The influence of teacher behavior on child social participation behavior
by Cynthis McHugh Baxter

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Home Economics
Montana State University
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Abstract:
This study was designed to investigate the influence of teacher behavior on the social participation of preschool children. It examined how a change in teacher behavior affected the children's social participation behavior.

The study was conducted in three phases, pretraining, training and post-training. Four teachers were observed during the free play period at a university laboratory preschool. Teacher behaviors were observed and coded for approximately 30 minutes, three days a week, for a two week period. Teacher behaviors were coded according to behaviors defined by Fagot (1973). Child behaviors were coded according to the social participation behaviors defined by Parten (1932).

Teacher behaviors which occurred most frequently during the children's cooperative play at the pretraining phase were chosen for training. Training sessions were held following preschool sessions for one half hour, three days a week for a two week period. Included in the training sessions were instructional handouts to guide video-tape viewing and daily feedback for classroom performance of training behaviors. Teacher and child behaviors were coded again during the post-training phase. Post-training data was used for comparisons among the three phases of the study.

Results indicated that the video-tape training was effective in increasing teacher play and observing behaviors. Open-ended questioning did not increase. When teacher behaviors were changed child behaviors also changed. Increased amounts of associative and cooperative play were observed. Parallel and unoccupied behaviors decreased. Cooperative play only increased during the training phase of the study.

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ii

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Table of Contents

Table of Contents -- Continued

viii

List of Tables

List of Figures

ABSTRACT

This study was designed to investigate the influence of teacher behavior on the social participation of preschool children. It examined how a change in teacher behavior affected the children's social participation behavior.

The study was conducted in three phases, pretraining, training and post-training. Four teachers were observed during the free play period at a university laboratory preschool. Teacher behaviors were observed and coded for approximately 30 minutes, three days a week, for a two week period. Teacher behaviors were coded according to behaviors defined by Fagot (1973). Child behaviors were coded according to the social participation behaviors defined by Parten (1932).

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CHAPTER 1

INTRODUCTION

Within the past decade there has been a renewed interest in the area of socialization of children. With the current trend of enrolling children in preschools for socialization purposes, preschool teachers are reexamining their programs and their roles as teachers in relation to their social goals for children.

Peer interaction is an important goal within a child's socialization. Social participation, the involvement of a child within a social/non-social context during play, is one type of peer interaction which is commonly found in the preschool setting.

As teachers reexamine their roles in the socialization of children, the effect of their behavior on a child's behavior becomes important. Teacher behavior within the preschool classroom has been studied. Teacher behavior has been shown to influence task persistence, self-esteem, leadership and levels of engagement within planned activities (Fagot, 1973; Thompson, 1944, Phyfe-Perkins, 1981). Since teachers have been shown to influence the behavior of children in these areas, this study sought to show that teacher behavior influences the social participation of children.

Review of Literature

In the review of the literature three topic components of the study will be covered. These three components, play, teacher behavior and video-tape training, have different focuses, which lend themselves to the use of three distinct literature reviews. To cover each component the review has been divided into three main sections.

Play

In this section literature on play is reviewed. Play and its importance to the preschool teacher, the social aspects of play and environmental influences on play are discussed.

"Since the days of Froebel, most teachers have seen play as an essential ingredient in the early childhood curriculum" (Almy, 1982, p. 2). Some of the direct influences of a teacher's perception of play come from the theories of psychoanalysts Erickson, Freud and Isaacs (Almy, 1982). Ideas about play associated with these theories are that "children work out their emotional conflicts in play" and "play develops mastery" (Almy, 1982, p. 3).

Piaget contributes to current ideas on play. Piaget (1962) states that play develops in stages and is a process through which the child intergrates and incorporates experiences. Another aspect of play noted by Piaget (1962) is that the forms of interactions during play change with the stages of play. A child's behavior evolves from initial egocentrisim with collective monologue interactions to

complimentary peer play with interactions employing differentiated roles (Piaget, 1962). These interactions become increasingly more social through the differentiation of roles, addition of rules and mutual agreements among peers.

