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ABSTRACT
                Examined was whether systematic use of motivational
games by teachers of the culturally disadvantaged and educable
mentally retarded (EMR) can improve students' attending behaviors
(operationally defined in terms of teacher-pupil interaction).
Teachers of five randomly selected regular inner city, first and
second grade classes and five primary EMR classes were trained in
games stimuli and systematic introduction of games into class
curricula. Results showed that use of games did not significantly
affect overall frequency of off-task behavior in either regular or
EMR classes, although individual teachers produced considerably
different results. Noted were differences in deviancy patterns
between the two types of classes and games' effects on specific forms
of deviant behavior. (KW)

THE EFFECTS OF GAMES ON MOTIVATIONAL ASPECTS

OF TEACHER-PUPIL INTERACTION[1]

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Melvyn I. Semmel and Susan K. Shuster

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Center for Innovation in Teaching the Handicapped

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Abstract

The systematic use of motivational games in the classroom was viewed as a means of improving patterns of attending behaviors of culturally disadvantaged and educable mentally handicapped (EMR) children.

From five inner city schools within the Indianapolis Public School system, five regular inner city classes (1st and 2nd grades) and five primary classes for the educable mentally retarded were selected randomly. Teachers were trained in games stimuli and in procedures for the systematic introduction of games into classroom curricula.

The results of the study indicated that overall frequency of off-task behavior, both in regular and EMR classes, was not markedly affected by games. However, considerable individual differences were found among teachers. Differences in deviancy patterns between regular and EMR groups were noted, as were the effects of games upon specific forms of pupil deviant behavior. Implications for future research and training were discussed.

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CHAPTER 1

Introduction

Background of the Problem

While the playing of games is by no means an unusual social,
cultural, or psychological phenomenon (Inbar & Stoll, 1970; Berne, 1964;
Mead, 1967), it is only in recent years that the subject has come to
generate significant interest among those professional segments of the
community concerned with the solution of complex individual and social
problems. This interest has found expression within the business and
industrial community, agencies of government, and the formal education-
al system, each of which has, in its own way, met some part of its ob-
jectives through the use of games and game-like procedures.

The fascination exerted by games is, in the first instance, a
reflection of their intrinsic qualities. It is doubtless a truism that
games are enjoyed by persons of all ages, occupations, and disposi-
tions. Child or adult, physician or bricklayer, extrovert or introvert;
all are drawn, by instinct or by inclination, to games. Whether de-
fined as natural games, games of chance or skill, educational or simu-
lation games, the process attracts, intrigues, motivates. Why this is
so can be understood at least partially by the relationship that the
key structural elements of the gaming process have to the natural gen-
erative forces of life itself. Games are active and competitive; they
demand immediate commitment; there is risk and excitement; there is
much of the high drama of life, but yet within individual reach and

control. The game, if not reality, nonetheless thrusts the player
into a real process, one which demands his efforts, imagination, and
skill. Thus the paradox may exist that for a game to be even moderate-
ly well executed, aloofness, detachment, even alienation from others
must be foresworn; in true life no such necessity prevails. In the
world of business, in the government office, in the high school class-
room, in fact, reality may be as much ennui as joie de vivre.

· In the second instance, increasing interest in games derives from
the view that the game process itself has remarkable utility when sys-
tematically applied to the solution of diverse social problems. A con-
tinuously advancing technology, with its attendant complexities, in-
creased societal wants, and the recurring belief that the human condi-
tion need not remain absolutely subject to the vicissitudes and dis-
utilities of "natural laws" (whether biological, social, or economic),
has generated major pressures and gargantuan tasks for the decision
makers. Accurate and adequate solutions have not always been at hand
for reasons which go beyond such fundamental limiting factors as
scarcity of resources and subsequent problems of allocation. One major
source of difficulty has as its focus the question of the "non-scientif-
ic" nature of the phenomena and the resultant relatively imprecise na-
ture of the analytic procedures. In contrast with the physical sciences,
which have served as the traditional exemplar of "science," that is to
say, a field of study whose phenomena can readily be controlled and pre-
dicted, the events of the behavioral and social sciences are not easily
manipulated. Human events flow in ways which mitigate against ready

control. Nor are they easily replicated. Time too takes its natural
toll; as Ochoa (1969) so aptly suggests, it cannot be expanded or com-
pressed. The study of natural and many man-generated phenomena, those
at least which are time dependent, has therefore presented special
problems to the researcher (in whatever field of inquiry), educator,
businessman, political scientist, and military planner.

To cope with the particular difficulties which present themselves
in efforts to study phenomena of the real world, both for decision mak-
ing and in training for decision making, without exercising control over
real events, attention has turned to gaming procedures. In these, the
facts of reality and not real events may be represented in a fashion
subject to the demands of rigorous analysis. These requirements in-
clude time control, replicability, and opportunity for manipulation of
the process according to the demands of the problem to be solved. When
the intrinsic qualities of games, i.e., motivation, interest, excite-
ment, and personal control are added to these attributes the power of
games as aides in problem solving, both academic and social-emotional,
is considerable indeed.

A classic example of the use of games to simulate real events for
purposes of training and decision making is found in military history.
As Tansey and Unwin (1969) indicate, war games, devised at various lev-
els of realism, have been in evidence for centuries. The practice is
widespread today. Large-scale military maneuvers designed to represent
actual conditions of warfare are commonly used for planning and train-
ing purposes. War games of the "drawing board" variety also have

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'found acceptance at high levels of decision making (Abt, 1970). Their
success has motivated political scientists and economic planners in par-
ticular to experiment with gaming procedures as aids in complex problem
solving.

Business and industrial leadership likewise has seen the value of
games for management training and the executive process. By means of
simulation games company policies and practices can readily and effec-
tively be transmitted to trainees, in many instances more successfully
than by standard lecture methods. Middle and upper-level management
simulation games provide a basis for improving skills within many of the
functions of the modern business organization. In addition, research
into more effective ways of "doing business," whether in manufacturing,
marketing, or industrial relations can often be carried out with less
risk and minimum cost when simulation techniques are utilized.

Attitudes among educators concerning the possible education ad-
vantages, that is to say, instructional advantages, of games as distinct
from their amusement aspects (in most instances, of course, these goals
are not mutually exclusive) appear to be moving in a more positive direc-
tion (Gordon, 1970), a shift which may be attributed in part to general
developments in gaming procedures and their application in the field.
The serious side of games is, of course, not entirely unknown to educa-
tors. For example, the representation of "real-life" school problems
via the well-known "in-basket" procedure and its variants has, for a
number of years, served as a widely used strategy in the training of
school administrators (Hemphill, Griffiths, & Frederiksen, 1962). It
is only recently, however, that more general utility of simulation

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games and in particular their potential for classroom instruction have

been recognized.

Within the classroom, games have been an acknowledged part of life

and have been used by teachers (and certainly by pupils) from time im-

, memorial. Their traditional use has been, and to a certain extent is

age dependent, for amusement, for recreation, for simple enjoyment. Oc-

casionally games have had some instructional purpose as, for instance,

in "spelling bees" or in card games used to teach number concepts. Es-

sentially though, classroom games tend to be viewed as pleasurable ac-

tivities with no end other than "fun" by most participants in the proc-

ess. "Fun" may be seen as needed not only as an end in itself but as

an antidote to the heavy dullness of the traditional and typical con-

temporary classroom. (Those who require "authority" for the latter as-

sertion are referred to the "at large" professional and popular lit-

erature.) Classroom games are contrapuntal to the more formal work of

school. At varying levels of conscious decision making teachers may

make use of games to round out the class program. Even the most typical

teacher is likely to admit the principal of and use for "opposition."

And so the general resistance to "games serious" found among educators

(despite the signs of change) may be explained by the belief among teach-

ers that games are inherently frivolous, and secondly, that a more

serious function would, in any event, erode whatever utility they do in

fact possess in the "complete" class program.

Games, Motivation and Handicapped Children

Whether the purpose of games is serious or recreational and what-

ever the institutional framework within which games are used, intrinsic

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motivational power may well be their central attribute (Gordon, 1970). This important characteristic is derived from a number of qualities of games. Among the foremost of these are their novelty, the excitement they engender, competitiveness, and the opportunity for risk-taking accompanied by minimum loss possibilities. In addition, the participant's sense of control over his environment, an experience which is enhanced by game-playing, contributes markedly to the motivational strength of games.

If the motivational value of games is not limited by institutional context nor by type of game, i.e., the degree to which it is educational, neither is it limited by type of child for whom it is intended (Boocock, 1969; Blaxall, 1965). Thus gifted and creative students as well as passive students, underachievers, and students with behavior problems may respond to and benefit from the use of games in the classroom.

Under formal learning conditions, culturally disadvantaged and moderately retarded children are likely to experience more than usual frustration, which often finds expression in reduced attention to expected classroom activities. In all likelihood this reduction in attention becomes translated into behavior that in one form or another is considered "deviant" and which is "troublesome" both to teacher and child. For teachers of the disadvantaged and moderately retarded, an important basic classroom objective therefore may be an increase in the attention of children to appropriate classroom activities.

The means by which that objective may be obtained are diverse. However, from the point of view of the humanist (and common sense), it

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would appear advantageous to achieve such an end by activities which create a learning environment which is interesting and motivating both to teacher and to student. The motivational potential which may inhere from the systematic use of games in the classroom, motivation which might then result in increased levels of attention to classroom learning, would appear to warrant the serious attention of educators.

This study has been designed to examine whether the systematic use of games by teachers of the culturally disadvantaged and educable mentally retarded affects their patterns of attending behaviors which are operationally defined in terms of teacher-pupil interaction. It is expected that this study will permit initial clarification of the issues and will suggest further research appropriate to its major concerns.

CHAPTER 2

Review of the Literature

The analysis of game theory as it applies to child development is
a complex task. One major difficulty encountered is understanding and
defining its elements; a second is distinguishing those features which
are peculiar to games and differentiating them from those related to
play.

Many definitions of play and games have been suggested. In essence,
the following characteristics in some combination seem applicable to
both: there are human participants (players) who freely explore their
environment; objectives are present which insure that reward or feedback
is provided; the purpose of the activity is fun; the activity is chal-
lenging; the activities are governed by rules; activities are simplified
representations of some system or process separate from real-life; ac-
tivities enhance the discovery of interconnected relationships; the ac-
tivities are in essence unproductive (Moore & Anderson, 1962; Snubick,
1964; Sutton-Smith, 1967; Abt, 1970; Inbar & Stoll, 1970).

Perhaps the only useful distinction that one can make between play
and games is that the latter is a more systematic activity in which rules
and competition coexist, with oneself as well as the players.

Even this definition and/or differentiation of games and play does
not establish the uniqueness of games. For example, if a game is not
"fun" it is still referred to as a game. Inbar and Stoll (1970) at-
tempt a clarification by distinguishing between the "formal characteris-
tics of games, the psychological definition of games, and the social

definition of games." They clearly differentiate a game from a game situation using the criterion of social meaningfulness.

Games in Education

Effects on Children

Few elements of games have received considerable attention in the literature. One is the socialization function of games which Piaget (1948) claims to be critical in the development of children. He believes that the highest level of autotelic behavior, i.e., behavior which has no end outside itself, is playing with rules and that this evolves from early exposure to play with games. Through this means, a spirit of cooperation or morale develops. Mead (1956) and later work by Piaget (1962) lend additional support to this notion with the argument that the game experience is the final step in the development of the self. Bettelheim (1964) and Sutton-Smith (1955) elaborate on this point, emphasizing that the interactions required in games result in social improvements of the players. Unfortunately, empirical tests of these hypotheses have not been reported.

Piaget (1948) has also emphasized the importance of the informal games of young children in their intellectual development. Sutton-Smith (1967) hypothesizes that "play increases the child's repertoire of responses, an increase which has potential value for subsequent adaptive responses . . . and . . . that where encouraged, it may also heighten the ease with which representational sets can be adopted towards di-

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verse materials [p. 366]." Silberman (1970) argues strongly that play
is the principal means of learning in early childhood. The manifest as-
pects of creativity are also believed to be facilitated in a play or
game-like atmosphere (Wallach & Kogan, 1965).

Play and games and cognitive development would appear to be func-
tionally related; the many facets of the former, however, make it ex-
tremely difficult to determine which variables (s) result in cognitive
growth.

While empirical evidence concerning the educational effectiveness
of games is lacking; they are believed, nevertheless, to have potential
value as didactic media.

Several characteristics of games emerge as relevant components of a
positive learning environment. One is the interaction between teacher
and child, which becomes a process of transfer of authority from the
teacher to the game via the latter's rules. Thus, elements of hostility
and resentment that may be directed at the authority figure are reduced
(Shankman, 1968; Shotick & Thate, 1960; Boocock & Coleman, 1966; Starbuck
& Kobrow, 1966). This joint involvement of teacher and children may also
result in divergent thinking (Crabtree, 1967).

Immediate feedback is provided through game participation. As a re-
sult, students are forced to recognize the consequences of their previous
actions. Through participation in specific games, students learn rela-
tionships among strategy, decisions, and outcomes (Anderson, 1970; Boocock
& Coleman, 1966; Cohen, 1969).

The availability of many games for classroom use (Zeiler, 1968;

Gordon, 1970) is in large part a result of their perceived power to motivate and involve students in the learning process. Kasperson (1968) believes that this is generated by the dramatic effect of interpersonal conflict and understanding of outcomes which prevail in game situations. Motivation also is heightened as students believe themselves to be causative agents of events and not merely passive spectators (Van Der Eyken, 1968). Motivating experiences also appreciably lengthen attention span which Denny and Adelman (1955) consider important, since there is theoretical support for the facilitating effects of attention-diverting variables upon learning.

Conventional organization of instruction and instructional time may be varied by game participation. Anderson (1970) found that the time expended in playing games produced an amount of learning, as reflected in test scores, equal to the learning which evolved from equal time spent in more conventional classroom learning. This notion is supported by Fletcher (1969), and Boocock, Schild and Stoll (1967). Allen, Allen and Ross (1970) found that math games resulted in greater amounts of learning in a shorter time when compared to conventional methods, and Humphrey (1965) found that games involving verbal and number cues resulted in greater improvement than conventional workbook procedures. However, this aspect of the utilization of games has not been met with unequivocal support. Cherryholmes (1966) reported that games were no more effective than conventional classroom media in terms of learning, retention, critical thinking, or attitude change.

As Kasperson (1968) indicates, it is difficult to establish evalua-

tion criteria as to what the game is in fact teaching and to create a test capable of discriminating among the various types of learning.

Other problems impede the measurement of game effectiveness. Individuals maintain differential learning rates. It is still unclear if generalizations are, in fact, made from the synthetic environment to the unfamiliar real world situation. The limited research available indicates no consistent relationship between performance in a game and academic performance (Boocock, 1969). And, it is also unclear what the impact of winning may be upon the learning process. For example, McKenney and Dill (1966) found that an emphasis on winning led students to choose conservative strategies rather than experiment with new approaches.

Although the effectiveness of games upon students has not been clearly demonstrated, the concept has considerable promise. As Inbar and Stoll (1970) suggest, "games may prove to be settings for teaching psychosociological dimensions rather than purely cognitive and factual material [p. 59]."

Games for Handicapped Children

The belief that play is absolutely essential for the development of handicapped children has been voiced emphatically for the past two decades (Avedon & Arje, 1964; Carlson, Deppe, & MacLean, 1963; Considine, 1955; Hilsendager, Jack, & Mann, 1968; Hunt, 1955; Kelly, 1964; McGriff, 1970; Ryan, 1955; Sessoms, 1965; Turner, 1955; Witt, 1971). This belief stems from evidence that mentally handicapped or deprived children have fewer opportunities to learn how to play (Benoit, 1955; Ross, 1970) and

that the play behavior is impoverished (Sigel & McBane, 1966). It is also argued that the educable mentally retarded, for example, have greater difficulty learning to play (Clark, 1964). Zigler (1967) has hypothesized that some aspects of the educable mentally retarded child's performance attributed to slow rate of intellectual development could be viewed as a product of play deprivation.

Perhaps a component of the play situation as important as the child's behavior is one's expectation of him. It is known that expectations concerning performance are low for retarded in all areas (Kirk, 1964). Unfortunately, our expectancies in the play situation are not much more positive (Rotter, 1954). It may be, however, that a soundly conceived play program can have as its major impract a chance of expectancy levels on the part of the professionals involved.

In addition, it is hypothesized that play and games for the handicapped (educable mentally retarded in particular) will assist in the development of social skills, either through experiences designed, for example, to instruct the youngster in the specifics of getting along with others or as a by-product of having played a game (Carrol & Abshir, 1966; Avedon, 1966; Benoit, 1955; Cleverdon & Rosenzweig, 1955; Wallin, 1955).

It has long been evident (Kirk & Stevens, 1943) that the game approach has been a meaningful one in attempts to develop deficient academic skills, at least as used in efforts to interest and challenge children. Other professionals have also capitalized on the need for game approaches to teach academic skills, as a perusal of the literature in the area of curriculum development for the mentally handicapped attests (Descoeudres, 1928; Ingram, 1960; Connor & Talbot, 1964).

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The apparent need for games and play activities to meet both the social and academic deficiencies of a variety of children has resulted in numerous publications listing games and other activities (Carlson & Ginglend, 1961; Buist & Schulman, 1969; Krateville & Hoyt, 1970).

As enthusiasm for games develops, it would appear important, however, to develop research activities which consider the basic questions: Does a game or play experience lend itself to changes in behavior of handicapped children? Is a game an effective educational medium?

Research: Games and Play Experiences
with Handicapped Children

Limited research has explored the relationship between play and mental ability. Although the results are somewhat inconclusive, it becomes apparent that the brighter child tends to play more and his play activities relate more to mental tasks (Boynton & Ford, 1969). In addition, it would appear that lower mental ability children prefer motor-type activities and play-type activities which have no complicated rules (Lehman & Witty, 1928; Wang, 1958).

The research in the area of psycho-motor functioning is encouraging. Stein (1966) reported that physical proficiency could be improved in the retardate as a result of planned and systematic programs of physical education. Oliver (1958) and Corder (1966) demonstrated an IQ gain achieved by educable mentally retarded boys who participated in planned and progressive physical education activities. No follow-up

studies were made to determine whether or not the IQ gains were maintained. S. Ross (1969a) found that, with training, EMR children improved in motor skills basic to games played by children.

In the area of social growth and self-esteem, limited research tends to support the notion that games requiring the exercise of a variety of self controls indicates social improvements in the players (Gump & Sutton-Smith, 1955; Minuchin, Chamberlain, & Graubard, 1966; Redl, 1958). Boocock (1969) found no consistent relationship between performance in a game and academic performance. The implication herein suggests that the poorer or slower student may be as likely to win the game as the best student, thus having an impact on self-esteem. S. Ross (1969b) found that with social training games in a laboratory setting, EMR children can improve in this area.

Relative to the impact of games or play on learning, some basic hypotheses have been tested which relate to this question. Shotick and Thate (1960) reported that the general level of enthusiasm of a group of educable mentally retarded children increased when the instructor participated with the children during a physical education program. Elliott (1970) found that unfamiliar school material became much more meaningful to educable mentally retarded if it was incorporated with familiar or known concepts, words, etc. Denny (1964) reports that increased attention span and consistent responding are essential if learning is to occur. Goldstein and Kass (1961) support the notion that there is a potential for incidental learning in educable mentally retarded children.

The most educationally relevant work with educable mentally retarded children has been done by D. Ross (1966, 1969, 1970). In her

1970 study the intentional learning was general game skills, and the in-
cidental learning was basic number skills. Ross used excitement to get
the child's attention, modeling procedures to show children right ways
without openly criticizing them, and rewards to emphasize winning. The
experimental group spent 100 minutes a week for nine months learning game
skills and incidentally learning number concepts. The control group
spent its time learning numbers in a traditional class program. The re-
sults showed that the experimental group performed significantly better
in terms of knowledge of number skills and in general game skills.

One of the strengths of this study was the modeling procedure which
Ross utilized. In essence, the adult model would participate in the
games with the children and he would break the rule which was causing the
children the most problem. The children and teacher helped the model
correct his mistake.

Benoit (1955) discussed several of the problems which interfere with
learning by the mentally retarded: need for repetition, dependence on
examples, poor initiative, lack of concentration. The Ross study has
shown that many of these problems can be overcome in a learning situation
by the use of games.

The progression that Ross has established shows promise. Once a
child learns general game skills, and has experienced success in playing
games, he may be able to use games to learn new material. By incorpo-
rating new material into an already successful familiar game situation,
the retarded child may be able to learn the unknown material.

Summary

In summary, it is apparent that empirical support for the effects of games on teacher, pupils, and the interaction between them, has been minimal. However, there exists sufficient interest in the games approach as a possible teaching-learning strategy to encourage additional research probes.

In relation to special education classes, or inner-city classes, the notion of game implementation must have at least face validity if one is sensitive to questions of experiential deprivation, inadequate motivation, and insufficient academic and socialization skills.

The present study explores the effects of motivational games in special education and inner-city classrooms. It attempts to analyze the effects of games which are systematically introduced into the curriculum on teacher-pupil interaction, and with particular attention paid to pupil deviancy and teacher patterns of emotion.

More specifically, the present study asks the following questions: (a) If games are systematically introduced into EMR and inner-city classroom curricula will overall deviant behavior of students decrease? (b) Will the systematic use of games in the classroom alter the types of control that teachers adopt in response to the deviant behavior? (c) Will the use of games in the classroom change the patterns of deviant behavior in the classroom--e.g., from more to less aggressive, from more to less withdrawn? (d) As a function of the use of games in the classroom are teachers likely to become more flexible in the selec-

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tion of control techniques? (e) Do teachers adopt stable intervention
patterns regardless of the pattern and type of child deviancy present?
(f) Does the effectiveness of games in the classroom depend upon the
target population—i.e., EMR or inner-city regular children?

CHAPTER 3

Method

Sample

The classrooms utilized in the study were selected from five inner-city schools. These were in close proximity to each other and were selected in order to minimize socio-economic difference between regular and educable mentally retarded children. From these inner-city schools five regular inner-city classes (first and second grades) and five primary classes for the educable mentally retarded (EMR) were selected at random.

TABLE 1

REGULAR AND EMR CLASSES (PRIMARY) UTILIZED IN THE STUDY

School Number	Class	Teacher
4	EMR	Ridley
5	EMR	Mayes
8	EMR	Meadowns
	REG	McKimmy
9	REG	Jones
	REG	Chambers
	EMR	Rimer
	EMR	Mobley
12	REG	Keegan
	REG	Cooley

Active cooperation of the principals and teachers had been assured

early in the school year. Subsequent to formal approval of the project

by the Indianapolis Public Schools' Central Administration, members of

the research team arranged small group meetings with each of the princi-

pals and teachers who were to be involved in the study. These meetings,

held in January 1971, were designed (a) to permit school and research

personnel to become acquainted, and (b) to answer questions concerning

procedural aspects of the research. Substantive issues were dealt with

to the extent that they would not impinge upon the integrity of the re-

search.

Since the major purposes of the study required assessment of teach-

er-pupil interaction in the classroom, the selection of an appropriate

system of observation was imperative.

Development of Observation Instrument

Methods for observing and categorizing such events may take many

forms and may derive from diverse conceptual frames of reference (Medley

& Mitzel, 1963; Fink, 1970). The systematic observation and specification

of classroom process by means of interaction analysis has, however, be-

come increasingly recognized as a vehicle for understanding the classroom

environment (Flanders, 1970; Fink, 1970). The system developed by Fink

(1970; 1971), specifically designed to provide a basis for the more pre-

cise analysis of the complexities of deviant behavior found in classes

for the emotionally handicapped, was selected initially as the means for

gathering classroom observation data for this study. The system deals

particularly with the verbal and nonverbal, task and nontask activities
of the teachers and pupils and emphasizes the management strategies in-
voked by teachers in response to pupil behavior. The categories are
represented in Table 2.

Within this system teacher categories are first dichotimized as
to their task and nontask nature. Three task categories are defined,
each of which reflects a different process of involving students in task
activities: unilateral direction giving, induced student participation,
and feedback. Teacher nontask, or control categories, are viewed as
having five dimensions. One is a covert response set. Four are overt
response sets. One additional category is reserved for "no interaction."

TABLE 2 .

FINK INTERACTION ANALYSIS SYSTEM

		Teacher Categories
Learning Task (social and academic learning)		1. GIVING: task directions, clarification of task, communication of facts or concepts.
		2. ASKING: teacher behavior directed at actively involving students in learning tasks, asking questions (not rhetorical questions) or asking for responses, either verbal or motoric.
		3. FEEDBACK: any indication by the teacher of the correctness or incorrectness of responses.
Control Behavior	Covert Response	4. PLANNED IGNORING: deliberate ignoring of nontask behavior as a means of control; may require assumption by observer that teacher knows behavior is occurring and is being ignored. Note that planned ignoring may not necessarily result in extinction of behavior.
Control Behavior	Verbal Interpretive	5. AUTHORITATIVE: efforts to change behavior by using commands, criticism, verbal attack, rationalization.
		6. CHANGE TONE: the use of humor, "joshing" and the like, to effect behavior change.
		7. APPEAL TO VALUE/LAW: include here both appeals to values ("You guys know better than that.") as well as appeals to established rules ("Free time doesn't begin until eleven o'clock.").
		8. SURFACE BEHAVIOR RESPONSE: deals with behavior at surface level; for example, "I know you guys have had a rough day, but let's get down to work."
		9. CAUSAL: effort by teacher to get students to think about or understand the nature of behavior. This includes the use of life-space interview techniques.

