared to receive them. These children have been referred to as problem children, retarded, slow learners, underprivileged, socially malnourished, disadvantaged, and many other terms and phrases intended to describe their environmental handicaps.

Deutsch (1962) pointed out that slum life provides a minimum range of stimulation and little opportunity to manipulate objects or to experiment with them in an orderly manner. This results in a deficiency in the development of intelligence. Bernstein (1960) found that lower-class conversations are limited to the immediate instant and generally do not include time, sequences, relationships between concepts, logical sequences, or causal relationships.

These deficiencies might be easy to correct if they did not also include the additional complications of emotional characteristics and attitudes.

Allinsmith and Goethals (1956) found that it was difficult for any person to span two cultures. For the young child

from a culturally deviant environment entering school can produce a cultural shock. The psychological consequences of this shock can impede socialization and be severe enough to lead to disorganization and neurotic behavior.

Variations in background naturally create a discrepancy between the cognitive, perceptual, and emotional development of the child, according to Taba (1964). The socialization process is carried on in the schools in a manner that incudes conflict between the child and his home. Taba (1964) maintained that this conflict leads to doubts in the child's mind about himself and his parents, his way of life and the values he has invested with feelings and emotional identification, and on which, therefore, his self-esteem rests.

According to Krogman (1956), inner-city children tend to have a low self-concept, limited trust in adults, many feelings of guilt, and a low standard of conduct. They are also hyperactive, question their own worth, fear being challenged, have a desire to cling to the familiar, and usually show apathy and lack of responsiveness. It is also difficult for them to develop any meaningful relationships in school.

Many Mexican-American children are actually making a jump from the eighteenth century to the twentieth century. They come primarily from rural areas both in Mexico and the United States. This transition involves a difficult adaptation, from a simple, easy-going culture into a more complex society that is mechanized, anonymous, and alienated from their previous environment. These

conditions create an increasing social distance between the school culture and that of the home and neighborhood.

Taba (1964) stated:

> . . . Homes of these children have a limited education tradition and, hence, little "know-how" about the school and its expectation. Not only are the parents themselves uneducated, they also have a meager understanding of the requirements for success in school. Therefore, they cannot help their children with academic content, skills in conduct, or in kindling aspiration for continued education (p. 150).

Schools often add to the difficulty by failing to recognize the problem, by demanding too abrupt a transition, and by paying too little attention to the role school life plays in facilitating acculturation.

If inner-city students are to have an equal opportunity to learn, it must begin with social learning. Moore (1964) felt the "schools must fill the gaps left by social learning at home and mend the conflict between the culture of the home and of the school."

Goldberg (1964) described a successful teacher of the culturally deprived as one who is aware of their home environment and who knows that native potential intelligence is unmeasurable. The successful teacher sets clearly defined limits and is aware that, unlike middle-class children, they rarely respond to exhortations intended to control behavior through invoking feelings of guilt and shame. He, therefore, sets the rules, fixes the boundaries, and establishes the routines with a minimum of discussion. He is also warm and outgoing, adapting his behavior to the individual pupils in his class. This teacher respects his students

and communicates this respect by setting high but reachable expectations, by impartial and consistent firmness and honesty, and by warm personal regard for each individual. Like other successful teachers, he has extensive knowledge of the content of the subjects he teaches.

Educators have recognized the schools' failure to educate culturally deprived children and have made some attempts to overcome it. Aided by such disciplines as psychology, they have tried to identify these children and diagnose their particular problems. However, diagnosis is frequently accompanied by labels that tell the teacher nothing about how to teach those children effectively. Another problem with labels is that they too often are used to rationalize what is in fact ineffective teaching. This study will go beyond labels to show the effectiveness of positive reinforcement in teaching social behaviors to inner-city prekindergarten children.

It is widely believed that American education has neglected systematic methods and teaching strategies for promoting social-emotional aspects of child development. This position has been noted by commentators in several disciplines: education (Borich, 1971), humanistic psychology (Henderson, 1972), special education (Bradtke, 1972), and behavioral psychology (Homme, 1970; Winnett and Winkler, 1972).

Skinner (1971, 1974) has written that behavioral techniques can be used to produce environments where cooperation, friendship, and respect prevail. Others (Homme, 1970; O'Leary

and O'Leary, 1972) have suggested that if schools should decide to emphasize affective goals such as the development of love and joy, the techniques of positive reinforcement would be a more effective approach.

With such a positive approach to teaching, it is possible to have students who pay attention, not because they are afraid of the consequences if they do not, but because paying attention has proved to be worthwhile. According to Skinner (1971), it is possible that students can become interested in their work, not because the work has been chosen which is interesting, but because the complex behavior called "taking an interest" as been abundantly reinforced. This approach produces students who learn because they have begun to understand the natural advantages of knowledge over ignorance, not because they fear punishment.

Skinner (1971) contended that positive reinforcement methods can be easily adapted to the classroom and that it entails no drastic changes in classroom organization or teaching methods but requires only that the teacher be aware of the basic principles of human behavior and utilize them in a consistent way. Skinner also felt that the current serious problem of school discipline could be solved by the use of positive reinforcement instead of punishment in the classroom.

Purpose of This Research

This research investigated the effectiveness of the use of positive reinforcement in the teaching of social behaviors to

inner-city prekindergarten children. Three specific social behaviors were examined: (1) taking turns, (2) following directions, and (3) group problem solving. Adult attention was systematically directed toward those children exhibiting desired behavior and withheld as an immediate consequence of undesirable behavior.

The effectiveness of positive reinforcement will be examined on film as the children respond to these three situations.

This research is important for a variety of reasons. First, it contributes additional information to the body of research literature concerned with teaching desirable classroom behavior in a prekindergarten inner-city school.

Second, this research gives teachers of young children an effective method of teaching desirable social behavior. The current research literature on teaching social behavior to inner-city prekindergarten children is inconclusive.

Finally, this research is helpful in demonstrating the technique of positive reinforcement to parent education groups and prospective teachers. Because this research will demonstrate on film the results of positive reinforcement, it should be an additional instructional aid for both parents and teachers.

Research Questions and Hypotheses

Research Questions

The primary research question of this study is: Will the use of positive reinforcement be effective in teaching social behaviors to inner-city prekindergarten children? This question is examined by showing on film the children's responses in the three specific social behaviors. The three behaviors that are examined are: (1) taking turns, (2) following directions, and (3) group problem solving. In each situation the following procedures were followed: (1) the teacher reviewed with the children the desirable behavior, (2) the children who performed the desirable behavior were given adult attention, and (3) the desired behavior was intermittently reinforced with adult attention.

The second question posed by this research is: Will adult attention that is systematically directed toward those children exhibiting desirable behavior be powerful enough to change the undesirable behaviors of the other children?

Research Hypotheses

In examining the research questions posed above, six research hypotheses are proposed to explore the various relationships.

H_1: The number of times children take turns will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

H_2: The number of children following directions will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

H_3: The number of children participating in group problem-solving sessions will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

H_4: Children will continue taking turns when positive reinforcement is intermittently directed to children exhibiting the desired behavior.

H_5: Children will continue following directions when positive reinforcement is intermittently directed toward children exhibiting the desired behavior.

H_6: Children will continue participating in group problem-solving sessions when positive reinforcement is intermittently directed toward children exhibiting the desired behavior.

Definitions of Important Terms

The following are definitions of important terms used frequently in this research study.

Contingency management is a systematic approach to the use of reinforcement. It involves a statement of the functional relationship between the child's responses and their consequences (Haring and Phillips, 1972).

Cueing is the process of giving a hint, a clue, or a tip to the child. The cueing procedures include: (1) visual modeling and other types of visual cueing; (2) verbal instruction, verbal modeling, and other types of auditory cueing; (3) physical guidance; and (4) precise environmental arrangements (Becker, 1971).

Desirable behaviors are used to refer to those behaviors with which those who comprise the child's social environment would be pleased (Gardner, 1974).

Discrimination is a reaction to differences and is learned through selective reinforcement and extinction (Hilgard and Atkinson, 1967).

Egocentrism is the child's inability to take another's point of view because he is unable to integrate the ideas of others into his thinking (Piaget, 1965).

Extinction is a deliberate strategy of withdrawing all reinforcement, positive or negative, in response to a behavior (Haring and Phillips, 1972).

Modeling is a condition in which the behavior to be acquired is demonstrated for the learner (Brown and Avery, 1974).

Prompting is the same as cueing.

Punishment is an aversive environmental event that decreases the frequency of occurrence of the response with which it is associated (Deese, 1958).

Reinforcement can be defined as anything that both increases the strength of a response and tends to induce repetitions of the behavior that preceded the reinforcement (Luthans, 1973).

A positive reinforcer is one that strengthens an association between a stimulus and response.

A negative reinforcer also strengthens the association between stimulus and response but it does so by its termination rather than presentation.

An extrinsic reinforcer does not have a direct relationship to the behavior itself. It is artificial and often arbitrary, such as money.

An intrinsic reinforcer is a natural consequence of the behavior, such as self-satisfaction or the acquisition of a new skill.

A primary reinforcer reduces some innate, vital physiological need, such as the need for food, water, or to escape pain.

A secondary reinforcer is a stimulus which, after it has been paired with a primary reinforcer, reinforces a behavior.

Intermittent reinforcer is used to encourage a child to continue performing an established behavior with few or no rewards, gradually and partially decreasing the frequency of the reinforcement.

Social reinforcement is a method of maintaining and modifying the behavior of children with adult approval or attention.

Shaping is a process that consists of reinforcing successive approximations of the desired behavior (Haring and Phillips, 1972).

Socialization is the term that sociologists use to describe the process of transforming babies who can do little but cry, eat, and sleep into adults who can communicate and function rather effectively in their society. Socialization varies from culture to culture (Bushell, Wrobel, and Michaelis, 1968).

Undesirable behaviors are used to refer to the child's behaviors that will be objectionable or cause negative reactions in the classroom, such as hitting, yelling, destroying property, slapping, and kicking (Gardner, 1974).

Limitations of the Research

Listed below are those aspects of the research that cannot be controlled:

1. All children in both morning and afternoon sessions of the prekindergarten will be included; thus any children with severe abnormal social behavior will be included in this study.

2. Since student attendance is not mandatory in the prekindergarten, numbers of participants will vary from day to day.

3. The number of participating children is small. The possibility of selecting several prekindergartens was dismissed on the grounds that it might present results of questionable reliability. The reason is that it would introduce such interfering variables as teacher variability and curriculum variability, both of which might affect the behavior of the children.

4. The interest and difficulty of the group problem-solving activities will vary between each activity and could distort the results.

5. Since many children come from Spanish-American homes, there could be a language barrier between the teacher and the students.

6. Intelligence levels of the children were not obtained. It was the view of the observers and the teacher that none of the children in the study departed greatly from a normal range of intelligence. Intelligence, as determined by intelligence tests, was not considered to be an interfering variable as long as a child did not depart from the normal range of intelligence. This

assumption is based on findings by Bijou (1965) that age is a more powerful variable in determining the social behavior of prekindergarten children. Therefore intelligence would have little influence on the social behavior of young children as long as it did not vary from the normal range.

7. Since the children may not be representative of all inner-city prekindergartens, the results of this study may not be generalized beyond the characteristics of this particular population and subject content area selected.

Summary

An attempt was made to establish a need for the most effective method of teaching social behavior to inner-city prekindergarten children. Literature was presented that discussed the different learning theories and their relationship to social learning. Definitions of terms, objectives of the study, stated hypotheses, and limitations were presented.

CHAPTER II

REVIEW OF RELATED LITERATURE

Overview

This section presents a brief review of the literature relating to the research question under examination in this study. Two specific topics are investigated here: (1) a review of Jean Piaget's studies on the social development of prekindergarten children and (2) a review of the effects of positive reinforcement in the classroom. Each of these areas is discussed and summarized. An overall summary follows them.

Social Development

This section reviews the literature on the effects of positive reinforcement in teaching social behaviors to prekindergarten children, based on the work of Jean Piaget.

In the period Piaget calls preoperational (18 months to age 7), the child is perceptually oriented; he makes judgments in terms of how things look to him. The child centers on only one variable and has difficulty realizing that an object can possess more than one property. During this stage, children confuse their own point of view with that of others. Piaget's studies found that each child at this age plays games according to his own rules and every one is a winner--to win means to have a good time.

Each child speaks for himself even though he thinks he is listening to and understanding others. This kind of "collective monologue" is really a mutual excitation to action rather than a real exchange of ideas. The child speaks not only to others but he constantly talks to himself. Early social behavior remains midway along the road between egocentrism and true socialization. Rather than extricating himself from his own point of view in order to coordinate it with the views of others, the child still remains unconsciously centered on himself.

Piaget observed that the morals of the young child are essentially heteronomous, and are subject to the external will of either respected persons or parents. Through his habits of play and imagination and his spontaneous thinking, a child is led to modify reality and to bend it to his own desires. He thus distorts the truth without misgivings. The child, nonetheless, accepts the rule of truthfulness and considers it right that he be blamed or punished for his own lies. Only lies to adults are blameworthy since it is adults who prohibit them. Regardless of the intention, the child feels that the further the falsehood is from reality, the worse the lie. These reactions, although seemingly typical, show how much the first moral values are derived from unilateral respect and how these values are interpreted according to their formation rather than their intent.

In short, interest, self-evaluations, spontaneous interpersonal values, and intuitive moral values appear to constitute

the principle crystallization of the affective life at this level of development.

Piaget's research found that, except in rare instances, children of this age do not generalize. Wahler's (1969) study supported Piaget's findings. Wahler described a change in the absence of spontaneous generalization of behavior from a child's home to the school setting. A behavior management program was initiated in the home of a five-year-old boy who displayed a general pattern of stubborn and disruptive behavior in both home and school settings. Although the behavior in the home improved, it did not generalize to the school setting. At school, he remained a stubborn and disruptive child. This behavior did change in the school only when the teachers initiated a similar behavior management program in that setting.

Piaget's studies showed that children of this age think concretely. They deal with each problem in isolation and do not integrate their solutions by means of any general theories from which they could abstract a common principle.

When children of this age try to furnish explanations to others, they are not really able to put themselves in the place of the other person; hence they talk as though they were talking to themselves.

In this period, a young child, who is less socialized than he is after the age of seven and much less so than the adult, needs a system of signifiers other than language, that are more individual and more motivated. The three symbols that are most

commonly found in the young child and that affect intelligence are: (1) symbolic play, (2) deferred imitation, and (3) mental imagery.

Symbolic play appears at about the same time as language but develops independently of it. It is of considerable significance in the young child's thinking. It is a source of personal, cognitive, and affective representations and of equally personal representative schematizations.

