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INCREASING THE INCIDENCE OF PHYSICAL EDUCATION LESSONS TAUGHT BY SECOND-GRADE CLASSROOM TEACHERS

The Ohio State University

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INCREASING THE INCIDENCE OF PHYSICAL EDUCATION LESSONS TAUGHT BY SECOND-GRADE CLASSROOM TEACHERS

DISSERTATION
Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
James O. Schwarz, B.S., M.A.

* * * * *

The Ohio State University
1983

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To My Parents
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Currently, minimum standards of education in the State of Ohio require that second-grade students be provided two thirty-minute physical education classes per week. However, for a variety of reasons the minimum standards of education are not always met. Some reasons, given by teachers at the three schools used in this study, for non-compliance included feelings of inadequacy regarding their ability to teach physical education, a feeling of being overwhelmed by other demands of reading, math, writing, etc., and low teacher morale. These factors, among others, plus the often held attitude of valuing reading more highly than physical education, has contributed to a lack of consistent teaching of physical education in many schools. It was the problem of adherence to minimum standards of education in physical education that this study investigated.

Many large city school systems are facing serious financial problems and this will become more acute in the 1980s (Lightfoot, 1978). The exodus of citizens from urban areas to the suburbs, increasing inflation, and voter
opposition to increased taxes (particularly property taxes to support education) have been major contributing factors to the financial troubles of urban school systems. Financially burdened school systems are faced with cuts in expenditures in order to avoid school closing. The steps most often taken in order to reduce spending are: closing school buildings, increasing class sizes, reducing the numbers of teachers employed (including teaching specialists), reducing the number of staff and teacher aids employed, providing minimal repair services, and purchasing fewer teaching materials.

Specialists in areas such as music, art, and physical education are often employed by school systems, but due to financial constraints of most school systems, these specialists are able to provide only a minimal educational experience to a large number of students. This was the situation in the school system investigated in this study. This inability to employ as many specialists as the school system would have desired contributed to the problems of adherence to minimum standards of education relevant to elementary physical education. A physical education specialist was assigned to several schools and taught one physical education lesson per week to kindergarten, first, second, and sometimes third grade students. This one
lesson does not fulfill the obligation of the school system to provide two thirty-minute physical education lessons for second-grade students. In order to meet state minimum standards, the classroom teacher was expected to conduct the second lesson; however, this often was not done.

**Statement of Problem**

The primary concern of this study involved the adherence to minimum standards of education of the State of Ohio for physical education of second-grade students. As stated in the introduction, second-grade students are entitled to two thirty-minute physical education classes per week. This does not include recess or other non-instructed free play activities. Since the physical education specialist provided only one of the two required physical education lessons and the classroom teacher often failed to conduct the second lesson, the primary question of this study was: "Can the incidence of physical education lessons taught by the classroom teacher be increased by providing a package intervention consisting of: (1) a scheduled time during which physical education could be taught; (2) the use of praise and prompts by the school administrator; and (3) the provision of more extensive physical education lesson plans?" Sub-questions generated from the statement of the problem were:
1. What reasons were given by the classroom teacher for not conducting one physical education lesson per week?

2. Will the nature of the physical education activity have an impact on whether a physical education lesson is conducted by the classroom teachers?

**Significance of the Study**

The general trend in education, particularly in large urban school systems, is one of ever-increasing belt-tightening. Budget cuts and staff reductions become frequent. Considering this trend the elementary school classroom teacher can be expected to assume more responsibilities, to demonstrate more versatility, and to shoulder more demand to teach physical education, art, and music. For if funds for art, music, and physical education specialists are reduced or eliminated from school budgets, the classroom teacher will be expected to conduct these activities. In the school system used in this study the classroom teacher is already expected to teach one physical education lesson per week. It is important to determine what contingencies will be effective in encouraging the classroom teacher to conduct these activities should funds
for these specialists be eliminated from school budgets. Physical education for children is important, yet it cannot have a positive effect on the development of the child unless the subject is taught. It is, therefore, important that the classroom teachers provide their students an opportunity to experience physical education.

**Limitations**

1. This study was limited to the conduct of physical education lessons taught by ten second-grade classroom teachers in three elementary schools.

2. The results of the study were limited in the ten second-grade teachers consenting to participate in the study.

3. The results of the study were limited to the number of possible opportunities for the conduct of physical education lessons. At times, the gymnasium was unavailable for the conduct of physical education lessons due to voting on election day, as well as various school assemblies. Teachers were assigned one period per week during which they could use the gymnasium, and if assemblies were held during that time, it was very difficult for the teacher to teach a physical education lesson.
Basic Assumptions

1. The second grade teachers participating as subjects in this study were assigned to their three schools based on available teaching vacancies and were representative of other second grade teachers in the school system.

2. Reliability checks were conducted throughout the investigation without the subject's awareness of the checks. It is assumed that these checks were representative of the reliability of each observation.

Operational Definition of Terms

The following terms are used throughout the study and are defined here to ensure that they are interpreted accurately.

Baseline - The level at which behavior is occurring before attempts are made to modify it (Crossman, 1979).