Because early childhood education is often used to facilitate socialization, it is important to look at the child's social play behaviors in relation to the preschool (Huston-Stein, Freidrich-Cofer and Susman, 1977). Recent research has been conducted on many different variables related to social behavior. One variable which has been studied is social participation.

Social participation studies have primarily been based on Parten's (1932) study. In looking at differences in interactions of children, Parten identified differences in the social participation of the children. Two variables which Parten studied were the kind of group the child participated in and the role of the child in the group. Through looking at the kind of group organization and integration (i.e. whether the group was organized in such a way that certain duties and responsibilities were demanded of its members, or whether it was a congregation of independent players), Parten developed a scale of social participation. The groups of social participation were defined as follows:

Unoccupied - the child is not playing;

Onlooker - the child is watching others play;

Solitary - the child plays alone;

Parallel - children play side by side with no interaction;

Associative - children play side by side with interaction but no

group goal;

Cooperative - children play together to gain a group goal and use

differentiated roles.

Parten (1932) studied 42 children between the ages of 2 and 5 using this scale and found quantitative and qualitative differences in the children's play. Using percentages of time, she found individual differences in the proportion of time each child was observed in various types of participation. Parallel play was the most frequent type of play (Parten, 1932).

Parten selected data on 34 children for further analysis. Correlations between rank order scores of the children and their ages were high and negative for less social play types; solitary -.58, parallel -.71, unoccupied onlooker -.71. High and positive correlations were found between age and more social groups, associative .51 and cooperative .67. Changes over time shows unoccupied, solitary and onlooker behaviors were less prevalent at the end of the study. Mean frequencies of associative play doubled by the end of the study and cooperative play increased from a mean frequency of 2.5 to 3.6. This indicates that, although differences were not statistically significant, the trend of change is consistant toward more social types of participation.

Differences in social participation in relation to age were also found by Peter K. Smith (1978). Smith conducted a 9 month longitudinal study comparing two groups of nursery school children in England. The play of 48 children, 12 boys and 12 girls in each group,

was studied. Smith used Parten's scale by making a combined category
of associative and cooperative play called group play and adding a
category called adult play to record non-peer interaction. Smith's
results were similar to Parten's. They showed a consistent increase
in group and decrease in solitary and unoccupied behaviors over time.
Differences over time were significant at the .001 level.

The effect of the preschool environment on children's play beha-
vior has also been studied. Three non-physical variables within the
preschool environment which have been studied are educational orien-
tation, classroom structure and curriculum differences.

The educational orientation of the nursery school affects a
child's play behavior. Tizard, Philips and Plewis (1976) looked at
differences in children's behavior among three types of nurseries
programs in England. Traditional nurseries, language-emphasized
nurseries and nurseries staffed with untrained personnel were studied.
The two types of play that were examined in the 109 children were
symbolic play and "appropriate" play, play which exploits the proper-
ties of the materials and does not involve a symbolic theme. Tizard
et al. reported that the traditional nursery had proportionally the
most "appropriate" play and least symbolic play. In special language-
emphasized classrooms, children used dramatic impersonations more
frequently. Tizard et al. discuss that the reason for differences may
be related to differences in the direction of staff focus. In setting
up activities in the three types of schools, teachers focused on
different types of activities dependent on the focus of orientation.
The focus of these activities sometimes left less opportunity for

certain types of play to occur.

Classroom structure was studied to determine its relationship to the naturally occurring behaviors of the children. Huston-Stein et al. (1977) studied classroom structure in 13 Headstart classrooms through observations using an index of teacher-led activity to independent child activity. A second index of structure based on teacher characteristics and practices was also used. Child behaviors found to be significantly correlated with a low level of direct instruction were as follows: prosocial behaviors to peer, $p < .10$; helping peers, $p < .05$; imaginative play, $p < .05$ total aggression, $p < .05$ and attention at circle time and responsibility for clean up time both $p < .05$. From these figures it would seem that allowing the child freedom to interact can increase positive behaviors.