Deferred imitation or imitations is that which occurs for the first time in the absence of the model to which it corresponds.

Mental imagery, according to Piaget, is a symbol of the object that is not yet manifested at the level of sensorimotor intelligence. The image can be conceived as an internalized imitation.

These three types of symbols are derived from motor imitation. It is independent of language, even though it aids in the acquisition of language. Language is thus a necessary, but not a sufficient, condition for the construction of logical operations.

Symbolic play constitutes a real activity of thought but remains essentially egocentric. Its function is to satisfy the self by transforming what is real into what is desired. The child who plays with dolls remakes his own life as he would like it to be.

A child's interest is a regulator of his energy and mobilizes internal reserves of strength. Piaget believed it is

for this reason that students make infinitely better progress when their studies correspond to their interests and needs.

According to Brearley and Hitchfield (1966),

> Children need freedom to make mistakes so that they may see the results of their own small injustices as well as those of others. They need to be in situations safe enough for them to be relatively free of adult interference in this social experimenting because only so can they bring the situation to its own close. After some poignant experience of this kind the youngest children often need to have their energies and attention directed elsewhere (p. 128).

It is possible, according to Piaget (1965), to foster the ideas of consideration for other people, at first on the grounds that this is the kind of thing one likes oneself. A certain amount of retributive behavior in young children must be tolerated by the teacher since it is only through experiences of this type that children can come to the next stage of thinking and feeling.

Young children have a different attitude concerning punishment than do adults. Younger children are only groping toward the idea that unacceptable behavior will be punished, or reciprocated in some form by their peers. Piaget felt children must be given ample opportunity in real social experiences to develop these ideas. The teacher must verbalize with the child the reason for the behavior and take this into consideration. Generalized discussion of moral issues is usually not appropriate in the prekindergarten.

The results of Piaget's studies with young children concerning punishment lead one to rethink the whole question of rules and regulations in school. School and classroom planning must be

such that the children's participation leads educators to think in terms of the solution to problems rather than obedience. If the teacher organizes everything himself, then it becomes merely a question of the children's conformity to this plan. The children are learning nothing of the reciprocity of self-command; they are not building up the permanent school of values that leads them to self-control and accepting the consequences for their own behavior.

Piaget (1965) felt the educational system must take into account the child's deeper psychological tendencies which urge him to work with others. Children working and studying in isolation can lead to good marks but is a handicap to the formation of reasonable beings and good citizens.

Piaget's studies found that young children's morality is determined by what adults around them permit and do not permit. Children believe that the rules are absolute and inflexible and that the same definitions of right and wrong hold true for everyone. An action will be viewed bad if it does not conform to a rule, if it causes damage, or if it is punished. Piaget found that young children view a child who broke 15 cups accidentally as being naughtier than a child who deliberately broke one cup. At the same time young children can perceive their own inner states and they expect everyone to understand their own innocent intentions. A prekindergartener, for example, who accidentally breaks a glass may deny responsibility for the act.

While children's ideas about right and wrong remain fairly stable, their behavior varies from situation to situation. Piaget's studies showed that children are not uniformly "honest" and "dishonest." A study by Nelson et al. (1969) found that children who will cheat in one situation may not cheat in another, depending on the opportunities, pressure to achieve, sanctions, and peer pressure.

A summary of Piaget's research provides many insights into teaching social development to young children.

1. Acquiring social skill is similar to motor development; the order of the stages and their nature does not change appreciably from one child to the next, but the rate of progress may be different.

2. Young children play games not to win but for the enjoyment of the game.

3. The child accepts orders, commands, and discipline from the adults he respects. Rules between children do not exist. Only adults have rules for children. Reinforcement from an adult whom the child respects will be more effective.

4. A child will stay with an activity longer if it meets his needs and is interesting.

5. A child needs to internalize his own social behavior. Unless a child performs a behavior as the result of his own motivation then the behavior has not been learned.

6. Young children tend to distort the truth and lies are not intentional. Lies that exaggerate reality are more serious to the child.

7. Lies to his peers are not considered to be serious by the child.

8. Behaviors must be learned in each new environment. Behaviors do not carry over from the home, school, on field trips, in the gym, or on the playground; they must be learned in each new situation.

9. Children at this age cannot be expected to exchange ideas, for they cannot integrate the ideas of the other children into their thinking.

10. Imitation is important in the learning of new social skills.

Piaget's studies have given some insights into the child's mind, and this knowledge should help adults become more effective in developing desirable behaviors in young children. An adult who is trying to teach children social behavior must be aware of the children's cognitive, physical, and emotional development. Piaget's findings demonstrate some of the differences in a young child's reasoning. It is these differences that must be understood to insure that young children will become successful learners and furthermore, will come to enjoy learning.

Positive Reinforcement

Positive reinforcement for the purpose of this study is defined as giving adult attention in the form of praise, approval, and affection to those desirable behaviors that are being performed by the prekindergarten children and withholding such

attention from negative consequences. The major concept underlying positive reinforcement emphasizes a positive, humanistic orientation. This approach, according to Gardner (1974), develops the highest possible level of self-direction, self-control, and independence in each young child.

Contingent positive reinforcement helps children develop an internal focus of control, according to studies by Crandal (1969) and Risley and Baer (1973). They found that reinforcement can also raise their general expectations of success and encourage their continued performance of appropriate behaviors.

Social reinforcement, which is an extrinsic and positive reinforcer, has been found to be a powerful weapon in controlling the aberrant behaviors of preschool children. A few examples include hyperactivity (Allen, Henke, Harris, Baer, and Reynolds, 1967), operant crying (Hart, Allen, Buell, Harris, and Wolf, 1964), and mutilative self-scratching (Allen and Harris, 1966).

A single unifying theme is apparent in each of these experimental analyses: The common everyday social behaviors or responses of preschool teachers are powerful determinants of child behavior. Therefore, the behaviors to which a teacher responds will increase, while the behaviors to which a teacher fails to respond will cease to exist. If a teacher wishes to eliminate the isolated tendencies of a withdrawn child (Allen, Hart, Buell, Harris, and Wolf, 1964), she withholds her smiles, praise, and conversation as long as the child remains withdrawn. But the moment the withdrawn child moves toward a peer or interacts with them the

teacher immediately directs attention to him. By controlling the timing of responses, that is, holding responses contingent on the desirable behavior rather than the undesirable behaviors, pre-kindergarten teachers have demonstrated that beneficial behavior changes can be effected (Harris, Wolf, and Baer, 1964). The research detailed in this paper uses this method of teaching desirable social behaviors.

A study by Harris et al. (1964) demonstrated the effectiveness of positive reinforcement in changing the behavior of a three-year-old child attending a prekindergarten program. The child spent 80 percent of her time in school crawling. The teachers viewed this behavior as a form of regression that followed the birth of a second child in her family. The teachers observed that she was getting considerable attention when she was crawling. The teachers agreed to ignore her when she was crawling and give adult attention only when she was in an upright position. Within one week of using positive reinforcement, she returned to a normal pattern of walking, running, and standing. The teachers, using a reversal control procedure, returned to providing attention when she was crawling and within two days the child regained the crawling rate of 80 percent. When the teachers again provided attention for walking, standing, and running the child returned to her normal pattern within four days. The use of positive reinforcement was continued and she retained her normal mobility behavior.

Birnbrauer and Lawler (1964) found that social reinforcement may be ineffective in influencing desired classroom behavior. They reported the development of numerous social and study behaviors in a highly disruptive, severely retarded boy. These newly acquired behaviors were soon lost when only social approval was provided. A token reinforcement system was necessary before the boy returned to desirable classroom behavior.

Brown and Elliott (1965), in their study with a group of nursery school students, were able to reduce significantly both physical and verbal aggressive behaviors. The undesirable behaviors were ignored by the teacher, while the cooperative and non-aggressive behaviors received frequent attention. The aggressive behaviors were controlled by using positive reinforcement procedures. During the training, the nursery school teacher tried, as much as possible, to ignore aggression and to reward peaceful behavior by attention and praise. Ratings of the children's aggression were made for a week prior to the training period in an effort to determine a base or reference rate of aggressive responses. Similar ratings were made after the first week of a two-week training period and again after three weeks to assess the effects of training. Although the effects on verbal aggression were enduring, physical aggression increased after the brief training period and decreased again with further training.

Johnston et al. (1966) examined a shaping procedure whereby successive approximations of the desired behavior were reinforced for a child who was physically inactive. Initially the child had

never used the climbing bars. The adults began providing social reinforcement for successive approximations. Whenever the child would go near or walk by the climbing bars, the adults would smile and speak to him. The adult attention was gradually changed to require the child to be nearer and nearer the bars. The adults terminated their attention when the child moved away from the bars. The child soon touched the frame and then climbed on them. Within a short period of time, the child was vigorously playing on the bars.

The reports of Wolf et al. (1964, 1967), Lovas (1964), and Lovas et al. (1966) found that it is not necessary to understand how a particular behavior developed out of past experiences in order to effectively change the behavior in the present. In most cases a focus on the child as he responds in his present environment can result in some appropriate behavior development. In these studies, children with limited and highly deviant behavior patterns were provided positive reinforcement that resulted in the development of a wide range of desired social behavior patterns.

A study by Becker and his colleagues (1967) examined the use of adult attention on a group of culturally deprived elementary school children who were identified as exhibiting a high rate of disruptive behaviors. These disruptive behaviors included getting out of one's seat frequently, rocking one's chair, destroying another's property, hitting, slapping, kicking, crying, and ignoring the teacher's requests. The teacher reminded these

children about the expected behaviors and then began ignoring the undesirable behavior and praising the desirable behavior. Statements of praise and recognition were used. After a few weeks of providing adult attention for the desirable behavior, there was a significant reduction in the undesirable behaviors. The teacher did the following:

1. Specified the desired behaviors. The children were told exactly what behavior was expected of them.
2. Did not give attention to the undesirable behaviors but instead gave praise to the children who were performing the desirable behavior.
3. Praised the children for improvement of behavior and when praising specified the behavior.

After six weeks, over 90 percent of the teacher's comments were observed as being positive. Both students improved greatly. In a follow-up study it was found that merely repeating the rules was not effective in changing classroom behavior.

Scott et al. (1967) reported that consistent use of contingent positive attention works in the classroom because children reinforced for good behavior will tend to engage in that behavior again and children observing the situation may motivate the child receiving the attention and will imitate the behavior that has been rewarded. Evidence from several studies (Gelfand et al., 1974; Scott et al., 1967) indicates that children often use teachers as their models and children are more likely to imitate positive nurturant adults than punishing adults.

Kanfer and Zich (1974) concluded that the less obvious external control exerted by the teacher, the more responsibility children have for directing their own behavior and the more opportunity they will have for learning and practicing self-control. Therefore direct commands should be kept to a minimum; otherwise, teachers may find themselves constantly involved in compelling children to obey.

Hoffman and Saltzstein (1967) presented evidence that when children learn social development through positive approaches rather than fear of punishment, the children tend to internalize such actions. With positive approaches children are also more likely to accept the blame for their own behavior, feel guilty when doing something wrong, and are more resistant to temptation. They also begin to formulate a general definition of "right" based on concerns for others rather than on concern for consequences to themselves.

Reynolds and Risley (1968) and Bereuter and Engelmann (1966) found in their studies that social attention in its various forms is less likely to be as effective in influencing behavior as are more concrete tangible events. They suggested that material reinforcers are disproportionately strong and that social reinforcement (praise, attention, and approval) from adults is a weak reinforcer among preschool children who live in culturally deprived homes. Adults appear to be important chiefly as dispensers of tokens.

Ward and Baker (1968) evaluated the effects on other class members when teachers provided selective social reinforcement to individual children who either presented a high frequency of disruptive behaviors or who were withdrawn and nonattentive. Other class members were responded to as they had been prior to the initiation of the specific training program. The children who received the selective social attention for desirable behavior showed a significant decrease in undesired behaviors. Although teachers did slightly decrease the amount of attention to the other class members, there was no significant increase in their deviant behavior.

A study by Buys (1970) found that although disruptive behaviors decreased with the use of contingent social reinforcement, it rose again when reinforcement ceased. Herman and Tramontana (1971) have shown that individual and group reinforcement were not differentially effective in modifying classroom behavior. Furthermore, the addition of instructions to reinforcement strengthens the capacity to modify behavior.

In administering what they believe to be punishment, teachers must take care that they are not actually increasing the behavior they wish to discourage. Harris et al. (1964) found that any form of adult social reinforcement would increase that specific behavior.

In addition to the effects of attention, teachers must be aware of the model they are setting for children's behavior. In a study by Gelfand et al. (1974) the adults used rewarding or

punishing techniques to teach a game to six- to eight-year-old children. When these children were asked to teach the game to another child, they imitated the punishing or rewarding behavior of their own teacher. Bandura and Walters (1963) reported that teachers who don't want children to develop coercive, punishing interaction patterns should be wary of employing such techniques themselves. The adult who uses physical punishment provides a model for aggressive behavior that may be imitated by the children.

Punishment by itself may suppress an undesirable behavior, according to Walter and Parke (1964), but it will be ineffective in the long run if the teacher does not take the opportunity to teach and reinforce alternative desirable behaviors.

Parker and Deur (1970), in a study of prekindergarten boys, found that punishment clearly was effective in reducing the amount of aggressive response. Other studies have shown that punishment can facilitate children's learning (Meyer and Offenbach, 1962; Penney, 1967; Macmillan et al., 1973). Aronfree (1968) found that discrimination learning in children is improved when punishment and reward are used as complementary outcomes. They found this approach to be more effective than when a reward/no reward system was used in complementary fashion (Spence and Segner, 1967; Stevenson et al., 1959). These authors did not advocate an unqualified or even an increased use of punishment, nor did they advocate not using extinction procedures where applicable. They remained firm advocates of positive reinforcement techniques in every instance possible.

Differences in persistence at a task due to monetary and social incentives have been examined by Williams (1970). Findings demonstrated that social reinforcement was more effective than monetary reinforcement in increasing persistence. No differential effects due to socioeconomic level were found. Females, however, demonstrated greater persistence than males.

A recent study by Bergan, McManis, and Melchert (1971) investigated the effects of token and social reinforcement on the Weschler Intelligence Scale for Children performance. Boys were found to be more accurate in the token reinforcement condition than in the verbal or control conditions. Girls, on the other hand, were more accurate when they received social reinforcement. Considering speed of performance, boys were the fastest when they received social reinforcement, while girls were equally fast in both reinforcement conditions.

Brown (1971) found that a combination of token and social reinforcement was more effective in modifying behavior than either form of reinforcement alone. It was concluded that altering social and token incentives apparently altered the meaning of the token reinforcer to include approval.