Behavior - Any act by the subject that is measurable and observable (Cooper, 1974).

Behavior of Interest - The dependent variable. In this study, the teaching of physical education lessons by the subjects.

Dependent Variable - A variable that is measured while another variable is changed in a systematic way (Sulzer-Azaroff and Mayer, 1977). In this study the teaching
of physical education lessons by the classroom teacher is the dependent variable.

Event Recording - The tally of the occurrence of an event--

In this study the occurrence of a physical education lesson by the classroom teacher.

Follow-up Physical Education Lesson - Lesson provided by the physical education specialist to be conducted by the classroom teacher.

In-depth Follow-up Lesson - A physical education lesson, provided by the physical education specialist, for use by the classroom teacher in conducting physical education lessons during intervention. A more comprehensive lesson than the follow-up lesson.

Independent Variable - The variable that is manipulated in the experimental design. In this study the independent variable consists of three phases: scheduling a reserved time in the gymnasium for use by each teacher to conduct a physical education class; principal input in the form of praising and prompting subjects for conducting physical education lessons; and the provision of in-depth follow-up lessons by the physical education specialist.

Mortality - The termination of a subject's participation in a study prior to completion of that study.
Physical Education Specialist - The physical education teacher assigned to teach elementary school physical education in the subject's schools.

Principal's Input - The phase of the study during which the principal of the school provided a letter to each teacher (subjects and non-subjects) emphasizing the importance of physical education and compliance with state standards of education. Also, the principal prompted the subjects to conduct physical education lessons and praised them when they taught a lesson.

Reactivity - Interference of the observer himself upon the behavior being observed (Werck, 1968).

Reliability - The degree to which the independent observers agree upon a specific behavior.

Scheduled Time - May also be referred to as reserved time. The time period during which the classroom teacher was entitled sole use of the gymnasium for conducting a physical education lesson.

Subject - The individual teacher participating in the study. In this study the subjects were ten second-grade classroom teachers.
Summary

In this chapter the significance of the study was identified, the statement of the problem was made, the limitations of the study given, and the operational definitions of terms provided.
Presently there is little literature directly related to this study. Certain areas were reviewed that were relevant to the study. These include: problems confronting educators, teacher motivation and reinforcement, and role of the principal.

**Problems Confronting Educators**

Schools are often expected to deal with alcohol and other drug abuse, teach sex education, develop student skills in areas related to future employment, as well as teach the basics. The tool for imparting this knowledge and developing socially acceptable behavior is the classroom teacher. All too often the classroom teacher feels overwhelmed by these demands. This is even more true in inner city schools were, as Lightfoot (1978) points out, great demands are placed on the teaching staff. In these schools, there tends to be large classes, greater problems with discipline, more requirements in supervision, and students with poor reading and achievement scores. The teacher is
frequently confronted with student attendance and truancy problems, vandalism of school and personal property, and must more frequently deal with threats of, and sometimes actual, physical and emotional harm. Nier (1978) also identifies declining school enrollments and financial difficulties, as well as an oversupply of teachers, as problems facing today's educators. This oversupply of teachers affects job availability and is negatively related to job satisfaction (Pfeffer, 1980).

Hertz (1978) identified student disinterest as an important problem facing teachers. This student disinterest may be a result of several factors: student abuse of alcohol and other drugs, problems at home, peer pressure against showing an interest in education, students no longer believing that they can get a good job through education, intense interest in outside activities, and part-time employment which provides significant sums of money.

Hertz also identifies problems of the teacher. The teacher sees many students who do not seem to care, parents unable or unwilling to manage their children, and taxpayers who refuse to increase taxes to support education; administrators seem uninterested in the teacher's problems; and media information regarding vandalism, threats, and harassment to teachers; reports of declining test scores; and statements that young people are poorly prepared contribute to teachers'
attitude problems. Considering student apathy and the negative experiences of the teacher, the teacher must decide if it is worth his effort to attempt to teach. Hertz's suggestions in dealing with this problem include presenting class expectations, demanding adherence to those expectations, and emphasizing writing and logical thinking. He does not deal with additional rewards for the classroom teachers to encourage them to put forth his best effort.

McGuire (1979) points to a serious problem facing school systems to be teacher burnout, which results from stress, tension and anxiety. These feelings develop from confrontations with vandalism, violence, disruptive students, inadequate salaries, involuntary transfers, interfering parents, oversized classes, and excessive paperwork. The result is teacher burnout and an exodus of many teachers from the profession. McGuire suggests that the local community be made aware of this problem and that the National Education Association will attempt to train teachers in techniques of classroom management and discipline. He believes that through total community involvement and support the problem of teacher burnout can be handled.

Teachers, usually, are conservative (Denno, 1977). Job-related stress can develop when the teacher's expectations of proper student behavior is met with actual student
behavior. Sparks (1979) suggests that this problem be attacked through the use of workshops. At these workshops, an attempt is made to identify the sources of job-related stress, reduce the feelings of isolation, and to identify professional strengths and work experiences that participants can draw on to increase their satisfaction with teaching. They then would form a plan to alleviate or prevent job distress.