Control Behavior - Continued	**Manipulation of Space-Person**	10. EXCLUSION: include here exclusions with or without force, using verbal or physical means.
		11. INTERNAL REARRANGEMENT: regrouping of physical aspects of room (moving desks); having a student sit near teacher or work by himself; teacher establishing herself in a different part of the room.
		12. VISUAL/GESTURAL: efforts at control by means of nods, smiles, stares, hand movements, etc.
	Manipulation of Incentive	13. REWARD: use of reward, future or present, and implied reward.
		14. PUNISHMENT: use of punishment, future or present, and implied punishment.
	Manipulation of Task	15. MANIPULATION OF TASK: change, reduce or refocus on task.
		16. NO INTERACTION: teacher working at desk, for example.

Pupil Categories

1. TASK:	include here all task oriented responses of the student (social or academic learning).
2. SELF-INVOLVEMENT:	include here all behavior in which student stares into space, daydreams, manipulates objects (playing with clothes, with self, chewing gum, playing with pencil in hand, etc.). No aggressive intent inferred.
3. VERBAL INTERACTION/SELF: 4. PEER: 5. TEACHER:	muttering to self, answers teacher when not supposed to, interrupts another student, talks out of turn, etc. Do not include working out loud. No aggressive intent inferred. Specify whether interaction is with self, peers, or teacher.
6. PHYSICAL INTERACTION/SELF: 7. PEER: 8. TEACHER:	moves around in class; joins one or more peers in activity; puts his arms around teacher. No aggressive intent inferred. Specify whether with self (wandering), with peers, with teacher.
9. VERBAL AGGRESSION/SELF: 10. PEER: 11. TEACHER:	insulting or abusive statements, swearing, yelling, whistling Specify whether to or by self, peers, or teacher.
12. PHYSICAL AGGRESSION/SELF: 13. PEER: 14. TEACHER:	overt physical attack, punching, kicking, hitting, spitting, throwing a book at someone. Specify whether to or by self, peers, or teacher.
15. GENERALIZED DISTURBING:	slamming a desk, clapping, whistling, rattling or tearing papers, tapping feet, if not an integral part of a task.

Pupil Categories, Con't.	
16. REFUSAL/RESISTIVE:	pupil resistance, ranging from whining, manipulative behavior to flat refusal.

The covert response set comprises one category, "Planned Ignoring,"
which is viewed as a positive control technique. The first of the four
overt response group of categories is seen as a series of verbal control
actions on an authoritative-interpretive continuum. Thus at one extreme
the category "Authoritative" represents verbal interpretation that limits
pupil participation. It represents behavior that is commanding, rational-
izing, critical. At the other extreme the category "Causal" reflects
verbal interaction which actively engages the student in the considera-
tion and solution of a problem. Commonly this means the use of life-
space interview techniques.

The second group of overt response categories is designed for be-
havior which involves physical or spatial manipulation of students or
their surroundings. This includes exclusion of students from class, the
use of "quiet rooms," internal physical or personal rearrangement of stu-
dents in relation to each other or the teacher, or the teacher's own
manipulations, such as words, smiles, gestures. Lower order incentives
used for control of deviant behavior are tallied in the "Reward" and
"Punishment" categories. These statements can be explicit or implicit
and oriented to the future or present. The fourth overt response group
accounts for the use of task as a means of control. This includes task
behavior which alters task expectations or which refocuses upon the
current task as a means of deviant behavior control.

One pupil task category is defined. Nontask activities are con-
sidered to have a number of dimensions. These include, first, the non-
aggressive acts contained within "Self-Involvement" as well as gen-
eralized verbal and physical interaction. Aggressive acts are charac-

terized in four ways "Verbal Aggression," "Physical Aggression," "Generalized Disturbing" and "Refusal/Resistive." "Verbal and Physical Interaction" and "Aggression" are further subdivided according to whether the behavior is directed towards Self, Peer, or Teacher.

In summary then, this observation system was designed to provide a basis for specifying the verbal and nonverbal, task and nontask behavior of the classroom with emphasis placed upon nontask behavior and its management.

During the planning and initial training stages of the study, continuing analysis of the categories was undertaken by Fink and Semmel. The objective was refinement and an increase in the validity of the categories which would then lead to the evolution of a more useful instrument and procedure. These changes are detailed below and are reflected in the Indiana Behavior Management System (IBMS-I) (Fink and Semmel, 1971).

1. The teacher task categories were reduced to one since the primary emphasis of the instrument was not upon finer distinctions of task initiation by the teacher but was rather upon managerial style and its outcomes.

2. The category "Planned Ignoring" presented a special and difficult problem. Although it is an important clinical/educational entity, i.e., teachers do in fact deliberately and frequently ignore behavior under the assumption that that strategy will most effectively result in reduction of deviant behavior, the observers cannot always make a ready determination of

teacher intent. As a general rule the observer must distinguish
(a) whether in fact the teacher is unaware of the deviancy and
therefore does not respond, or (b) does not respond because she
does not choose to, i.e., is afraid to, is uncertain what to do,
or (c) whether her nonresponse is a deliberate control. The
accuracy of the observer's decision is clearly subject to marked
error and thus reduces confidence in the utility of the cate-
gory. The fact that teachers do use this technique presented
the authors with a dilemma. This was resolved by broadening the
scope of the "No Interaction" category to include all "nonrespond-
ing" decisions by the teachers, whether intentional or not.

3. Within the verbal interpretive categories of the Fink system
   several category refinements and designations of categories
   were made:

   a) "Change Tone" was replaced by the term "Humor" to more
      clearly reflect the intent of the category.

   b) "Stipulation of Value-Law" replaced the term "Appeal to
      Value-Law."

   c) To sharpen the distinction between teacher expressions of
      sympathy (within a "firmness context") as a control strat-
      agem, and to direct efforts to motivate students to think
      about or understand directly the nature of his behavior,
      adjustments were made in the "Surface Behavior Response"
      and "Causal" categories. The first was redesignated
      "Empathic Response," the second "Probing Response."

d) Teacher efforts at control by means of facial gesture or
hand movements (visual-gestural) were combined with short
verbal phrases, such as "all right," "take it easy," etc.
into an enlarged category. This dimension of control was
seen as essentially a set of conditioned stimuli which
phrase served to designate the category.

e) The "Reward" and "Punishment" categories included both
applied and implied consequences. It was determined that
greater clarity of issues could be obtained if the implied
and applied conditions were separated. Thus the category
"If-Then" was developed to include all statements imply-
ing positive or negative consequences of behavior, with a
suitable subscript to indicate whether positive or nega-
tive; the "Punishment" category was reserved for direct
application punishment; "Reward" was dropped since "ap-
plied reward" as a means of control would have had no
meaning.

f) Pupi' categories were left unchanged.

TABLE 3

INDIANA BEHAVIOR MANAGEMENT SYSTEM I

Teacher Categories

Task Behavior	
1. TASK:	Any behavior related specifically to lesson material, task instructions, etc.
Control Behavior	
2. AUTHORITATIVE:	Efforts to change behavior by using commands, <u>criticism</u>, verbal attack, rationalization, reference to authority. (e.g., "Be quiet!" "I said that's enough." "You're behaving very poorly today." "What's the matter with you today!") (No answer expected).
3. HUMOR:	The use of humor, "joshing," and the like, to effect behavior change. (e.g., "You're making more noise than a pack of wild Indians.")
4. STIPULATION OF VALUE-LAW:	Description of or reference to a norm of behavior (e.g., "Free time doesn't begin until eleven o'clock." or "You're supposed to wait until you're called on." "Look how nice Susie is sitting." "Raise hand, don't interrupt.")
5. EMPATHIC RESPONSE:	Expression of sympathy with pupil feeling while maintaining firmness (e.g., "I know you're tired, but we've got to get through this chapter today.")
6. PROBING RESPONSE:	Effort by teacher to find out or get student to think about or understand the nature of behavior. Answer from pupil expected. This includes the use of life-space interview techniques, both individual and group.

TABLE 3--Continued

Teacher Categories

7. EXCLUSION:	Exclusion from classroom with or without force, using verbal or physical means. (e.g., "Go stand in the hall." "We're going to take you to the principal's office.")
8. CONDITIONED STIMULUS:	Efforts at control by means of facial and hand gesture, short phrases such as "all right," "take it easy," "wait," "excuse me" and calling child's name.
9. REDIRECTION TO TASK:	Explicit refocusing of attention to task (e.g., after child has gone off task, "Billy, could you open your book and read the first paragraph for me?" "Get back to your arithmetic."
10. INTERNAL REARRANGEMENT:	Regrouping of physical aspects of room (i.e., moving desks); having a student sit by teacher or work by himself; teacher establishing herself in a different part of the room.
11. IF-THEN	Verbal statements implying positive or negative consequences of behavior (incentives, rewards, or promises are positive consequences (IT+), threats imply negative consequences (IT-). (e.g., "If you get all the problems done before 10 o'clock, we'll have a long recess today." "If you don't quit fighting, I'm going to have to take you to the principal.")
12. PUNISHMENT:	Verbal or physical. Restriction, loss of privilege. (e.g., "You don't get recess today.")
13. NO INTERACTION, PLANNED:	No interaction planned (NIP):teacher deliberately ignores child's behavior.

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TABLE 3--Continued

Pupil Categories

Task Behaviors	
1. TASK:	Any behavior appropriate or related to lessons or lesson instructions.
2. SELF-INVOLVEMENT:	Include here all behavior in which student stares into space, daydreams, and manipulates objects (playing with clothes, with self, chewing gum, playing with pencil in hand, etc.) No aggressive intent inferred.
3. VERBAL INTERACTION/SELF: 4. PEER: 5. TEACHER:	Muttering to self, answers teacher when not supposed to, interrupts another student, talks out of turn, etc. Do not include working out loud. No aggressive intent inferred. Specify whether interaction is with self, peers, or teacher.
6. PHYSICAL INTERACTION/SELF: 7. PEER: 8. TEACHER:	Moves around in class; joins one or more peers in activity; puts his arm around teacher. No aggressive intent inferred. Specify whether with self (wandering), with peers, with teacher.
9. VERBAL AGGRESSION/SELF: 10. PEER: 11. TEACHER:	Insulting or abusive statements, swearing, yelling. Specify whether to or by self, peers, or teacher.
12. PHYSICAL AGGRESSION/SELF: 13. PEER: 14. TEACHER:	Overt physical attack, punching, kicking, hitting, spitting, throwing a book at someone. Specify whether to or by self, peers, or teacher.

TABLE 3--Continued

Pupil Categories

15. GENERALIZED DISTURBING:	Slamming a desk, clapping, whistling, rattling or tearing papers, tapping feet, if not an integral part of a task.
16. REFUSAL/RESISTIVE:	Pupil resistance, ranging from whining, manipulative behavior to flat refusal.

Observer Selection and Training

Following the development of IBMS-I and its selection as the major
criterion measure for the study, coders were selected for training in
the system. Research assistants and associates employed by the Center
were contacted and, on the basis of interest and availability, were in-
vited to serve as part of an observer resource pool. Eight such mem-
bers of the staff were initially identified and were selected for train-
ing.

The training procedures adopted were divided into three phases:
(a) cognitive understanding of the category system; (b) practice in the
application of the system in live and simulated settings; (c) check-out
training. Details of the training procedures follow.

Cognitive Understanding of the Category System

Previous experience with the use of observation instruments by the
investigators suggested the importance of "cognitive interaction" with
the categories. Trainees were asked first to commit the system to mem-
ory, i.e., to be able to recite (on demand) the category names and the
definitions of each. Trainees practiced with each other, and on two
separate occasions (once in a total group and once on an individual
basis) were "checked" by the training coordinator. When the trainees
demonstrated satisfactory understanding of the category system (i.e.,
absolute recall of the categories and their definitions) this phase of
training was concluded.

Application of the System

A commonly accepted procedure in the training of classroom ob-
servers is a period of practice in a classroom setting. One natural
assumption is that familiarization with typical classroom environ-
ments is a necessary precondition for successful observation. Con-
sistent with this line of reasoning is the expectation that the types
and forms of behavior one expects to observe in research will appear
during such familiarization procedures. It came as a surprise, then,
to project staff when it was discovered that the local classrooms be-
ing used for training, classrooms that at the onset appeared typical,
did not demonstrate patterns of deviancy that would permit adequate
practice in observation. It was decided therefore to institute simu-
lated classroom conditions with members of the training groups rotating
in the roles played. In this way it was possible to insure the appear-
ance of those pupil and teacher behaviors appropriate to the observa-
tion system being trained. In addition, and subsequent to this ac-
tivity, classrooms in which training could be carried out were made
available in the Indianapolis Public Schools.

Observer Reliability

The final phase of training was concerned with the development of
adequate levels of inter-observer reliability. While no absolute mini-
mum level is considered standard, reliability coefficients of .80 to .85
are generally acceptable (Flanders, 1965). Table 4 indicates the inter-
observer reliability levels achieved in training by the six observers

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utilized in the actual data collection phase. The method derived by

Scott (1955) as modified by Flanders (1965) was used to compute the

coefficients.

TABLE 4

INTER-OBSERVER RELIABILITY COEFFICIENTS OF

CLASSROOM OBSERVERS IN TRAINING

Observer	Initial	Final
1		
2	.44	.81
3		
4	.85	---
2		
4	.41	.84
2		
5	.30	.76
1		
6	.45	.89
1		
4	.40	.90

These training results were considered to provide a satisfactory basis for inclusion of these observers in actual data collection. Specific reliability checks during the study ensured maintenance of adequate reliability levels.

Development of Games Stimuli

Over an extended period of time the efforts of a number of Center
staff, Harold S. Guskin, Arnold A. Shuster, and Susan K. Shuster, in
particular, had been directed at the development of games which could be
used to facilitate the social, affective, physical, and intellectual
development of handicapped children. The work of this group contributed
importantly to the final development, refinement, and selection of games
stimuli that were used as sample material for the teachers who participated
in the study.

Games Workshop for Teachers

Prior to the implementation of the treatment phase, a workshop was
planned for the teachers who were to participate in the study. The
specific objectives of the workshop were as follows:

1. To help teachers understand the value of using game techniques
   in the teaching of children.

2. To make game playing attractive to teachers by demonstrating
   the relative ease with which it could be introduced and main-
   tained within the classroom.

3. To enable teachers to become more flexible in the classroom
   through active participation in the playing and generation
   of games.

To assure the attainment of these outcomes the workshop was designed
with a number of sub-objectives in mind. These were as follows:

1. Provide teachers with a packet of 30 games that could be utilized readily and which could serve both academic and affective needs.

2. Enable teachers to participate in the playing of several of the games.

3. Explain the potential for incidental learning through game-playing with particular reference to the work of D. Ross (1970).

4. Provide opportunities for the teachers themselves to generate games for specific educational purposes and within the context of specific environments.

The style of the workshop was that of an actor-teacher teaching other actors (Spolin, 1963). This model was preferred since it would force the teachers themselves to use the games. Problems encountered in playing games, in following directions, and in generating new games thus created the material for discussing the manner in which games could be used in the classroom. The workshop thus moved from the concrete art of playing games to the more abstract, generalized, integrated comprehension of games in relation to teaching.

Since a major purpose of the study was the determination of changes in teacher behavior as a result of games utilization in a teaching situation, it was considered essential to have teachers become thoroughly acclimatized to the use of games, both those provided and those which they might select independently. It also was deemed imperative to have this take place in a comfortable and facilitative

manner. The workshop itself was made to seem like a game, with the emphasis on action, competition, excitement, and novelty.

The workshop director, who had extensive experience as an actor and actor-trainer and who had contributed significantly to the development of the specific games which were being used, introduced the session. His remarks were designed to provide the minimum amount of information needed to permit the workshop to get underway.

Following the introductory remarks, a single game called "Blindfold" was played with, as in all cases, the workshop director acting as leader and all teachers playing. This is a game which does not unduly tax participants and is thus especially appropriate as an introduction. The game's purpose for children, a point carefully made by the leader, is the development of the senses. It focuses particularly upon sharpening of attention, the development of concentration and of discriminatory judgments.

The second game played was "The Drawing Game," a highly competitive, energizing game which also focuses attention and abstractive skills for participants. After this game was played the workshop leader led a discussion of the participants' reactions to the games. There were five objectives to the discussion period:

1. Explain the principles of these games, i.e., focusing attention of the student on the specific problem to be solved while the emphasis for the student is on playing.

2. Explain the principle of incidental learning, using the D. Ross study (1970) as referent.

3. Enable teachers to realize, from their own participation,
    certain of the effects (e.g., motivation) the games would
    have on children.

4. Emphasize the relative ease of leading games.

5. Heighten the teachers' interest in using games.

Following the discussion a third game was introduced to the group.
It is called "Picnic" and is an introductory role playing game which has
an out-of-doors environment relying on memory and imagination. Knowledge
of this game permits the development of a variety of similar games which
can provide many valuable experiences. A short discussion took place im-
mediately after.

This point served as the transition to the next major phase of the
workshop. As indicated earlier, the teachers' comfort with games was
considered an important objective, particularly since it would assist
teachers to generate games other than those which were pre-packaged.
This portion of the workshop was concerned, then, with facilitating the
opportunity of teacher generation of new games. A game itself was made
of this process. The main body of teachers was divided in three with
each sub-group in competition with each other. The first game was that
each team was to generate a new game similar to "Picnic," with the win-
ning team receiving a point. This approach to the development of new
games was chosen in order to give the teachers the greatest possible
success with the process. All groups developed acceptable games with
great ease and speed. Thus they were able to realize from their direct
experience that the process was well within individual grasp.

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As a continuation of this process, the three teams were asked to
write down as many ideas for similar games as they could within a one
minute period. The team with the greatest number would win a point.
Again, each group found the task quite easy, coming forward with from
eight to twelve possibilities each.

Games were then discussed in terms of their potential for creating
more flexibility in the classroom. The following points were emphasized:

1. Teachers can improvise new games when confronted with unex-
   pected problems.

2. Teachers can use games already known which may have bearing on
   the problem of the moment.

3. Games can alter the feeling-tone of the class day; as few as
   three or four games in a day can refresh children and teacher
   and thus serve as an indirect source of energy and an addition-
   al resource for teachers.

4. Theory of incidental learning potential for children through
   games was reviewed.

In relation to this it was pointed out that games could help teachers
plan lessons more effectively and inventively. An example of this was
provided through the following exercise.

Each teacher was asked to visualize one child in her class, the les-
son plan for that day, and the expected problem that child would have
with the lesson. With these three points in mind, each teacher was
asked to take a few minutes to develop a game--and to write it down--
that would overcome the child's problem and help teach him the material

that was to be learned; that would, in other words, focus attention upon play but would nevertheless (incidentally) teach the content of the lesson. All but one of the teachers were successful.

The workshop was concluded with a brief discussion of the remaining games and questions which pertained to them.

Experimental Design

The ten classes (i.e., five EMR and five Regular) in the sample were observed on nine separate occasions throughout the period of the study. The sequence of operations was as follows: The first three sessions covered a period of three weeks and was designated the Baseline or Phase I of the study. During this period, separate coders observed each class on three different occasions. Each observation occurred at any time during the day that an academic lesson was in progress, and was of 30 minutes' duration.

The second three sessions also covered a period of three weeks. This period was designated the Treatment or Phase II of the study. During this period, each class again was observed on three separate occasions. Each observation began during the first academic lesson of the morning and continued until 30 minutes had expired. During the workshop (described previously) which preceded Phase II, teachers were introduced to the game stimuli and the procedures for the treatment were clearly described. Each teacher was instructed to employ daily, throughout the treatment period, a game at the beginning of the first academic lesson in the morning, and once more at her option during the

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rest of the day. However, only _three_ of the initial morning lessons
were sampled during Phase II. Moreover, none of the teachers' "option"
lessons were observed.

The final three sessions of the study covered a period of three weeks
and were designated the Post-Treatment Phase of Phase III. During this
period, each class was observed on three separate occasions. Paralleling
Phase I, each observation occurred at any time during the day that an aca-
lesson was in progress, and was of 30 minutes' duration.

The assignment of coders to classroom observations was counter-
balanced across teachers and phases. The intra-observation interval was
five seconds, and both a teacher and a pupil behavior was recorded at
each interval.

CHAPTER 4

Results

The data analysis is divided into three sections: analysis of over-
all patterns of teacher control behavior among Regular and EMR teachers
based upon the categories of the Indiana Behavior Management System-I
(IBMS-I); analysis of most frequently appearing teacher control tech-
niques; analysis of the most frequently appearing pupil off-task be-
haviors.

The analyses are developed in the following manner. The first sec-
tion is concerned with the analysis of overall patterns of teacher con-
trol behavior among the Regular and EMR groups. Analysis of variance is
employed to assess the effects of both group classification and phase
condition.

In the second section primary emphasis is placed upon analysis of
the three most frequently appearing teacher control techniques, taken as
a group. The total percentage of these behaviors is analyzed by means
of analysis of variance for both Regular and EMR teachers, by phase.

In the final section the most frequently appearing pupil off-task be-
haviors are considered individually and assessed by means of analysis of
variance for EMR and Regular classrooms, by phase.

Analysis of Teacher Behavior

The first part of the analysis focused upon the following criterion: off-task behaviors as defined by the Indiana Behavior Management System-I (IBMS-I). For each teacher the amount of off-task behavior was grouped by phases. The total percentage of off-task behavior was then analyzed by ANOVA for EMR and Regular teachers, by phase. A 2x3 Fixed ANOVA Design with repeated measures over the last factor was applied. The effects of group classification (A) and phase condition (B) were assessed. Table 5 presents a summary of this analysis.

TABLE 5

SUMMARY OF ANALYSIS OF VARIANCE OF PERCENT

OFF-TASK BEHAVIOR FOR GROUPS AND PHASES

Source	df	MS	F
Between Ss	9		
Groups (A)	1	64.50	2.19ns
Subjects within groups	8	30.59	
Within Ss	20		
Phases (B)	2	0.40	1.00ns
A x B	2	0.15	1.00ns
B x Subjects within groups	16	1.31	

ns = nonsignificant

The results of the analysis reve led that neither of the main effects nor the two-way interaction of groups and phase conditions was significant ($\underline{p} > .05$).

Table 6 compares percentage of time off-task across phases for each teacher in the sample.