Deci (1972) found that verbal reinforcement was more effective in increasing intrinsic motivation than was monetary reinforcement. This finding, however, was restricted to male subjects.

Brown et al. (1969) reported that, for kindergarten children, tangible rewards do not generally have more reinforcement value than social approval comments from an adult. A combination

of tangible and social reinforcement may be more effective than tangible or social reinforcement alone. It was also noted that young children respond to different kinds of rewards and that much thought must be given to the manner in which appropriate responses are shaped and strengthened so that they can eventually be maintained by natural consequences.

A study by Hassett (1970) examined the effects of money, candy, personal praise, and performance praise of several lower-class cultural groups (Anglo, Navaho, Spanish-American, and black). The unanimous response to material rewards observed among the groups was attributed to lower-class membership and not to cultural differences.

Other research examining the differential effects of social and nonsocial incentives further suggests a simultaneous consideration of individual characteristics and/or the behavior under investigation. Witryol, Lowden, Fagan, and Bergen (1968) examined the effects of reinforcement schedule (100 percent verbal versus 100 percent material; 100 percent verbal versus 50 percent material), motivation-inducing instructions, age and sex upon a two-choice discrimination learning, problem-solving task, in which one choice was rewarded with a verbalism and the other with a small toy. Results indicated that choice of verbal reward increased as a function of instructions, schedule, and age. Subjects who were low in socioeconomic status chose more verbal than material rewards. Subjects considered high in socioeconomic status were not responsive

to the schedule conditions, while middle-class subjects were most influenced by the instructions.

Drabman and Lahey (1974) and Drabman et al. (1974) reported that the reduction of disruptive behavior will increase positive social interaction between children. Strain and Timm (1974) reported results suggesting that changes in the rate of positive social responses by the recipient of contingent adult attention may be accompanied by comparable changes in the social behavior of interacting peers. Viewed together, these correlational and functional analysis data suggest that as a child increases his rate of emitting positive social behaviors, his peers will in turn increase their rate of emitting positive social behaviors toward him.

Sarbin and Allen (1968) examined the ability of social reinforcement to alter group behavior. Low participators who received positive reinforcement increased participation during the first half of the reinforcement sessions and maintained that level in the remaining sessions. High participators who received negative reinforcement decreased participation greatly in the first half of the sessions yet increased to original operant levels during the remaining half. Data presented by Sorensen (1968) support the conclusion that social reinforcement can successfully strengthen dominant behavior in a group setting.

In a study by Crowley (1968), the teacher administered praise, blame, or silence to the children as they completed a task. It was found that the children receiving praise persisted the

longest and those receiving blame remained at the task the shortest period of time.

Yarrow et al. (1973) found that teachers can become more effective models by getting involved in a close relationship with children. In this study teachers spent several weeks building a relationship with children before systematically demonstrating helping behavior. Teachers used pictures and dramatic settings to portray situations in which people needed help. The teacher explained what she would do to be helpful. Children who observed models they already knew and respected were themselves more helpful and considerate to others than children who observed models with whom they had no previous relationship. The children continued to demonstrate their helpfulness several weeks after the study.

Allen (1966) reported that positive comments from an adult can influence children to spend more time doing a task. He found that the effect may be even more pronounced when the teacher praised the children intermittently rather than every time the task was performed. With these conditions, children will tend to continue an activity during fairly long periods of time without any encouragement at all.

It is not necessary to provide tangible rewards such as money, candy, snacks, or prizes to prekindergarten children for motivation purposes, according to Lepper and Greene (1973). They found that children who had been promised a certificate for drawing a picture of a visiting adult soon became disinterested in this activity. Children who drew a picture for the adult without

promise of the reward still maintained an interest in this activity, even though they received the reward as a surprise.

Environmental situations have a strong influence on the level of complexity of children's social interactions, according to Charlesworth and Hartrup (1967). Among prekindergarten children, they found that complex social interactions are most likely to occur in the doll corner and during dramatic play. Toys and games that promote group play encourage more complex social interaction than providing toys such as crayons, puzzles, and points for individual work. When teachers attend to group play and encourage it by providing positive comments and new suggestions, the number of complex interactions is likely to increase also.

As children grow older they tend to spend more time with other children and less with adults. Marshall and McCandless (1957) reported that children who spend a great deal of time interacting with adults tend to be less popular with their peers and such emotional dependence may interfere with this developmental shift. Scott et al. (1967) reported that teachers can influence in subtle ways the contingencies peers set for each other. When teachers give positive attention to cooperative friendly behavior and ignore inappropriate behaviors, children often imitate the teacher's example. They often stop responding positively to negative or inappropriate behaviors and begin to praise each other's constructive and desirable behaviors.

One effective means of raising a child's peer standing is to put that child in charge of a desired activity. Kerby and Toler

(1970) found that when they put a prekindergarten child in charge of dispensing candy to the class, he began to engage in more cooperative play. The candy had provided this prekindergarten isolate with a reason to approach other children and gain practice in making social initiatives. It also enhanced the boy's status in the group.

The preceding studies provided many strategies for teaching social behavior to young children:

1. Eliminate toys that suggest aggressive play, such as guns, toy soldiers, and cowboys (Bandura, 1973).
2. Do not allow aggressive acts to be rewarded with teacher attention or submissions by another child (Bandura and Walters, 1963).
3. Model a reasoned, cooperative, nonaggressive approach to social conflicts (Bandura and Walters, 1963).
4. Praise children who are behaving cooperatively consistently (Harris et al., 1967; Risely and Baer, 1973).
5. Avoid lecturing to children when they are not sharing or cooperating (Harris et al., 1967).
6. Provide models of sharing, helping, and cooperating (Yarrow et al., 1973).
7. Give attention to children who are behaving well. Use a form of attention the child finds pleasant (Risley and Baer, 1973; Brown et al., 1969).
8. Ignore misbehavior whenever possible and praise the children who are behaving appropriately (Brown and Elliott, 1965).

9. Specify the desired behaviors when praising the children (Becker et al., 1967).
10. Develop a few clear rules with the children and discuss the reasoning behind the rules (O'Leary and Drabman, 1974).
11. Provide equipment that can be used by several children at a time to increase social interactions (Thomson, 1972).
12. Provide and suggest to the child playing alone ways to interact with others and attend to the child only when he is playing with others (Johnston et al., 1966).
13. Avoid physical punishment (Bandura and Walters, 1963).
14. Direct commands should be kept to a minimum (Kanger and Zich, 1974).
15. Once a child has learned a task, praise him only intermittently (Allen, 1966).

Summary

It is apparent from the research considered here that there is no consistent nor consensual definition of what constitutes social reinforcement. The mere presence of an adult as well as interest items that allegedly have social connotations have qualified as social reinforcers.

In several studies of low-income children, it was shown that tokens could change behavior and that verbal praise was not enough. In other studies of low-income children, disruptive

behavior was changed by verbal praise. Punishment was even found to be effective with young children in changing behavior. These results indicate a very mixed picture.

Many of the studies with young children were done in laboratory settings under controlled conditions. Several studies were done with children who had extreme problems with social behavior. There are no consistent results that determine the effectiveness of positive reinforcement in the teaching of social behavior to inner-city prekindergarten children.

CHAPTER III

RESEARCH DESIGN

Overview

This section of the dissertation presents a description of the research and procedures for the research investigation. The first topic is the experimental design, which includes a description of the design, variables, and the research hypotheses.

A second topic is the method. Here the subjects, treatment, and the data-collection procedures are described. The final topic of this section is a discussion of the validity and reliability concerns of this research investigation.

Experimental Design

This investigation examined the effects of learning social behavior with the presence or absence of positive reinforcement and the effects of intermittent positive reinforcement in maintaining the desired behavior.

Variables

There are two independent variables that will be examined in this study. They are (1) the absence or presence of positive reinforcement in the teaching of three specific social behaviors and (2) maintaining the behaviors by intermittent positive reinforcement.

The two dependent variables of interest in this investigation are (1) the number and frequency of the children performing the social behaviors that receive positive reinforcement and (2) the number and frequency of the children performing the social behaviors that receive intermittent positive reinforcement.

Treatments

The children were observed receiving no positive reinforcement for the three social behaviors. The children were then observed receiving positive reinforcement and they were observed receiving intermittent positive reinforcement.

These observations were recorded by two observers for two weeks and by one observer for the last three weeks. The children were observed and data collected for a total of five weeks.

Hypotheses

As outlined in the first section of the research, six hypotheses were advanced to examine the research questions posed by this investigation.

H_1: The number of times children take turns will increase when positive reinforcement is directed toward the children exhibiting the desired behavior.

H_2: The number of children following directions will increase when positive reinforcement is directed toward the children exhibiting the desired behavior.

H_3: The number of children participating in group problem-solving sessions will increase when positive reinforcement is directed to the children exhibiting the desired behavior.

H_4: Children will continue taking turns when positive reinforcement is intermittently directed to the children exhibiting the desired behavior.

H_5: Children will continue following directions when positive reinforcement is intermittently directed to children exhibiting the desired behavior.

H_6: Children will continue participating in group problem-solving sessions when positive reinforcement is intermittently directed to the children exhibiting the desired behavior.

Method of the Research

Subjects

Data for this study were collected from children enrolled in the Jessie Rouse prekindergarten program in the City of Saginaw School District. This prekindergarten program is federally funded through Title I of the Elementary and Secondary Education Act. The prekindergarten program purpose is to prepare "disadvantaged" children for entry into kindergarten. In this case, the "disadvantage" means that children in this program come from a background that may not have equipped them with the skills necessary for success in school. A number of variables are involved: socioeconomic status, income level, number of books in the home, and family situation, among others. It is hoped that after a year of prekindergarten these children will be at least on a par with other four-year-olds as they enter kindergarten.

The class began in late September and the observations took place from October 4, 1977, to November 4, 1977. No data were collected on October 28, the day of the prekindergarten Halloween party.

Class composition was as follows:

Sex

Morning Group	Afternoon Group
9 boys	13 boys
11 girls	4 girls

Racial Composition

Morning Group	Afternoon Group
7 Caucasian	7 Caucasian
6 Black	1 Black
7 Mexican-American	9 Mexican-American

The total N for the morning group was 20. The total N for the afternoon group was 17. The total N for all groups was 37.

For the entire sample, ages ranged from 45 to 57 months. The median age was 52 months. As was mentioned in discussing the limitations of the study, this is not a large sample when one considers the various factors that are known to affect the children's behavior. However, it seems to be representative of the racial composition of inner-city schools.

The children attend school two and one-half hours either in the morning or the afternoon. Each session meets on Monday, Tuesday, Wednesday, and Thursday. On Fridays the children do not attend school. The teacher participates in in-service meetings, holds parent-child meetings, or has conferences with the prekindergarten parents.

In the fall before school starts, the children are given a screening test to determine their eligibility for the prekindergarten

program (Appendix A). This test is administered to each child individually by the teacher in the classroom. The test results are sent to the prekindergarten supervisor, who determines what children qualify for this program.

The prekindergarten teacher then visits each child and parents in their home. At this time the parents are informed of the starting date of school, which was September 27, 1976. The first day the six oldest children attend school, the second day the next six oldest attend, and on the third day all the children attend. This study began on the fifth day of school.

The Design

The reversal design for comparing the effect of positive reinforcement has been used by Allen et al. (1967), Baer and Wolf (1968), Harris et al. (1967), and Hart et al. (1964). The reversal design is typical of behavior modification experiments in general. In these studies, the length of the baseline period as well as any other phase of the experiments were usually determined by waiting until a relatively stable picture was obtained of the behavior. When this was achieved the second phase began, in which some reinforcement procedure was initiated.

Much of the work in behavior modification has relied on reversal design of experimental effects. For example, journals like the Journal of Applied Behavior Analysis and Behavior Research and Therapy will document that the preponderance of research in the area of classroom management has involved reversal designs. The

effectiveness of procedures such as token reinforcement programs and contingent teacher attention has been convincingly demonstrated with the reversal designs (O'Leary and O'Leary, 1972).

Procedure

This investigation employed a combination of a reversal and multiple-baseline design (Baer et al., 1968) to evaluate these conditions: (A) baseline behavior, (B) use of positive reinforcement, (C) withdrawal of positive reinforcement, and (D) intermittent positive reinforcement. These conditions were implemented in this order: A-B-C-B-D.

Baseline period is the rate of behavior prior to treatment of intervention. After a pattern of behavior emerges and performance is relatively stable, the use of positive reinforcement is implemented and is called the B phase. The next phase, reversal or withdrawal of positive reinforcement, was added to determine what caused the change. If behavior reverts to the initial baseline phase, this strongly suggests that the use of positive reinforcement was responsible for the change. To increase the plausibility of this conclusion, positive reinforcement is reinstated. If behavior again changes, this should be a clear demonstration that the intervention was responsible for the change.

Period A, Baseline

The existing rate of activity participation prior to the systematic application of positive reinforcement was recorded during the first full week of school. This stage involved conditions in

which no prompting or reinforcement for positive social behavior was provided by the teacher. At the end of the first week, the behaviors of the children reflected a stable and systematic movement. The number of times children were taking turns remained near 40 percent. The number of children following directions remained below 16 percent, and the number of children participating in group problem solving remained near 50 percent. There was little variability in behavior, and it is assumed that this level would remain stable if no intervention was begun.

Period B, Positive Reinforcement

The purpose of this stage was to increase and maintain an increased frequency of positive social behavior for each subject. The procedure for positive reinforcement each day was:

1. Tell the children the behavior that was expected.
2. Immediately reinforce the children for performing the desired behavior.
3. When reinforcing the children, refer to the specific behavior.
4. Ignore the undesirable behaviors.

When the undesired behavior occurred, the teacher did not in any way attend to the child, but remained absorbed in one of the many necessary activities of teachers with other children or reinforced the children who were performing the desired behaviors. If the undesirable behavior occurred while the teacher was attending to the child, she at once turned to another child in a matter-of-

fact way. The teacher gave immediate attention whenever the children performed the desirable behavior. This period was in effect for one week (four days).

Period C, Reversal

To ascertain whether positive reinforcement was, in fact, the determining factor in modifying the behavior under study, reinforcement was withdrawn. This reversal period lasted only three days because data showed the alteration affected the behavior in the direction observed during baseline. Johnson et al. (1966) and Hawkins et al. (1966) both used somewhat shorter second baseline periods in their studies.

Period B, Return of Reinforcement

In this phase of the study reinforcement procedures were reinstated. Children performing the desired behavior were immediately given positive reinforcement and the other undesirable behaviors were ignored. This phase was carried on for one week of the study (four days).