This section has attempted to identify problems confronting teachers in general and inner-city teachers in particular. Teachers are facing many and complex problems. They often feel that they are not valued, that their accomplishments usually go unnoticed and unrecognized, and that the difficulties they face may be insurmountable. Each teacher considers the situation in which he is teaching and decides to attempt to provide a meaningful and total educational experience for his student, or gradually decides to simply "do enough to get by."

In the next section rewards to increase teacher performance will be discussed.

Teacher Motivation and Reinforcement

In this section, contingencies to increase job performance will be discussed. Studies using rules as prompts
and praise and money as reinforcers will be identified and their results given.

Rules

Delquadri and Guild (1974); O'Leary and O'Leary (1977); and O'Leary, Becker, Evans, and Sandargas (1969) found that the provision of rules alone without contingencies to ensure adherence to those rules have little effect on subject behavior. Breyer and Allen (1975) found that attempts to change teacher behavior is often ineffective due to teacher apathy or sabotage. Teachers may see feedback as threatening. They found that feedback and specification of behavioral goals was insufficient to achieve desired changes in teacher behavior. Prior teaching habits were too strong to be overcome by simple procedures or, in other words, the "pay-off" was not adequate.

The use of contingent praise was used by Polirstok and Greer (1977) to effect change in aversive behavior involving teachers and students. Lewis and Strain (1978) found that the use of goal setting and feedback produced a desired change in teacher behavior in delivering praise to students, and that Cossaist, Hall and Hopkins (1973) found that the use of instructions, feedback and praise to teachers increased teacher behavior in providing
praise to students and that feedback plus praise was most effective. Their data on instructions alone was inconclusive. Kirby and Shields (1972) found that the use of praise and immediate feedback improved student performance in arithmetic. At times, the use of praise and feedback is sufficient enough "pay off" to produce a desired change in behavior.

When praise has been insufficient in effecting a change in subject behavior, additional reinforcers have been effective. Contingent cash bonus payments have been effective reinforcers in several studies. Lipka and Goulet's (1979) investigation unsurprisingly found that money was a concern of teachers. Pierce and Risley (1974) found that the threat of job termination and the presentation of a thorough job description did not increase job performance of employees in an urban recreation program. When the employee had an opportunity for input in the job description and received pay contingent upon job performance, job performance did increase. Scrivens (1979) suggests that increased pay would serve as an added incentive for reducing the number of teachers leaving the profession, and Hough (1979) suggests that money, promotion and recognition should be used as rewards for teachers and that the reward structure should be matched to the characteristics of each teacher.
Parker (1979) encourages the use of cash bonuses as rewards for teachers and administrators whose students demonstrated significant increases in test scores. Lutzker and Blackburn (1979) suggest increasing work performance by offering bonuses and state that industry has improved work performance.

Quilitch (1975) found that money was a powerful reinforcer in encouraging employees to improve job performance. He found that the use of memos and workshops were ineffective in increasing job performance. These were viewed as inconsequential instructions and were too weak to effect an increase in the provision of instruction of recreational activities to hospital residents. Daily public posting of results and the use of cash incentives based on patient improvement did result in an increase in job performance. Harris, Bushell, Sherman and Kane (1975) applied instruction, feedback, praise and bonus payments in an attempt to effect a change in teacher behavior. They found that teachers were not using teaching materials as directed and that the teachers continued in this manner when encouraged by the principal to use the materials properly. The authority of the researchers was ineffective in changing teacher behavior, and the use of instruction, feedback and praise provided only limited success in encouraging proper use of teaching materials. However, the use of cash bonuses was effective in effecting a change in
this behavior. The researchers suggest that in-service stipends or teacher meetings held during school rather than after school might be alternative reinforces in place of cash bonuses.

Gudridge (1980) states that great teachers deserve great rewards but usually their efforts to unrecognized and unrewarded. Ways must be found to reward teachers for exceptional performance. Praise and encouragement, money, contingent time off, more contact with and recognition by other adults, respect and support by the principal and increased opportunity for professional growth are some of the methods that could be made available to reward great teachers.

In this section on reinforcement, various rewards were discussed. Additional money seems to be a powerful reinforcer. Praise, prompting and encouragement are reinforcers that are effective with some subjects but not others. It seems that when the subject's resistance to change is sufficiently strong to prevent praising and prompting from being effective reinforcers, more powerful ones must be introduced. Money is one such reinforcer; however, considering the financial status of most school districts its use as a reinforcer will probably be limited. It is, therefore, necessary to find other effective
contingencies to increase job performance and to promote great thinking.