The play of children in two different educationally based curricula has been compared. Johnson and Ershler (1981) looked at the differences in play between two classrooms, a formal education classroom based on Ausubel's theory and a discovery-based classroom based on Piaget's theory. A combination of Parten's scale (1932) and Simlansky's cognitive scale (1968) was used to analyze the children's play. Parten's categories of associative and cooperative play were combined into an interactive group. The three categories of play Simlansky used were functional - routine and simple motoric play; constructive - sequenced organized purposeful behavior; and dramatic - child transforms own identity of that of objects, situations or friends. One of Simlansky's categories and one of Parten's categories were recorded for the same time period. Using this combined scale, 26 children

attending the two classrooms were observed over a period of 16 months. The formal education classroom used a combination of small group and one free play period while the discovery classroom used two planned free play periods. Observations were made during the free play periods. Analysis of overall time changes revealed that, across classrooms, dramatic interactive play significantly (p.<.01) increased. When social levels were summarized, constructive play showed a drop in frequency of occurrence (p.<.01). Children in the formal classroom displayed more dramatic parallel play than children in the discovery class (p<.05). The discovery classroom had more functional interactive play (p<.01) and overall, more functional play (p<.01). Classroom differences over time showed that the children in the formal classroom decreased in constructive play and the children in the discovery classroom increased in constructive play at the p<.01 level. Johnson and Ershler noted that overall interactive play was more common than parallel play. In summarizing they also note that future research might investigate "the process by which program effects on play occur by attending to specific curriculum content and teacher behaviors" (Johnson & Ershler, 1981, p. 1004). This information might be useful in facilitating the attainment of educational goals in the social and cognitive components of play (Johnson & Ershler, 1981).

Social and cognitive components of play have been shown to be influenced by some environmental variables in preschools. Social participation is just one component of play which is important to the preschool teacher.

Teacher Behavior

The second component of the study to be covered in this review is teacher behavior. In this section teacher behavior, its effect on the child, and how these behaviors have been studied will be discussed.

Teachers do affect children in the early childhood classrooms (Phyfe-Perkins, 1981). Three of the ways in which teachers affect children are in a stimulus response mode, through their directions and through their participatory role in activities.

The role which teachers have in supplying a stimulus type effect on the child's response behavior is a powerful one (Buell, Stoddard, Harris and Baer, 1968). Social reinforcement provided by the teacher has been studied in relation to the response of the preschool child (Buell et al., 1968; Rintoul, Cooper, Schilmoelle and LeBlanc, 1975). Teacher verbal behaviors in the form of social primes, which are suggestions to interact socially with another child, increase a child's interactions with his peers (Goetz, Thompson and Etzel, 1975). Peer interactions are also shown to increase when teacher verbalizations decrease and social primes increase (Rintoul et al., 1975).

The teacher's directive role in the classroom has been an influence on a child's behavior. In Phyfe-Perkins' (1981) review of literature on effects of the preschool teacher behavior in the classroom, studies on the amount and type of teacher direction have been reviewed. Studies reviewed show that high levels of direct instruction and asking direct questions were negatively correlated with observed

levels of children's cooperation, independence and verbal initiative.
Although studies point to the negative aspects of directive behavior,
Phyfe-Perkins noted two specialized cases of teacher direction which
indicate the importance of the context of the direction. Teacher-
structured dramatic play significantly increased child to child inter-
actions in a group of handicapped children. The teacher, rather than
adopting a role in the play, assigned children roles which were then
carried without adult interference. Also, some children sought out
small group activities with teacher direction.

The participatory role of the teacher in the play of children is
noted by Phyfe-Perkins as affecting the child's behaviors. The liter-
ature appears to support positive outcomes for children where adults
interact with them in a child-centered, non-directive manner. In a
study noted by Phyfe-Perkins (1981), adults facilitated dramatic play
by assuming a non-directive role in the play, and becoming another
player in the experimental group. The group with the role playing
teachers far exceeded the control group in effectively cooperating in
solving problems as a group. In a second study of two daycare environ-
ments, it was found that in the classrooms in which adults participated
more and directed less, children exhibited higher levels of cognitive
play, task involvement and verbal initiative (Phyfe-Perkins, 1981).