TABLE 6

PERCENT OF TIME OFF-TASK IN REGULAR AND EMR CLASSES

	Phase 1 %	Phase 2 %	Phase 3 %
Regular Teachers			
1	12.8	8.9	10.2
2	1.4	1.7	2.8
3	4.2	7.1	6.9
4	5.5	4.9	4.9
6	4.1	5.6	6.2
$\overline{x}$%	5.6	5.6	6.0
EMR Teachers			
5	2.0	2.4	3.1
7	8.2	9.2	9.4
8	1.3	1.1	0.6
9	2.2	1.5	2.1
10	1.0	1.0	0.1
$\overline{x}$%	3.0	3.0	3.1

Figures 1, 2, and 3 (pp. 48, 49 & 50) graphically illustrate the data revealed in Table 6.
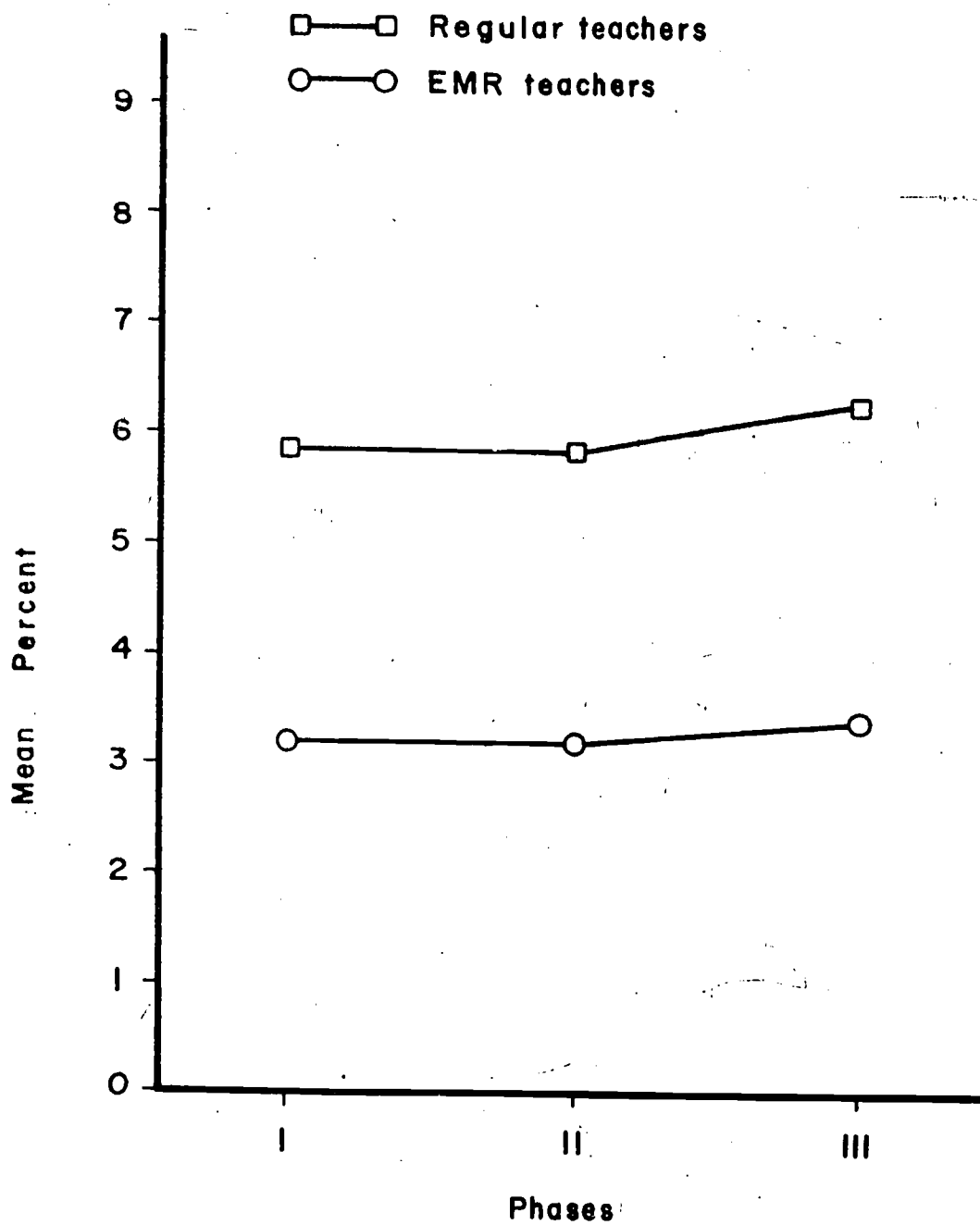
Fig. 1. Mean percent of time off-task across phases.
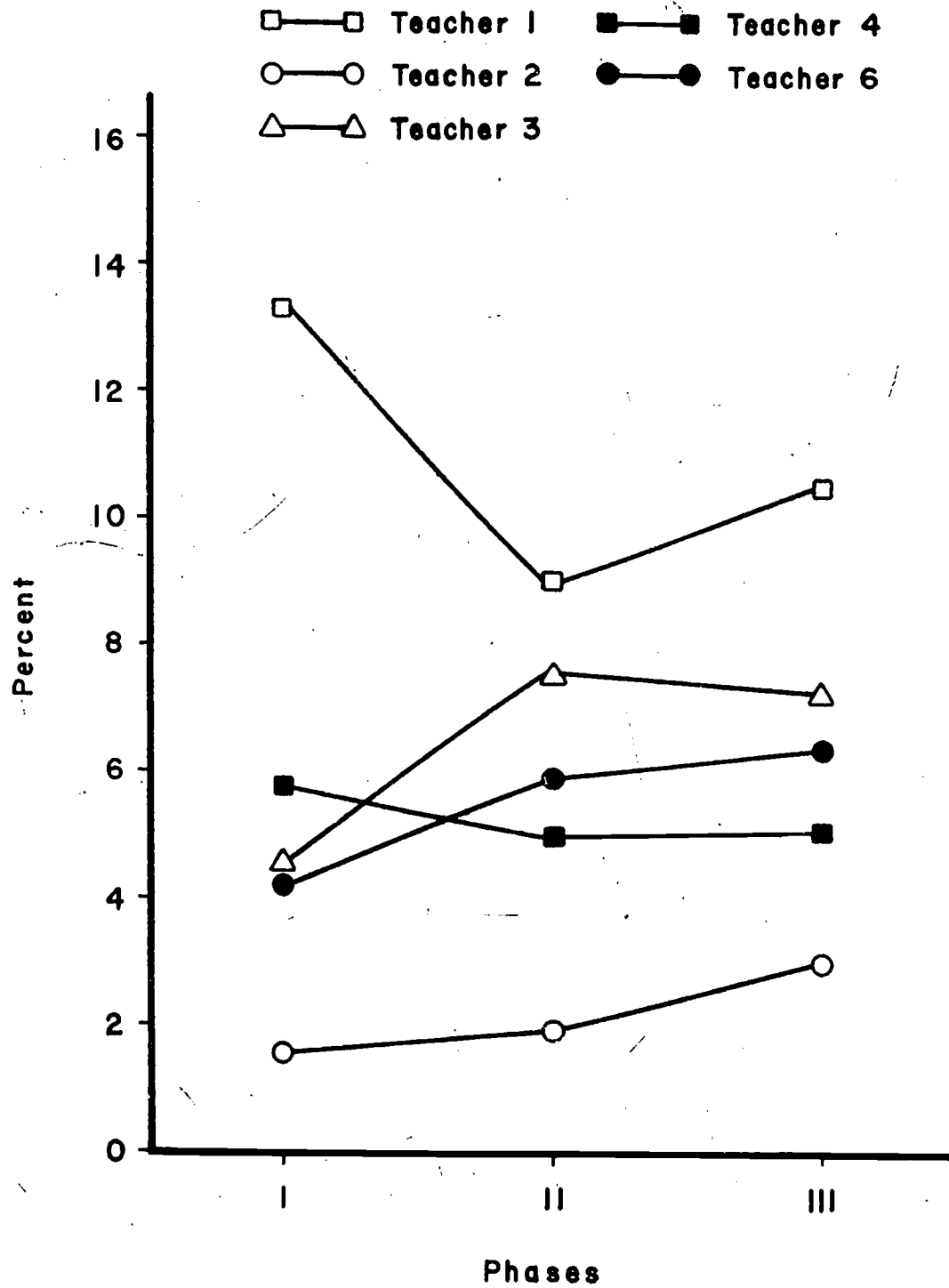
Fig. 2. Percent of time off-task by regular teachers across phases.

□——□ Teacher 5   ■——■ Teacher 9

○——○ Teacher 7   ●——● Teacher 10

△——△ Teacher 8

Percent

10

9

8

7

6

5

4

3

2

1

0

I   II   III
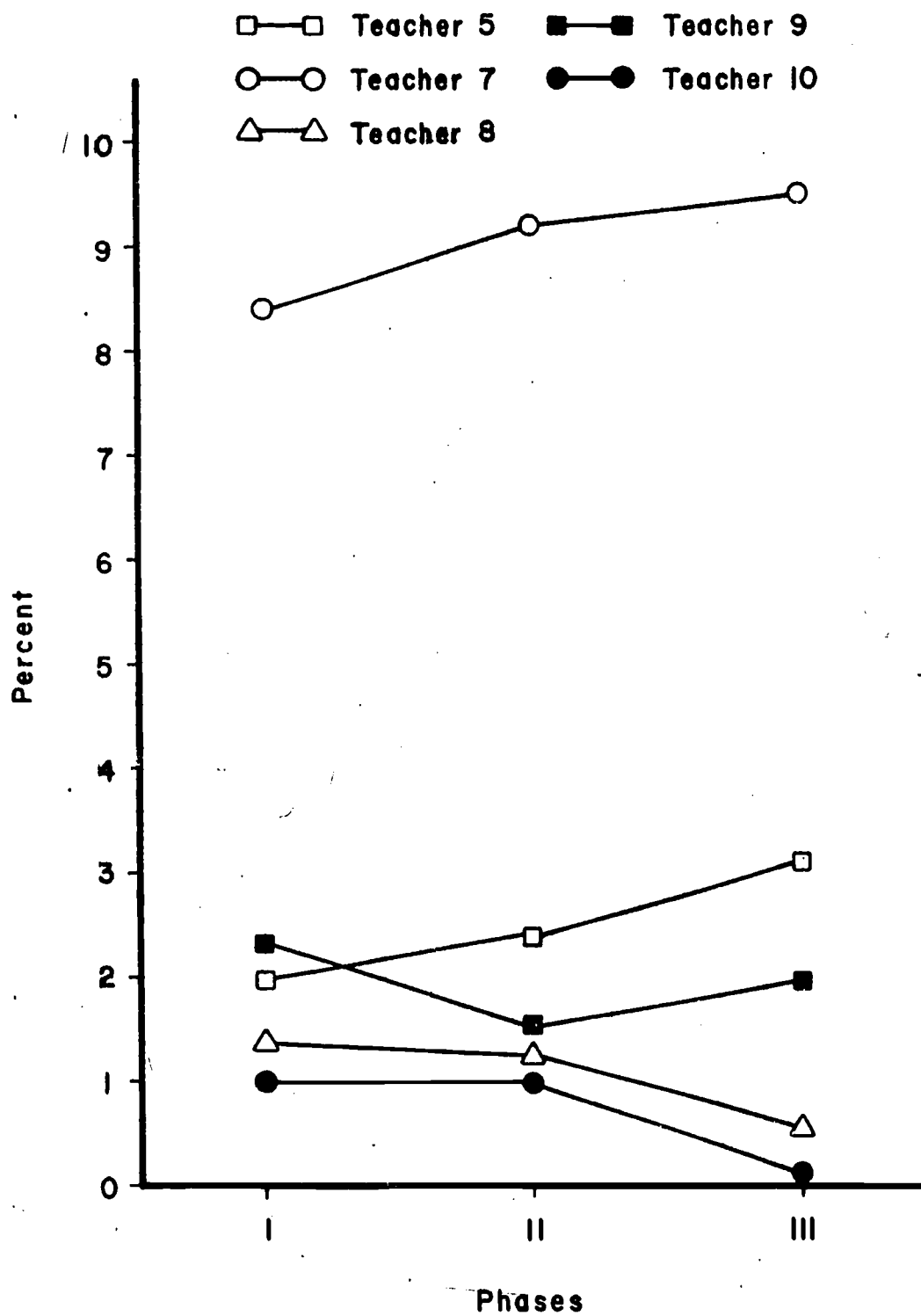
Phases

Fig. 3.   Percent of time off-task by EMR teachers across phases.

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As indicated in Figure 1, the mean percent of time off-task re-
mained relatively stable for both groups across phases. Although over-
all average of off-task behavior approximated 4%, Regular classes showed
twice as much off-task activity as EMR classes.

As shown in Figure 2, Regular teachers showed little evidence of
change overall; there was, however, a narrower range of off-task be-
havior in both Phases II and III than prior to the introduction of games.

The teacher with the most off-task behavior (teacher 1) showed
greatest change (from 13% to 10%) and also the greatest volatility across
phases. Three of the five teachers showed a rising curve of off-task
behavior but it was not a statistically significant level.

Figure 3 indicates that four out of five of the EMR teachers showed
the same low rate of off-task activity prior to the introduction of games.
Of these, three declined slightly and one showed a slight increase. One
of the five classes was at a high level of off-task activity which re-
mained essentially unchanged across phases.

Overall, there was no apparent effect of games on off-task activity;
however, the range of off-task behavior became slightly greater follow-
ing games, in contrast to the regular classes.

Most Frequent Teacher Control Behaviors

The three most frequent control behaviors used by teachers were
"Authoritative," "Value/Law," and "Conditioned Stimulus." Table 7 pre-
sents the mean percent occurrence for these behaviors and reveals that
over 86% of the variance of teacher control was accounted for by them.

TABLE 7

PERCENT OF MOST FREQUENT TEACHER CONTROL BEHAVIOR

	Phase 1 %	Phase 2 %	Phase 3 %
Regular Teachers			
1	76	93	89
2	82	84	81
3	86	81	84
4	73	94	86
6	95	99	89
$\overline{x}$%	82	90	86
EMR Teachers			
5	89	98	78
7	87	88	77
8	89	92	40
9	81	73	87
10	86	83	100
$\overline{x}$%	86	87	76

The data in Table 7 was analyzed by a 2x3 Fixed ANOVA Design, with repeated measures over the last factor. The effects of group classification (A) and phase condition (B) were assessed. Table 8 presents a summary of this analysis.

TABLE 8

SUMMARY OF ANALYSIS OF VARIANCE OF

A, V/L, CS RATIO FOR GROUPS AND PHASES

Source	df	MS	F
Between Ss	9		
Groups (A)	1	00.0065	1.00ns
Subjects with groups	8	00.0097	
Within Ss	20		
Phases (B)	2	00.0137	1.00ns
A x B	2	00.0113	1.00ns
B x Subjects within groups	16	00.0137	

ns = nonsignificant

This analysis revealed that the main effects of groups (Regular teachers vs. EMR teachers) and phase condition (pretreatment vs. treatment vs. posttreatment) were nonsignificant (p > .05). The two-way interaction of groups with phase conditions was also nonsignificant (p > .05).

Figures 4, 5, and 6 (pp. 54, 55, & 56) graphically illustrate the data shown in Table 8.

Figure 4 shows that there was relatively little difference in the use of the three most frequent control techniques between the two groups.

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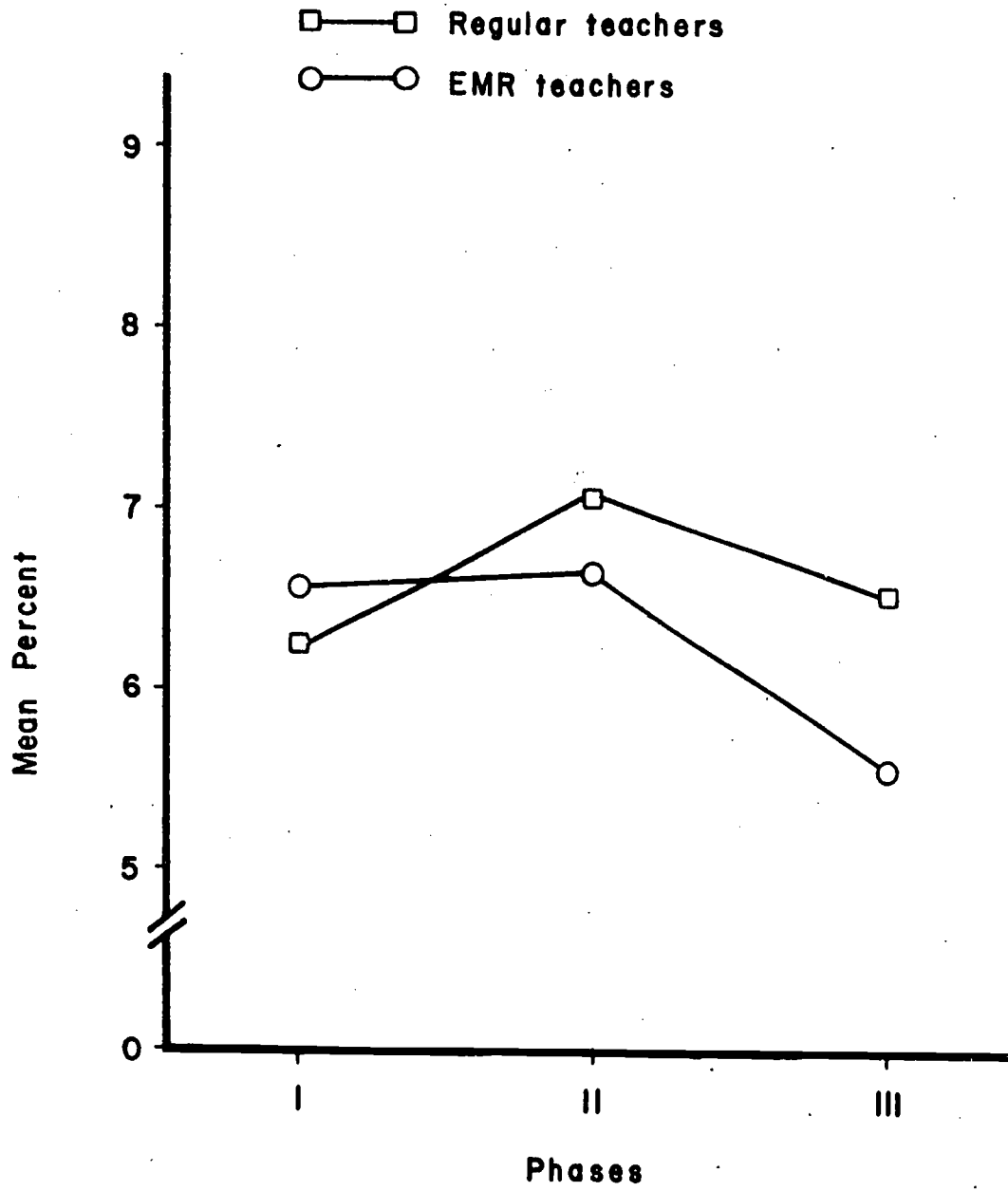
Fig. 4: Mean percent of A, V/L, and CS across phases.
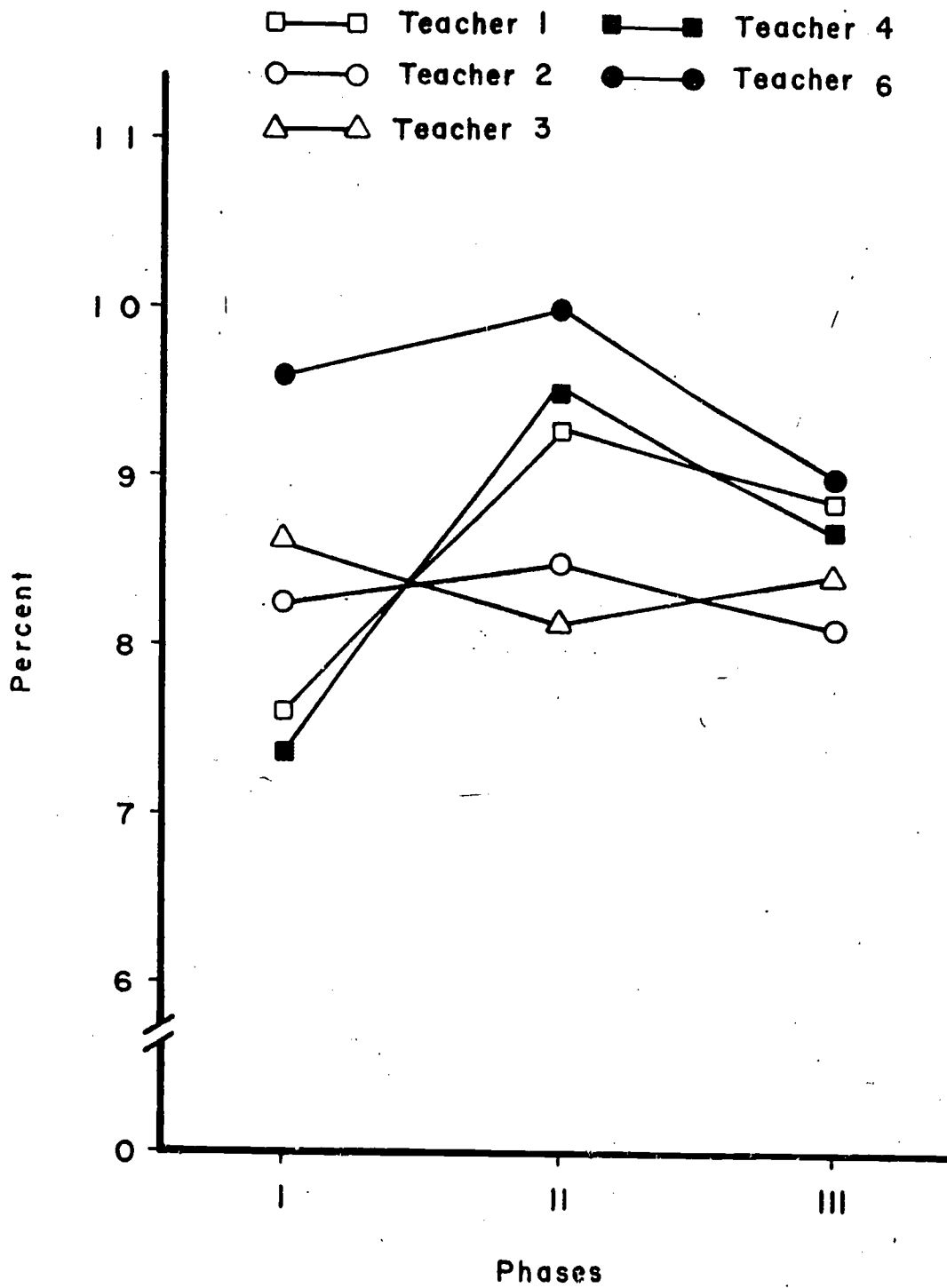
Fig. 5. A, V/L, and CS for regular teachers across phases.
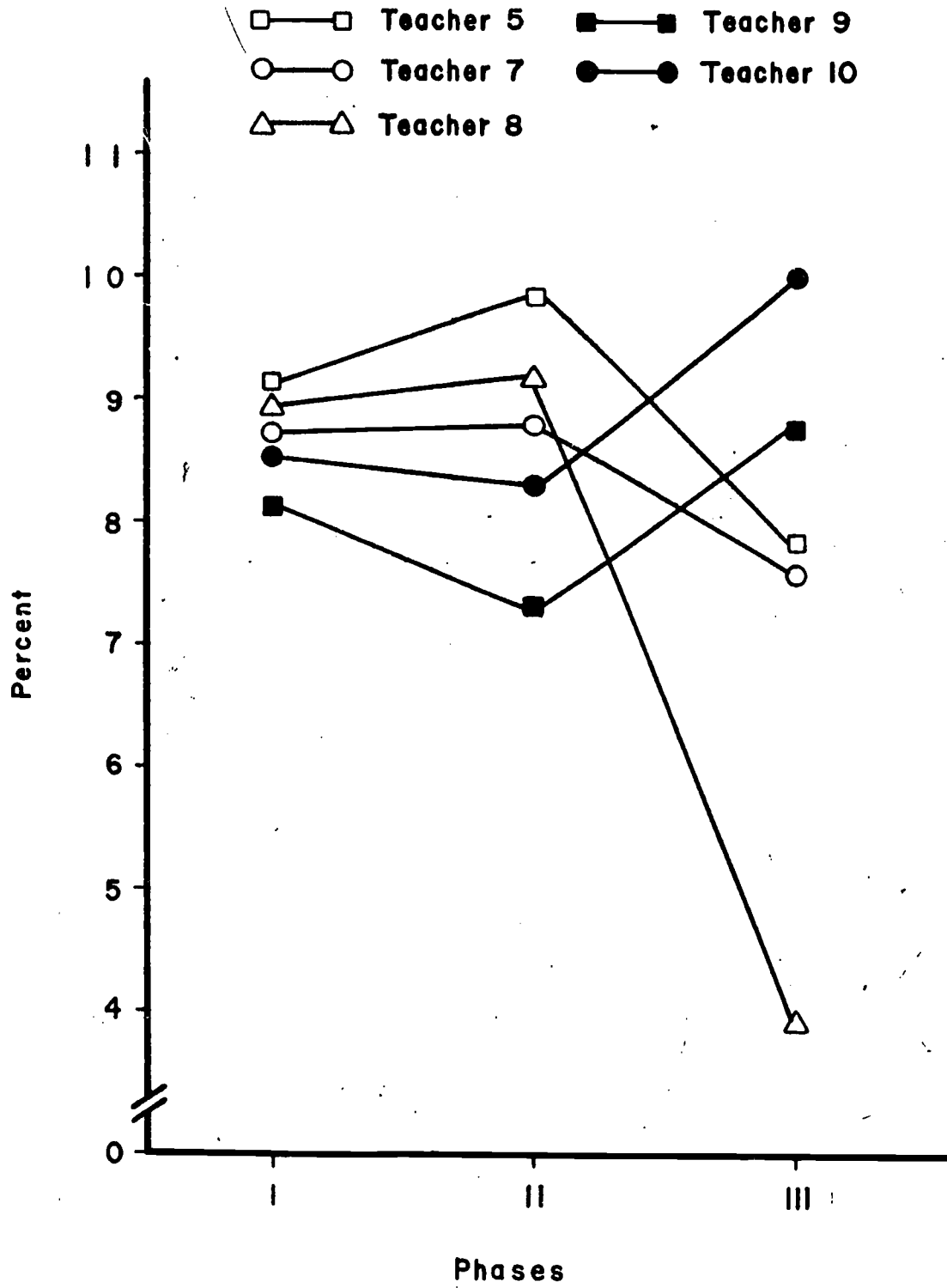
Fig. 6. A, V/L, and CS for EMR teachers across phases.

During the posttreatment phase there was a tendency toward greater/use of the control behavior by the Regular teachers, however.

From pretreatment phase to posttreatment phase Regular teachers' control behavior had a tendency to increase; EMR teachers' control behavior had a tendency to decrease. It would appear that the use of the categories "Authoritative," "Value/Law," and "Conditional Stimulus" decreased EMR classes as a function of games--from 80% to 76%. EMR teachers, however, used proportionately greater amounts of these categories in terms of overall patterns of control.

Figure 5 presents the mean of the categories "Authoritative" (A), "Value/Law" (V/L), and "Conditional Stimulus " (CS) for regular teachers, across phases.

As a function of games the range of A, V/L, and CS narrowed due to changes, primarily in the behaviors of Teachers 1 and 4. As a group the use of A, V/L and CS increased during the treatment phase; this effect, however, did not maintain itself. This was mainly accounted for by Teachers 1 and 4.

Figure 6 presents the mean of A, V/L, and CS categories for EMR teachers across phases.

As may be observed from Figure 6, baseline data indicated little initial difference among EMR teachers. At treatment there was, however, a wider range; three teachers remained consistent, one increased, while one decreased. In the posttreatment phase and as a function of games, three of the teachers reduced their use of the three most frequent control categories, especially Teacher 8 who moved from 89% to 40%.

Teachers 9 and 10 increased their uses of the categories.

As a group EMR teachers reduced their use of the most frequent con-
trol techniques as a function of games and posttreatment conditions. In
contrast to the Regular teachers (see Figure 5), there was more volatility
and greater range among EMR teachers subsequent to treatment. It would
appear, further, that (a) individual differences among teachers were sig-
nificant, and (b) that heterogeneity among EMR teachers may have been
greater than the differences between EMR and Regular groups.