**Role of the Principal**

The principal is the leader of his school. If students are unmotivated, the values of the principal are crucial in determining teacher actions (Tjosvold and Kastelic, 1976). A positive or negative climate can be effected by the attitude of the principal (Mitchell, 1979). Mitchell suggests that in order to develop a positive attitude a plan of action should be developed. This plan would include personal goals and a time table during which these goals would be achieved. In order to motivate the teaching staff, the principal must be enthusiastic and demonstrate this enthusiasm to the staff. Degenfelder (1979) stated that increasing motivation among staff members is often a problem, but suggested that the principal should consider the following when attempting to increase teacher performance: employment security, high interaction opportunity, high perceived contribution opportunity, group-centered leadership, and instructional supportiveness. Giving teachers a greater opportunity to interact with other teachers and the principal and providing the teachers an opportunity for input in decision-making increased motivation. It is the responsibility of the administration
to provide these conditions. Williams (1978) states that principals are in a position to deal with teachers in large groups (teachers' meetings), small groups (departmental meetings), and individually (conferences). When attempting to motivate teachers the principal must be aware of individual differences in what teachers view as rewards. Some teachers may view working with student-teachers as rewarding whereas others view it as additional work. It is not enough, says Williams, to eliminate factors of job dissatisfaction. We must provide for teacher satisfaction—not only in areas of salary but also in areas such as feelings of achievement and personal success. Erlandson and Pastor (1981) found that there is a relationship between job satisfaction and teacher motivation. Teachers identified opportunity for peer recognition, collegial planning, and significant group contribution to instructional efforts to be rewarding. The principal should structure the school environment in such a manner as to provide frequent opportunities for interaction, recognition, and contribution. Walker and Moffet (1979) suggest that teacher morale can be improved by frequent compliments for teacher effort. It is suggested that the principal should know the first name of students and teachers and make frequent efforts to praise performance. Teacher-of-the-week, lunch-with-the-principal (students)
blue ribbons-for-the-secretary, grandparents' week, parent-honor-roll, special-school-service-awards (business or community leaders), and gold-medal-volunteer clubs are some methods of publicly recognizing parent, student, staff and community contributions. The principal can be a powerful force in the school and the use of a system of carefully chosen and delivered rewards can result in an increase in morale.

Gibson (1979) suggests that in order to increase job performance the teacher, as well as the administrator, must believe that the task can be accomplished, that information regarding the problem to be overcome must be gathered, and that teachers and administrators must know what is expected from them. Finally, the principal must explain the purpose of and reasons behind a particular action.

Principals need to be assertive without being aggressive when encouraging teachers to fulfill their responsibilities (Kampmeier, 1976) and Crase (1978) states that principals need to support physical education and emphasize its importance. In order to ensure the teaching of physical education the principal must motivate the teachers to teach the subject. Rules alone usually are not effective. For a person to become motivated to perform a task, a desired reward must result from the task, and there must
be a clear performance path leading to the reward (Kaiser and Polczynski, 1979). If the individual questions the relationship between performance and the reward, increased performance may not occur. To foster increased performance, the principal must determine if he is providing appropriate rewards in appropriate situations to appropriate teachers.

Among several factors thought to characterize the instructionally effective school is the role of the principal. Madans, Airasian, and Kellaghan (1980) stated that the principal of these schools had high expectations for the staff and students, and had specific and clear goals. Also, Clark, Lotto and McCarthy (1980) had high expectations of teacher behavior and student progress. They, also, stated that principals in instructionally effective schools possessed effective communication skills in presenting their viewpoint to teachers, motivated teachers and exhorted them to achieve a set standard of performance. Edmonds (1979) stated that principals of these schools demonstrated strong leadership. Austin (1979), also, stated that these principals exhibited strong leadership and had high expectations of teacher and student performance. Brookover and Lezotte (1979) stated that the principal was assertive and Madden, Lawson and Sweet (1976) said that the principals were directive about decisions.
but, also, supportive of the teacher. Venezky and Winfield (1979) stated that principals of these effective schools had high expectations, had high task orientation, and worked closely with specialists.

In order to improve teacher performance, the principal must promote a positive school environment, regularly praise and recognize teacher achievement, and prompt teachers toward increased productivity.

Summary

Teachers are faced with many problems. When they are asked to conduct activities which they view as additional, and at times unimportant, they may avoid fulfilling the task—even though that task may be an aspect of state standards of education. Providing rules and instructions for fulfilling this obligation, without contingencies, usually are ineffective. The teacher evaluates the cost versus the benefit of conducting the activity and if the benefit does not outweigh the cost the activity is not undertaken. When contingencies are applied and significant rewards are made available, the performance of the teacher is more likely to increase. It is the responsibility of the principal to exercise his authority in such a manner as to provide a positive rather than negative school environment and to arrange contingencies such that teacher
performance will increase. The principal should attempt to arrange the reward structure so that teacher needs are accommodated as much as possible. Finally, the principal should—in addition to providing a positive motivational climate and reward structure—also express his beliefs in the importance of each subject to be taught, adherence to minimum standards of education, and prompt teachers to comply with these standards.
CHAPTER III
METHODS AND PROCEDURES

The procedures in this study were developed in an attempt to answer the research question stated in Chapter I:

Can the incidence of physical education lessons taught by second-grade classroom teachers be increased?

This chapter will be divided into the following areas: subjects and settings, subject selection, materials, observational procedures, observer training, reliability, reactivity, stages of the study, experimental design, and analysis of the study.

Subjects

Subject one was a sixty-one year old white female. She taught school for fifteen years in Mexico and twelve years in Columbus City schools.