Preschool teacher behavior studies have primarily viewed teacher
behavior in two ways. Behaviors have been studied as a single part of
the teacher's behavior influencing a child's behavior, such as Thompson's
(1944) study of the emotional characteristics of teacher behavior

influencing the child's social behavior. Teacher behaviors have also been studied as a general set of classroom behaviors influencing a more general characteristic of the child, such as Fagot's (1973) study of preschool teacher behavior's influence on task performance of the child.

The difficulty with most scales measuring preschool teacher behaviors is that in studying only one aspect of the teacher's behavior the totality of their behaviors is ignored. Fagot (1973) noted that the difficulty with studies of more than one behavior was that the instruments used were more appropriate to the elementary school and therefore difficult to use in the less structured preschool environment.

Fagot produced a code with 14 teacher behaviors designed to compare the task behavior of children among three preschools. She found that in all instances of classroom differences, the class with the highest percentage of nontask behavior differed significantly from the other two classes. The teachers in the low task group criticized more ($p<.01$), gave information rather than responding to the child's questions ($p<.01$) and gave more physical comfort ($p<.01$).

Fagot (1973) stated the following:

much research on teaching has concentrated on the learning of specific skills and behaviors and for this type of learning it is probably true that highly structured environments in which the child's responses are controlled by the teacher is the most efficient way to learn. However education should be more than learning of simple skills. (p.206)

Examining the teacher's ability to affect the general abilities of the child would be a more applicable way of reaching a preschool ideal of generalizable social skills for the child.

Teacher behavior does affect the child's behavior. Three of the ways are in stimulus response modes, though direction and their participation in activies. How research looks at teacher behavior is important because if we want to affect a general skill of children some ways of researching teacher behaviors may be more effective than others.

Video-tape Training

The third component in the literature review is video-tape training. Research has been conducted on how to modify teacher behavior through video-tapes. Techniques of modification using the concept of modeling (a video-taped teaching episode emphasizing a specific teaching behavior) have been developed and researched (Young, 1969). Young's (1969) review of the literature and theories of modification of teacher behavior using video-taped models in a microteaching sequence discusses the effectiveness of video training. Video-tape models are effective when discrimination viewing is available and positive incidences of teacher behavior have greater transfer to actual lessons.

In discussing the effectiveness of modeling, Young notes that studies on the perceptual versus the symbolic model have been conducted. The perceptual model is the video-taped teaching sequence and the symbolic model is a written description of the desired teacher

behavior with a detailed descriptions and rationale. Studies in-
vestigating the relative effectiveness of these models show that
teachers (interns) viewing the perceptual model incorporate more of
the modeled teacher behaviors than those teachers with only the sym-
bolic model. A combination of the two models was more effective than
either alone.

Viewing the video-tape with discrimination or supervised guidance
of the teacher has been shown to make a difference in the effective-
ness of the modeling (Young, 1969). The most effective viewing pro-
cedure involved a supervisor who reinforced the desired behaviors and
made suggestions on alternate forms of the desired behavior. Self-
instructional models, which used audio or visual cues on the tape to
provide the reinforcement and discrimination previously provided by
the supervisor, proved to be significantly more effective than a model
with non-cued focus (e.g. written directions and explanations of the
behavior). The latter produced no behavior changes.

Young (1969) also notes that studies on the effectiveness of
positive versus negative models show that a positive model alone is
more effective. In showing a model of a desired behavior and a model
with a desired and undesired behavior to two groups of teachers,
effectiveness of the positive model became evident when teachers
attempted to incorporate the behavior in their lessons.

Teacher behaviors have been shown to be modifiable through use of
a video-taped model. The use of the discriminate viewing adds to the
effectiveness as well as use of the positive model.