Analysis of Pupil Behavior

The second part of the analysis focused upon the most frequent
pupil deviant behavior: "Self-Involvement," "Verbal Interaction/Peers,"
"Verbal Interaction/Teachers," "Physical Interaction/Self." It is
interesting to observe that these behaviors also reflected the more ex-
treme patterns of pupil deviancy: passive, withdrawn behavior on the
one hand, varieties of acting-out behavior on the other.

Table 9 compares the percent of total time off-task to the pupil
category "Self-Involvement."

Figures 7 and 8 (pp. 60 & 61) graphically illustrate the data pre-
sented in Table 9.

As indicated in Figure 7, there was almost twice as much "Self-
Involvement" within EMR classes compared to Regular classrooms at base-
line. During the treatment phase, "Self-Involvement" in the EMR classes
decreased by better than half and stabilized at the level of the

TABLE 9

PERCENT OF THE TOTAL TIME OFF-TASK FOR "SELF-INVOLVEMENT"

	Phase 1 %	Phase 2 %	Phase 3 %
Regular Classrooms			
1	05	03	04
2	53	39	28
3	08	07	11
4	11	12	16
6	23	16	16
$\overline{x}$%	20	15	15
EMR Classrooms			
5	40	24	32
7	13	17	25
8	11	17	10
9	24	19	03
10	71	00	00
$\overline{x}$%	36	15	14

Regular classrooms. This rate of behavior maintained itself at the
same level during the posttreatment phase for both groups.

As shown in Figure 8 there was little evidence of change overall
in the rate of "Self-Involvement" within the Regular classrooms. A
major change, however, occurred in Classroom 2; "Self-Involvement"
decreased from 53% during baseline to 39% during treatment. In the
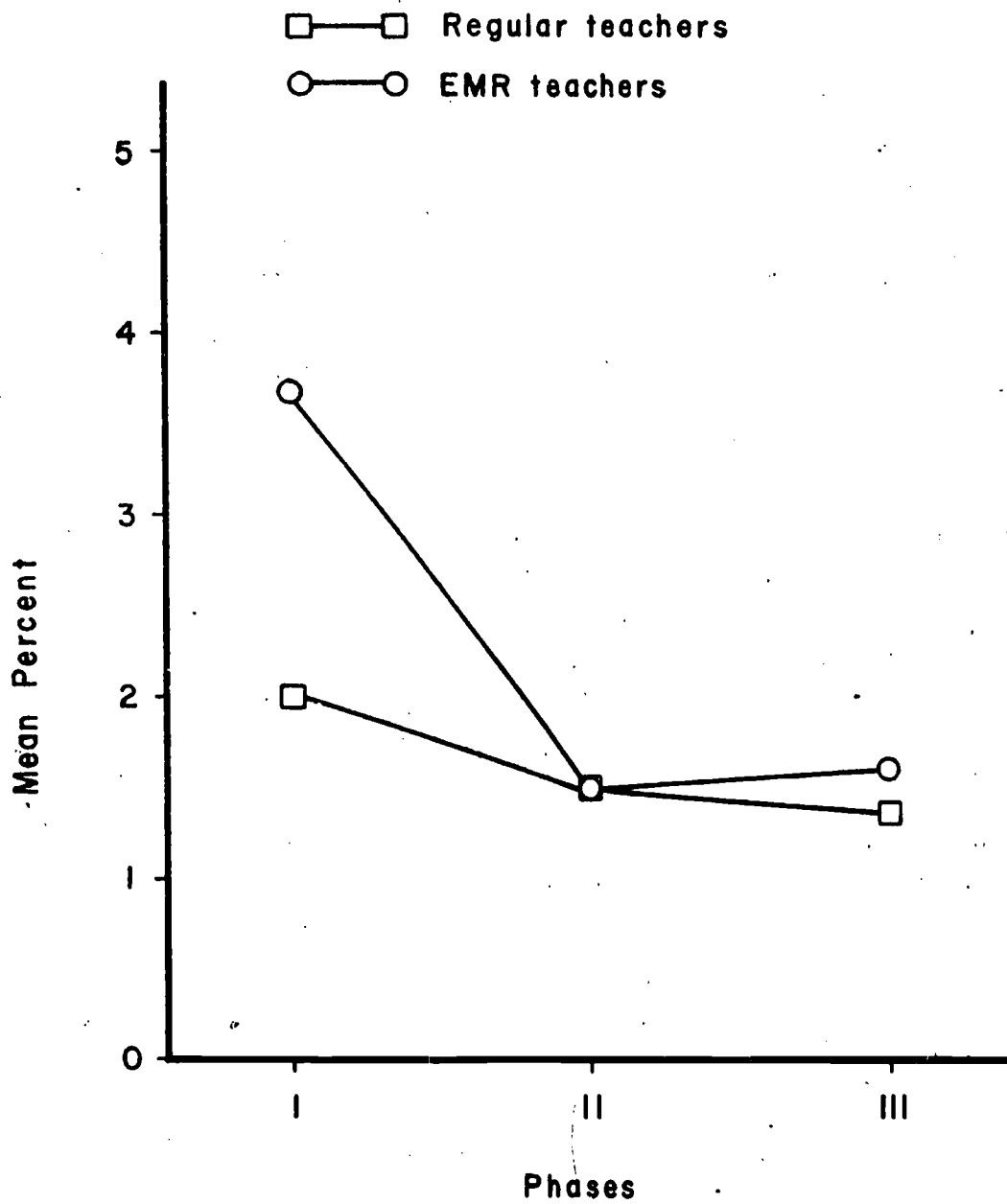
Fig. 7. Mean percent of total time off-task for"Self-Involve-
ment"across phases.
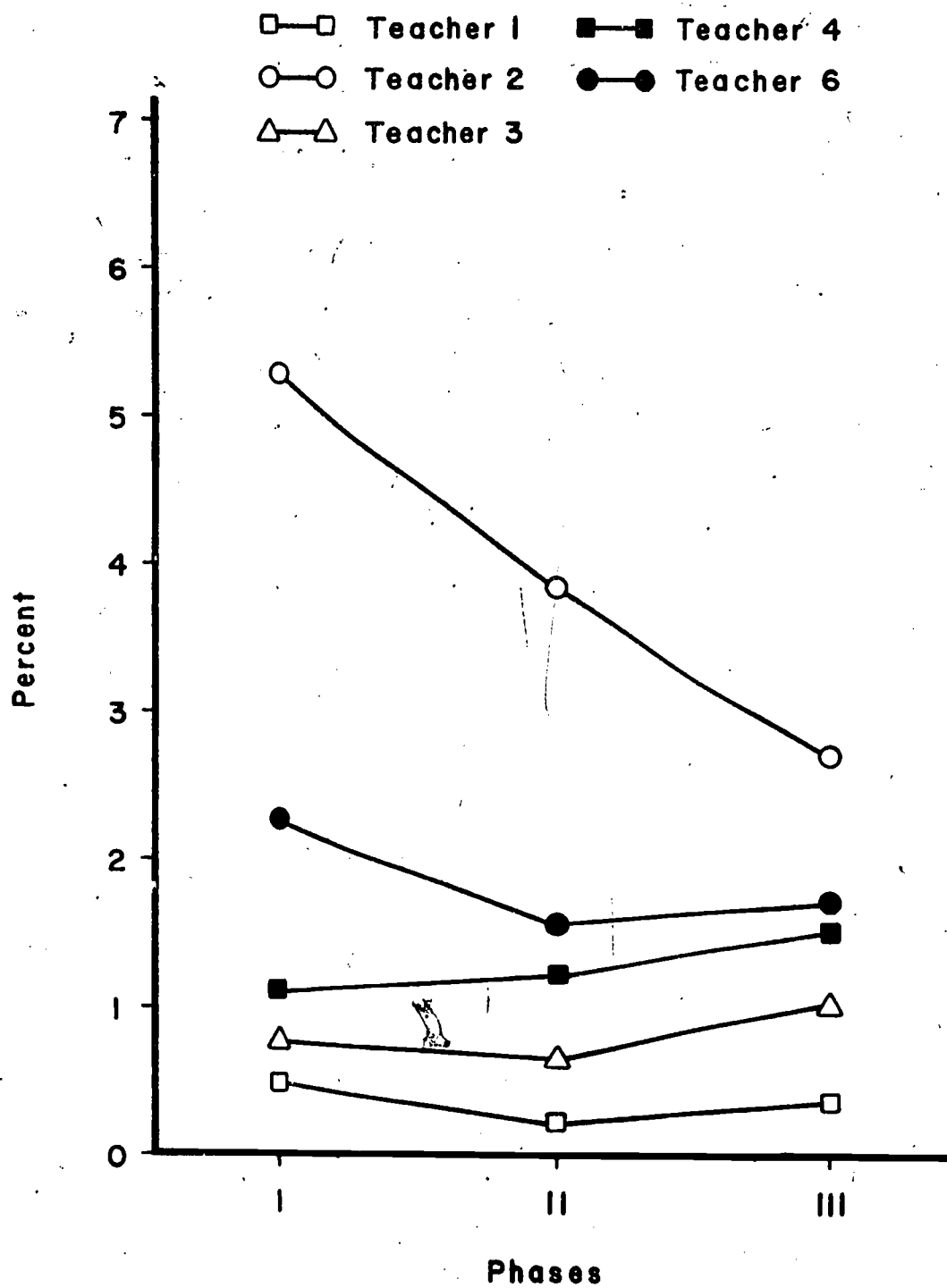
Fig. 8. Percent of total time off-task for "Self-Involvement" in regular classrooms.

posttreatment phase "Self-Involvement" again decreased substantially, although its final level (28%) was the highest of the five Regular classrooms.

As is evident from Figure 9 (p. 63), a wide range of "Self-Involvement" behavior existed in the EMR classrooms prior to the introduction of games. At one end of the continuum, Classroom 10 showed a "Self-Involvement" rate of 71%; at the other end in Classroom 8 the rate of "Self-Involvement" was 11%. During the treatment phase, three of the classrooms' rates of "Self-Involvement" decreased, while two increased slightly. Of the former, Classroom 7 represented the most marked decrease (71% to 00%) and was largely responsible for the overall decline in "Self-Involvement" phases. While there was little change overall from treatment to posttreatment phases, two of the classrooms showed slight increases, two somewhat greater decreases, and in one (Classroom 7) the marked decrease from baseline to treatment in rate of "Self-Involvement" was maintained.

It would appear, therefore, that games had very little effect upon "Self-Involvement" within regular classrooms. Much more evident, however, was their effect in EMR classrooms, where initially greater frequencies tended to be reduced. While the reductions were non-significant statistically, there was nevertheless a clear trend toward lesser "Self-Involvement" as a function of games.

Table 10 indicates the percentage of total time off-task for the pupil category "Verbal Interaction/Peers."

Figures 10, 11, and 12 (pp. 65, 66 & 67) graphically illustrate the data presented in Table 10.

68
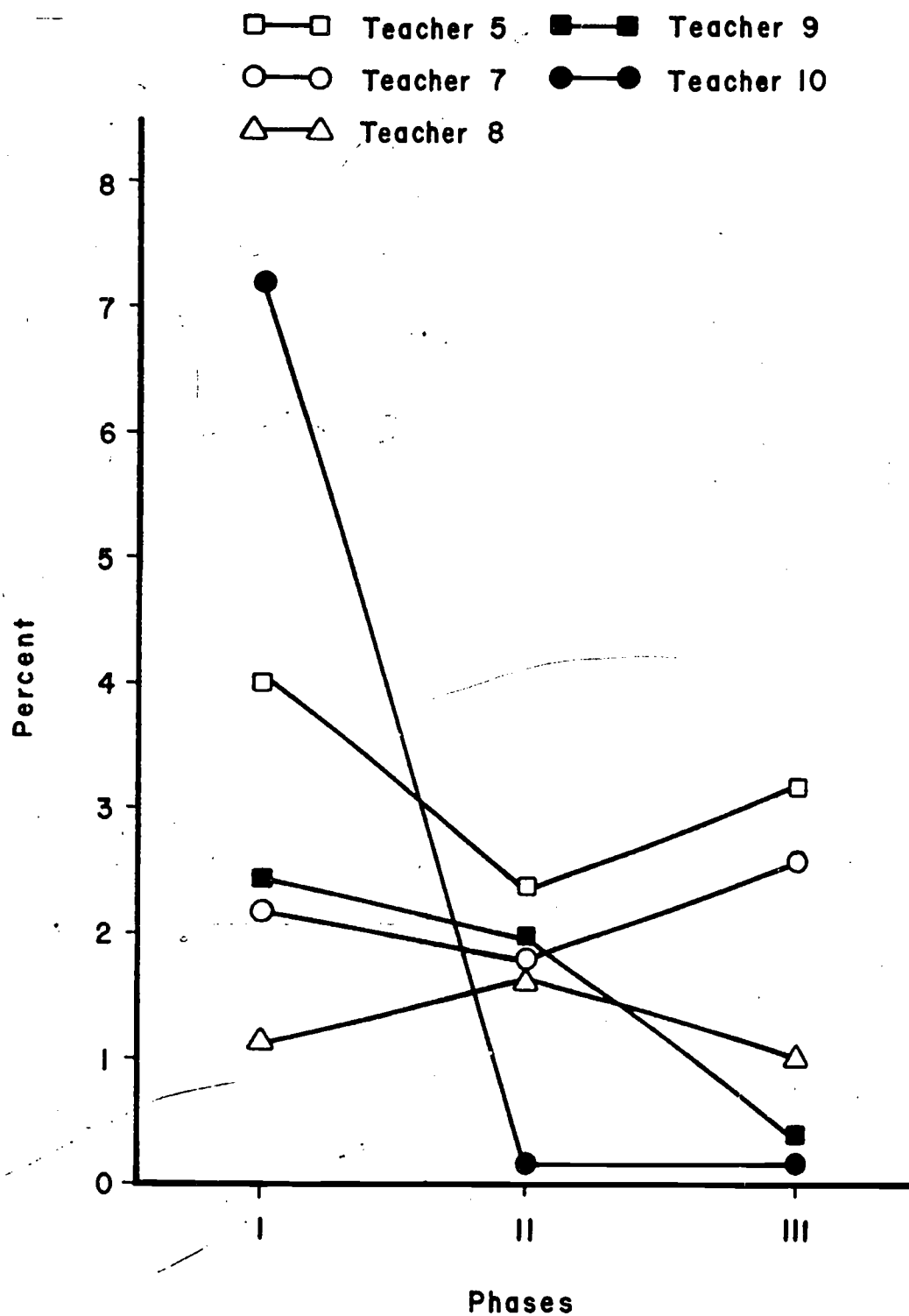
Fig. 9.   Percent of total time off-task for "Self-Involvement"

in EMR classrooms.

TABLE 10

PERCENT OF TOTAL TIME OFF-TASK

FOR "VERBAL INTERACTION/PEERS"

	Phase 1 %	Phase 2 %	Phase 3 %
Regular Teachers			
1	54	44	37
2	12	32	23
3	16	17	21
4	24	16	12
6	14	28	32
$\bar{x}$%	24	27	25
EMR Teachers			
5	11	17	10
7	18	22	06
8	32	46	20
9	24	15	15
10	14	06	100
$\bar{x}$%	20	21	30

As indicated in Figure 10, a slight difference existed between the two groups during baseline, with "Verbal Interaction/Peers" (VI/P) higher in the Regular classrooms. This difference was maintained during treatment. Following games VI/P increased in the EMR groups, rising from 21% to 30%. In the regular classrooms, VI/P decreased slightly