Period D, Intermittent Reinforcement

During this phase adult positive reinforcement was gradually reduced and the desirable behaviors were only reinforced intermittently. The frequency of the positive reinforcement needed to maintain the desirable behaviors were recorded for one week (four days).

Setting

The study took place in a classroom located in Jessie Rouse Public School in Saginaw, Michigan. The room is a regular classroom size, 24.5 feet wide by 36 feet long. The class routine and schedule were closely followed each day. The class schedule is located in Appendix B.

Activities

For taking turns, the children were divided into three groups with five to seven in each group. The children would take turns sliding down the slide for a total of three minutes. This activity was repeated each day throughout the study.

In group problem solving, the activities used were putting a cart together, constructing a shape tower, and putting puzzles together. A schedule of problem-solving activities is listed in Appendix C. Activities for group problem solving were similar both to the degree of difficulty and interest of the prekindergarten children. It was this writer's view that if the group problem-solving activities were repeated the children would remember the activity and would make it easier for them to participate.

Response Definitions

Taking turns is defined as giving another child a chance at an activity while the child waits for his turn. A child who did not go to the end of the line or who moved in front of another child was not considered taking turns. Recordings were made for three minutes for each group.

Following directions is defined in this study as following the specific instructions of the teacher. Each day the children were told to help put the toys away and then sit on the rug. The children were given five minutes to complete this task.

Group problem solving is defined in this study as three or more students working together to complete a motor activity that overcomes some type of barrier to accomplish the goal. The children had to contribute to the problem solving by using either some motor movement or verbal response and participate for three minutes. All tasks were too difficult for the children to complete.

Positive reinforcement by adult attention included verbal sayings such as, "These children are taking turns," "You are very fast workers," and "Look at all the children who are sitting on the rug." Nonverbal responses were a smile, a pat on the back, and close proximity to the children performing the desirable behavior. Other types of adult attention are listed in Appendix D.

Observers

Two observers were used for the first two weeks of the study. Total observer reliability for these weeks was 89.5 percent. One observer was used for the remainder of the study. Both observers were college students. The observers were given training for one session period. During this time the definitions of (1) group problem solving, (2) taking turns, and (3) following teacher directions were reviewed. One day of trial runs was made. It was decided

at this time to have the children wear name tags pinned on their backs.

The observers were instructed to record each time a child participated in the desired response with a positive (+) or a minus (-). A separate recording sheet with the children's names was provided each observer for each activity. Recording sheets are found in Appendix E. A timer was set at the beginning of each activity and rang at the completion of the time. The observers would then reset the timer and record the next group of children.

During taking turns, the observers recorded each group for three minutes. There were three groups with five to seven children in each group. At the end of each three minutes another group of children was recorded. The teacher rotated the children within the groups each day.

The same procedure for group problem solving was followed.

During following directions, the teacher would tell the children: "It's clean-up time." "Let's all help put the toys away and then come sit on the rug." This was repeated five times, one minute apart. The children would have five minutes to complete this activity. This same procedure was followed each day throughout the study.

The assessment of reliability among the observers was calculated by scoring the frequency of each child during each interval as agree or disagree and dividing the total number of agreements by the total number of agreements plus the total number of disagreements, or:

$$\frac{\text{\# of agreements}}{\text{\# of agreements + \# of disagreements}}$$

An example of instruments scoring and calculation of agreement is included in Appendix F. Table 3.1 shows the range and mean percentage of observer agreement for each behavior reported.

Data Analysis

A time sample recording technique (Bijou, Peterson, Harris, Allen, and Johnson, 1969) was employed, in which each session was divided into three-minute periods for problem solving and taking turns. Following directions was a five-minute period. All subject responses, both positive and negative, were recorded on a prepared coding sheet. All data collected were of a frequency nature. The frequency of both positive and negative behavior across all experimental conditions was collected.

Table 3.1.--Range and mean percentage of observer agreement for each behavior reported.

Behaviors	Range of Agreement (%)	Mean Agreement (%)
Taking turns		
Positive	82-86	84
Negative	94-96	95
Problem solving		
Positive	88-96	92
Negative	96-100	98
Following directions		
Positive	86-88	87
Negative	82-98	90

Daily percentages of the number of times each child participated in taking turns either negatively or positively were calculated. The frequency of the positive and negative behavior for each subject was calculated and summarized for following directions and group problem solving. All data were summarized and placed on graphs.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

This study attempted to provide data to support the following statements:

1. The number of times children take turns will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

2. The number of children following directions will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

3. The number of children participating in group problem-solving sessions will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

4. Children will continue taking turns when positive reinforcement is intermittently directed to children exhibiting the desired behavior.

5. Children will continue following directions when positive reinforcement is intermittently directed toward children exhibiting the desired behavior.

6. Children will continue participating in group problem-solving sessions when positive reinforcement is intermittently directed toward children exhibiting the desired behavior.

This study also attempted to provide answers to the following questions:

1. Will the use of positive reinforcement be effective in teaching social behaviors to inner-city prekindergarten children?

2. Will adult attention that is systematically directed toward those children exhibiting desirable behavior be powerful enough to change the undesirable behaviors of the other children?

Test of Hypotheses

H_1: The number of times children take turns will increase when positive reinforcement is immediately directed toward the children exhibiting the desired behavior.

During Baseline I, the subjects engaged infrequently in taking turns. The mean percentage of the frequency of taking turns was 41 percent (Table 4.1).

When teacher attention was directed toward the children taking turns (Baseline II), the desirable behaviors rapidly increased to a mean of 88 percent.

During Baseline III, reinforcement of the desirable behaviors was stopped and the behaviors decreased abruptly to a mean of 32 percent.

Table 4.1.--Taking turns.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	85	180	47	41%
	5	36	123	29	
	6	61	141	43	
	7	68	153	44	
Baseline II	11	104	121	86	88%
	12	110	118	93	
	13	105	125	84	
	14	100	113	88	
Baseline III	18	55	124	44	32%
	19	42	177	24	
	20	51	186	27	
Baseline IV	21	122	140	87	78%
	25	115	136	85	
	26	111	161	69	
	27	113	157	72	
Nov. Baseline V	1	78	86	91	89%
	2	64	75	85	
	3	68	77	88	
	4	56	61	92	

During Baseline IV, the subjects rapidly returned to taking turns when teacher attention was directed toward the desirable behavior. The mean number of positive behaviors was 78 percent.

The positive behaviors were maintained and increased with intermittent positive reinforcements (Table 4.2).

The frequency of taking turns rapidly increased when positive reinforcement was immediately directed toward the children exhibiting the desired behavior.

H_2: The number of children following directions will increase when positive reinforcement is directed toward the children exhibiting the desired behavior.

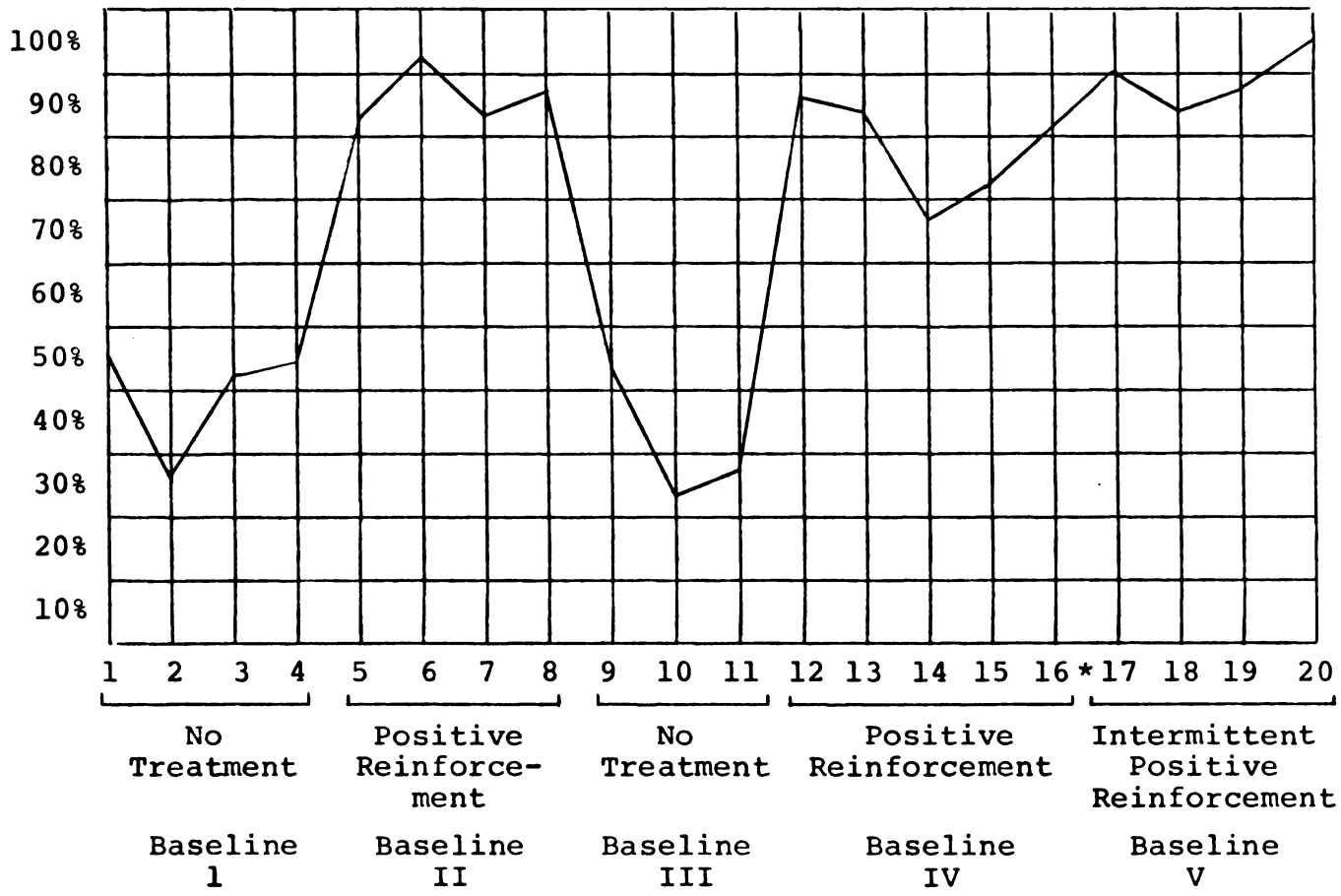
During Baseline I only a small number of children followed the teacher's directions by putting the toys away and sitting on the rug. The mean percentage of children responding to the directions was 6 percent (Table 4.3).

When the teacher gave the directions and then immediately called attention to those children who were following directions (Baseline II), the mean percentage of children responding rose to 60 percent.

When the attention was withdrawn and the teacher only gave the directions (Baseline III), the children following directions abruptly dropped to a mean average of 10 percent.

When teacher attention was reinstated the percentage of children responding increased to 79 percent (Baseline IV).

Table 4.2.--Percent times children participated positively in taking turns.



*No data, Halloween party.

Table 4.3.--Following directions.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	1	33	3	6%
	5	0	33	0	
	6	5	33	15	
	7	2	32	6	
Baseline II	11	15	31	48	60%
	12	15	35	43	
	13	26	33	79	
	14	22	31	71	
Baseline III	18	5	34	15	10%
	19	3	35	9	
	20	2	36	6	
Baseline IV	21	21	32	66	79%
	25	25	31	81	
	26	29	34	85	
	27	29	35	83	
Nov. Baseline V	1	30	30	100	86%
	2	33	36	92	
	3	24	34	71	
	4	27	33	82	

The behaviors continued to increase during the intermittent period as the teacher continued to positively reinforce the desirable behavior during Baseline V (Table 4.4).

The number of children following directions rapidly increased when positive reinforcement was directed toward those children performing this desired behavior.

H_3: The number of children participating in group problem-solving sessions will increase when positive reinforcement is directed toward the children exhibiting the desired behavior.

During Baseline I, the mean percentage of children who were participating in group problem solving was 41 percent (Table 4.5).

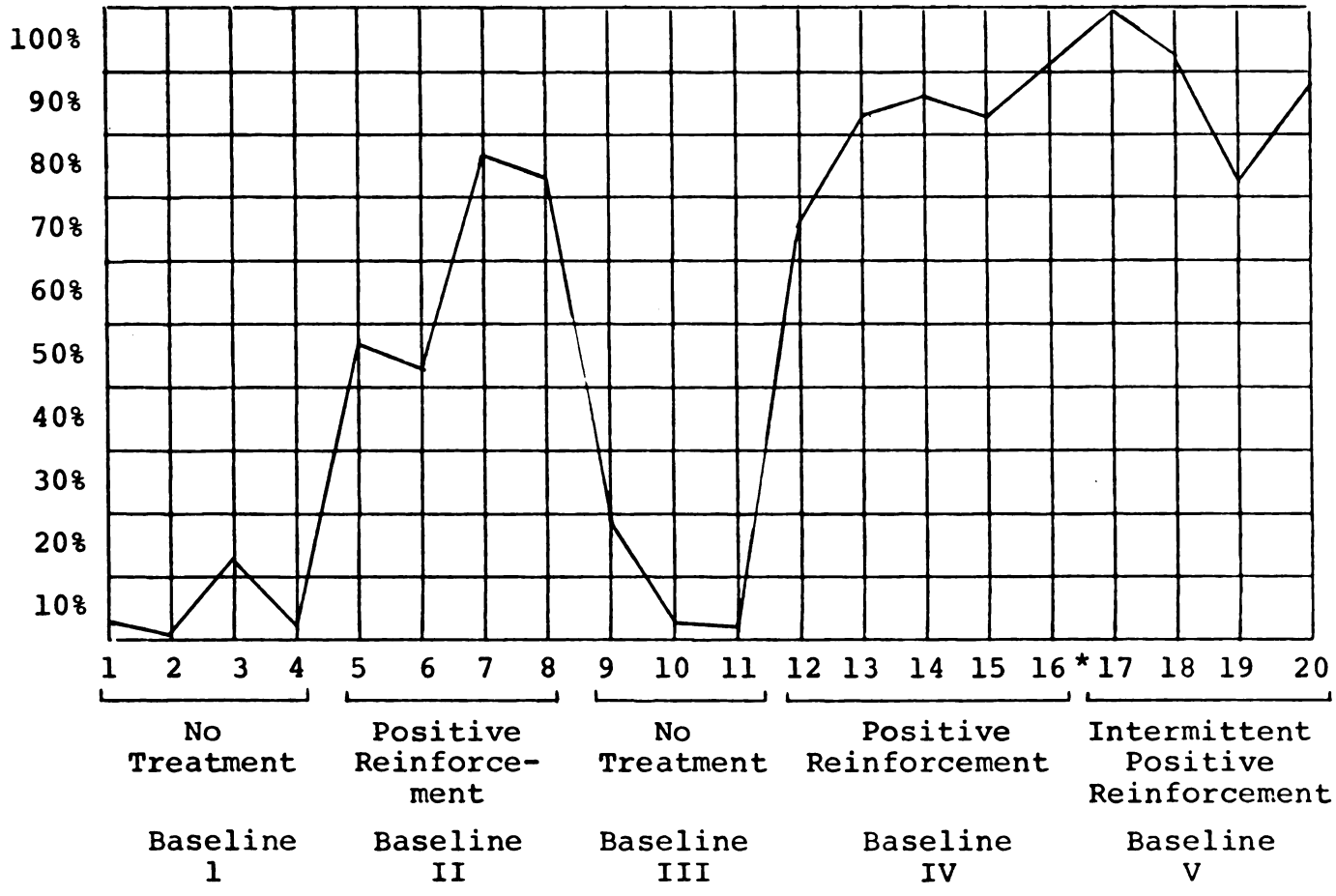
When teacher attention was directed toward those children participating in group problem solving (Baseline II), the mean percentage of children participating rose to 78 percent.