Rationale for this Study

Preschool environments are designed to stimulate and enhance social and intellectual development of young children (Goetz et al., 1975, Beehler et al., 1974). Teacher behavior has been frequently studied as part of the environment. Many studies, however look only at one part of a teacher's behavior and its relationship to one aspect of child behavior (Fagot 1973). Fagot noted that such studies were inadequate when attempting to describe behaviors through which a teacher could work on influencng a child's general abilities rather than one specifc skill.

This study attempted to describe a range of preschool teacher behaviors which influence a child's social participation as defined by Parten (1932). The purpose of this effort is to help teachers to view their own behavior in relation to its effect on a child's social participation.

Social behaviors associated with play have been linked to cognition in the forms of problem solving (Rosen, 1974), role taking abilities and classifying (Rubin & Maioni, 1975) as well as certain types of social participation. Therefore, teachers could potentially influence students by changing their own behavior.

Statement of the Problem

The purpose of this study was to identify teacher behaviors which occurred in a preschool setting while children participated in the designated free play time. It was designed to show the relationship

between teacher behavior and 4 year old children's social partici-
pation behavior as defined by Parten (1932) and to change teacher
behavior through a video-taped training procedure. The effect of
teacher behavior changes on child behavior was examined.

Hypotheses

There were 2 null hypotheses that were addressed by this study:

1. Teacher behaviors do not influence the social participation
    behavior of children.

2. The social participation of 4 year old children will not change
    when teachers are trained to perform certain behaviors.

Research Hypothesis

There were two research hypothesis that were addressed in this study:

1. Teacher behaviors do influence the social participation behaviors
    of children.

2. The social participation of 4 year old children will change when
    teachers are trained to perform certain behaviors.

Assumptions

1. In this study it is assumed that teacher behavior in the class-
    room affects child behavior to some degree in a stimulus-
    response type mode.

2. Teachers are assumed to be capable of and willing to change their
    behaviors.

Limitations

1. This study was limited to those events which occurred only during the designated free play period.

2. All children in the study came from white middle socioeconomic status families and were enrolled in a university laboratory preschool.

3. The number of trained teacher behaviors to be investigated was limited to three.

CHAPTER 2

METHOD

Design of This Study

The design of this study was a pretest - post-test design with a
training period between pretest and post-test. The study was divided
into 3 basic data collection and analysis phases: pretraining, train-
ing and post-training. Pretraining baseline data was used to deter-
mine the behaviors used in the training procedure and to provide
baseline data for comparisons.

A six day training period was conducted following the pretraining
baseline data collection period. The training consisted of the four
teachers viewing a video-taped teaching sequence which showed an unfa-
miliar teacher modeling positive examples of observing, participating
in play and asking open-ended questions, the three behaviors chosen
for the training. The twenty minute tape was viewed by the teachers
as a group with a supervisor providing cues during the viewing to the
behaviors. Two instructional handouts were used to provide further
cueing to the behaviors on the tape (see Appendix A). Teachers viewed
the tape three times with one teacher being absent for the third
viewing. The viewings took place during the first, third and fifth
training sessions. Training sessions lasted approximately one half
hour including discussion time after viewing the tape.

Daily reinforcement for use of the training behaviors was given to each teacher at the end of the class time by the supervisor. Anecdotal records showing positive child responses or unique techniques used by the teachers were discussed by the group daily.

During the training period, data collection was continued in the same format as the pretraining collection. Teacher behaviors and child behaviors were observed and coded for approximately 30 minutes over a two week period. Data was used to make comparisons of teacher behavior changes and to note any changes in child behavior.

The third section of the study was the post-training data collection period. Following the training, teacher behavior was no longer reinforced by the superivisor. Data collection followed the same format as used in the previous two collections. Analysis followed to determine the extent of sustained teacher behavior change and the relative effect on the child's social behavior.

Subjects

Teachers: this study involved four preschool teachers, who taught in the 4-year-old group at the Child Development Center at Montana State University. Teachers, deemed qualified to work with young children by the director of the center, were chosen to participate in the group by the director. Selection of teachers was made independent of this study.