70
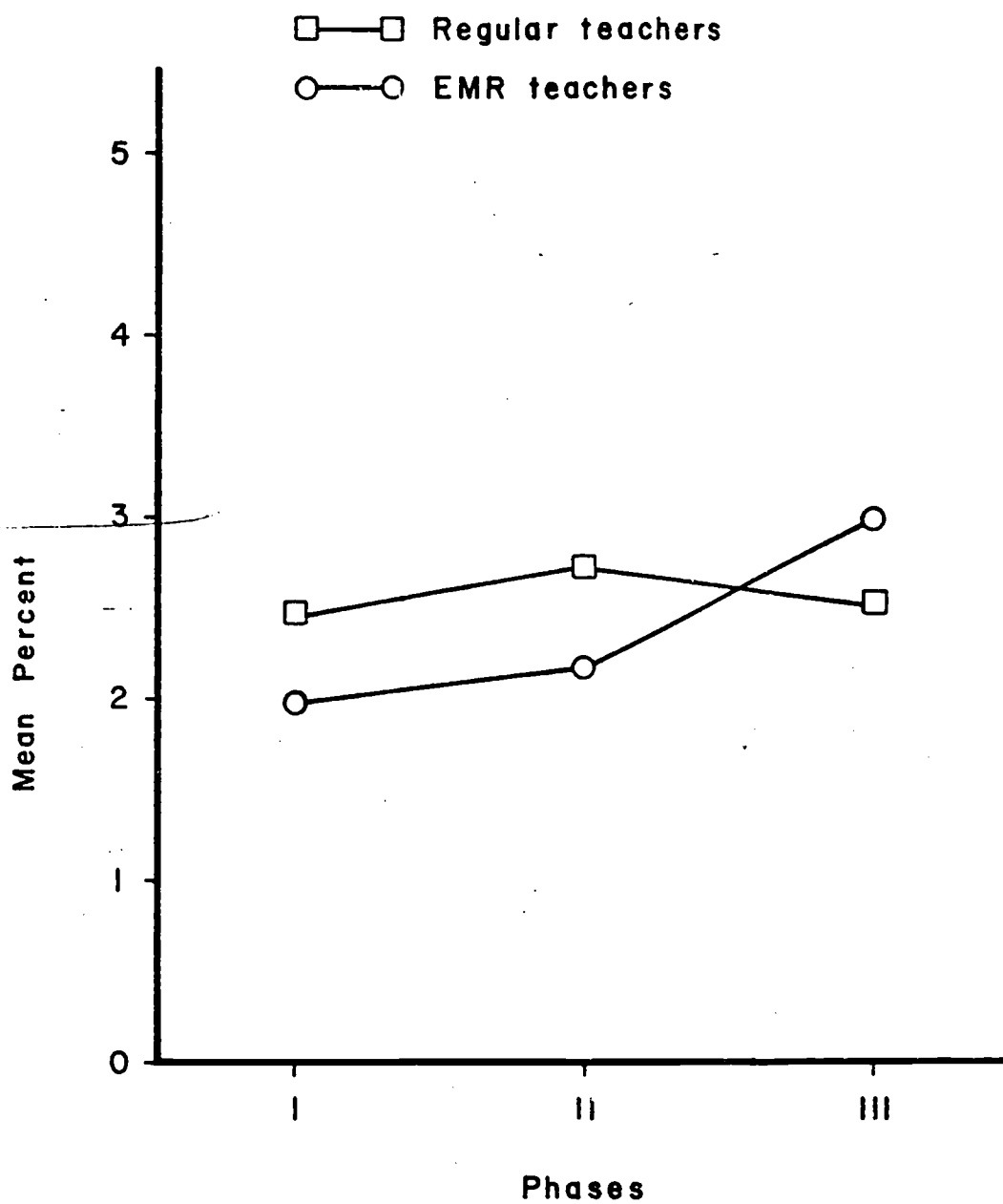
Fig. 10. Mean percent of total time off-task for "Verbal Inter-
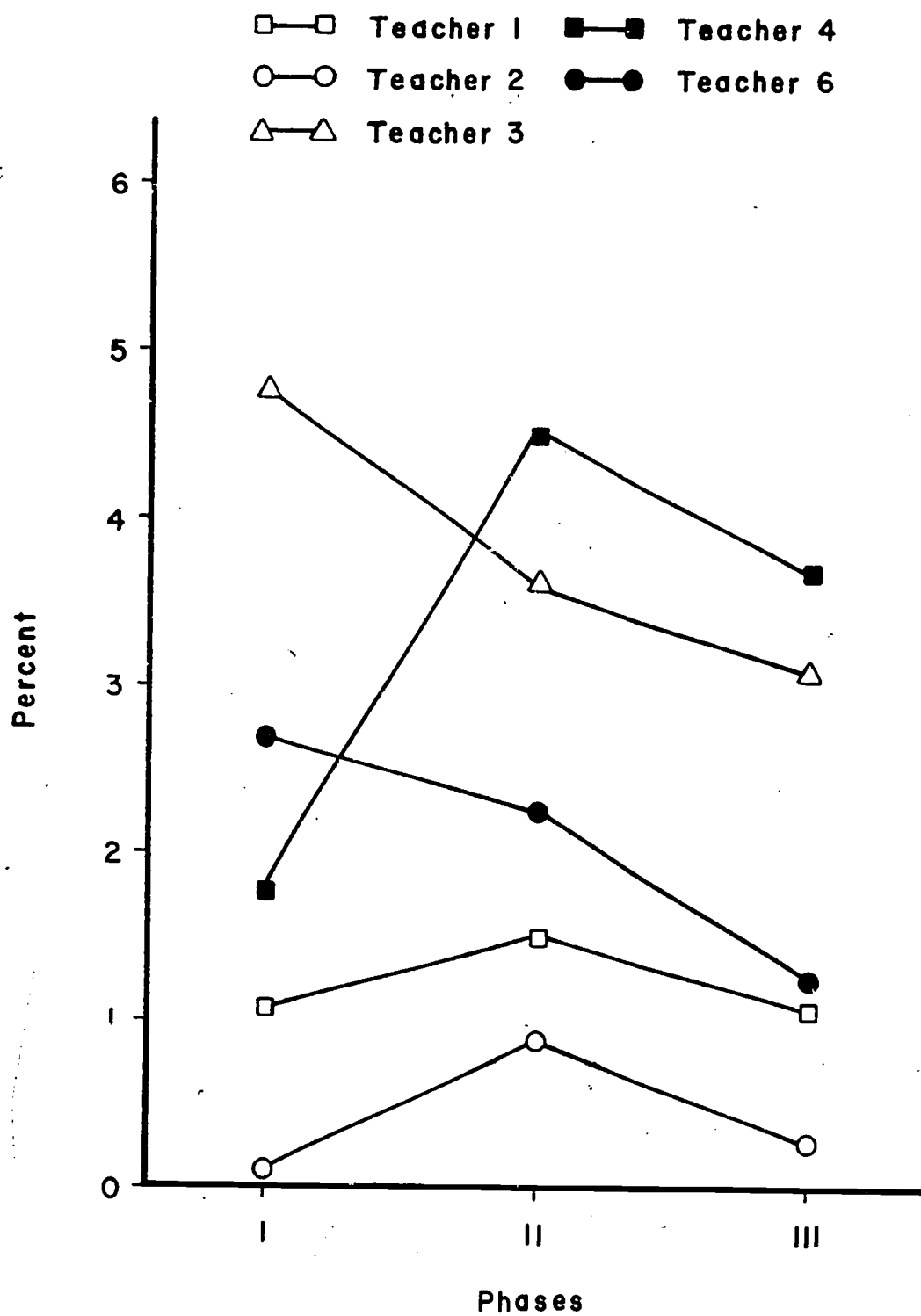action/Peers" across phases.
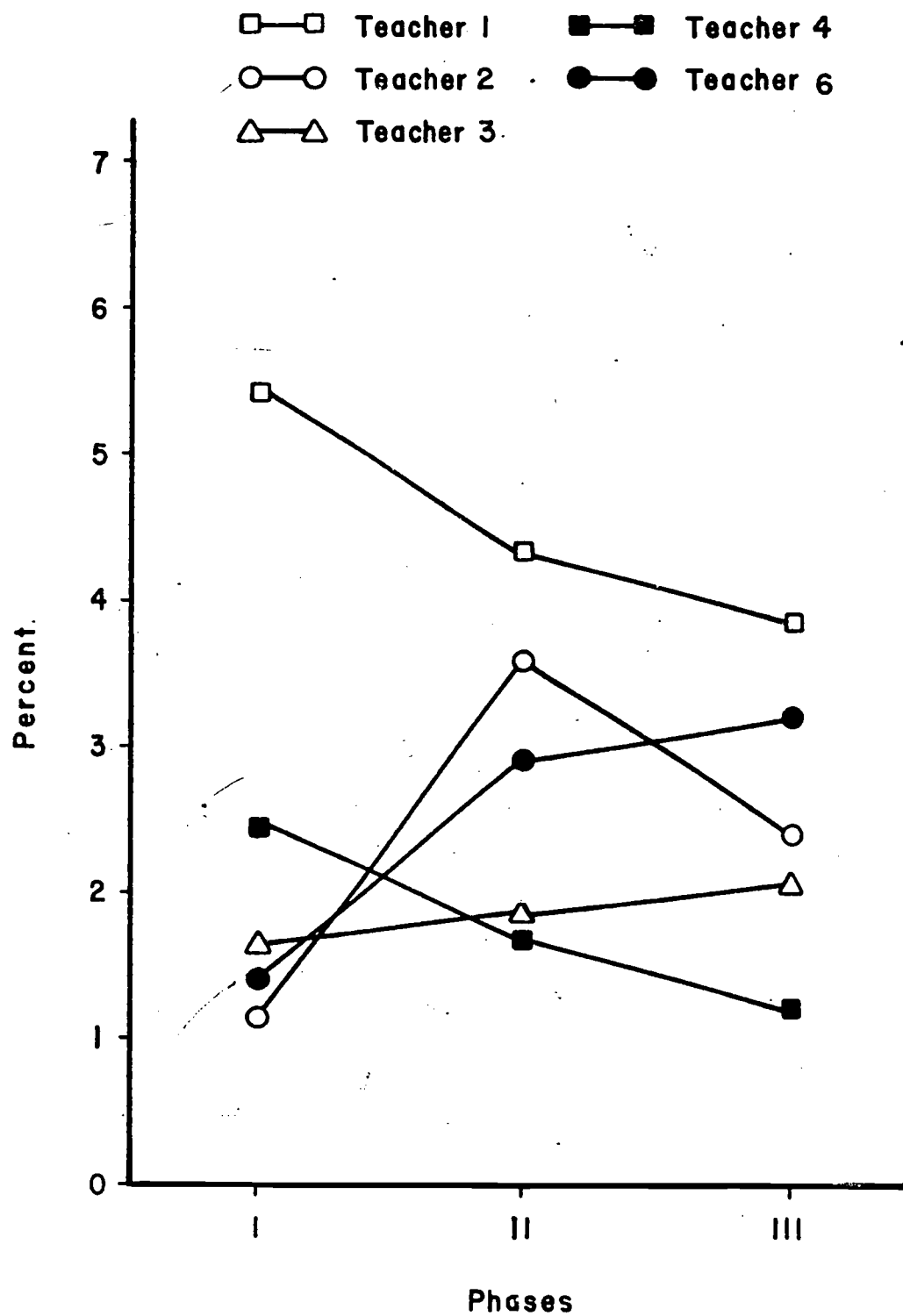
Fig. 11. Percent of the total time off-task for "Verbal Inter-action/Peers" for regular teachers by phases.
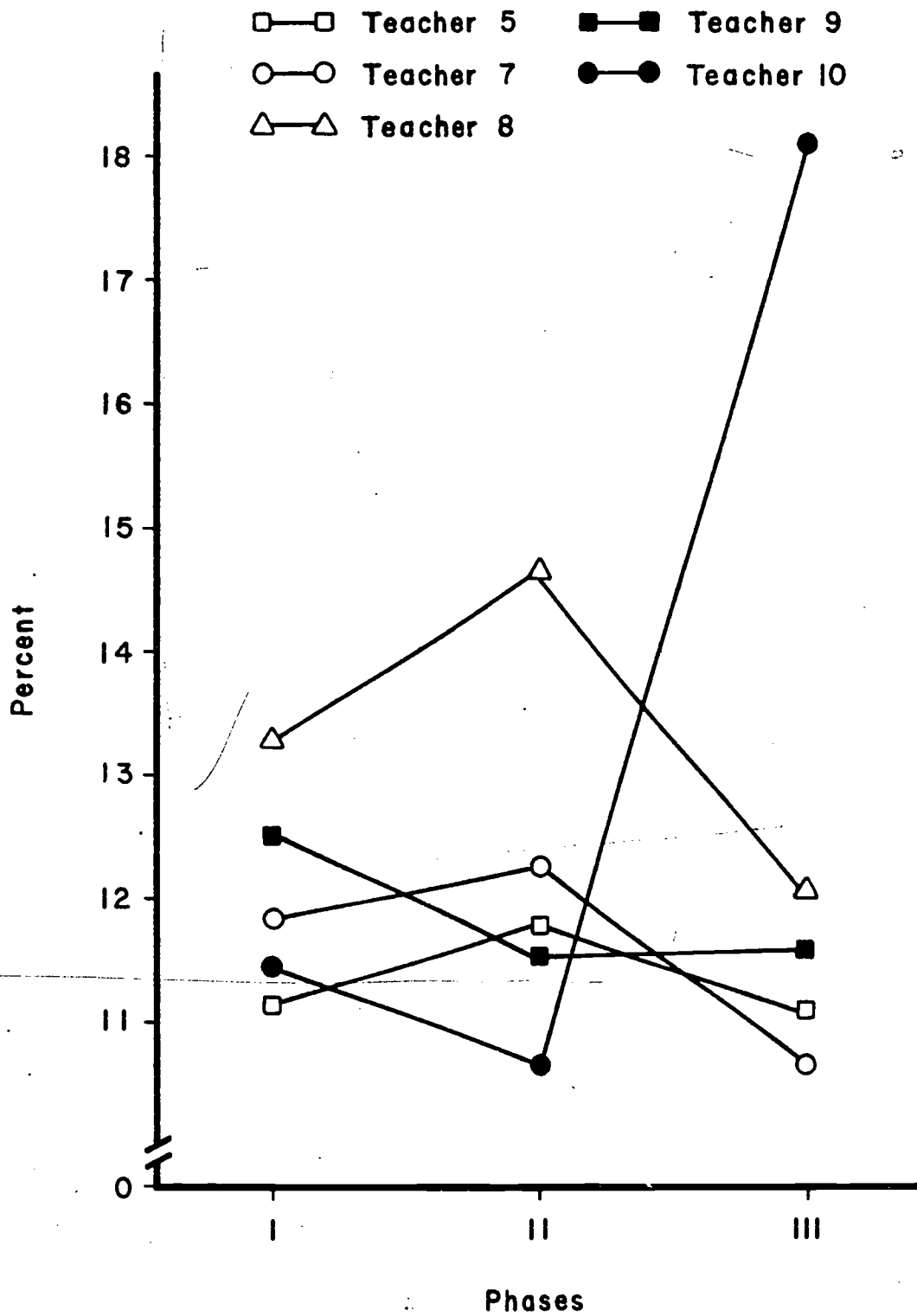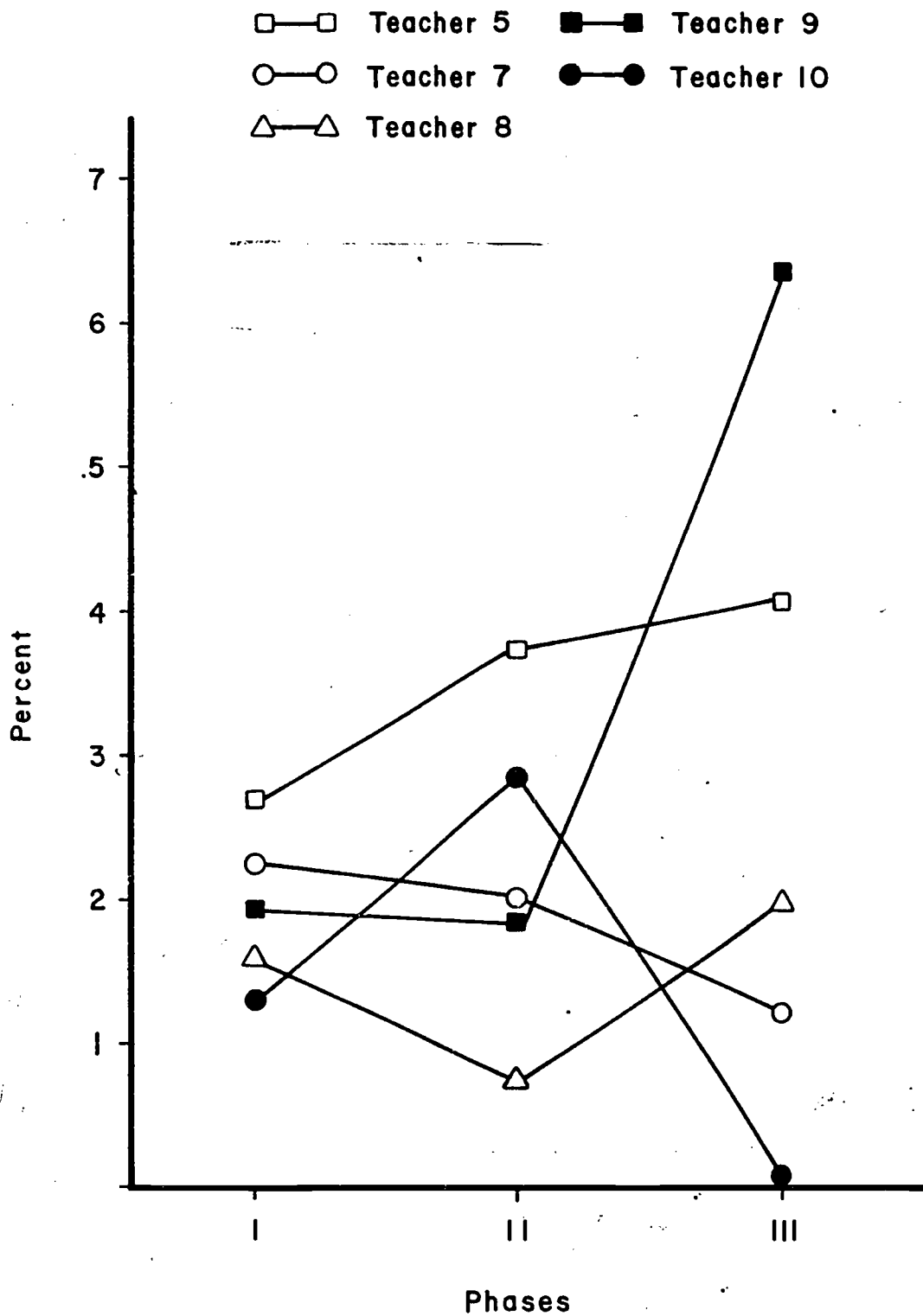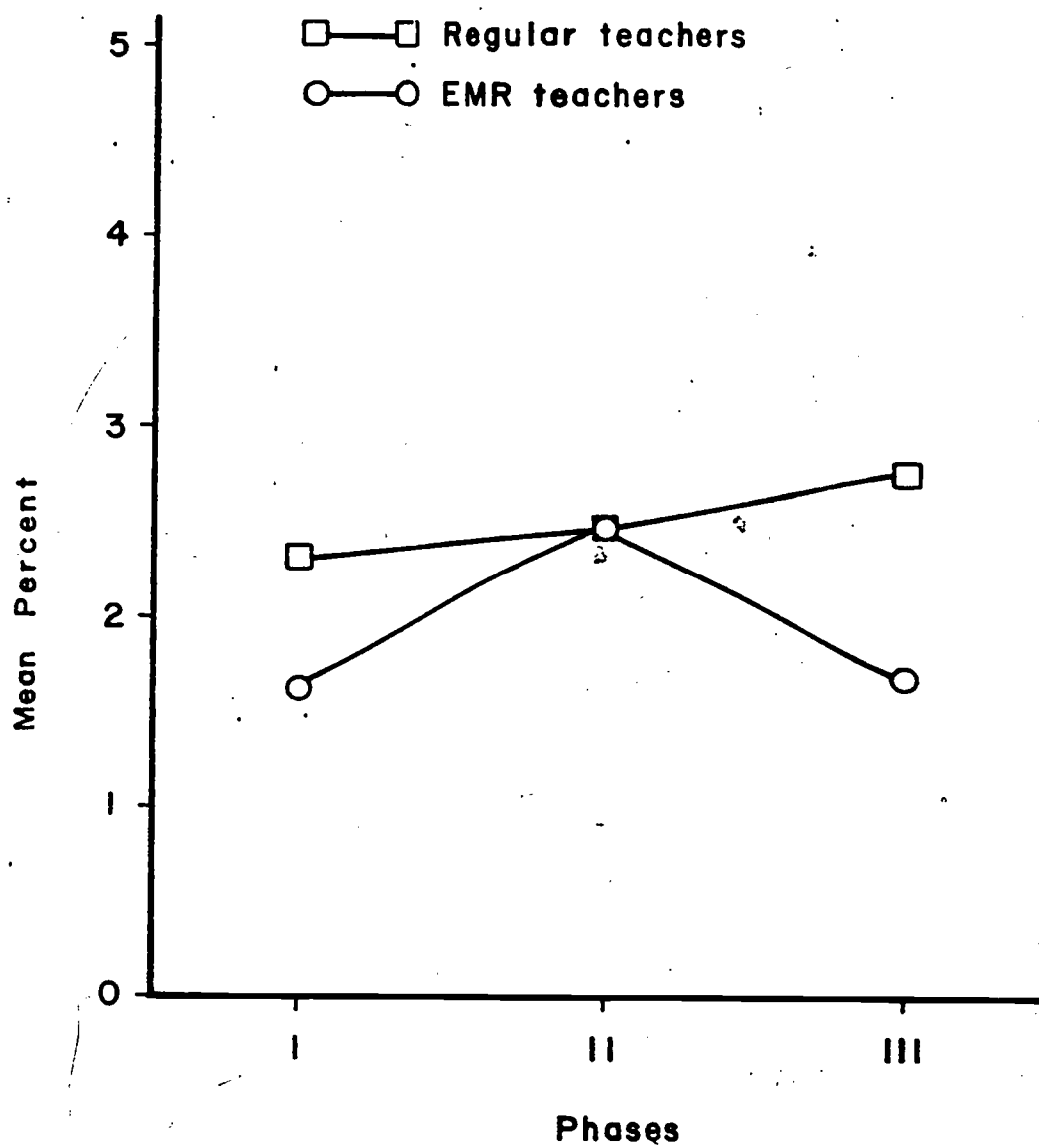
Fig. 12. Percent of time off-task for "Verbal Interaction/Peers" for EMR teachers by phases.

following games to the approximate level occurring during baseline.

Figure 11 reveals the considerable individual differences within the Regular classrooms. In Classrooms 1 and 4, the rate of "Verbal Interaction/Peers" decreased substantially and in linear fashion from baseline to posttreatment. In Classroom 2, the rate of "Verbal Interaction/Peers" increased during treatment; during posttreatment the rate decreased, but to a level twice that of baseline. In Classroom 3 there was a slight increase in VI/P.

As is shown in Figure 12, the trend among the EMR classrooms was deviant. In four out of five of the classrooms the "Verbal Interaction/Peers" rate decreased as a function of games. In Classroom 10, however, there was a marked shift upward as a function of games, with the percentages rising from 6% during treatment to 100% during the final phase.

Table 11 indicates the percent of total time off-task for the pupil category "Verbal Interaction/Teacher."

Figures 13, 14, and 15 (pp. 70, 71 & 72) graphically illustrate the data presented in Table 11.

As indicated in Figure 13 there was very little change overall in "Verbal Interaction/Teacher" as a function of games. Both Regular and EMR groups were at the same level during baseline and remained essentially unchanged during treatment. Following games, however, the Regular classrooms experienced a decrease in the rate of "Verbal Interaction/Teacher"; the EMR group's rate, on the other hand, rose slightly.

TABLE 11

PERCENT OF TOTAL TIME OFF-TASK

FOR "VERBAL INTERACTION/TEACHER"

	Phase 1 %	Phase 2 %	Phase 3 %
Regular Teachers			
1	10	12	11
2	00	06	02
3	47	34	30
4	17	42	36
6	26	20	11
$\overline{x}$%	20	23	18
EMR Teachers			
5	26	37	41
7	22	20	13
8	16	08	20
9	19	19	64
10	14	28	00
$\overline{x}$%	19	22	27

Figure 14 reflected wide individual differences within the Regular

classrooms, with VI/T rates ranging frcm 0% in Classroom 2 to 47% in

Classroom 3 during baseline. These individual differences were es-

sentially maintained during the successive phases; however it should be

noted that individual classroom patterns did alter. Thus, for example,

in Classrooms 3 and 6 VI/T rates declined; Classroom 4's rate in-
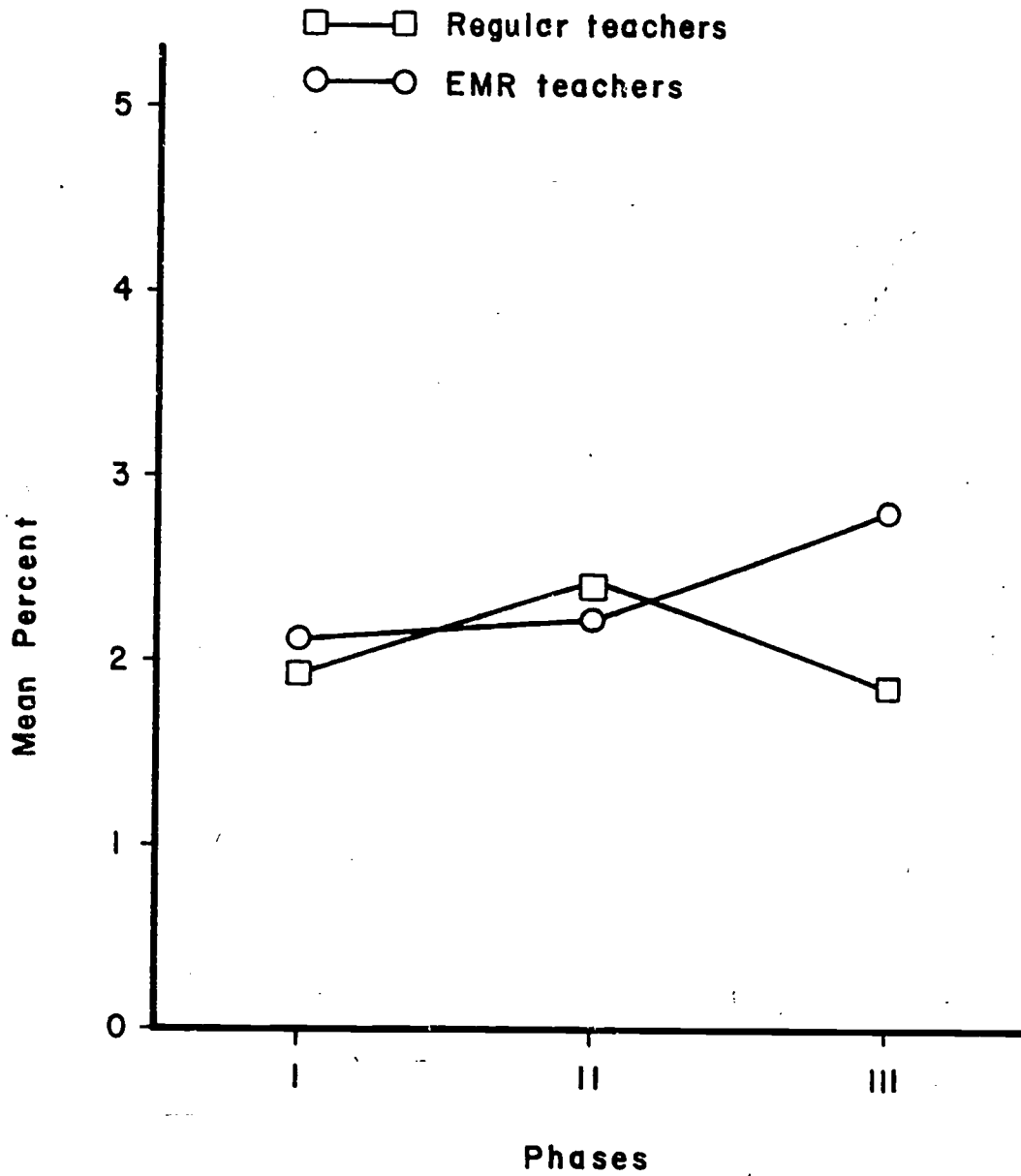
Fig. 13.   Mean percent of total time off-task for "Verbal Inter-
action/Teacher"across phases.
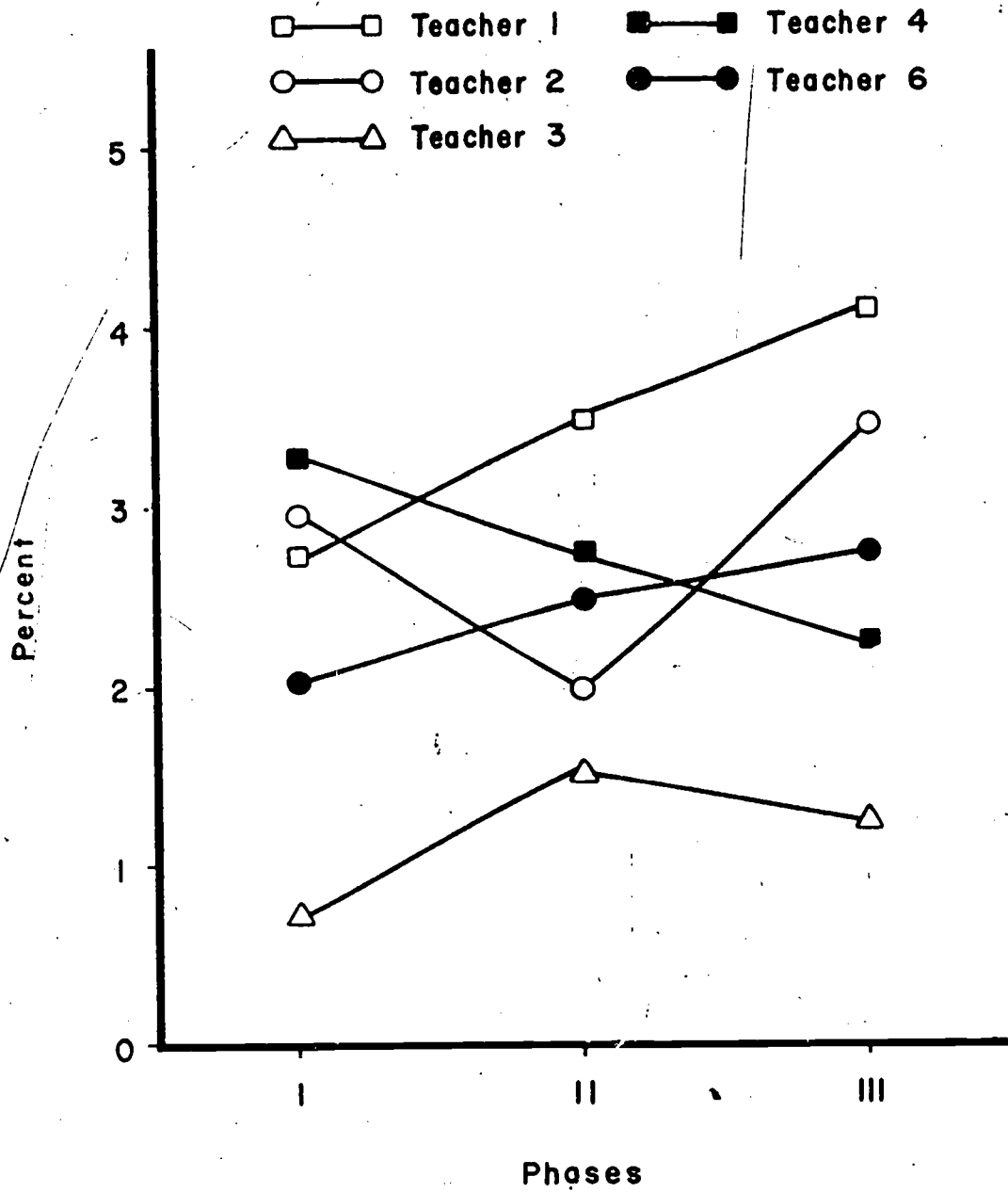
Fig. 14. Percent of time off-task for "Verbal Interaction/Teacher" for regular teachers by phases.

Fig. 15. Percent of total time off-task for"Verbal Interaction/ Teacher"for EMR teachers across phases.

creased markedly; Classrooms 1 and 2's rates remained essentially un-
changed.

In comparison with the Regular classrooms, the EMR group initially
showed a much narrower range of "Verbal Interaction/Teacher" rates (14%
to 26%). This range increased markedly as a function of games, such
that during posttreatment phase the range of VI/T rates was from 0% to
64%. This widening in the range of behaviors reflected increases in
Classrooms 5 and 9 on the one hand and reductions in Classrooms 7 and
10 on the other.

Table 12 indicates the percent of total time off-task for "Phys-
ical Interaction/Self."

Figures 16, 17, and 18 (pp. 75, 76 & 77) graphically illustrate
the data presented in Table 12.

As indicated in Figure 16, Regular classrooms showed more evidence
of "Physical Interaction/Self" than EMR classrooms during baseline and
posttreatment phases; during treatment the rate of "Physical Interac-
tion/Self" was identical in both groups. As a function of games it ap-
peared that PI/S returned to its former levels within the EMR group,
but rose slightly within the Regular classrooms.

Within the Regular classrooms there was evidence of considerable
individual differences. Classrooms 1, 2, 3, and 6 show varying degrees
of increase in rates of "Physical Interaction/Self"; in Classroom 4
the "Physical Interaction/Self" rate declined by one-third.

Within the EMR group there was considerable volatility in PI/S.
Three of the classrooms showed marked increases during treatment with

TABLE 12

PERCENT OF TOTAL TIME OFF-TASK

FOR "PHYSICAL INTERACTION/SELF"

		Phase 1 %	Phase 2 %	Phase 3 %
Regular Teachers				
1		27	34	40
2		29	19	34
3		07	15	13
4		33	26	22
6		20	25	27
$\overline{x}$%		23	24	27
EMR Teachers				
5		14	20	11
7		27	23	37
8		26	21	30
9		12	38	08
10		00	17	00
$\overline{x}$%		16	24	17

a return to former levels in posttreatment. The remaining two classrooms
showed reverse tendencies: declines during treatment with increases to
former levels and higher in posttreatment.

Fig. 16. Mean percent of total time off-task for "Physical Interaction/Self" across phases.