During Baseline III, positive reinforcement was withdrawn and the mean number of children participating in problem solving dropped steadily each day for a mean number of 48 percent.

When teacher attention was reinstated and directed toward those children performing the desired behavior, the mean number of children increased to 89 percent (Baseline IV).

During the intermittent positive reinforcement period (Baseline V), the desired behavior continued to increase and reached 100 percent participation on two days (Table 4.6). The mean participation for this period was 97 percent.

Table 4.4.--Percent times children participated positively in following directions.

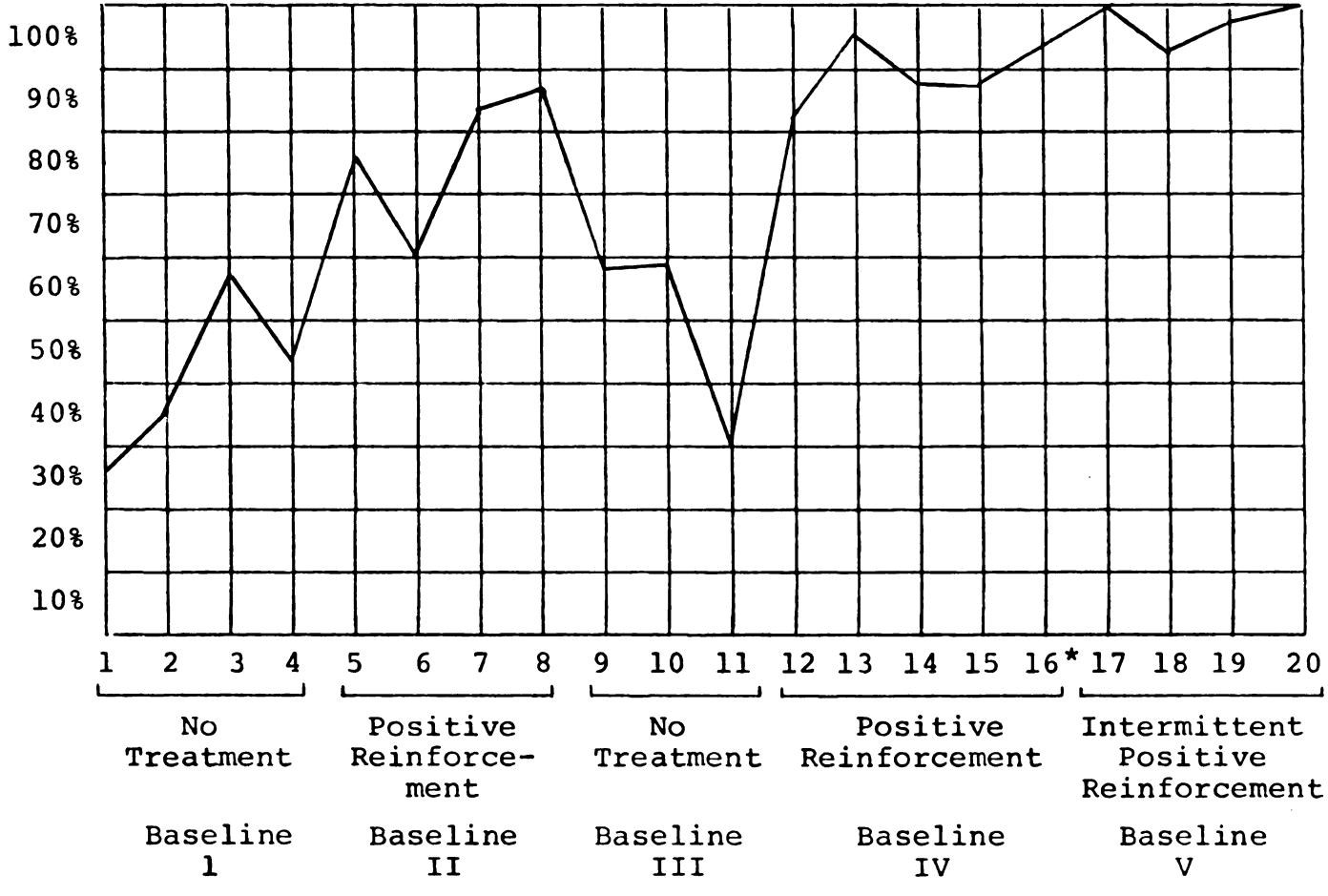


*No data, Halloween party.

Table 4.5.--Group problem solving.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	9	33	27	41%
	5	11	31	35	
	6	17	30	57	
	7	14	32	44	
Baseline II	11	19	24	79	78%
	12	21	35	60	
	13	25	30	83	
	14	22	25	88	
Baseline III	18	20	35	57	48%
	19	21	36	58	
	20	9	32	28	
Baseline IV	21	29	36	81	89%
	25	28	29	97	
	26	30	34	88	
	27	30	34	88	
Nov. Baseline V	1	28	28	100	97%
	2	25	27	93	
	3	22	23	96	
	4	21	21	100	

Table 4.6.--Percent times children participated positively in group problem solving.



*No data, Halloween party.

The number of children participating in group problem solving increased rapidly when positive reinforcement was directed toward those children performing this desired behavior.

H_4: Children will continue taking turns when positive reinforcement is intermittently directed to the children exhibiting the desired behavior.

During Baseline IV, the number of positive reinforcements by the teacher ranged from 111 to 122 during taking turns (Table 4.7). This number reflects the number of positive desirable behaviors. Each time a child was observed taking turns, he was positively reinforced with some form of teacher attention.

Table 4.7.--Range and mean frequency of teacher positive reinforcement directed toward those children performing the desired behavior.

Behavior	Range	Mean
Taking turns		
Baseline IV	111-122	115
Baseline V	11-38	19
Following directions		
Baseline IV	21-29	26
Baseline V	7-11	9
Group problem solving		
Baseline IV	28-30	29
Baseline V	12-14	13

During Baseline V, the teacher reduced the number of reinforcements from a mean of 115 to 19. Children were reinforced for their desirable behaviors approximately once for every five times they performed the behavior.

The children continued the high frequency of taking turns when positive reinforcement was intermittently directed to those children exhibiting the desired behavior.

H_5: Children will continue following directions when positive reinforcement is intermittently directed at children exhibiting the desired behavior.

During Baseline IV, the mean frequency of teacher attention was 26. When children were following directions the teacher would call attention to those children who were putting their toys away and then sitting on the rug.

When teacher attention was decreased during Baseline V to a mean frequency of nine, the children still continued to follow directions. During the first day of intermittent positive reinforcement all the children in attendance followed these directions. On the second day there was a slight decrease to 91 percent, with another decrease occurring on the third day to 71 percent. By the fourth day, the number of children participating had increased to 81 percent (Table 4.4). Perhaps there should have been more intermittent reinforcement on the second and third days.

Based on this trend, it appears that children will continue following directions when positive reinforcement is intermittently directed to children exhibiting the desired behavior.

H_6: Children will continue participating in group problem-solving sessions when positive reinforcement is intermittently directed to the children exhibiting the desired behavior.

During Baseline IV, the mean frequency of teacher attention was 29 (Table 4.7). The children were positively reinforced when they participated in problem-solving activities.

When teacher attention during Baseline V was reduced to a mean frequency of 13 (Table 4.7), the children still continued to increase their participation in group problem solving. During two days, all children participated in this activity (Table 4.6).

Children will continue participating in group problem-solving sessions when positive reinforcement is intermittently directed to the children exhibiting the desired behavior.

Analysis of Data on Morning and Afternoon Sessions

The desirable behaviors between the morning and afternoon sessions varied slightly. In taking turns (Tables 4.8, 4.9, 4.10, and 4.11), the morning group showed a greater response in all baseline behaviors after the entry behavior was recorded.

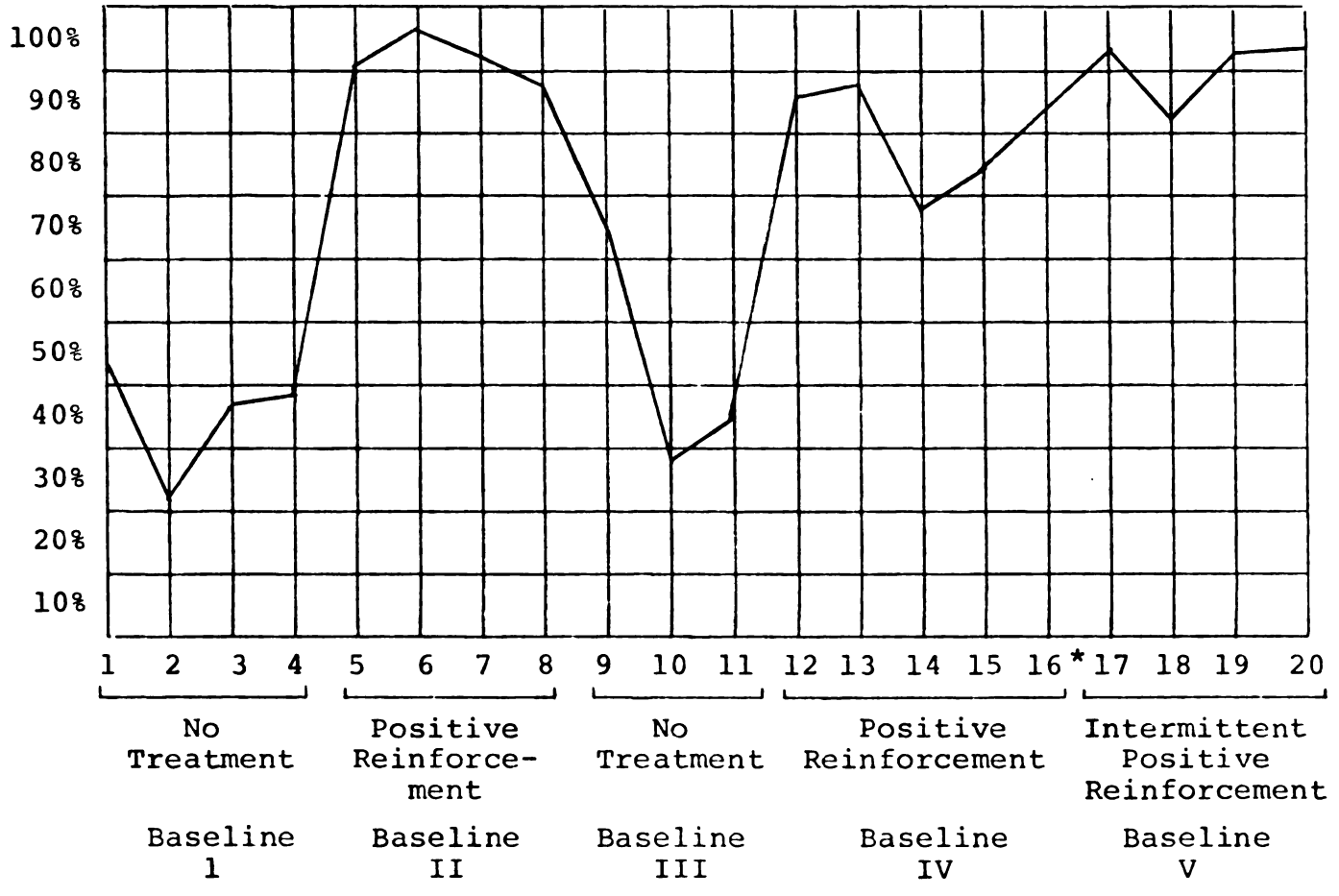
In following directions, the afternoon prekindergarten was significantly higher in positive behaviors in Baseline IV and Baseline V. The mean of the positive behaviors in the morning was 78 percent, while in the afternoon session a mean of 95 percent was achieved (Tables 4.13 and 4.15).

Positive behaviors in group problem solving were similar for both afternoon and morning groups. There was only a 1 percent

Table 4.8.--Taking turns in the morning session.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	41	99	41	35%
	5	12	58	21	
	6	28	71	39	
	7	29	75	39	
Baseline II	11	60	66	91	93%
	12	57	59	97	
	13	62	67	93	
	14	58	65	89	
Baseline III	18	34	55	62	41%
	19	24	89	27	
	20	35	105	33	
Baseline IV	21	71	81	88	79%
	25	61	70	87	
	26	55	82	67	
	27	65	87	75	
Nov. Baseline V	1	56	61	92	90%
	2	33	40	83	
	3	49	53	92	
	4	37	40	93	

Table 4.9.--Percent number of times children participated positively in taking turns in the morning session.