Children: children participating in the preschool program were between the ages of 4 years, 4 months and 5 years, 4 months at the beginning of the study and had been members of the class for the

previous 3 months. The class met on Monday, Wednesday and Friday for

2½ hours. The children attending the school were from white middle

socioeconomic status families.

Data Collection

The method of data collection was based on Bijou, Peterson and

Ault's (1965) method of integrating descriptive and experimental field

studies. A frequency tally was used to record data during the data

collection periods.

Bijou et al. state: "The measure of frequency is preferable to

duration, intensity and latency because it measures readily changes

over short and long periods of observation, it specifies the amount of

behavior displayed and is applicable to operant behavior across species"

(p. 176). Environmental and behavioral events to be recorded were in

two general categories: teacher behavior and child behavior.

Observations

Two observation techniques were used in data collection in this

study: time sampling and rotation.

Time sampling. This is the technique of observing a particular

subject for a precise time unit, then recording the behavior displayed

by that subject. In this study two observers were used for the same 3

second time period. One observer watched and recorded the behaviors

displayed by the teacher and the other observed and recorded the

behaviors of the children in the area with the teacher. The observer

recorded the first behavior displayed by the teacher in the three second time period. For each group of children the predominant play behavior during the three second time period was recorded. The amount of time needed to record, established in the pilot study, was approximately 10 seconds. This procedure was repeated for at least 10 consecutive 3 second intervals. The recorded data then served as a representative sample of that teacher's general behavior and the general behavior of children within that area. Both Parten (1932) and Fagot (1973) used time sampling in their studies.

Rotation. In this study a teacher was observed for at least 10 consecutive 3 second intervals. The observer then rotated to a new teacher at random until all four teachers had been observed for approximately 600 intervals or approximately 30 minutes over a period of 6 school days. The observer recorded the teacher's name, time of day, the area of the classroom the teacher was in, and the specific teacher behavior being performed. The child observer also recorded the teacher's name, time, area of the classroom in addition to the child's social behavior.

Pilot Study. Both the time sampling and rotation procedures were set up in a 6 day pilot study. The pilot study was conducted to establish teacher and child behavior categories as well as to check the inter-observer reliability. The observers were trained for a two hour period coding from video tapes. An inter-observer relability of 92.5% for the teacher behaviors and 98% for the child behaviors was established in the pilot study.

Inter-observer Reliability. Inter-observer reliability was calculated in this study the first day of each collection period. Both observers recorded the same set of behaviors, either teacher or child, for the same 50, 3 second time intervals. Reliability was calculated for the 50 intervals by dividing the number of agreements by 50 and then multiplying that number by 100. For the teacher behavior coding a reliability of between 98% for the pretraining and training and 92% for the post-training was maintained. A reliability for the child behaviors of between 100% for the training and post-training and 98% for the pretraining was maintained.

Procedures for Data Collection

In this section the basic collection procedure is described and information on the coding sheet is provided. This study was based on a pretest, post-test design dividing the study into three major components. Three data collections occurred: pretraining, training, post-training. Data collection occurred during the indoor free play time of the preschool.

Teacher Behavior

The behaviors of each teacher were coded according to a numerical system for 10 consecutive 3 second coding intervals. During each set of intervals the observer watched a particular teacher for 3 seconds then coded her teaching behavior. In the following 7-10 seconds the observer recorded the behavior on the coding sheet (see Appendix B). The coding continued for at least 10 consecutive coding intervals,

then the rotation to the next available different teacher occurred.
The specific teacher behaviors were adapted from Fagot's (1973) study
and validated in the pilot study. Behaviors, coding numbers and defi-
nitions adopted for this study are as follows:

1 OBSERVING - Teacher is physically away from children and less available

      for interaction with the children. Watching the children

      is her primary activity.

2 NOT INTERACTING - Teacher is near children and available for

      interaction with the children but is not involved in

      any form of interaction with the children.

3 INTERACTING -

    3-1   LISTENING - Teacher is involved in an interaction with a

           child or children who are directly speaking to her.