Fig. 17. Percent of total time off-task for "Physical Interaction/
Self" for regular teachers across phases.
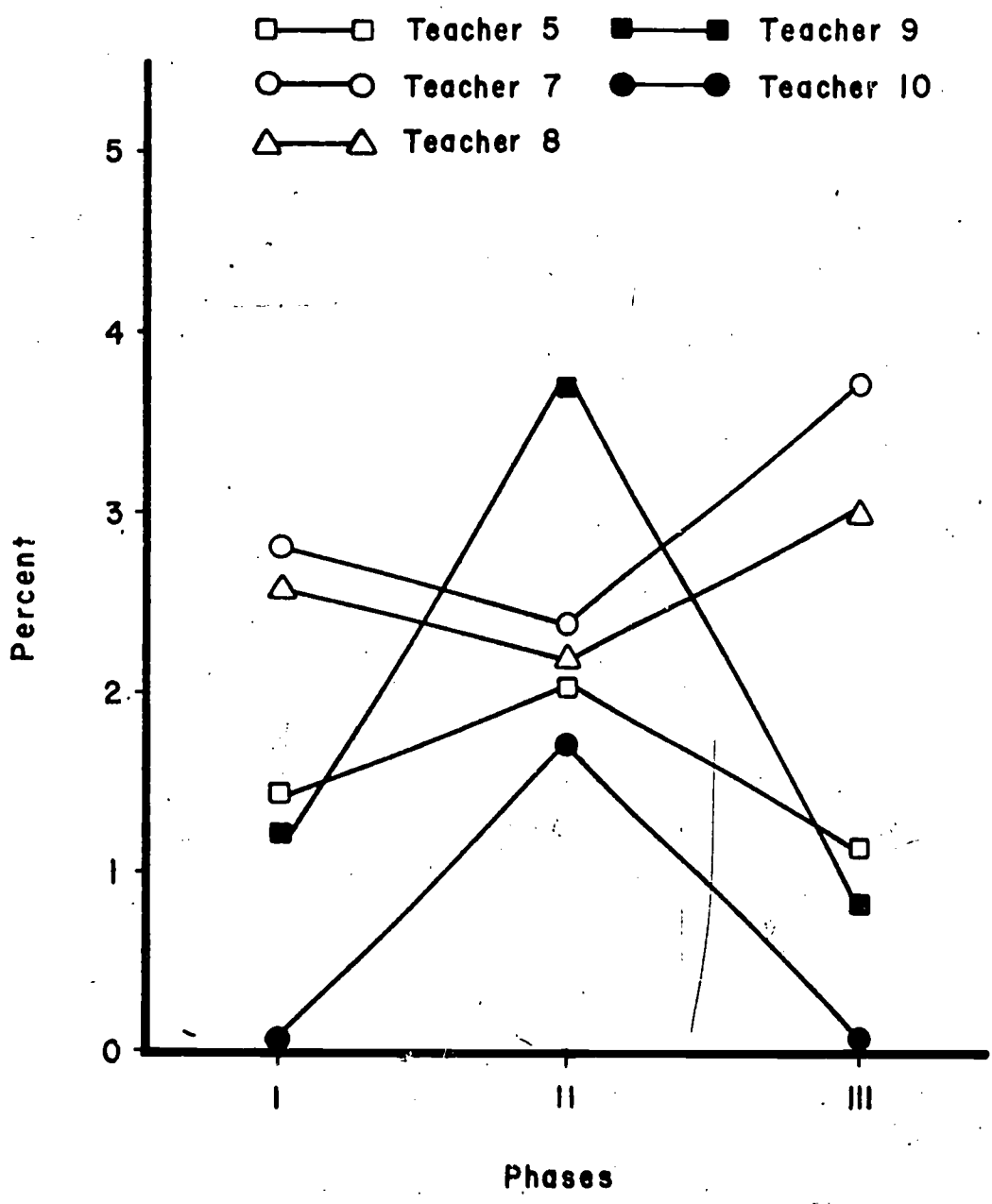
Fig. 18. Percent of total time off-task for "Physical Interaction/ Self" for EMR teachers across phases.

Summary

Overall average of off-task behavior for Regular and EMR classes
was 4%, with Regular classes showing twice as much off-task activity as
EMR classes. Regular classroom teachers showed little evidence of change
overall; there was, however, a narrower range of off-task behavior dur-
ing treatment and posttreatment phases than prior to the introduction of
games. There was little overall effect of games on off-task activity
within EMR classes; in contrast to Regular classes, however, the range of
off-task behavior increased slightly during the final phase.

There was relatively little difference in the use of the three most
frequent control techniques between the two groups, although there was a
tendency toward greater use of the control behavior by the Regular teach-
ers and a decrease among EMR teachers. In terms of overall patterns of
control, the latter group made proportionately greater use of these most
frequent control techniques. Further, in contrast to Regular teachers,
EMR teachers showed greater volatility and range subsequent to treatment.
Individual differences also appeared to be significant, with heterogeneity
among EMR teachers in all likelihood greater than differences between
groups.

The analysis of the most frequent pupil behaviors indicated
almost twice as much "Self-Involvement" within EMR classes compared to
Regular classes at baseline. "Self-Involvement" decreased by more than
half during treatment in EMR classes and remained at that level during
posttreatment for both EMR and Regular groups. In Regular classes "Self-
Involvement" changed little overall.

During the posttreatment phase "Verbal Interaction/Peers" rates
increased among EMR classes to a slightly higher level than in the
Regular group. Overall differences between the two groups in terms of
"Verbal Interaction/Peers" were minor, however,

There was little overall change in "Verbal Interaction/Teacher" as
a result of games. Both groups were at the same level during baseline
and remained essentially unchanged during treatment. In the posttreat-
ment phase, however, the rate of "Verbal Interaction/Teachers' de-
creased in the Regular classrooms and rose slightly in the EMR group.
Regular classrooms showed more evidence, overall, of "Physical/Inter-
action/Self" during baseline and posttreatment phases; during treat-
ment, however, its rate was identical in both groups.

CHAPTER 5

Conclusions

While the results of this pilot study were not statistically significant, a number of tendencies were evident. These were judged to be of sufficient interest and importance to warrant discussion and, further, to have implications for practice, training, and research.

Discussion of Results

It was demonstrated that the overall frequency of off-task behavior, in both Regular and EMR classes, was not markedly affected by the introduction of games into the curriculum; this result, however, ought not to obscure the considerable individual differences found among teachers. It was interesting to note, in fact, that the behaviors of only a small minority of the teachers could be said to have been unaffected by the use of games. The changes, too, were not in a uniform direction. In some instances off-task behaviors were increased; in others they decreased. These results may, of course, reflect any number of factors; it would be tempting, for instance, to argue that when individual teachers' control (off-task) behaviors increased a loosening in classroom structure (as a direct result of games) was therein reflected, which then required the application of increased management intervention. Likewise, it would be tempting to suppose that when teacher off-task behavior decreased, subsequent to the use of games, it reflected a final positive result of

games, represented in reduced classroom anxiety and frustration among pupils in the first instance and a lessened need for classroom control applications in the second. The explanation for this latter result would not be incongruent with the hypothesis upon which this study was built, namely, that the properties of games have positive effects upon pupil motivation and thus upon the need for control, since, of course, improved motivation would increase pupil attention to appropriate classroom activities.

The comparison of Regular and EMR classes with regard to overall off-task behavior revealed that Regular classrooms had a consistently higher rate. This could be attributed to the simple fact of greater numbers of children in Regular classrooms, the assumption here being that the greater numbers would increase the probability of deviance and thus the need for its control. Another possibility is that the training of Regular classroom teachers in behavior management may be lesser, qualitatively and quantitatively, than for special education teachers, hence reducing the formers' effectiveness potential for successful classroom management.

The results reflected few absolute differences between the two groups in their uses of the three most frequent control behaviors, i.e., "Authoritative," "Value/Law," and "Conditioned Stimulus." It is significant to note, however, that while absolute differences were minimal, differences were considerable when taken from the point of view of proportion of these techniques in relation to overall deviancy. Since half as much deviant behavior occurred in EMR classes, it is clear that

EMR teachers in fact made greater use of this set of techniques. These methods, it should be pointed out, tend to range from the relatively neutral and somewhat rule-oriented to the negatively authoritative. This suggests that there was less flexibility in management techniques among EMR teachers, even if in toto fewer management problems arose. It may also be that when, typically, fewer management problems arise, one responds with a narrower range of techniques; that as problems multiply, one finds it necessary to invoke more possibilities for control.

As with overall behavior patterns, there w re considerable individual differences among teachers within groups in their use of the most frequent set of interventions. These differences were highlighted in each group in directly opposing ways. Regular teachers used diverse kinds of intervention during baseline and were practically undifferentiated during and after games. EMR teachers, on the other hand, showed few differences initially but wide differences following games. This apparently greater effect of games upon individual teacher patterns of control may have been a result of the greater curricular and classroom organization flexibility available to the special class teachers.

Among the most frequent pupil deviant behaviors, the most dramatic change occurred in "Self-Involvement," a category designed to reflect the withdrawn and passive characteristics of pupil deviancy in contrast to its more overt varieties. The marked decreases which occurred in the EMR classes, compared to the minor changes within regular classes, demonstrated that games can have an important disinhibiting effect when occurring at certain levels at any rate.

The disinhibiting effect of games also may explain the slight in-
creases which occurred following the use of games in "Verbal Inter-
action/Peers" and "Verbal Interaction/Teachers" in the EMR classes.

Implications

Due to the pilot nature of this study and the small sample of
classrooms employed, the extension of the results to more general state-
ments about games and their effectiveness, about the nature of off-
task behavior in special and regular classrooms, and about implications
derived therefrom for issues of practice, teacher training, and re-
search must be interpreted with some degree of caution.

The positive effect which games appeared to have upon certain of
the pupil behaviors appearing in special classes suggests that games
indeed have potential as a curriculum intervention for handicapped chil-
dren. In particular, it would appear that games, when introduced under
specified conditions i to the classroom, can have a direct effect upon
certain off-task behaviors of students. It would appear reasonable to
suppose, then, that greater specificity of the nature and conditions of
game introduction (including such variables as (a) particular qualities
of games, (b) specific handicapping conditions of children, and (c) time
and curricular place of introduction) could have important effects upon
learning conditions and outcomes.

If games have positive effects upon pupils, it would also seem
reasonable to suppose that changes might occur in teacher attitudes and
behaviors as a function of game playing. While teacher attitudes did

seem to be positively affected by games (see Appendix B), the type of

management strategies employed did not alter substantially when con-

sidered from an overall point of view. It may be that preservice or

inservice teacher training which provided access to and training in a

wider variety of behavior management training than is typical, coupled

with some degree of "game playing," could result in both attitude and

skill development. Further, it may be reasonable to suppose that man-

agement skill training itself could be most effectively accomplished in

a game-playing context.

Two issues appear to be most important as we consider directions

for future research and development. The present state of the art sug-

gests that games indeed have motivational qualities and from that point

of view alone could be considered to possess sufficient value.

It does seem reasonable to consider, though, whether or not the

additional qualities which games also intrinsically possess could not be

harnessed to more specific use for varieties of child dysfunction.

Could, for instance, specific games be developed to improve specific

emotional states of children? Could we specify particular games for

particular subsets of emotional states? Could we specify a set of games

that could sequentially bear upon both affective and academic objec-

tives?

A second issue concerns the matter of individual differences noted

in classrooms with respect to the effects of games on management tech-

niques on the one hand and pupil deviancy on the other. Simple univar-

iable explanations notwithstanding it would seem worthwhile to consider

the following issues in future research if one is to understand properly

the educational implications of any treatment: (a) whether intermediate
and context variables may need to be more carefully identified and con-
sidered, and (b) whether individual teacher and pupil characteristics
may need greater specification.

This suggests the difficulty which arises from efforts to draw
conclusions from group data in education when the groups are classified
as homogeneous either by administrative determination or by nosological
scheme. The relevant question may be whether there is homogeneity with
respect to educationally relevant variables, or, to borrow from Reynolds
(1971), appropriate decision variables in the classroom.

APPENDIX A

Games Pool Available to Teachers

The development of games which could be used to facilitate the
social, affective, physical, and intellectual development of handi-
capped children had, for some time, represented the extended efforts
of Harold S. Guskin, Arnold A. Shuster, and Susan K. Shuster, members
of the Center staff. Responsibility for both the selection of existent
games and the development of new games which would be appropriate to
the particular needs of this study was assumed by this group. The games
which resulted from these efforts are detailed in the following pages.

PICNIC

Ask children if they've
ever been on a picnic. What
do you bring on a picnic? Food
and drinks. Let's place all
.these objects in a picnic bas-
ket in the center of the room (could be trash basket, or anything). Ask
all the children to spread out a large blanket (imag-
inary) in the middle of the room and everyone sit on
it. Have each child pick out a food he wants to eat
from the basket and eat it. Then: Do we play games
at a picnic? Throw the ball, go on a nature walk?
Let's toss an imaginary ball around in the circle
(just for a few seconds); you can also play other
games the children suggest. Let's go on a nature
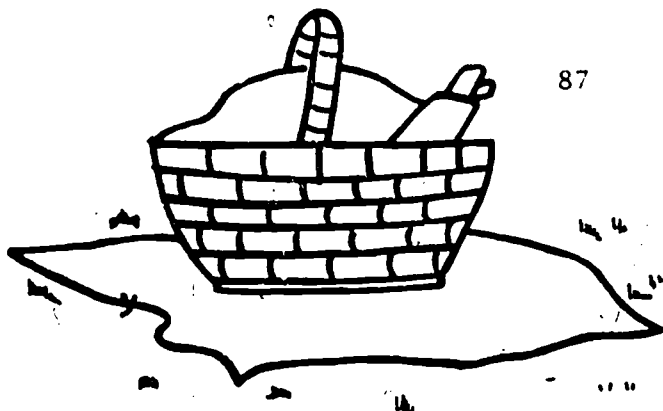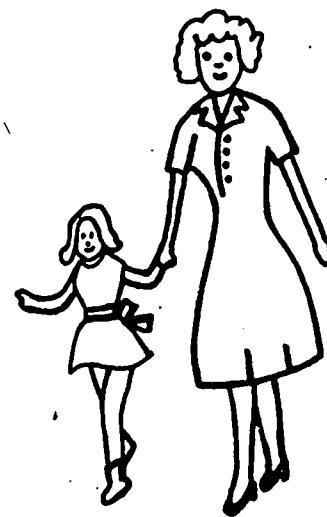
walk (teacher takes children on a
little walk around the room, climbing
over chairs and under, finding imaginary berries--pick
and eat--flowers, and seeing a rabbit). Then quickly
(in the middle of the walk) tell them it's starting to
rain. Let's pick up our
basket and food and the blan-
ket and run for a cave. Make
a cave quickly with the children out of a few
chairs or under a table and everyone get under
until the rain stops. When it stops, we all
go home and our picnic game is over--but we'll
come back another day.
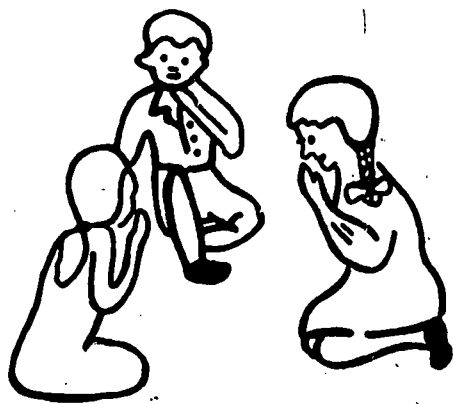
URANIUM
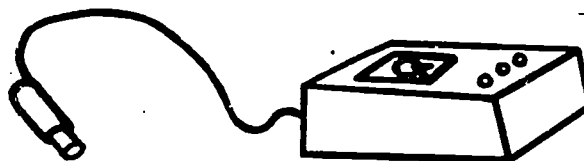
One child is chosen to
be IT and leaves the room. The
class agrees on a hiding place for a small pebble, which represents the
uranium ore. When IT comes into the room, the other children imitate a
Geiger counter by making ticking noise with their tongues, or tapping
their pencils on their desks, or clapping hands. In addition, the
teacher should provide verbal cues for the child as to his/her "close-
ness," etc. to the uranium. The speed and volume of the "Geiger
counter" is increased as IT gets closer to the uranium. When he is far
away, the tick is very slow and barely audible. The point of the game
is to develop the hearing sense of IT so that he can find the uranium
when the "Geiger counter" reaches its highest speed. When IT finds the
uranium, he chooses someone to take his place and the game is repeated.

TEACHING HINT: For more excitement, divide the class into two teams
and time the child hunting. The teams participate alternately and the
one with the lowest time score at the end of the game period wins.

STORY CHAIN

The children sit in a circle. The teacher, as time-keeper, has a watch.

When the timekeeper says "start" the child on her immediate left starts a story and narrates it for thirty seconds.

When the timekeeper raises his hand and says "time" the child on the immediate left of the current storyteller picks up the story, adding his contribution, until the timekeeper again says "time."

The story is developed by every child in turn, each given only thirty seconds to relate his part of the tale.

The last child to get a turn concludes the story.

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FEELIE

All players sit in a circle on the floor.

Each player closes his eyes and puts his hands behind his back.

The teacher then places an object in each child's hands, asking each child in turn to describe it, (smooth, rough, the kind of shape and material), and finally to guess what it is.

With the teacher's help, each child is given a chance to verbalize the characteristics of some one object.
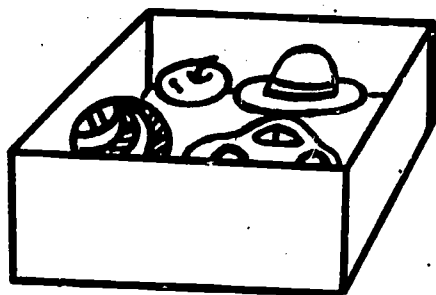
GLUE

Everyone stands in a circle. Ex-
plain to the children that the center
of the circle can be anything they
want it to be. Let's take turns
and lead the rest of the children
through the center. First tell
one of the children that he is
going to lead the other
children through the
center and the center is
glue. Have him go in and then
have the other children follow him. Coach them to feel their arms in
the glue, their legs, their backs, their necks, their heads. Is the
glue light or heavy? Does your body feel light or heavy in the glue?
The teacher can go on to have the children become snakes in the
glue or fish in the glue, etc.

After a short time, have the children go back to standing
around the circle. Choose the second child and tell him the
center is water. Do same thing as the first part. Continue
until all children have gone. Other possibilities are oil,
sand, pebbles, paint, paper.

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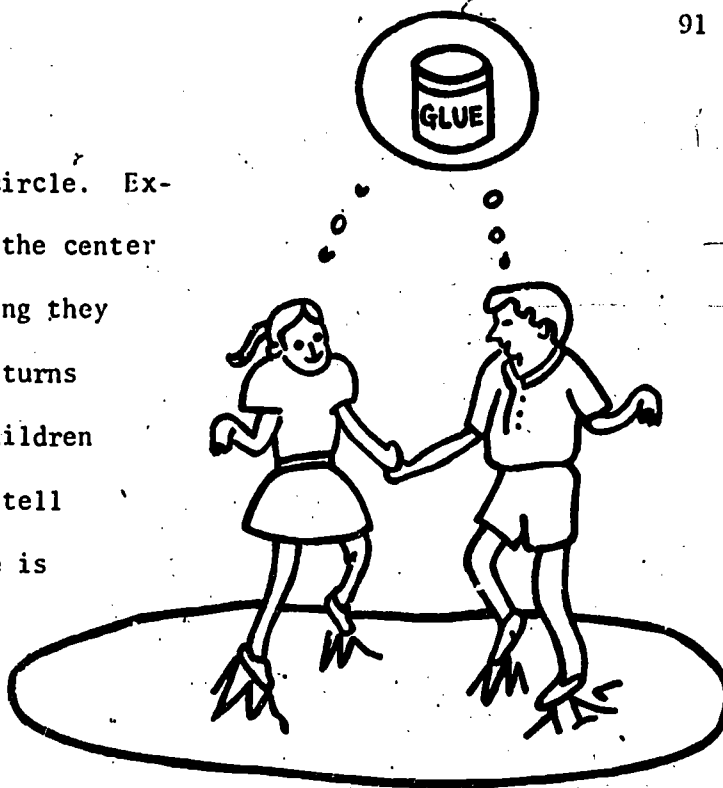
NOAH

The children are in two equal teams with one child on each team to act as Noah.
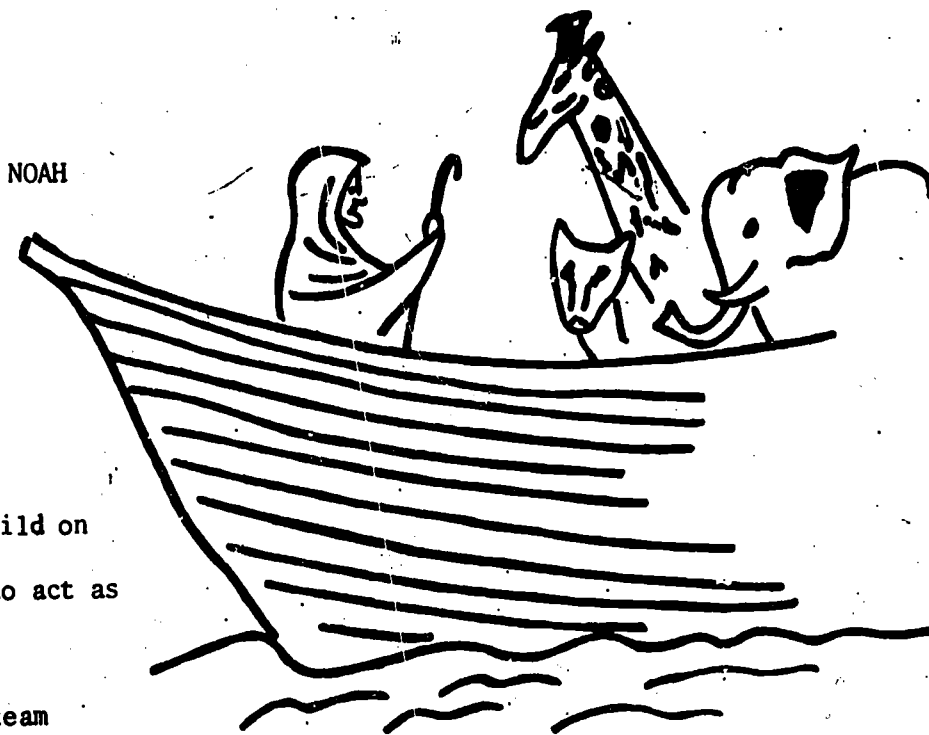
Each team forms a circular 'ark' around their Noah.

The teacher whispers the name of an animal to one child from each team.

When all children have been told which animals they are, the game starts.

One child at a time imitates by sound and mime the animal assigned to him, moving from child to child in a clockwise manner.

When Noah recognizes an animal, he calls him by name to "enter the ark" by sitting at Noah's feet.

The first team to fill its ark with all its animals is the winner.
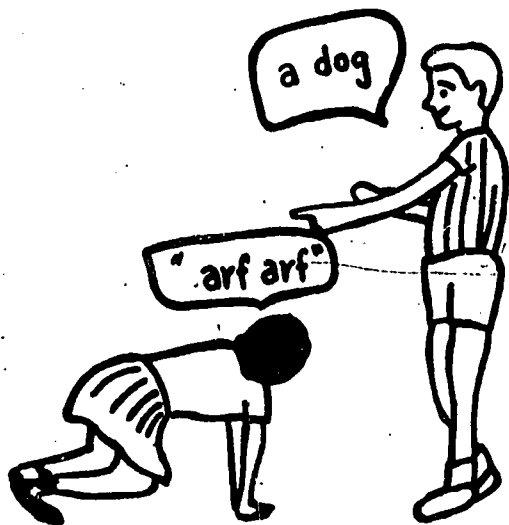
TAP-A-STORY

Let's tell each other stories but let's make it a guessing game. Instead of telling stories with words, let's tell a story by tapping on our desk. Let's each take a turn tapping out a story for the class. Tell us by tapping how you feel. Are you happy or are you sad? Are you joyful or mad? Are you walking or running in the story? Talking or singing? Tell the class everything by tapping.
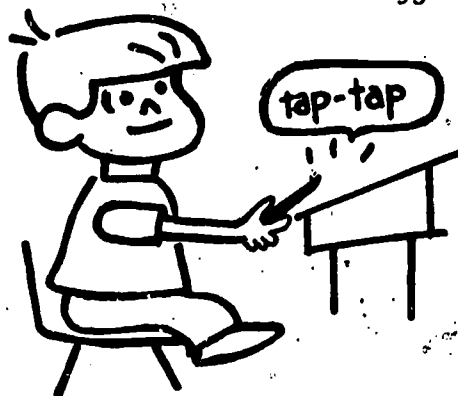
tap-tap

tap tap-ta-tap tap "I went to the store".

After each child taps, have a group discussion about what the story was. Coach the children to look for how the child was feeling in the story. What was happening?

tap taptap-ta ta- taa aa ppp "I ate some candy"

NAMES

The children sit in
chairs in a circle with one
player in the center.

The center player
calls out the names of any
two other players and then
the word "go."

On "go" the two chil-
dren named change seats while
the Namer tries to sit on one of the vacated chairs.

If he succeeds, the one left without a
chair becomes the new Namer.