Subject two was a twenty-two year old white female. She was a substitute teacher in her first year of teaching after graduating from college. She had one course in college concerning the teaching of physical education.
Subject three was a thirty-six year old white female. She had eleven years teaching experience, all with Columbus City schools. She had one course in college regarding teaching physical education and one workshop on parachute activity.

Subject four was a fifty-eight year old white female with twenty-eight years of teaching experience, fourteen in Columbus City schools. She had a M.A. degree and took two courses in her undergraduate work regarding teaching physical education. She took no workshops regarding physical education skills. She was the Columbus Education Association's Building Representative.

Subject five was forty years old. She was a white female with eighteen years of teaching experience, fourteen years with Columbus City schools. She took one course regarding teaching physical education and attended no workshops regarding physical education activities.

Subject six was a thirty-six year old white female with twelve years teaching experience--all with Columbus City schools. She had taken four physical education activity classes, one methods course regarding reaching physical education, and attended one dance workshop.

Subject seven was a forty-one year old white female. She had fourteen years of teaching experience--all with Columbus City schools. She had taken one physical education...
education methods class in college and attended no workshops.

Subject eight was a black female. She was fifty-five years old, and had taught for fourteen years—all with Columbus City schools. During her college experience, she took two physical education activities classes and two methods course. She, also, participated in workshops involving ball skills and bean bag activities.

Subject nine was a fifty-seven year old white female. She had taught for twenty-nine years—sixteen with Columbus City schools. She took one methods class and two physical education activities classes during her college education.

Subject ten was thirty-two years old. The subject was a white female and had taught for eight years—all with Columbus City schools. She took two physical education classes and one methods class while an undergraduate student. She had participated in no inservice training relevant to physical education.

The subjects were all females. Nine subjects were white and one was black. They ranged in age from twenty-two to sixty-one and in years of service from one to twenty-nine years.

None of the subjects possessed more than a very basic knowledge of physical education, and only three of
them participated in workshops aimed at improving physical education teaching skills.

Settings

The ten subjects were assigned to three elementary schools in the Columbus City School System. These three schools were serviced by one physical education specialist (the researcher). The physical education specialist's responsibility was to teach one physical education lesson per week, and the second-grade classroom teachers were to teach a second lesson. These ten subjects were observed for fourteen weeks during the months of March, April, May, and June, 1981.

Five subjects were assigned to a large and heavily populated building--School A. As a result of the large enrollment at School A, the classroom teacher did not have much flexibility in planning for gymnasium use. Three of the subjects were assigned to School B. The enrollment of this school, though less than School A's, was large and allowed for little flexibility in planning for gymnasium use. Only two of the subjects were assigned to School C. Considerable opportunities for gymnasium and outdoor facility use was available.
School A

School A was a three-story brick building constructed in the 1920s. It had the largest gymnasium of the three buildings. It was the only school having a wooden gymnasium floor and, like the other two buildings, the gymnasium was also used for breakfast, lunch, and assembly programs. The gymnasium in School A was available for physical education classes from 9:30 A.M. to 11:00 A.M., and again from 1:45 P.M. to 3:15 P.M., with school time prior to 9:30 A.M. being used for the breakfast program and 11:00 A.M. to 1:45 P.M. for lunch.

The physical education specialist was assigned to conduct physical education classes on Mondays and Tuesdays and placed follow-up lessons in each teacher's mailbox no later than noon on each Tuesday. It was intended that these lessons would be conducted by the classroom teacher as a related follow-up physical education lesson. These lessons were similar to the lesson taught by the physical education specialist and it was expected that the classroom teacher would use them rather than conduct a non-related lesson. It was determined that this desired goal was not
achieved and that the classroom teachers did not conduct follow-up lessons; nor did they conduct physical education lessons with any regularity. This was determined by the investigator asking the classroom teachers whether they taught a physical education lesson or not. If not, the investigator questioned the teacher to determine why no lesson was taught; and if a lesson was taught, the teacher was asked to describe what she taught. The investigator assumed that the reporting of no lessons taught was accurate; that the teacher would have no reason to report no lessons taught.

Several reasons were given by the subjects at School A for failing to conduct physical education classes. School A had the second largest primary school enrollment in the Columbus City School System. Due to the large number of classes, it was often difficult for the classroom teacher to gain access to the gymnasium at a convenient time for a second physical education lesson. This was further complicated by school assemblies, PTA meetings, seasonal and holiday program presentations, and program practices, and election-day activities.

The use of outdoor facilities posed additional problems. School A had a large outdoor play area. Much of it was paved with tetherball and four-square stations. The paved areas were littered with glass and teachers were
reluctant to conduct physical education classes on this surface. There was a smaller grassy play area, but this area often needed to be mowed, and it also contained broken bottles. Furthermore, senior high and middle-school students often walked through the playground on their way to and from school and at times disrupted outdoor physical education classes. It was nearly impossible for the classroom teacher to conduct outdoor physical education classes during recess times. Other students who were outside for recess often wanted to participate in the physical education class and distracted the students in the class. Due to these conditions, the classroom teacher, as well as the physical education specialist, seldom conducted outdoor physical education classes.