    3-2   GIVING INFORMATION - Teacher verbally gives information not

           attempting to change the child's behavior.

    3-3   ASKS ACADEMIC QUESTION - Teacher asks questions expecting a

           particular response or a simple yes, no answer.

    3-4   ASKS QUESTION OPEN-ENDED - Teacher is asking general ques-

           tions which do not elicit a particular response.

    3-5   DIRECT/REDIRECT - Teacher is attempting to change a child's

           behavior through verbal or physical directions.

    3-6   SOLICITATE - Teacher attempts to verbally or physically

           direct a child to another play area.

    3-7   COMMENTS POSITIVELY - Teacher makes positive verbal comments

           about a child's actions or products.

3-8   CRITICIZES - Teacher shows disapproval, verbally or through

   physical action, of a child's actions.

3-9   PLAYS - Teacher actively participates in play situation

   with children.

3-10 HELPING - Teacher is involved in aiding a child with a main-

   tenance task (e.g. tying their shoe, stapling papers).

3-11 TOUCHING - Teacher is interacting with a child by physically

   touching them, usually in an attempt to comfort them.

3-12 OTHER - Teacher behaviors which may not be categorized in

   any other group were placed here.

Since this study was concerned with teacher behavior in relation
to a child's social play behavior, teacher behavior was coded only
when the teacher was in the approximate play area of the children or
appeared to be responsible for the children in a play area and when
only one teacher was interacting with a group of children. Teacher
behavior was not recorded when the teacher was not near any children
or did not appear responsible for a play area of children.

Child Social Participation Behaviors

Child behaviors were coded by a second observer for identical
time intervals with teacher behaviors. During 10 consecutive coding
intervals children's social participation behaviors were recorded on
the code sheet (see Appendix B). Codes consisted of the first letter
of the category (i.e. u for unoccupied). Children within the area of
the teacher's responsibility were coded. While the "teacher" observer
was observing the teacher for 3 seconds and recording teacher behavior,

the "child" observer was observing the children in the area and recording social participation behavior. The specific child behaviors which were observed were adopted from Parten (1932). Behaviors were tested in the pilot study. Behavior definitions along with codes used for this study are as follows:

U - UNOCCUPIED - The children apparently are not playing at all but occupy themselves with watching anything of momentary interest.

O - ONLOOKER - The children spend most of their time watching others at play. The child may talk with others but does not overtly enter the play.

S - SOLITARY PLAY - The children play alone and independently, each with toys that are different from those used by other children within the same are.

P - PARALLEL PLAY - The children play independently, but use similar toys and the activity brings them among each other but there is no attempt to influence the activity to others. There is very little if any interaction. Play is "beside" rather than "with" others.

A - ASSOCIATE PLAY - The children play with other children. There is interaction among the children, borrowing and lending materials but all engage in similar if not identical activity. There is no division of labor or organization of

activity. Each child acts as they wish not
as the group may dictate.

C - COOPERATIVE PLAY - The children play as a group that is organized
for the purpose of obtaining a group goal, or
dramatizing adult situations, or formal
games. Each child within the group has an
identifiable role. There is a division of
labor established.

Since this study was concerned with the relationship between
teacher behaviors and child social participation behaviors, only
children who were involved in an area where a teacher was being recor-
ded were coded. Any behaviors where more than one teacher was
interacting with children were not recorded.

Analysis of Data

Analysis of data were performed twice during the study. The
first analysis took place following the pretraining session. The
second analysis followed the post-training session.

First the behaviors were tabulated from the code sheets. The raw
frequencies of occurrences of child behavior with occurrences of
teacher behavior for the same three second coding interval were tabu-
lated. The frequencies were then figured into percentages in order to
choose the training behaviors.

The second set of analyses, following the post-training, involved
tabulating individual and totals of teacher behaviors and child beha-
viors for each phase of the study. Frequencies for both teacher
behavior and child behaviors were calculated as percentages. A chi
square test for independence was performed between teacher behavior
and phase of the study. Comparisons among the phases of the study
were made for teacher behavior and child behavior.