If he does not succeed, he tries again.
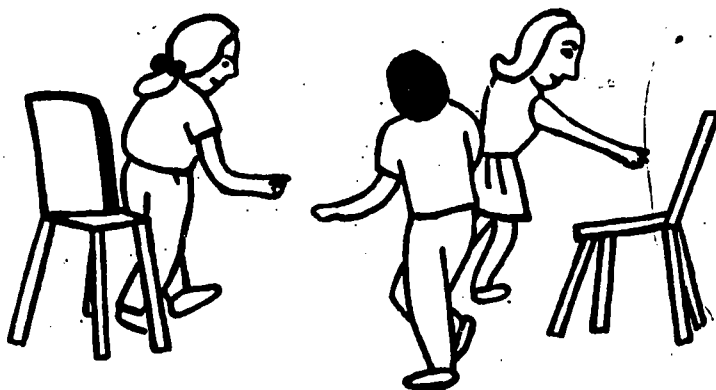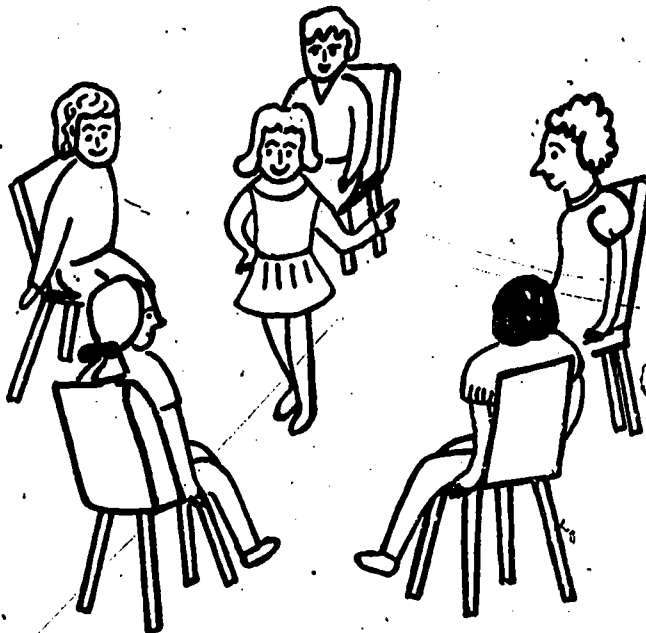
MIRROR

Let's play a mirror game.

Group the children in twos facing each other.

One child of each pair will be the leader and the other will be the mirror.

First have the leaders mime small circles in front of themselves with their hands and have the mirrow try to follow the action just as if they were mirrors.

Coach the leaders to move slowly in order to help the mirrors to follow.

Then have the leaders mime many different actions:

> washing face
>
> dressing
>
> brushing teeth
>
> combing hair
>
> etc.

At some point reverse the roles.

WHOGONE

A child from
each of two teams
leaves the room.

After one of
his teammates has
hidden and the rest have exchanged
seats, each child returns and must
call the name of his hidden teammate.

The first correct guess wins a point.

The highest scoring team wins.

WHO?

SYMPHONY

How would you all like
to make music? We're go-
ing to make a symphony.
Do you know what that is?
It's a big piece of music
that uses many sounds and
people. We're going to be the
symphony orchestra. That's all
the people who play a symphony,
and we're going to record our music
on this tape recorder and then play it back.
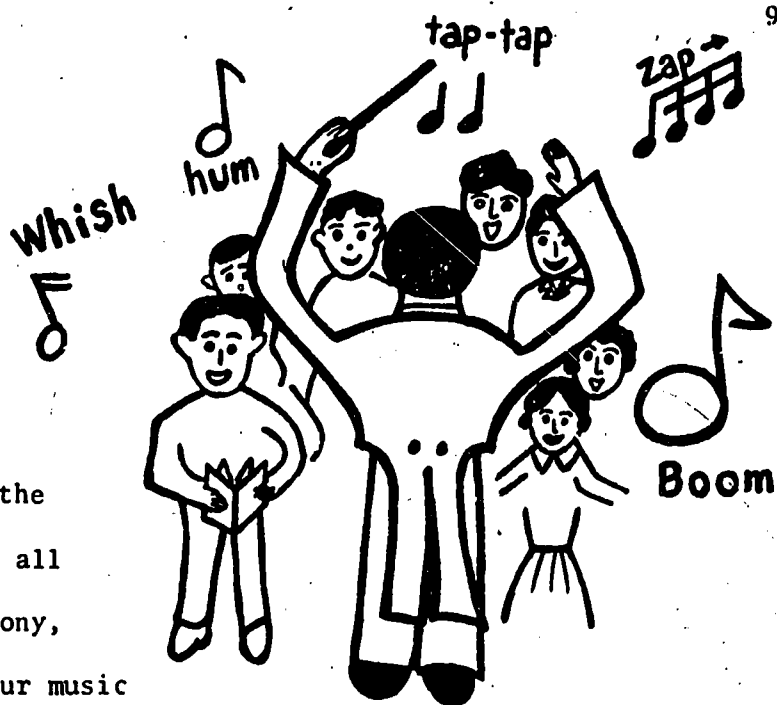
Let's first have a rehearsal. Let's practice. When I point to each
of you, I want you to hum something, anything. Then, everybody be ready,
because I'm quickly going to point to another and you hum anything you
want and so on until everyone has hummed something. Then have them all
hum together anything they like, maybe even very loudly. Do this once
or twice until they get used to it. Then get them ready for the taping.
Everyone must be silent while one person is humming because he is the
soloist, and be ready for me to point to the next child, and just go right
on and hum. Put on the tape recorder and point to one child for a second
or two, then to another, and to each one until all have sung, then have
them all hum together for a finale. Rerun the tape and let them hear
it. They'll love it!

We can make a symphony of animal sounds, city sounds, school sounds,
etc. We can make a symphony of sounds of instruments--cans, sticks, boxes,
etc.

BONE

One child is selected to be the dog. He sits on a chair or stool in front of the children who are sitting at their desks. The dog closes his eyes. His back is toward the other players. The dog's bone, which is an eraser, book, or any article of similar size, is placed near his chair.
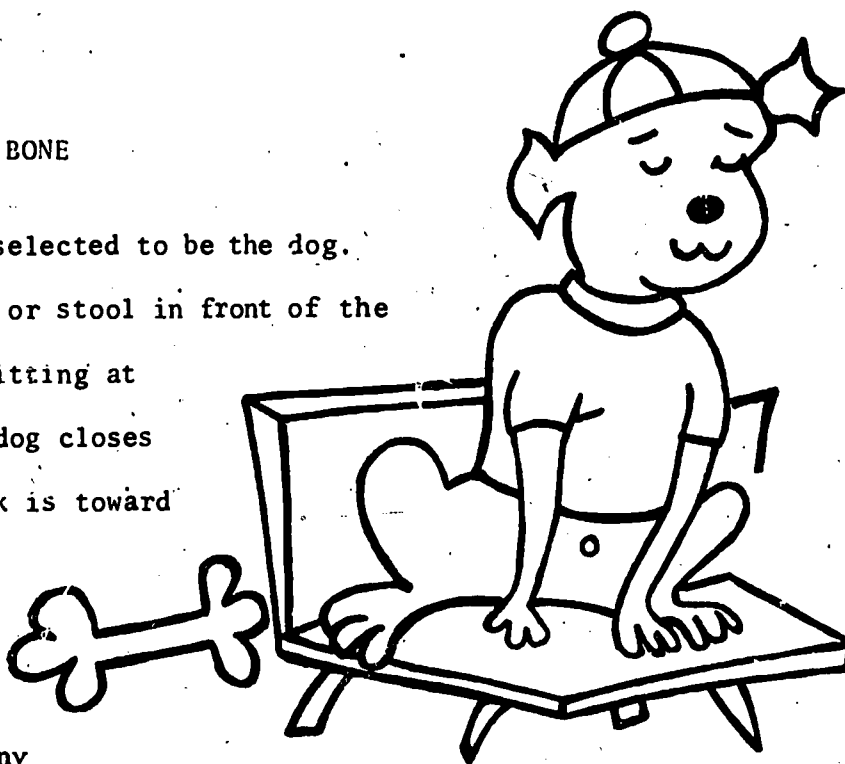
A child selected by the teacher attempts to sneak up to the dog and touch his bone without the dog's hearing him. If the dog hears someone coming, he turns around and says, "Bow Wow!" Then, the player must return to his own seat.

The teacher selects other players who, in turn, attempt to sneak up and touch the bone. A child who is successful in touching the bone before the dog hears him becomes the dog and the game is repeated.

BUS

Have all the children walk as old people and talk with them about old people and how hard it is to walk.
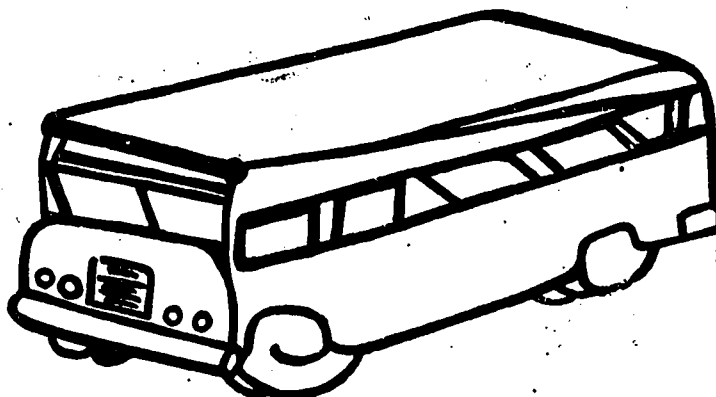
The place is a bus stop. One child is selected and told that he is to play a very old person. He must try to remember how an old person walks. The rest of the class plays a bus. A bus driver is selected who is told that he is a leader and must help the teacher by listening closely to what teacher says. Other children line up in twos behind the bus driver and wait for his cue.

1. The first game is getting to the bus stop to take a trip on the bus. The child acting the old person is told to go to the bus stop. (Coaching--don't forget you are old.) As the child gets close to the stop the teacher signals the bus to come up to the stop.

2. Start again (possibly with same child) and start the bus more quickly and coach the old person to rush but remember he is old.

3. Repeat with bus at the stop and already pulling out.

4. Repeat with the child playing his own age.

MACHINE

Tell the children you're going
to play a joining game. Tell them
you are going to select one child to
go up front and be a part of a machine, any machine. And as soon as the
other children recognize the machine, they run up and become a different
part of the machine. Then select one child to go up. Tell him to select
any machine and without telling us what it is, become part of it. If
there is great trouble selecting a machine, help the child the first time
with a suggestion. You may have to coax the children to join in the
first time, but soon it will be a lot of fun for them.
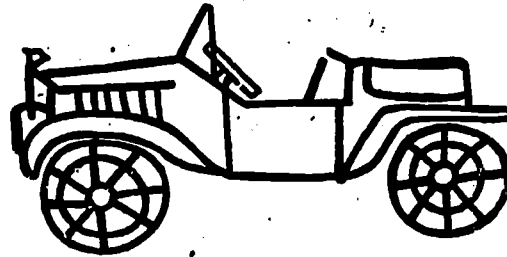
Suggestions: Cars
Trains
Airplanes
Motors
Refrigerator
Motorcycle
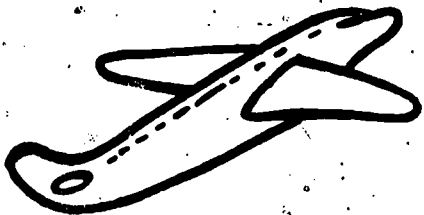
This can be done just as effectively with
animals. The first child becomes a part to
an animal and the rest have to join in.

Moving parts should be stressed. Also, make sure the children in
the audience do not give away what the
machine is.

SHAKE

DESCRIPTION:
Teacher asks.
children if
they've ever
seen their par-
ents, teachers, or adults of any kind shake hands. They shake hands
to say hello. This morning let's all shake noses softly. Let's
shake both hands. Let's shake knees. Let's shake backs. Let's
shake ears.

Coaching (remember it's a way of saying hello so you mustn't
hurt anyone. Be very careful.)
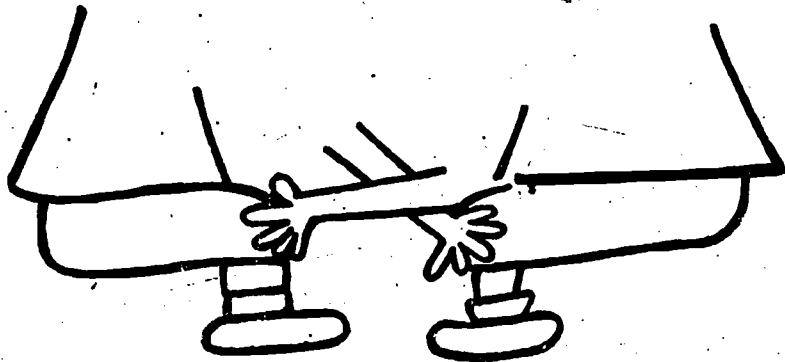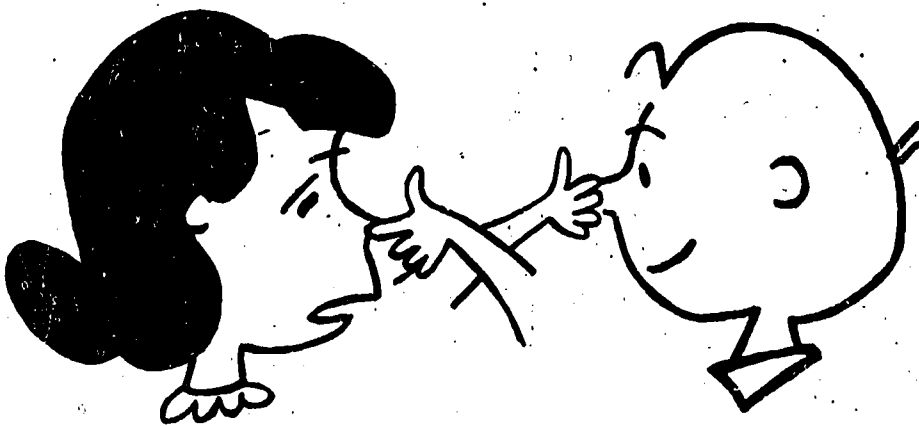
GROCERY STORE

— Tell the children we're going to play grocery store. Have children with teacher set up the room like a grocery, main counter, fruit, vegetable, and meat counters, etc. Then have the children select the Mommy & Daddy role, and child role, manager, store helper at each of the counters (try to fit number of roles to number in class). Mommy, Daddy and child have come to buy groceries for the week.
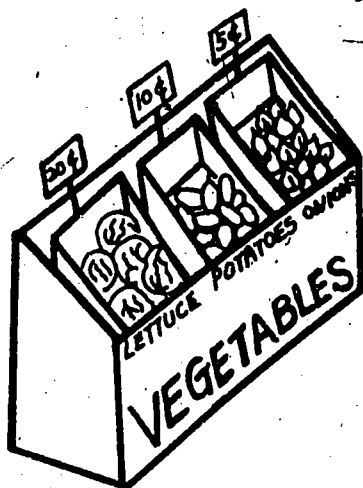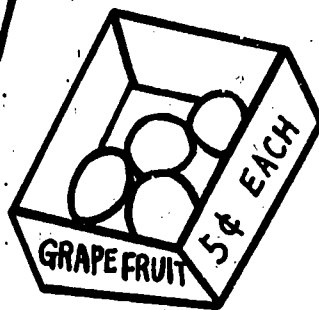
Side coaching: What do you eat in the week? What would you like? Ask the child if he wants anything? How much does it cost? is it too expensive? etc.

Have the buyers come in to the manager and he will ask, "What would you like to buy today?" When they say, he sends them to each of the counters. They ask for items and talk to the fruit man, etc. (teacher can help by coaxing the children in dialogue at first). Then they bring items to the manager--he charges them money for each item and then they go.
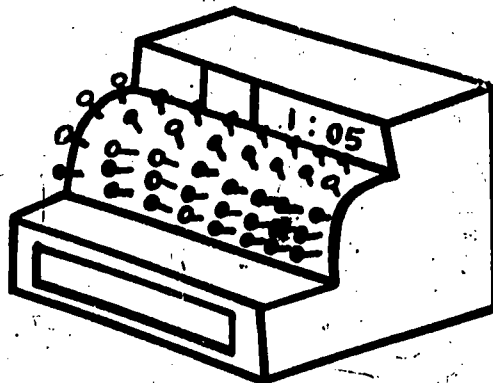
BIRTHDAY

Let's play "A birthday party for Mommy."
Let's make it a surprise for Mommy. Who
should we invite to the party? Any relatives,
friends? Select roles and decide who is going to
bake the cake, get the candles, cook the food, what food will there be?
Then start the game by having Mommy hiding in the back of the room
until she's called and the other children arriving and preparing the
food and finally Mommy coming in and the surprise of bringing in the
cake and singing happy birthday to Mommy.

This game has endless possibilities and complications can be added.
For instance, the party could be outside and it starts to rain. Mommy
comes too early and they have to keep the surprise party a secret until
the right moment.

Could also play "Making Christmas Dinner."
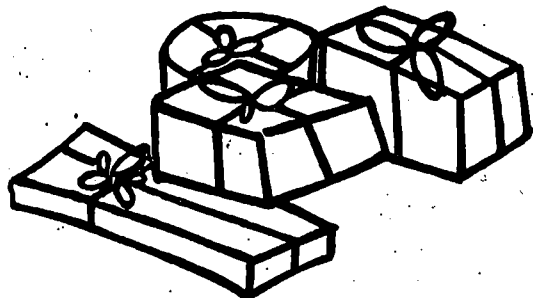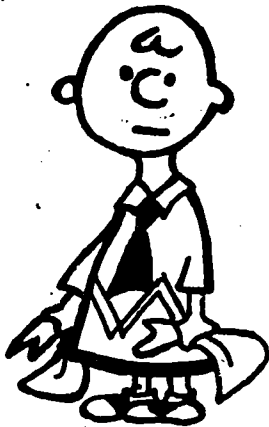
DIFFERENT

Children seated in circle with one child in middle.   All children are asked to look closely and try to remember what the child is wearing. Then all children turn around and close their eyes.   Teacher puts the one child's coat on.   Then children turn around and teacher asks them to decide what one thing is different.

. Repeat and add one more thing (a book) and keep repeating, adding other things.   Have each child be the one in the center.

Then:

Add two (2) objects and ask children to guess what two things are different.

Add three (3) objects.

, Also:

Taking objects away from fully clothed and cluttered child.

Also:

Do this with pairs of children so that one child demonstrates and one child must guess.   Make sure the other children know that is is a secret so they don't give away the answer.
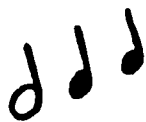
GROWING

Have children crouch quietly on their hands and knees as bundled as possible.

Start beating a simple quiet rhythm on a drum or on a desk (♩♪♪|♩ ♩|♪♪♪|o) and ask the children to feel the pulse inside themselves. "You must concentrate very hard."
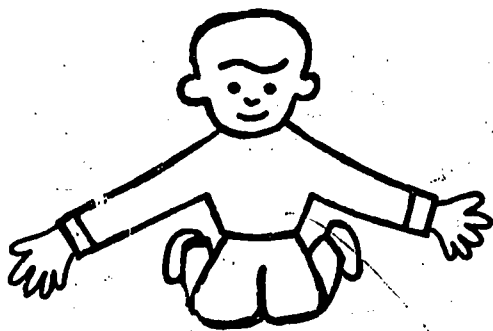
Let beat start getting louder and louder. Quietly tell the children to feel themselves grow with the beat. "Grow with the music. Feel yourself getting larger and larger."

Coach them to slowly stand and stretch eventually with the beat--while the beat gets louder and louder. When all the children are fully stretched, start letting the beat get softer.

Coach them to feel themselves "getting smaller and smaller, shrinking" until they move back to the position ir which they started. Then have complete silence for 15 seconds.

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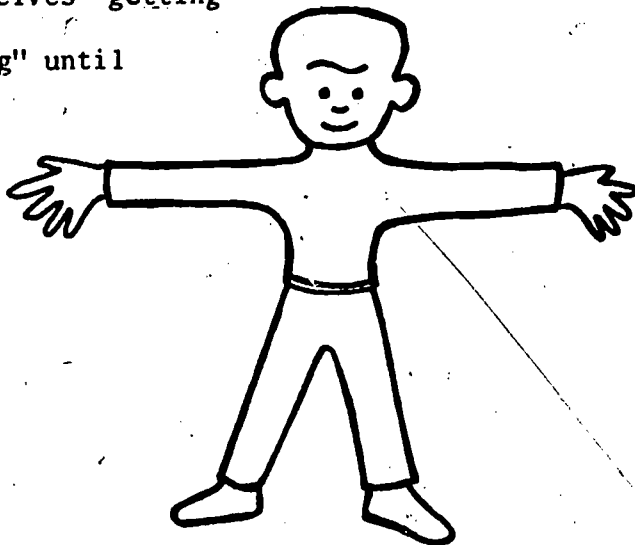
CIRCUS

Everyone sits in a

big circle.
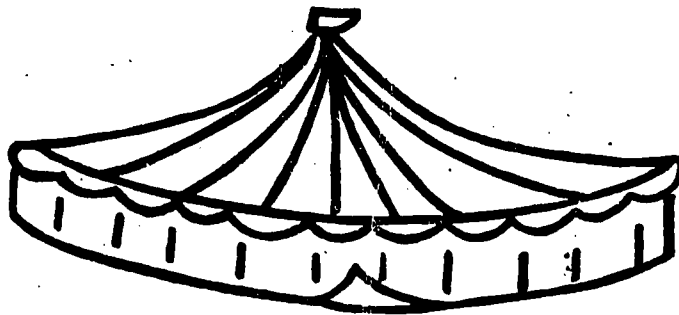
Ask the children to remember a circus--

what did you see? See the colors? See the clowns, the elephants, the

tightrope walker? Music would help or teacher can sing circus music.

This is a circus ring. We are going to make up a circus. The

teacher acts as the ringmaster (after the first time, one of the children

can be the ringmaster).

The children decide what characters or animals

they would like to be:

Suggestions: Lion tamer & lions
                Tightrope walker
                Strongman
                Horse trainer & horses
                Elephants and trainer
                Clowns
                Any others children suggest
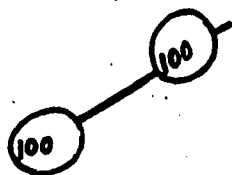
Then each act is performed in-

dividually with the rest of the class

acting as audience (about 1 minute each at first).

The ringmaster announces each act and asks for "a big round of applause"

after each act. When time is almost up, we can

end with a circus parade around the room.
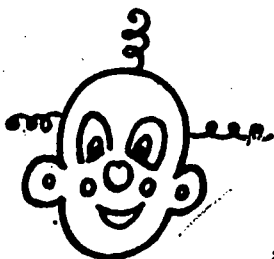
(Eventually this game can take a longer time

and be done in several parts throughout the day,

adding popcorn sellers, starting with ticket takers).

BLINDFOLD

Tell the children we're going to help
each other look at the room and discover new
things about it with everything but our eyes.
This is not a talking game so don't give away secrets. Let each child
discover new and old things for himself. Help your partner without
talking. Have him touch many different things. We'll each get turns.

The teacher selects partners and one is blindfolded. The other
child is the leader. Make sure to tell the children to protect their
partners from hurting themselves while blindfolded. Have the partners
hold hands and those leaders take the followers around the room. Coax
the leaders without talking to stop and have their partners touch dif-
ferent things in the room. After five or so minutes, have the leaders
switch to followers (blindfolded) and be led around the room by the
leaders. Keep the partners the same.
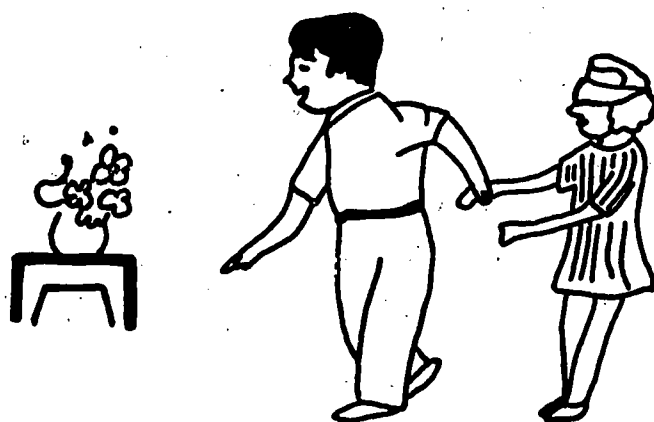
It is important for the
leaders to be helped by
the teacher to find things
to show the followers;
different textures, plants,
any animals in the room,
peculiar objects, etc.

When the children
show that they take the games quite seriously, play this game out of
doors on a nice day. But make sure you have control of the children.
It is most fun out of doors playing this game if there is no danger of
moving traffic near the school or anything else which could hurt the children.

JOINING

Everyone sits in a circle.

The teacher sends one child to the center to start
an activity. (The teacher whispers the activity in
child's ear--such as painting a fence, playing baseball,
jumping rope, eating an ice cream cone.)

Then send another child up with a different activity
to play (whispered in child's ear). The first child
must adapt quickly to the second child's activity and
join in the new activity.

Then send a third child up with a different activity to play
(whispered in child's ear). The first and second
child must now adapt to the third child and join
in the new activity.