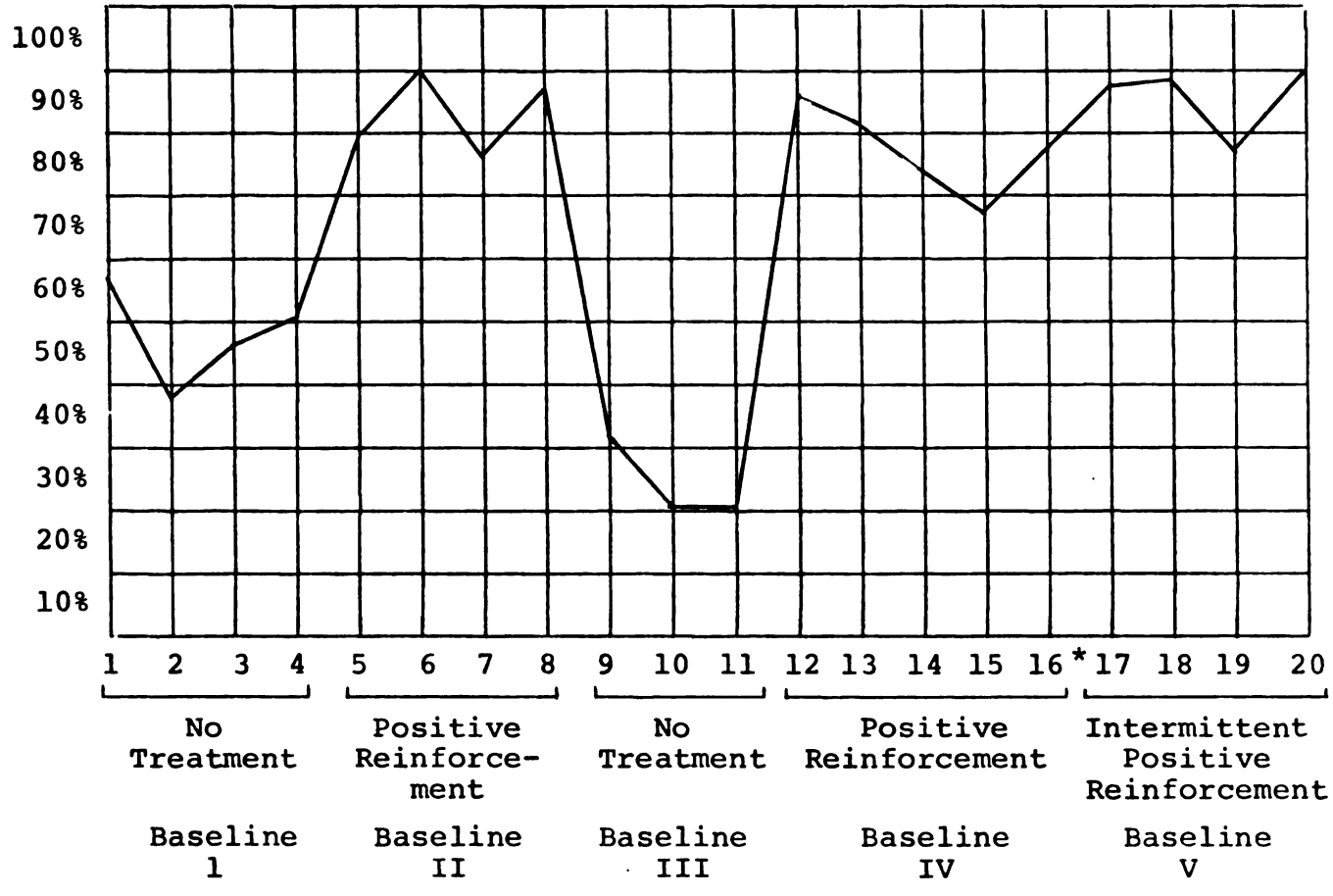


*No data, Halloween party.

Table 4.10.--Taking turns in the afternoon session.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	44	81	54	47%
	5	24	65	37	
	6	33	70	47	
	7	39	78	50	
Baseline II	11	44	55	80	83%
	12	53	59	99	
	13	43	58	74	
	14	42	48	88	
Baseline III	18	21	69	30	23%
	19	18	88	20	
	20	16	81	20	
Baseline IV	21	51	59	86	77%
	25	54	66	82	
	26	56	79	71	
	27	48	70	69	
Nov. Baseline V	1	22	25	88	87%
	2	31	35	89	
	3	19	24	79	
	4	19	21	90	

Table 4.11.--Percent number of times children participated positively in taking turns in the afternoon session.

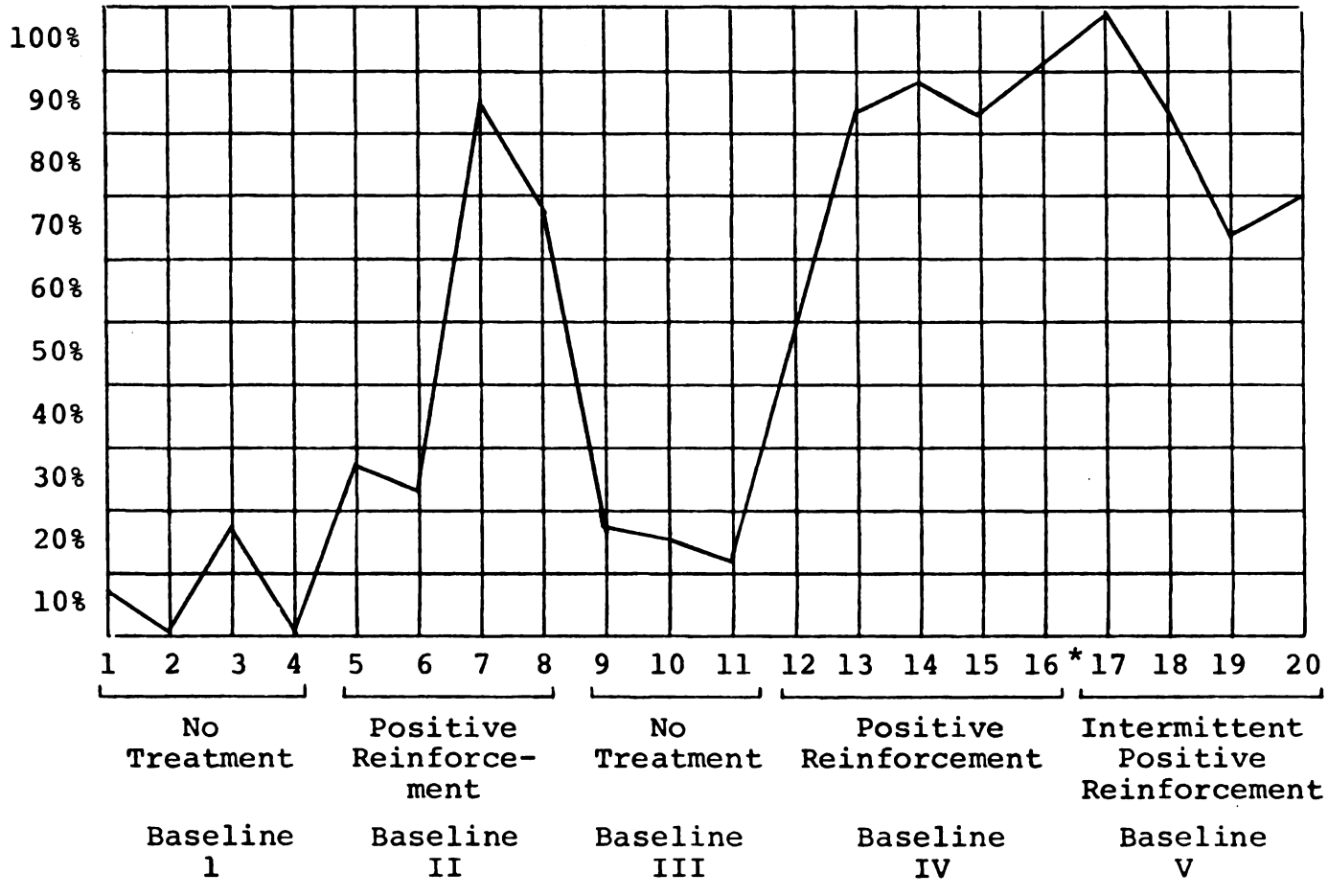


*No data, Halloween party.

Table 4.12.--Following directions in the morning session.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	1	15	7	7%
	5	0	17	0	
	6	3	16	19	
	7	0	19	0	
Baseline II	11	5	18	28	53%
	12	5	19	26	
	13	14	16	88	
	14	11	16	69	
Baseline III	18	3	19	16	14
	19	3	19	16	
	20	2	19	11	
Baseline IV	21	9	19	47	75%
	25	14	17	82	
	26	16	18	89	
	27	15	18	83	
Nov. Baseline V	1	15	15	100	78%
	2	16	19	84	
	3	11	18	61	
	4	12	18	67	

Table 4.13.--Percent number of times children participated positively in following directions in the morning session.

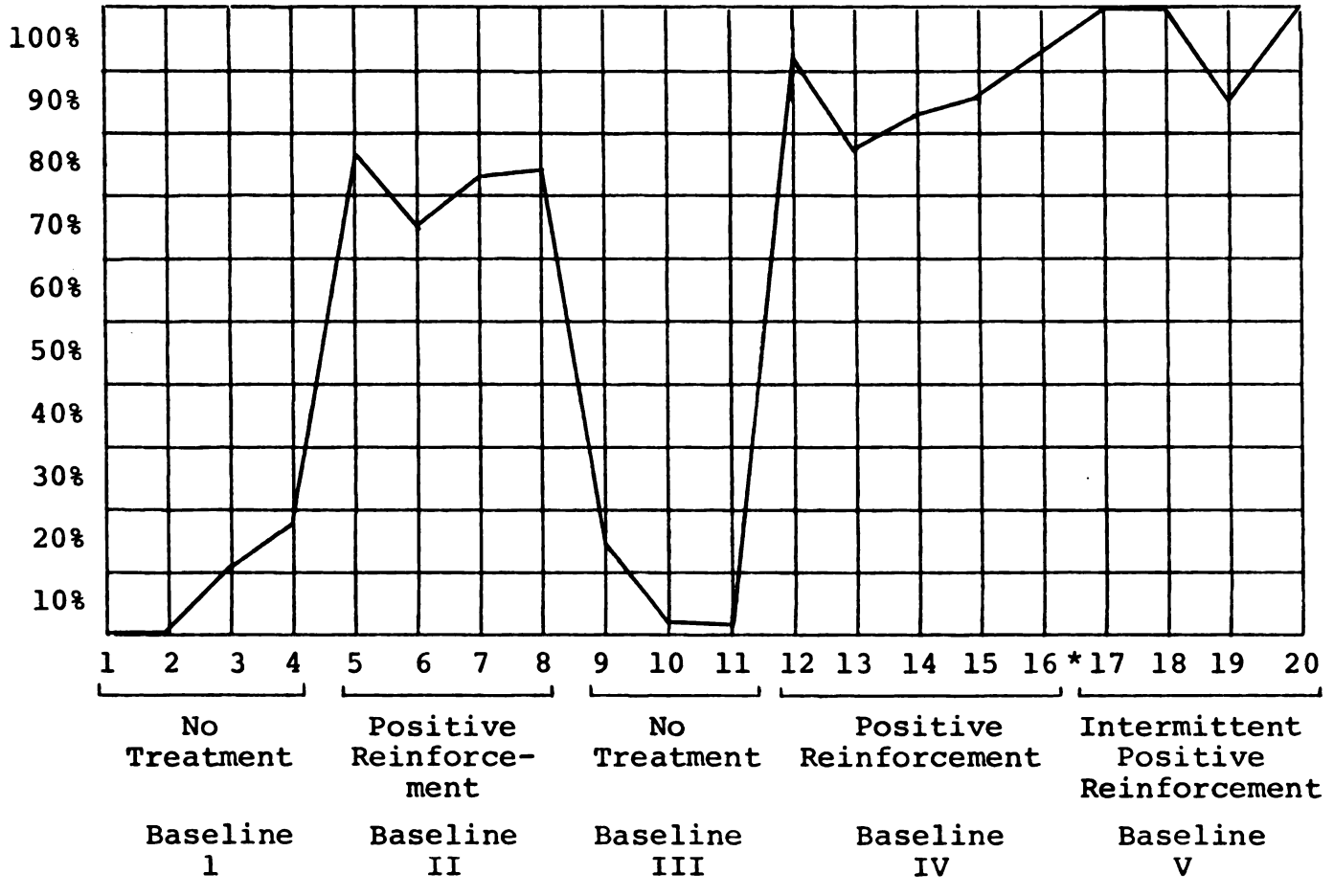


*No data, Halloween party.

Table 4.14.--Following directions in the afternoon session.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	0	18	0	7%
	5	0	16	0	
	6	2	17	12	
	7	2	13	15	
Baseline II	11	10	13	77	71%
	12	10	16	63	
	13	12	17	71	
	14	11	15	73	
Baseline III	18	2	15	13	4%
	19	0	16	0	
	20	0	17	0	
Baseline IV	21	12	13	92	84%
	25	11	14	79	
	26	13	16	81	
	27	14	17	82	
Nov. Baseline V	1	15	15	100	95%
	2	17	17	100	
	3	13	16	81	
	4	15	15	100	

Table 4.15.--Percent times children participated positively in following directions in the afternoon session.



*No data, Halloween party.

difference in the final mean percentage of these behaviors (Tables 4.17 and 4.19).

On the last day of the study, the positive behaviors in taking turns, following directions, and problem solving were all above 90 percent, except for the morning class in following directions. The afternoon class in problem solving and following directions had 100 percent participation in positive behaviors on the final day. The morning class also had 100 percent on the last day in taking turns.

Summary of Findings From the Statistical Analysis of the Data

The data gathered from this study show the effectiveness of positive reinforcement as a technique for teaching social behavior to inner-city prekindergarten children. The data clearly show that positive reinforcement does increase desirable behaviors in young children. When positive reinforcement was withdrawn, the frequency of positive behaviors abruptly dropped to the level of the entrance behavior. When positive reinforcement was reinstated, the children quickly increased those desirable behaviors.