School B

School B was comprised of two parts: a three-story older section (constructed in the early 1900s) and a newer, one-story section.

Three of the ten subjects were assigned to this school. The school enrollment was smaller here than at School A and there were fewer conflicts regarding scheduling time for a second weekly physical education class.

At School B, the gymnasium was available for physical education classes from 10:00 A.M. to 11:30 A.M. and from
2:00 P.M. to 3:30 P.M. Although adequate time seemed to be available for the custodian to clean the gymnasium after the breakfast and lunch programs, the custodian, on several occasions, did not have the gymnasium clean and ready for physical education. This was more common on days when the physical education specialist was not servicing the school (the physical education specialist was present on Wednesdays and Thursdays).

The playground area at School B was smaller than at School A and totally paved. Although it was not as littered with glass as School A's, it did have enough glass and considerable irregularities in the paved surface that classroom teachers and the physical education specialist were reluctant to take their classes outside for physical education. Although there were problems involving the outdoor facilities, these problems were fewer than at School A and, therefore, the teachers were more likely to conduct an outdoor physical education class.

School C

School C was the most recently constructed building of the three schools. A one-floor plan, School C was located on a large lot with an adequate paved surface and a very large grassy play area. The play area at this school had the least amount of glass and other hazards.
The two subjects assigned to this school had the greatest opportunity to conduct indoor as well as outdoor physical education lessons, and due to the small enrollment at School C, gaining access to the gymnasium presented the least problem for the subjects in the three schools.

The physical education specialist serviced the students at this school only one day per week, Friday, and the classroom teacher received a suggested follow-up lesson by 9:00 A.M. every Friday. The time scheduled for physical education taught by the physical education specialist at School C was from 9:00 A.M. to 11:00 A.M. and from 1:00 P.M. to 3:00 P.M.

Teachers at this school were most likely to take their classes outside for physical education.

Students

The students at all three schools were from predominately lower-income level, and often one-parent, families. The school system was recently desegregated with the percentages of Caucasian/Black students being approximately 65%/35%.

Administrators

An important factor that must be considered in any setting involving schools is the role of the school admin-
istrator. The principal of School A was in his late 30s, very energetic, enthusiastic, positive, and consistent in handling discipline problems. He was also interested in maintaining good rapport with the teachers assigned to his school and was generally respected and well-liked by the teachers and viewed by them as supportive of their problems. He pledged and gave support in the conduct of the study and voiced a high regard for physical education.

The principal of School B was less enthusiastic regarding the conduct of the study but did promise to cooperate "if it didn't involve too much of his time." His age was approximately fifty, and he was viewed by the teachers of School B as being too slow in decision-making and not as supportive and assertive in matters regarding discipline as they wanted him to be.

The principal of School C promised support for the study but in actuality participated little. He was in his late forties and was viewed with mixed emotions by the teachers. He was very friendly with the teachers and this seemed to have an impact on how they responded to him. He was viewed by the teachers as adequate in the areas of discipline and support.

Additional discussions of the impact of these administrators will be presented during Chapter IV.
Activities

The nature of the activities taught was believed to be an important factor in the subject's decision to conduct or not to conduct the provided follow-up physical education lessons. For this reason, the physical education specialist provided the same follow-up and taught the same physical education lesson to all classes. For some subjects, gymnastics was a threatening activity and they refused to teach it. One subject verbalized this concern to the physical education specialist.

The provided follow-up physical education lessons were as follows:

- Weeks 1-4: Ball skills (4 lessons)
- Weeks 5-9: Gymnastics (5 lessons)
- Weeks 10-12: Parachute (3 lessons)
- Week 13: Parachute/Practice (field day) (1 lesson)
- Week 14: Dance/Field Day (1 lesson)

Subject Selection

The subjects selected for this study were all ten second-grade teachers assigned to the three elementary schools serviced by the physical education specialist. All ten subjects agreed to participate in the study. One teacher became ill before the study began and did not return to school during the remainder of the school year. Data was taken on the class and will be reported for all
substitute teachers assigned to the class. Although these subjects were not randomly selected, there is no reason to believe that they are not representative of second-grade teachers in the Columbus City School System. All subjects were female and ranged in service from first-year teacher to nearing retirement.

**Dependent Variable**

The dependent variable is that variable which is intervened upon in order to observe the effect of the independent variable. In this study the independent variable was introduced in an attempt to increase the occurrences of the dependent variable. The dependent variable was the incidence of physical education lessons taught by the classroom teacher. To be considered having taught a physical education lesson, the lesson must not have been less than twenty minutes in length and must have been directed by the classroom teacher. Sending the class to the playground for an extra, non-instructed recess period did not constitute an incidence of the dependent variable; however, an instructed, twenty minutes or longer physical education lesson—using either the provided follow-up or one of the teacher's choosing was considered to be an occurrence of a physical education lesson.
Teacher behavior was intervened upon in an attempt to increase the incidence of physical education lessons by the classroom teacher.