There should be no talking between the
children. Each activity is a secret. The
children playing must guess the new activity
and show that they have guessed not by talking
but by joining in.

follow me

follow me

follow me
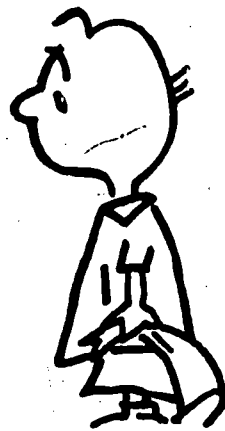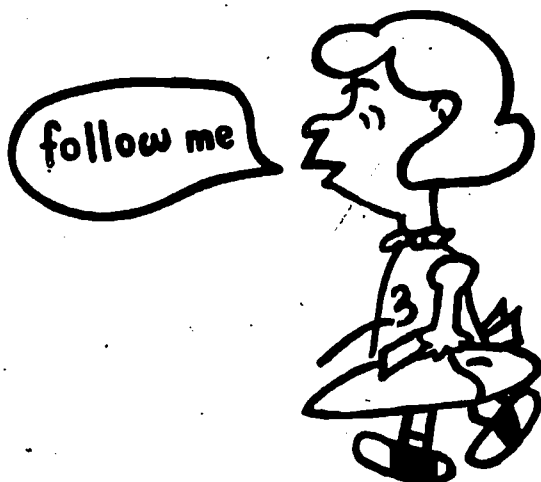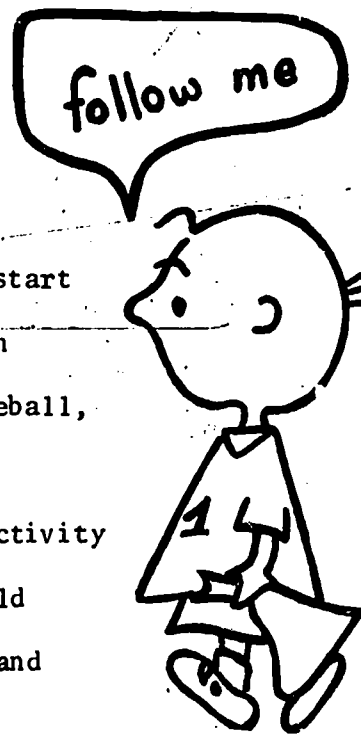
SHIP

Ask the children if they have ever seen
the ocean (the sea). The waves moving back
and forth. Teacher starts rocking and making
sounds of the sea (shwiiish). Ask the chil-
dren to feel the waves and make the
sound of the sea with you. There's
a storm at sea, really shaking
them. Then tell them we're going to play pirates at sea
and you (the teacher) are going to be a shark
swimming around the boat. If you can you'll catch
any of the children near the edge of the boat. Ask
the children to make the sounds of the ocean and
storm rocking the boat while you try to catch
those near the edge. As they move back and forth
remind them that the boat will tip over and the
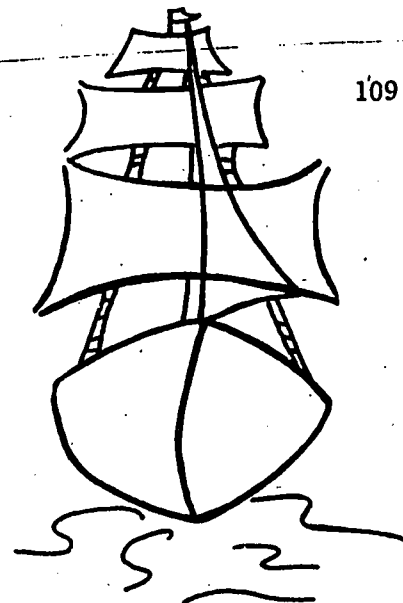shark will catch them. Make this
exciting, the children love
to be frightened by the
shark. A little shouting
and howling should be expected
and the teacher should consider
this a good sign.

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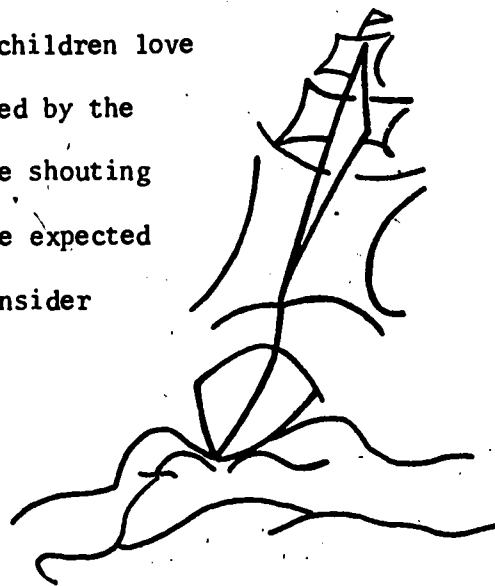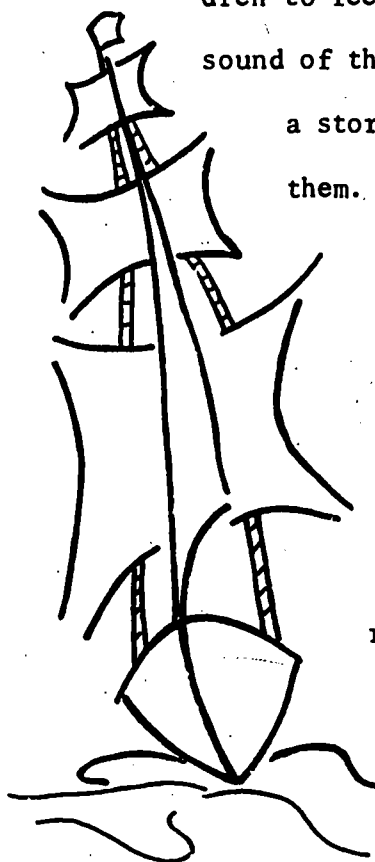
DRAWING

The class is divided into two teams and
sits at opposite tables (across the room) with
the teacher standing between with a list of
easily identifiable objects (train, cow, cat,
Christmas tree, window).

One player from each team goes to the teacher
and is shown one object. The players rush back to
their team tables and without talking try to draw the
object.

As soon as his team (anyone on the
team) recognizes the object, the object is
called out and that team wins the point. Con-
tinue the game until each player has had a
chance to draw. The team with the most
points wins.
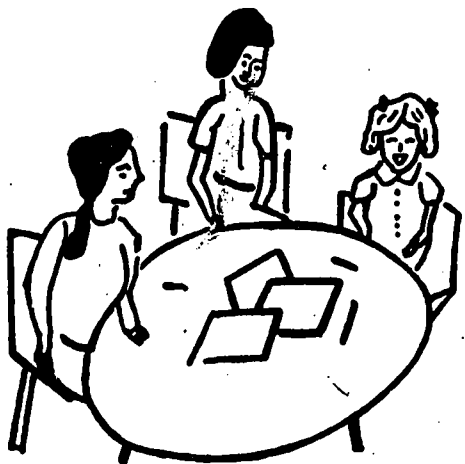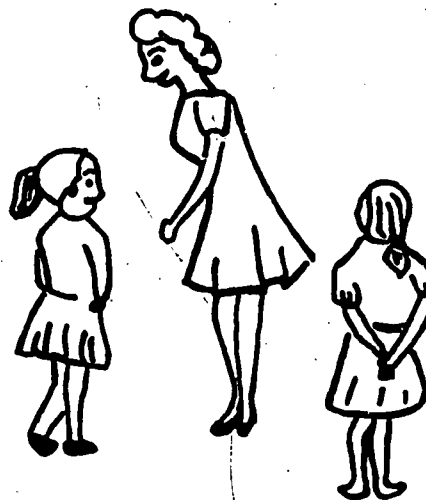
PANTOMIME

Tell the children we are going to play a pantomime game where we act out everything but never say it. We'll each take turns at doing and guessing. Take one of the children and quietly ask him to pantomime a chair or rock, or boat, airplane, rocket, sink, bus, car, horse, etc. The other children are to guess what the child is pantomiming. Each child gets a turn.
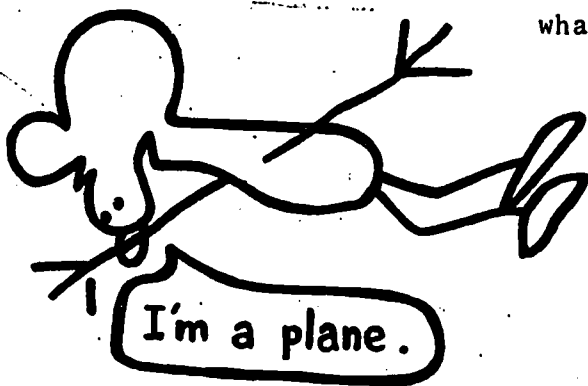
guess what I am?
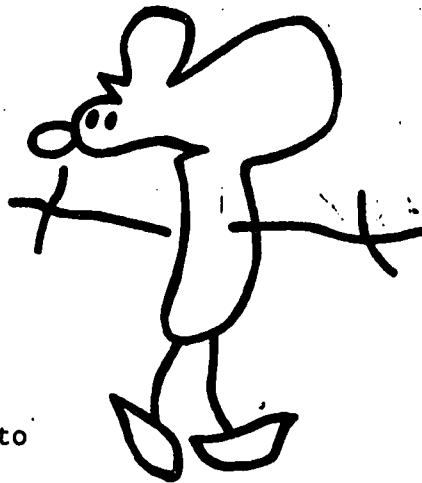
Also can be played this way: Everyone in a circle with one child in the center. He says, "On my way to school this morning I saw?" He pantomimes what he saw and the other children must guess.

Can be played with two teams.

I'm a plane.

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ZOO

Tell the children we are going to
play Zoo today.

Talk about the Zoo with the children.
What kinds of animals are in the Zoo? Have
you ever been to a Zoo? What do the animals
do all day in the Zoo? Are they happy or unhappy?
Let's all play Zoo!

Ask for what animals we should play. Then have all the children
walk like each animal and make the sounds of the animal--all together.
Do this for as many animals as you have time for with everyone simultan-
eously walking and making the sounds of the animals.

Then you can ask each child to act out his favorite animal. Talk
to the child about the animal. Have the child perform for the rest of
the class.

Later in the day, the children can draw their animal and write a
little story about the animal.

Suggestion: If you have a tape
recorder, tape the sounds of
the animals that the children
make and play the tape back,
having the children guess which
animal it is and walk like the animal.
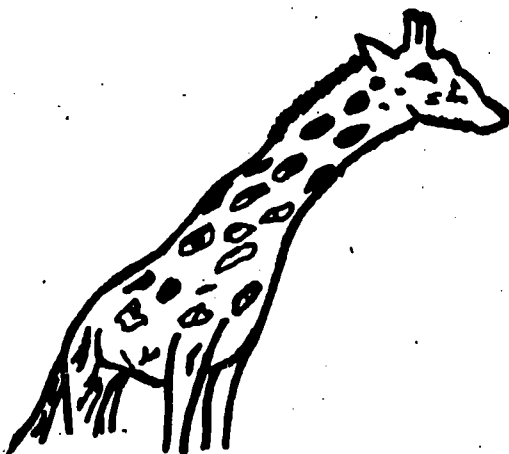
MUSICOLORS

Play a "clas-
sical music" re-
cording and let the
children draw or
paint the music
with crayons or
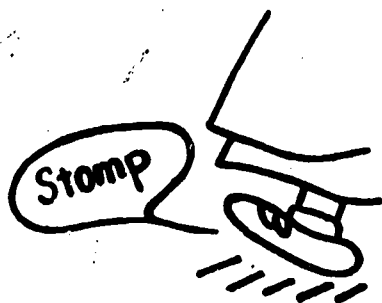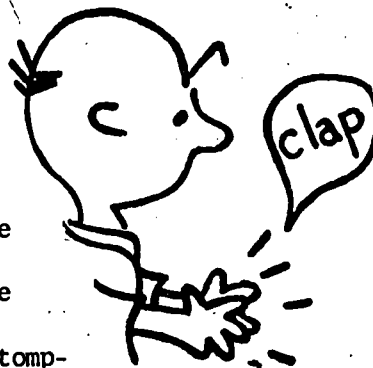paint. Emphasize
the use of color
and simple things.
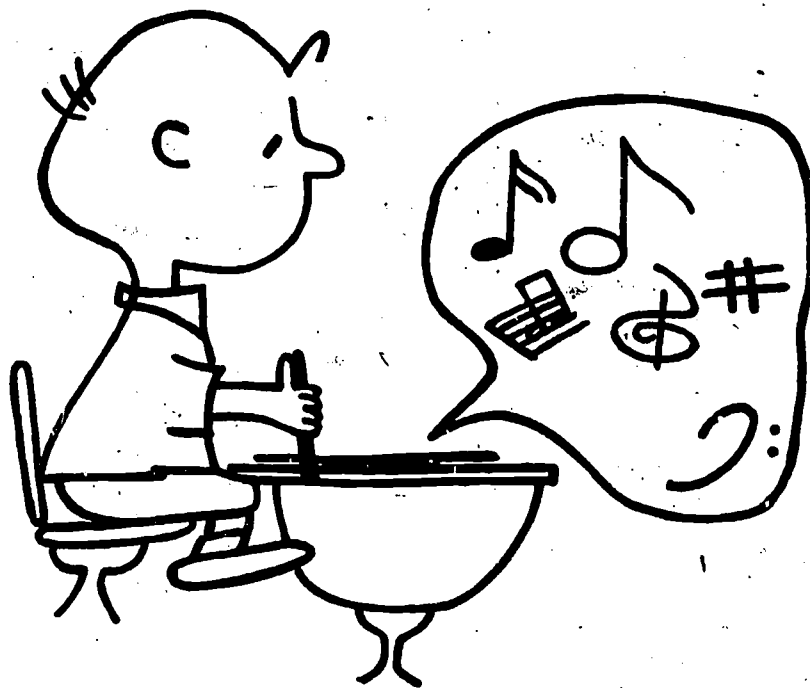
It would be preferable if the music
was very modern, colorful music such as the works of Varese, Boulez,
Webern, Stravinsky, etc. But if no records by these composers are
available, any classical music will do. Vary the music between Chamber
Music, soloist (piano, voice, cello, harp, violin, etc.) and large
colorful works for symphony orchestra. Opera would be good for the
imagination.

These are wonderful games and can be played over and over again,
using different music and helping the children to develop their abilities
to abstract and imagine. It is also an excellent introduction to music.

REMEMBERING

Have three children stand in the center
of circle or in front of class. Tell them we're
going to play a clap, stomp, and hum game. Have
all three try it out by clapping their hands, stomp-
ing one foot on the floor, humming once. Then tell them
that we're going to number them 1, 2, and 3. The 2 child must remember
what 1 did and repeat that and add one sound to it. The No. 3 child
remembers and repeats what No. 2 did and adds a
third sound (either a clap, stomp, or hum).
Help them until they succeed.

Do this with each group of 3 in the
class. It may be helpful to coach the No. 1
child of the second group to choose a dif-
ferent sound to do than No. 1 of the first
group. (If Group I #1 child clapped, coach Group II #1 child to hum).

Remembering can also be played this way: They can choose any sound
they want. Start by having everyone make different sounds so the chil-
dren have many sounds in their ears. Then play the game as "I," with
the first child choosing any sound he or she wants, the
second child repeats that and adds a second sound. The
third child repeats the two sounds that #2 did and
adds a third sound.

And then: with 4 children

with 5 children

as many as you can.

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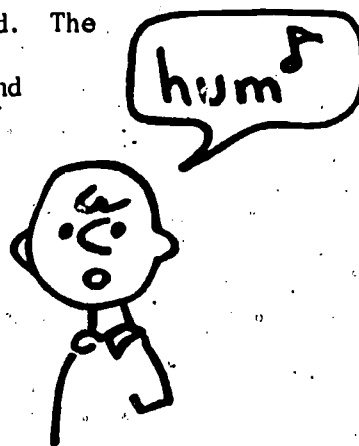
CLOUDS

For a few moments
talk to the children about
the air. Did they realize that
air was really something they could
feel? Demonstrate by having them fan themselves. What is it that seems
to be brushing against our faces when we fan ourselves? Why, yes, it is
the air moving. Now, let's all open up our arms and try to feel the
air. Let's all imagine that we are clouds. Clouds don't walk or talk,
they just float in the sky. They float on the air. Feel your shoulders,
hands, forehead as clouds. In order to
feel you must concentrate very
hard and close your eyes.

Then ask them to try to
feel the waves of air part as
they move their hands and arms as clouds
through the air. Have the children sway gently in the air and feel the
air move away as they move from side to side. Have the children move
slowly around the room feeling the air part in front of them as they
move through it. Have them move their arms slowly as they are walking
slowly and feel the air part.

Have them imagine themselves as rain clouds, storm clouds, etc.
Finish by discussing what they
felt and learned today.

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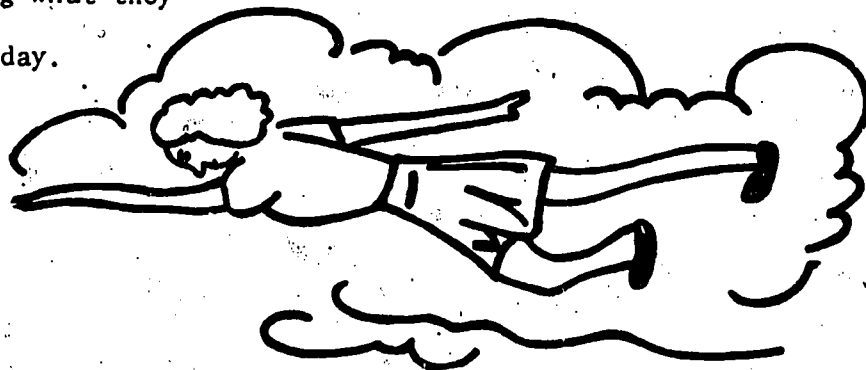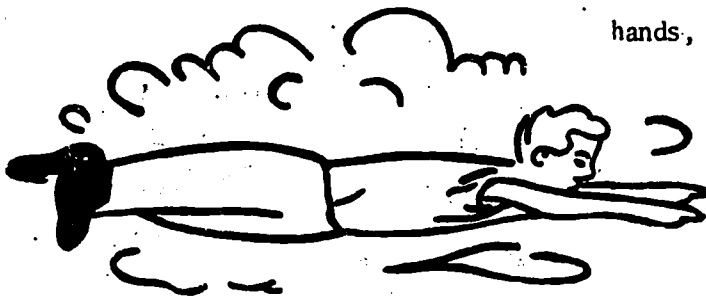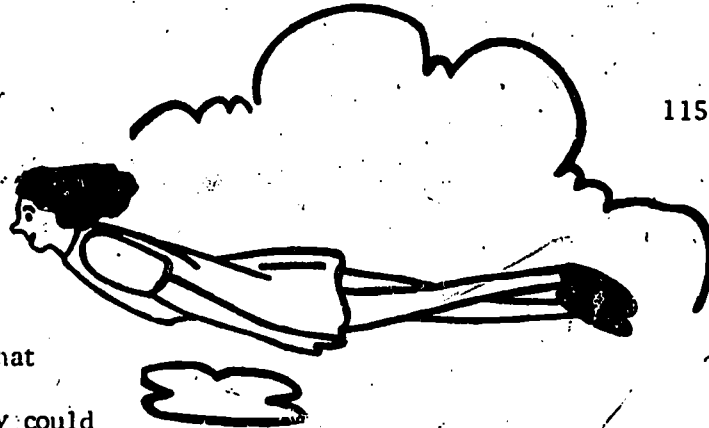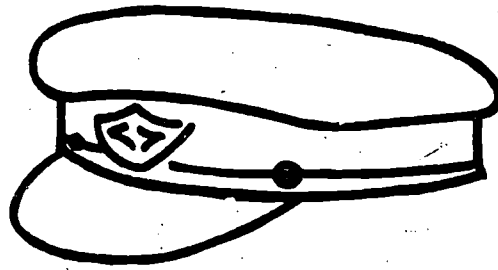
POLICEMAN

One child is chosen to be the
policeman (or policewoman) and leaves the
room. The other children walk around the room. The teacher or leader
calls the policeman in and says, "The children are lost. Will you
please take them home safely?" The policeman whistles and all the chil-
dren must "freeze" wherever they are.

The policeman then takes each child to his seat. The players must
stay where they are until the policeman seats them. Success for the
policeman is determined by the number of children he can seat correct-
ly. He is not permitted to look in the desks or in books for clues to
correct seating.
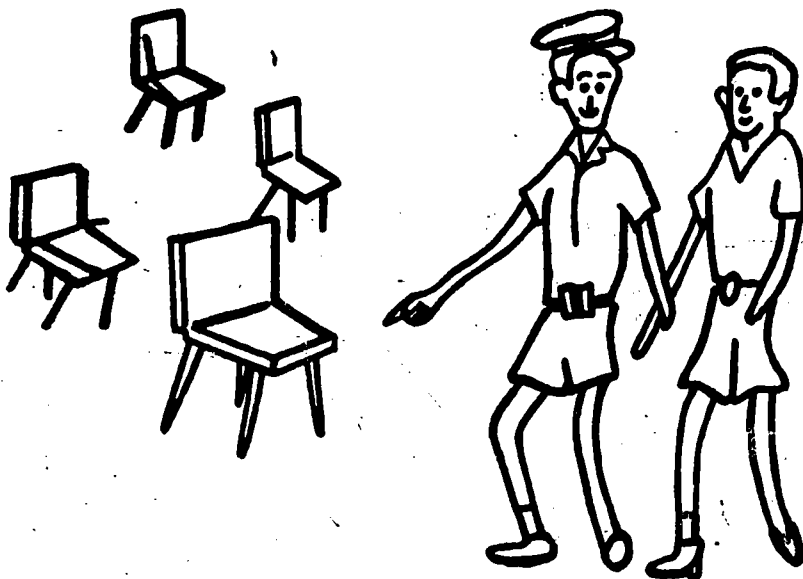
APPENDIX B

Evaluation of Games Workshop

In order to assist teachers who were to participate in the study
to (a) understand the value of game techniques in work with children,
(b) become motivated to use games by demonstration of the relative
simplicity of implementation, and (c) develop flexibility in the class-
room by means of active participation in the playing and generation of
games, a workshop was planned for the participating teachers. This was
arranged with the cooperation of the Indianapolis Public Schools.
(See letter overleaf.)

At the conclusion of the workshop, each teacher completed an atti-
tude questionnaire designed to provide project staff with an evaluation
of the workshop. The Game Workshop Questionnaire developed for this eval-
uation is shown in Table 13 (pp. 119 & 120).

A summary of the results of the evaluation are contained in Table
14 (p. 121).

The teachers' responses to the games workshop were clearly positive.
Most teachers felt that games would not undermine classroom discipline,
that games would be helpful, and that games would have more than transi-
tory value. It is significant to note that no teachers felt absolutely
that "academic type" games were "best."

In terms of the workshop itself it is also clear that it was viewed
as a positive, worthwhile experience. The outstanding personal and
leadership qualities of the workshop director were vital contributing
factors and suggest that a well executed workshop can be an important
and useful vehicle for motivating teachers.

March 12, 1971

Mr. Casimir A. Wykowski
School No. 9
407 North Fulton Street
Indianapolis, Indiana   46202

Dear Mr. Wykowski:

This letter is to inform you of the forthcoming workshop to be held
in conjunction with the project in which some of your teachers are par-
ticipating. The workshop will be held on March 26, 1971, at the Roose-
velt Annex Auditorium from 1:00-3:30.

We have provided reimbursement for released time for the teachers
participating in your building and have arranged for the necessary sub-
stitutes. Because of this, it is important for you NOT to contact the
Education Center on the day of the workshop since we will be handling
this.

The teachers in your building who are involved are:
Mrs. Penny Moberly, Mrs. Jean Rimer, Miss Nealie Chambers, Miss Delores
Jones.

I would like to thank you for your cooperation and participation in
this project. If you have any further questions, feel free to contact
Mrs. Newhouse, Field Coordinator, at 634-2381, Ext. 293.

Sincerely,

Albert H. Fink, Ph.D.

AHF:ja

This letter was also sent to:

Mr. John Patterson   Dr. Maurice Schankerman   Mr. Paul K. Smith
School No. 4   School No. 5   School No. 8
525 N. Blackford St.   20 N. California St.   520 Virginia Ave.
            46202   46202   46203

Mr. Ralph Nay
School No. 12
733 South West St.
            46225

TABLE 13

GAME WORKSHOP QUESTIONNAIRE

(Name)

INDIANA UNIVERSITY

GAME WORKSHOP QUESTIONNAIRE

NOTE: What is wanted is your opinion about the following statements.
Read each statement and then mark an "x" in the square which
best reflects your feelings.

INDIANA UNIVERSITY

GAME WORKSHOP QUESTIONNAIRE

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. I dislike games that teach coordination and rhythem.					
2. I plan on using some of the workshop games again.					
3. These games could undermine my disciplinary ability.					
4. The use of games can help me understand children's behavior problems.					
5. Games have little carry-over values.					
6. Mr. Guskin was well informed about classroom game usage.					
7. Mr. Guskin's explanations were clear and to the point.					
8. He was distant, cold, aloof.					
9. His voice and demeanor were excellent.					
10. He seemed dogmatic and intolerant of disagreement.					
11. He has an unsatisfactory personality.					
12. Concentration, memory, or language usage games are best.					
13. Games involving curriculum based items, i.e., numbers, letters, telling time, colors, etc., are best.					

THANK YOU FOR YOUR ASSISTANCE!

TABLE 14

TEACHER EVALUATION OF GAMES WORKSHOP

Category	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1					10
2	5	5			
3			2	4	3
4	5	4	1		
5			5	2	3
6	4	6			
7	8	2			
8	1			3	6
9	5	4			
10				1	9
11	1			1	8
12		2	5	2	
13			7	2	

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