Concurrent occurrence of teacher behaviors and child behaviors
were tabulated for all three phases of the study. Frequencies were
then calculated as percentages.

CHAPTER 3

RESULTS

The results of this study fall into three main categories. Two
teacher training behaviors were increased using a video-taped training
method. The influence of teacher behavior on children's social partic-
ipation behavior was shown. The children's social participation did
change when teachers were trained to perform certain behaviors.

Descriptions of Teacher Behavior

The first step in overall analysis was to tabulate teacher be-
havior for each phase of the study. The results of the tabulation of
teacher behavior for each phase are shown in Table 1. Tabulations are
shown as proportional distribution of behaviors for each phase expressed
in terms of percentages and number of occurrences.

An even sampling distribution of teacher behaviors from each
phase of the study was recorded. Of the 7225 observations recorded
33.3% were made in the pretraining session, 33.4% in the training
session and 33.2% in the post-training.

The results of the totaled teacher behaviors for all the phases
show an overall pattern in teacher behavior. For the group as a
whole, 2.5% (2131 behaviors) of the teachers' behaviors were not

Table 1. Number of occurrences of Teacher Behavior for each phase of the study expressed in percentages.

	Pretraining	Training	Posttraining	Total
Observing*	2.7^1 $(66)^2$	8.2 (199)	18.5 (445)	(710) 9.8^3
Not Interacting	31.5 (760)	29.8 (720)	27.1 (651)	(2131) 29.5
Listening	22.1 (532)	17.5 (422)	17.3 (414)	(1368) 18.9
Giving Information	12.0 (288)	10.9 (264)	8.8 (210)	(105) 10.5
Academic Questions	10.7 (258)	8.0 (194)	7.4 (178)	(630) 8.7
Openended Questions*	2.7 (66)	2.2 (54)	2.4 (57)	(177) 2.4
Direct/Redirect	7.5 (181)	7.4 (179)	5.9 (142)	(502) 6.9
Solicitate	.2 (5)	.0 (1)	.1 (3)	(9) .1
Comment Positively	4.9 (117)	3.1 (76)	2.7 (65)	(258) 3.6
Play*	1.8 (44)	10.1 (243)	6.5 (155)	(442) 6.1
Helping	2.3 (56)	2.1 (50)	3.2 (77)	(183) 2.5
Touching	.2 (6)	.1 (3)	.1 (3)	(12) .2
Other	1.2 (30)	.5 (11)	.0 (0)	(41) .6
Total Frequency	2409	2416	2400	7225

* Behaviors which were used in the training sessions
1. Percentage of occurrences
2. Number of occurrences
3. Pecentage of total occurrences

interacting (C200)[1], making it the most frequently occurring behavior

overall. Only one teacher behavior, criticizing (C308) did not occur

at any time during the study. Together four of the behaviors, not

interacting (C200) (29.1%), listening (C301) (22.1%), giving infor-

mation (C302) (18.9%) and observing (C100) (9.8%), accounted for 68.7%

or roughly two thirds of the teacher behaviors.

Pretraining

Results from analysis of the pretraining data were used to choose

the behaviors for the training sessions. Frequencies of occurrence of

teacher behavior were totaled in relation to occurrence of child

behavior. Specifically, occurrences of cooperative play with teacher

behaviors were chosen. Observing (C100) (2.7% of the time), play

(C309) (1.8%) and openended questioning (C304) (2.7%) were chosen on

the basis of their frequency of occurrence with cooperative play. The

proportional distribution of child behavior for teacher behaviors for

the pretraining phase of the study is shown in Table 2. For each of

the training behaviors there was a high percentage of occurrence with

the child behavior of cooperative play as can be seen in Table 2.

Seventy five percent of the time during the pretraining when teachers

were observing (C100), children were involved in cooperative play.

Likewise, when teachers were coded as playing (C308), 48.3% of the

time children were cooperatively playing. For openended questioning

[1] Teacher behavior numerical codes will be written following the
teacher behavior term in order to indicate the teacher behaviors
used in this study.