**Independent Variable**

There were three aspects of the independent variable:

1. A scheduled, reserved time for each second-grade teacher to conduct a physical education lesson;

2. A letter from the principal to the teachers emphasizing physical education as an important aspect of education, and the principal's involvement through prompting and praising teachers for conducting physical education lessons;

3. The provision of in-depth physical education follow-up lessons for use by the classroom teachers.

**Observational Instrument**

The observational instrument used in this study was quite simple yet effective.

Since there existed only one behavior to be measured (the teaching of a physical education lesson by the classroom teacher), event recording was used.

A question sheet was attached to the follow-up lessons provided by the physical education specialist. This question sheet was to be returned to the physical education specialist within one week and was used as a method of self-reporting regarding what, if anything, was
conducted as a physical education lesson. The sheet identified whether the teacher taught the provided lesson, an alternative lesson, or no lesson; and if no lesson was taught, the subject was asked to explain why.

Observers

Although the primary method of reporting the occurrence or non-occurrence of a physical education lesson taught by the classroom teacher utilized self-reporting, in-school observers were at times used to check reliability. One faculty member at each school agreed to participate as the in-school observer. Two of these functioned as a home-community-school liaison person and the third was a guidance counselor. All three were able to move about the school and their appearance at the gymnasium for a few minutes should not have resulted in any subject reactivity. Further mention of the in-school observers can be found under Observer Training.

Materials

The subjects were provided a self-reporting sheet, and the observers in each school weekly received a copy of the follow-up lesson plan so that they would be aware of what was to be taught.
Observational Procedure

The subjects were directed to return the self-reporting sheet prior to the next scheduled physical education class to be taught by the physical education specialist. If it was not returned, the physical education specialist asked the subject what was taught. Also, the physical education specialist asked the in-school observer to verify what and who taught physical education lessons.

Observer Training

Since the subjects were asked to use self-reporting and answered a few questions on a provided question sheet, no training of the subjects for reporting purposes was necessary. Some observer training, although minimal, was done with the in-school observers. Each of the three observers was given an instruction sheet informing them that they would receive a copy of the weekly follow-up lessons, that the classroom teacher was permitted to modify the lesson or could teach a physical education lesson of their own choosing. The observer was to record on a calendar what the teacher taught and the date that they taught the lesson. The observer was told to look into the gymnasium for a few minutes and then return to their office and to record the behavior. The only foreseen difficulty
involved checking reliability during baseline when there was no assigned or specifically scheduled time for the classroom teacher to conduct a physical education lesson. This, however, proved not to be a problem because only two of the ten subjects, using self-reporting, reported conducting a physical education lesson. It was assumed that self-reporting of non-conduct of a physical education lesson was an accurate and honest assessment and that there was no reason for the subject to record incorrectly non-compliance.

Reliability

It is essential in ensuring internal validity in single subject research that the data be accurate. In this study, reliability is defined as the degree to which the in-school observers and the subjects agree in reporting the occurrence or the non-occurrence of the defined behavior.

Relative factors in this study to reliable data collection are:

1. Each subject was asked to self-report regarding the conduct or non-conduct of a physical education lesson. The subject was to report what activity was conducted, and if no activity was taught, to explain
why. The investigator made no comment regarding the conduct or non-conduct of the lesson. It was hoped that this would encourage accurate reporting.

The data was derived from recording the conduct of a physical education lesson--either the provided lesson or one of her own choosing.

2. Reliability checks were made across all phases for all subjects. Reliability checks were conducted by the in-school observer. Although the investigator was not an observer, disagreements regarding the occurrence and non-occurrence were resolved by the investigator. For example, on one occasion the subject took her class outside for a physical education lesson. She reported that she had taught a lesson, but the in-school observer indicated that she did not. This conflict was resolved when a student reported to the investigator that their class did a physical education lesson outdoors.

3. It was not possible to rotate observers across the three settings because the observers were
school personnel permanently assigned to each of the schools.

4. Retraining of observers was minimal due to the simplicity of the recording instrument. In fact, this retraining consisted of reminding the in-school observers to look in the gymnasium and to record the activities being conducted; and that during warm weather, the in-school observers should remember that the subject might be conducting a physical education lesson outside and they should check that area if the gymnasium was not in use.

**Reactivity**

Reactivity refers to a change in the behavior of a subject or an observer due to a perceived change or an expected change in the environment.

Several steps were taken to ensure that the subject's environment was not changed appreciably. Although subjects signed consent forms and were aware that the investigator was conducting a study, they did not know the exact nature of the study. They received a letter asking for their cooperation in conducting a study aimed at improving physical education instruction.
From the beginning of the school year (the study was conducted during the second half of the school year), all teachers were given suggested follow-up lessons and self-reporting sheets and, therefore, the use of these were not viewed as a change in the subject's environment.

The arrival of the in-school observer at the gymnasium was not a reason for subject reactivity. The observer looked into the gymnasium for a few minutes and appeared to simply be an interested fellow staff member and not an observer.

During Intervention I, the subjects were assigned for one period per week a reserved time in the gymnasium for them to conduct a physical education lesson. It was explained to the teachers that this was necessary to reduce conflicts regarding gymnasium usage.