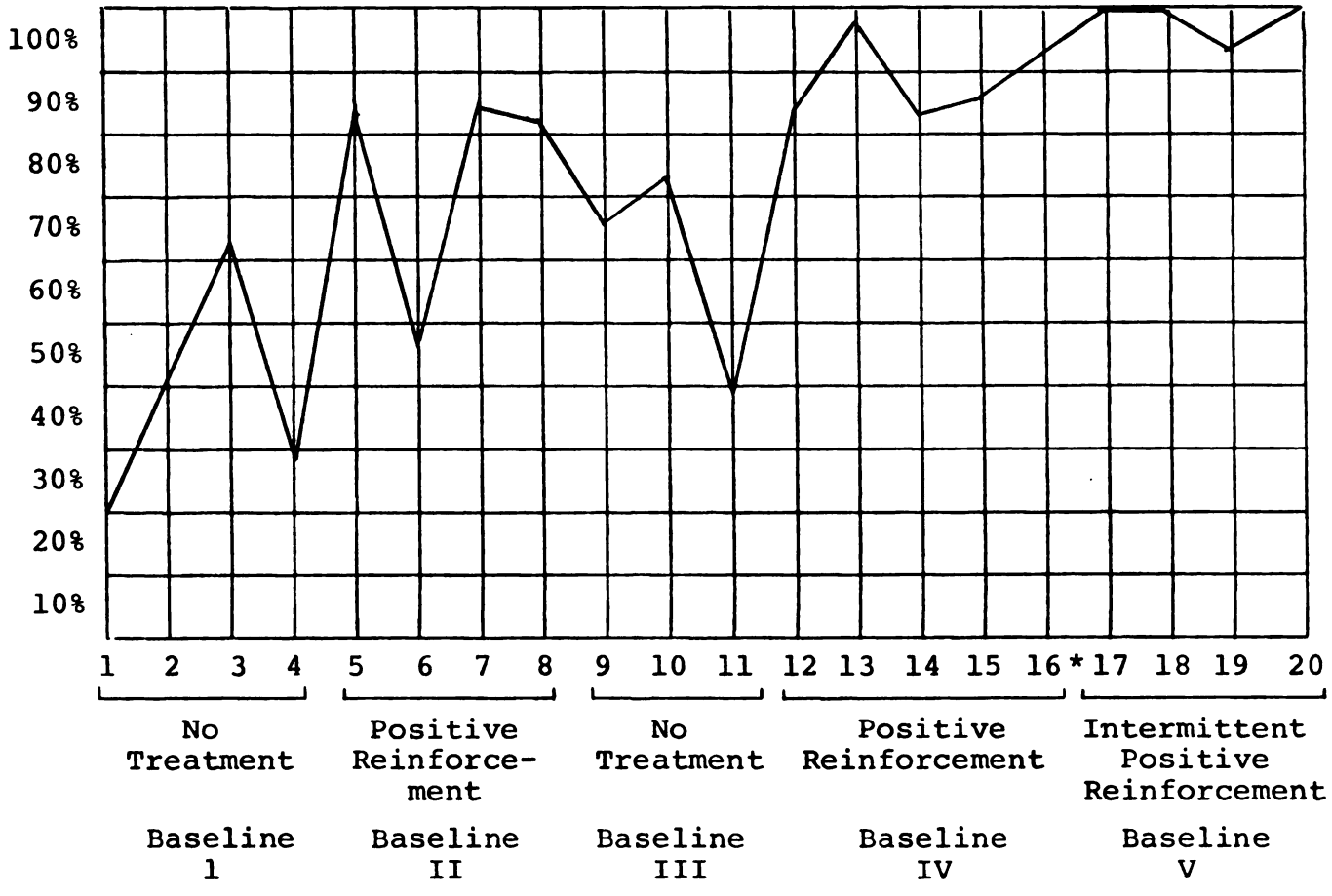
This study has shown that teacher attention is a powerful tool when it is systematically directed toward those children exhibiting desirable behavior. This attention is powerful enough to change the undesirable behaviors of the other children.

Once children have learned a particular behavior, it is not necessary for the teacher to give attention to each desirable

Table 4.16.--Group problem solving in the morning session.

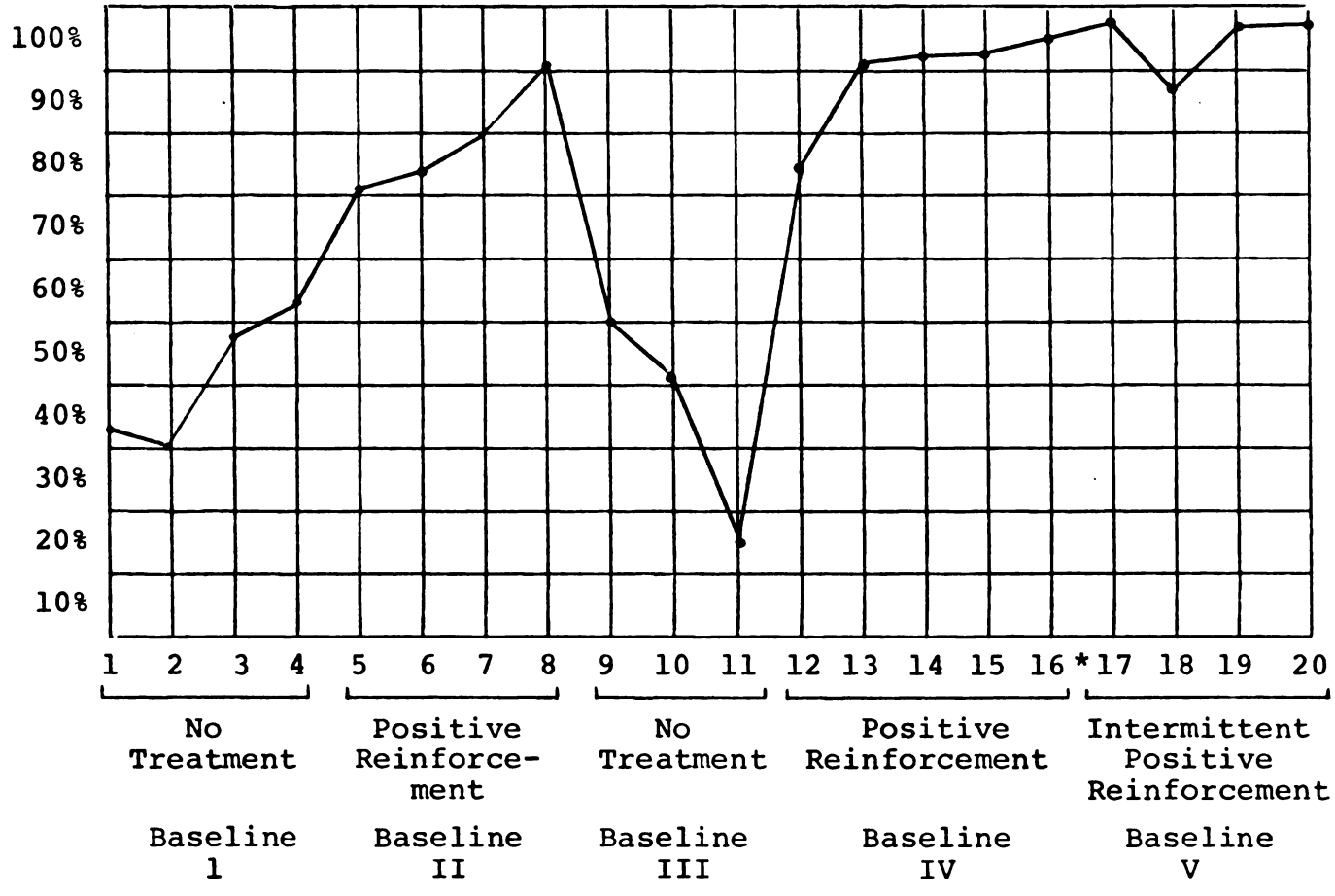
		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	3	15	20	40%
	5	6	15	40	
	6	10	16	63	
	7	7	19	37	
Baseline II	11	10	12	83	75%
	12	9	19	47	
	13	13	15	87	
	14	10	12	83	
Baseline III	18	13	19	68	60%
	19	14	19	74	
	20	7	18	39	
Baseline IV	21	15	18	83	87%
	25	17	17	100	
	26	14	17	82	
	27	15	18	83	
Nov. Baseline V	1	17	17	100	98%
	2	11	11	100	
	3	10	11	91	
	4	11	11	100	

Table 4.17.--Percent times children participated positively in group problem solving in the morning session.



*No data, Halloween party.

Table 4.18.--Percent number of times children participated positively in group problem solving in the afternoon session.



*No data, Halloween party.

Table 4.19.--Group problem solving in the afternoon session.

		Positive Behavior	Total	Percent	Mean
Oct. Baseline I	4	6	18	33	42%
	5	5	16	31	
	6	7	14	50	
	7	7	13	54	
Baseline II	11	9	12	75	81%
	12	12	16	75	
	13	12	15	80	
	14	12	13	92	
Baseline III	18	7	16	44	33%
	19	7	17	41	
	20	2	14	14	
Baseline IV	21	14	18	78	90%
	25	11	12	92	
	26	16	17	94	
	27	15	16	94	
Nov. Baseline V	1	11	11	100	97%
	2	14	16	88	
	3	12	12	100	
	4	10	10	100	

behavior. Children will continue high frequencies of desirable behaviors when positive reinforcement is intermittently directed to those children exhibiting the desired behavior.

CHAPTER V

THE FILM

The purpose of this film is to show educators and parents an effective method for teaching social behaviors to children. The filming took place in an inner-city prekindergarten classroom as described in this study.

This is an 18-minute film study divided into three main segments. The first segment takes place in the first weeks of school. It shows the children:

1. playing alone or parallel to other children,
2. incapable of taking turns and following directions in groups,
3. unable to participate in group problem solving,
4. unable to work and play cooperatively with others.

The middle segment of the film demonstrates the use of positive reinforcement as a means of helping children to acquire specific social behaviors. It shows how quickly children will respond to adult attention that is systematically directed to the children who are performing desirable behaviors.

The procedure for positive reinforcement is demonstrated by the teacher with the children. (1) The children are told what behavior is expected of them. (2) Adult attention is directed

toward those children performing the behavior. (3) The teacher refers to the specific behavior when calling attention to the children.

The final segment of the film shows the children as they perform desirable social behaviors as the result of their own motivation and self-control. Children are shown sharing ideas and activities with each other. It shows children playing and problem solving in groups cooperatively.

This film shows the power of adult attention for controlling behaviors. It emphasizes the importance of teachers handling students' behavior problems in a positive manner.

This film is important for a variety of reasons. First, it will be helpful in demonstrating the technique of using positive reinforcement for teaching social behavior. Second, it shows the importance of adult attention in determining the social behaviors of children. Finally, this film supports this study by showing how specific behaviors can be rapidly acquired by children through the systematic application of positive reinforcement.

This film study was written, filmed, edited, and narrated by this writer on super-8 sound film. The movie was filmed in the classroom by the teacher as she performed her teaching duties.

This writer wishes to encourage other teachers to use this medium (or color video tape) with their students.

Sound movie film can be used to:

1. build self-concepts of children by seeing themselves in a movie projected on the screen.

2. demonstrate to parents activities that go on in the classroom.
3. demonstrate to teachers successful teaching strategies and activities.
4. film dramatic presentations that the children have written and participated in.

Very little training is necessary to operate an automatic super-8 sound camera. The teacher can edit and narrate the film by using guidebooks that come with the equipment. After the initial investment of the camera, projector, and splicing equipment (Appendix G), the cost for six minutes is approximately $15 (1977). The super-8 sound film can be duplicated on color video tape for a slightly additional cost. The script and shooting procedures are found in Appendix H.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the effectiveness of positive reinforcement in the teaching of social behaviors to inner-city prekindergarten children. It is important to remember that this study took place precisely at the beginning of school in the fall, before any behavior patterns were firmly established by the children. Three specific social behaviors were examined: (1) taking turns, (2) following directions, and (3) group problem solving. Adult attention was systematically directed toward those children exhibiting desired behavior and withheld as an immediate consequence of undesirable behavior.

The major finding of this study, based on the data analysis, was that adult intervention procedures directed toward increasing desirable social behaviors reliably increased positive social behavior and decreased negative social behavior. More specifically, the study found that:

1. The number of times children took turns did increase when positive reinforcement was immediately directed toward the children exhibiting the desired behavior.

2. The number of children following directions did increase when positive reinforcement was immediately directed toward the children exhibiting the desired behavior.

3. The number of children participating in group problem solving did increase when positive reinforcement was directed toward the children exhibiting the desired behavior.

4. Children continued taking turns when positive reinforcement was intermittently directed toward children exhibiting the desired behavior.

5. Children continued following directions when positive reinforcement was intermittently directed toward children exhibiting the desired behavior.

6. Children continued participating in group problem-solving sessions when positive reinforcement was intermittently directed toward children exhibiting the desired behavior.

The results of this study show that positive reinforcement can be an effective tool for teaching social behaviors to inner-city prekindergarten children.

The study found that adult attention, when systematically directed toward those children exhibiting desirable behavior, is powerful enough to change the undesirable behaviors of the other children.

Discussion

This research controlled for several variables in addition to the actual time allotted for the study. They were:

(1) a consistent environment, including scheduling and routine; (2) the continuous presence of the children in the classroom; and (3) the reinforcement of other desirable classroom behaviors throughout the study.

The presence of two observers in the classroom did not cause any dramatic reactions by the children, and they seemed to ignore them completely. It was apparent from the data that the reliability of observation of the individual children was not as accurate as recording the number of behaviors. A set of identical twins in the morning and duplication of first names led to this confusion. For taking turns, the children were moving about so quickly that it was difficult for the observers to see the name tags. The recording of individual behaviors was much easier in group problem solving and following directions because the children remained less active.

Dividing the children into groups for problem solving and taking turns was an unnatural procedure in a normal prekindergarten program. Many times the children were reluctant to leave the learning activities they had chosen. For several months after the study, the children would ask if it was their time to slide.

For some children, a group-oriented approach is not an effective method of teaching desirable social behaviors. As in other areas of education, those children need individual help and direction.

Although research on individual behavior in laboratory settings is presently available (Allen et al., 1964; Harris

et al., 1964; Wolf et al., 1964), more studies in typical classrooms seem highly desirable.

Positive reinforcement does offer a potential path for teaching social behavior in all classrooms, but its predicted effects are presently intertwined with a vast number of "moderating variables." The rate and consistency of learning social behaviors depends on the intellectual, physical, emotional, and social development of the individual child. Unusual difficulty in development in any of these behavioral areas will have an effect on the child learning social behaviors. The learning environment must be well-designed with the individual child's specific learning and behavior in focus. Those in the child's environment must provide successful learning experiences with positive interaction.

Implications

The findings demonstrate that positive social behaviors in young children can be achieved through teacher attention. The results of this study seem to indicate that teachers may help many children by systematically reinforcing desirable social behavior.

It appears that the use of positive reinforcement is an effective, humane, and acceptable method for teaching desirable social behavior. It encourages children to feel good about themselves while limiting discipline problems and traditional

punishment responses by the teachers. However, further research in this area is necessary.

A review of the literature of Piaget revealed that pre-kindergarten children can remember only a few rules. If teachers wish to teach a number of desirable behaviors to their pupils, they must continually remind them of these behaviors. Piaget found that children have learned a behavior only when their actions are the result of their own thinking. Positive reinforcement is an effective method that gives teachers the opportunity to increase the desirable behaviors and at the same time gives students the freedom to act as the result of their own thinking.

This study has shown the effectiveness of adult attention in controlling behavior. It is imperative that teachers and parents understand that the behaviors they attend to will be the behaviors the children acquire.

For this reason teachers must be aware of their own behavior and model the desirable behaviors they want the students to learn (Bandura, 1963). If teachers or parents resolve their problems by shouting or physical punishment, then the children will likely resolve their conflicts in the same manner.

Current psychological studies and theories support the contention that adults can change and control the performance of children, both academic and disciplinary (Hall et al., 1964; Madsen et al., 1968; Thomas et al., 1968). It is necessary that both parents and teachers receive training and education in these

techniques. One such approach was presented in this study, that of positive reinforcement, which emphasizes positive and humanistic controls leading to self-discipline and self-control.

Recommendations

For future group studies with prekindergarten children, activities should be selected that fit routinely into the program and cause as little disruption as possible. Young children should not be regimented into time slots for such studies.

The findings of this study support, in general, results of laboratory research on social development reviewed by Horowitz (1963). Further studies in school situations that can implement this research in the classroom seem highly desirable.

Social behavior should be a continuous learning experience for children at every grade level and should be given a top priority in the school curriculum.

Parents, teachers, and administrators should receive inservice training concerning the methods of teaching social behavior.

Educators need to formulate specific guidelines for handling behavior problems in their respective settings. These guidelines should be based on individual differences between and among groups of students. Pre-planning by educators and parents should always precede any treatment for behavioral change.

Parents, teachers, and administrators must become aware of the importance of teaching social behavior if there is to be proper discipline in the home and school. Social competencies

must be identified, grade-specific teaching strategies must be developed and become an area in the school curriculum.

Similar research should be conducted in schools from other socioeconomic areas and also in other grade levels.

Replication of this study with an experimental and control group seems highly desirable. Frequently effects that are attributed to treatment interventions can be due solely to developmental processes. It is impossible to differentiate treatment changes from those due to maturation unless one concurrently compares subjects who receive no treatment with those who do receive a particular treatment. Experimentation can benefit by applying both approaches and then judging both results.

Although some educators have raised questions concerning the use of behavior techniques, it seems that many more ethical issues are raised by not developing a scientific analysis of classroom behavior.

It would seem that positive reinforcement could be used more effectively in classrooms. Based on the findings of this study, teachers could:

1. Increase the use of adult attention for desirable social behaviors.
2. Withhold attention for inappropriate behaviors.
3. Use adult attention and withdrawal as a means to effect change in pupil behavior rather than an occasional response to selected behaviors.

It is time educators directly address themselves to behavior problems and develop effective methods and teaching strategies for controlling undesirable behavior and teaching desirable social skills.

APPENDICES

APPENDIX A

A SCREENING DEVICE FOR PRESCHOOL READINESS

APPENDIX A

A SCREENING DEVICE FOR PRESCHOOL READINESS

Raw Score
(27 items) _____

Name_____ Boy_____ Girl_____
Last First Middle

Date of test____ ____ ____ Date of birth ____ ____ ____
Year Month Day Year Month Day

Attendance area_____

Scoring: R = right or correct response; W = wrong or incorrect response; N = no response; I = inappropriate (i.e., child may echo examiner, response not relevant to question, etc.). Instructions to examiner are enclosed in parentheses and should not be verbalized to child. For unintelligible responses place an X in I column on test form.

	R	W	N	I
Sample 0. What is your name? -- Sample item				
1. What is your last name?				
2. How old are you? Fingers used / /				
3. Put your finger on your neck.				
4. What do you call this? (Knee)*				
5. What do you do with your ear?				
6. Give me one this color. (Blue)				
7. Show me the green one.				
8. What color is this? (Yellow)				
9. What color is this? (Black)				

*Remember, bend your knee sharply and cup your fingers over it to demonstrate.

	R	W	N	I
10. Count to five. (circle upper limit) 1 2 3 4 5				
11. Give me four blocks.				
12. How many do I have? (Three)				
13. Give me <u>all</u> the blocks.				
14. Can you walk like this? (Teacher walks backwards toe to heel.)				
15. Clap your hands, walk around your chair, and sit down.				
16. What are books for?				
17. Copies a cross. +				
18. Show me how you can hop. Two feet ☐ One foot ☐				
19. Stand up and throw me the ball.				
20. Which of these is most like a wheel?				
21. Which of these is most like a tent?				
22. Which of these is most like a stick?				
23. Which is bigger, a tree or a flower?				
24. Traces a diamond from a template.				
25. Tell me a poem or a nursery rhyme.				
26. Mastery of Y and J sounds. (Say, yellow jello!)				
27. Tends to engage in conversation-like responses.				

APPENDIX B

PREKINDERGARTEN SCHEDULE

APPENDIX B

PREKINDERGARTEN SCHEDULE

Morning Session

8:45- 9:00	Free time
9:00- 9:30	Share time, finger plays, story, Peabody lesson
9:30- 9:33	1st group, taking turns
9:34- 9:37	2nd group, taking turns
9:38- 9:41	3rd group, taking turns
9:42- 9:45	1st group, problem solving
9:46- 9:49	2nd group, problem solving
9:50- 9:53	3rd group, problem solving
9:54- 9:59	Following directions
10:00-11:20	Washing hands, juice and crackers
10:20-11:00	Learning centers
11:00-11:15	Music, games, movies
11:15-11:30	Dismissal

Afternoon Session

12:20-12:30	Free time
12:30- 1:00	Share time, finger plays, story, Peabody lesson
1:00- 1:03	1st group, taking turns
1:04- 1:07	2nd group, taking turns
1:08- 1:11	3rd group, taking turns
1:12- 1:15	1st group, problem solving
1:16- 1:19	2nd group, problem solving
1:20- 1:23	3rd group, problem solving
1:24- 1:29	Following directions
1:30- 1:50	Washing hands, juice and crackers
1:50- 2:30	Learning centers
2:30- 2:45	Music, games, movies
2:45- 3:00	Dismissal

APPENDIX C

PROBLEM-SOLVING ACTIVITIES

APPENDIX C

PROBLEM-SOLVING ACTIVITIES

October	4	Swedish variplay set (Community Playthings)
	5	Shape blocks and shape ball
	6	Shape stack (Child Guidance)
	7	Donkey and chicken puzzle, 8 pieces (Judy)
	11	Swedish variplay set (Community Playthings) repeat
	12	Shape blocks and shape ball, repeat
	13	Shape stack (Child Guidance) repeat
	14	Donkey and chicken puzzle, 8 pieces (Judy)
	18	Shape fitting blocks
	19	Gingerbread boy and horse puzzle, 8 pieces (Judy)
	20	Sort boxes
	21	Shape fitting blocks, repeat
	25	Gingerbread boy and horse puzzle, 8 pieces (Judy) repeat
	26	Sort boxes
	27	Jack and Jill, chicken puzzle, 10 pieces
November	1	School bus, farm puzzle, 10 pieces
	2	Farm puzzle, school bus, 10 pieces
	3	Fire truck, donkey puzzle, 10 pieces
	4	Donkey, fire truck puzzle, 10 pieces

APPENDIX D

FORMS OF ADULT ATTENTION

APPENDIX D

FORMS OF ADULT ATTENTION (Thomson, 1972)

Nonverbal

1. Watching the child
2. Nodding, raising an eyebrow, winking
3. Facial gestures (smiling, faking surprise, etc.)
4. Establishing eye contact
5. Making physical contact (holding hands, arm around the shoulder, patting, holding child on the lap)
6. Remaining in close proximity to the child
7. Waiting for the child to finish an activity so he may be included in the next event
8. Assisting the child with tasks the child finds unpleasant or difficult
9. Handing the child attractive materials
10. Participating with the child in an activity (building blocks, carrying boards together, setting up equipment)
11. Laughing with the child at appropriate times
12. Complying with a child's request
13. Listening to a child and not allowing this conversation to be interrupted

Verbal

1. Small talk (nondirective general conversation)
2. Suggestions to facilitate the child's involvement and participation
3. Challenges, dares
4. Praise and approval

5. Questions and requests

6. Directive statements

7. Encouragement of a child's participation in making appropriate decisions

8. Expressions of honest affection

9. Comments related to the child, the child's activity, or the children the child is interacting with

10. Expressions of humor that children can appreciate

11. Invitations to participate in attractive activities

APPENDIX E

SAMPLE RECORDING SHEET

APPENDIX E

SAMPLE RECORDING SHEET

Activity_____

Date_____

Children's Names																		
1.																		
2.																		
3.																		
4.																		
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7.																		
8.																		
9.																		
10.																		
11.																		
12.																		
13.																		
14.																		
15.																		

APPENDIX F

OBSERVER AGREEMENT TABLES

APPENDIX F

OBSERVER AGREEMENT TABLES

Table F1.--Mean percentage of observer agreement for taking turns.

Behaviors	1st Week	2nd Week	Total
Observer I			
Positive	307	514	821
Negative	342	65	407
Observer II			
Positive	358	419	677
Negative	363	61	424
Observer agreement			
Positive	86%	82%	82%
Negative	94%	94%	96%

Table F2.--Mean percentage of observer agreement for group problem solving.

Behaviors	1st Week	2nd Week	Total
Observer I			
Positive	51	87	138
Negative	78	28	106
Observer II			
Positive	58	91	145
Negative	75	28	103
Observer agreement			
Positive	88%	96%	95%
Negative	96%	100%	97%

Table F3.--Mean percentage of observer agreement for following directions.

Behaviors	1st Week	2nd Week	Total
Observer I			
Positive	12	79	91
Negative	121	50	171
Observer II			
Positive	14	90	104
Negative	119	41	160
Observer agreement			
Positive	86%	88%	86%
Negative	98%	82%	94%

APPENDIX G

EQUIPMENT

APPENDIX G

EQUIPMENT

Movie camera	$249.00
Movie projector	265.00
Editing equipment	33.00
Total cost	$547.00

APPENDIX H

SCRIPT AND SHOOTING PROCEDURES

APPENDIX H

SCRIPT AND SHOOTING PROCEDURES

Music	1/2 shot	Children cracking and trying to separate egg yolk into bowl
(title) TEACHING SOCIAL BEHAVIOR TO YOUNG CHILDREN	close-up	Lettering in children's blocks on blue background
	1/2 shot	Children squirting whipped cream onto construction paper and finger painting with it
(author) MARY HILL	close-up	Lettering in children's blocks
(title) ENTRY BEHAVIOR	close-up	Red on blue lettering
Fade-out music		

Picture	Shots	Narration
Child crying	Close-up zoom-out	
Children crying	Long shot to close-up	
Several children sitting alone watching other children play	Close-up zoom to half-shot	This is the first day of school. For many children, it is their first experience as an individual away from their family. It may also be the first time with so many children their own age. This giant step can be difficult and the teacher and parent must give them understanding and support.
Child playing alone with toys	Close-up move to half-shot	Children are likely to play alone when they first enter school. They must be taught to work and play cooperatively with others. How well children learn group living now can determine their success in later life.
Children at the slide pushing to get in front of each other	Long shot	These children must learn to live comfortably with others. Each must somehow come to recognize where his rights end and others' begin. The many things that adults do to help children learn this respect and this concern are called discipline.
Children throwing blocks	Long shot	All too often teachers and parents confuse discipline with ridiculing, shaming, and physically punishing a child. Thus adults are modeling the very behaviors they wish to prevent and at the same time taking chances with a child's

		self-respect. Physical punishment only teaches fear. Children observing physical punishment are likely to use it for resolving their own conflicts. There are better ways, more effective ways, ways that we find in use in good classrooms for young children.
Child playing alone at the table	Close-up zoom to half-shot	Social behavior is a learned behavior and can effectively be taught only when children are in groups. It is unreasonable to assume that children have acquired desirable classroom behavior before they enter school. Parents cannot be held responsible for this learning experience. Proper classroom behavior must be taught by the teacher in the school setting.
Children not putting toys away; the teacher repeats several times, "It's time to put the toys away."	Long shot	
Title Board USING POSITIVE REINFORCEMENT	Close-up	
Children playing on the table. "It's clean-up time." The children slowly respond as the teacher calls by name the children who put their toys away and sit on the rug. Finally all children sit on the rug.	Long shot	

Title Board	Close-up
Tell the children the specific behavior. Immediately call attention to the children performing the behavior.	
"Mac Scott is sitting on the edge of the rug; he may come up and get a number," says the teacher. The other children sit on the edge of the rug.	Long shot zoom to close-up
The teacher says, "Let's see who can put toys away." The teacher then calls the children by name as they put the toys away.	Long shot zoom to half-shot
Children again putting toys away and working cooperatively to get the big Tinker Toys apart and into the box. The teacher is praising the children.	Long shot zoom to half-shot
Children taking turns on the bouncer. The teacher is calling attention to the children taking turns.	Long shot
Title Board	
Several months later	Close-up

Children playing with blocks cooperatively	Close-up zoom to half-shot	These children have learned to share and play together. Occasionally the teacher still calls attention to those children playing cooperatively.
Teacher and children playing on the floor with a musical toy	Half-shot zoom to close-up	Adult attention is a powerful weapon when training young children. Well-behaved children who feel the need for adult attention will exhibit undesirable behavior if they cannot get it another way. Adults must be aware of what behaviors they are responding to--for these will be the behaviors acquired by the children.
Three girls helping each other as they walk on stilts. The teacher says, "Hopie is helping Stephanie. Stacey is helping Stephanie."	Long shot zoom to close-up stilts and feet	Recent studies have shown that problem children receive a much greater amount of adult attention than do their peers. Further the largest part of that attention is negative. In our society praising doesn't come naturally, especially when we think of using it to change the behavior of children.
Children are sitting in a circle. The teacher asks the children, "We are going outside for a walk. What are some of the rules?" The children reply, "Stay on the sidewalk and stay near teacher."	Long shot	Clearly stated rules help children govern their own behavior. Young children can only remember a few rules at one time.

Children lining up for gym. "How do we go down to gym?" Children respond, "Very slowly and very quietly."	Long shot	Children are not sure what behaviors are expected of them in new situations. Behaviors must be learned in each new environment. Young children going to the gym, playground, or on a field trip must be reminded of the behaviors that are expected of them.
Adult helping children on an art project	Half-shot	Children learn kindness, courtesy, respect for self and others for the adults in their lives. Children also learn to yell, hit, scream, and behave uncooperatively from adults. It is important that adults working with children be aware of their own behavior. They must model only those behaviors they want the children to learn. Patience, good humor, and cooperation are needed at all times by teachers of children.
Teacher and children playing together with blocks	Long shot	Children will make mistakes for this is an accepted way of learning. There are no bad children, only adults who have shown them the way. Children need to experience many successes in learning desirable behaviors. It is important that every adult who enters the life of a young child provide these successful learning experiences.
Teacher in child's wagon. "Positive reinforcement can be an effective method for teaching social behavior to young children." "Who can give me a ride?" Children push teacher out the door.	Close-up move to long shot	

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