During Intervention II, the principal wrote a form letter to all teachers that emphasized physical education and urged them to be certain that they were meeting minimum state standards of education in all subjects, physical education as well as math and reading. He also encouraged the teachers to use their assigned gymnasium time; praised those who did, and prompted those who were not. Since these statements were directed to all teachers in the school, the subjects did not feel that they were being treated differently.
During Intervention III, the investigator provided all teachers in the school a more comprehensive lesson plan. It was explained that some teachers requested more comprehensive lesson plans, thus reducing some teachers' feelings of inadequacy regarding teaching physical education. Since all teachers received these lesson plans, the subjects did perceive themselves as receiving special attention. In order to further reduce the possibility of subject reactivity, the interventions were implemented with all subjects in a school rather than with individual subjects across schools. It was believed that the subjects would recognize that they were receiving different treatment if one, for example, received in-depth lesson plans but another subject did not or if one subject received an assigned, reserved time in the gymnasium while others did not.

The in-school observers were told that the purpose of the study was to determine whether the incidence of physical education lessons taught by classroom teachers could be increased. They were asked to check reliability on the subjects as well as some non-subjects. They were not told when baseline ended, neither were they informed of the implementation of the interventions.

Every effort was made by the investigator to maintain an environment that was as non-reactive as possible.
Stages of the Study

A multiple baseline design (Baer, Wolfe, Risley, 1968) across subjects in three elementary schools was used in this study because the investigator wanted to determine effectiveness of the three aspects of intervention without reversing a desired behavior nor attempting to reverse a behavior which might not easily lend itself to reversal (e.g., asking the principal to recall his letter of emphasis on physical education).

Baseline

The baseline phase was recorded from day one until a scheduled, reserved time was provided for each subject during which they were to conduct a physical education lesson. For subjects one, two, three, four and five at School A, baseline lasted four weeks. Baseline for subjects six, seven, and eight at School B lasted five weeks--from week one through week five. For subjects nine and ten at School C, baseline lasted six weeks (week one through six).

Prior to the baseline phase, subjects signed an informed consent form and were told that the exact nature of the study and the results would be made available to them at the conclusion of the study. The subjects were
assured that they would not be expected to do anything more than what minimum state standards presently required.

**Intervention I**

During Intervention I the investigator arranged a schedule for all subjects in all three schools for the conduct of physical education lessons. In School A, the duration of this intervention was from week five through week eight. In School B, Intervention I lasted from week six through week nine and at School C, from week seven through week ten. It was the intent of the researcher to reduce teacher conflicts regarding the use of the gymnasium.

**Intervention II**

During Intervention II, which lasted three weeks, the principal of each school gave all teachers a letter emphasizing the importance of physical education and encouraged the teachers to be certain that they were complying with all minimum state standards of education. He was also asked to praise those subjects who were conducting physical education lessons and to prompt those who were not to renew their efforts toward compliance with this particular state standard of education.
Figure 1. Sample Multiple Baseline Design
It was the opinion of the investigator that this intervention might be the most effective of the three interventions. It was believed that the school administrator's favorable and enthusiastic attitude regarding physical education would be recognized by the subjects and that they would—with his encouragement, praise and prompts—be more likely to conduct a physical education lesson than if the emphasis came from the investigator—a fellow teacher.

**Intervention III**

Several subjects had requested that they be provided more information regarding the conduct of physical education lessons. In an attempt to satisfy this request, and in order to determine if this was indeed a factor in the conduct or non-conduct of physical education lessons by the subjects, in-depth follow-up lessons were provided.

Intervention III lasted three weeks at School A, two weeks at School B, and one week at School C. Intervention III was shortened due to the termination of the school year.

**Post Checks**

The purpose of using post checks was to determine whether the subjects would continue to conduct physical
education classes after the study was completed. The design of this study did provide for post checks; however, the school year terminated prior to their implementation.

Experimental Design and Analysis of Data

Experimental Design

Experimental analysis was conducted via a multiple baseline design (Baer, Wolfe, Risley, 1968) across ten subjects in three schools.

A multiple baseline may be used across subjects, settings, or behaviors. In the multiple baseline design one intervention is implemented with a subject, setting, or behavior, while all others remain in baseline. The intervention is then applied in a second setting, or upon a second subject or behavior. A functional relationship is demonstrated when there is a change in the dependent variable in the desired direction during the intervention while at the same time other behaviors, subjects or settings which have not been presented with the independent variable remain unchanged or move in a counter therapeutic direction.

The investigator was assigned to three schools which served as the three settings in which the ten subjects' behavior was intervened upon. It was believed that ten
subjects in the three schools would be sufficient for replication.

**Analysis of the Data**

Data are presented in graph form in Chapter IV in a cumulative form for physical education lessons taught, total number of physical education lessons taught during each phase of the study, and in percentage of weekly lessons taught in relation to the total possible physical education lessons per each phase of the interventions. The data will be reported for each subject, each school and for each phase of the intervention.

**Summary**

In this chapter, a brief description of the ten subjects, three principals and three schools was given. The method used in determining subject selection was given and the dependent and independent variables were identified.

Materials, observational procedures, and observer training was discussed and efforts at ensuring reliability, as well as efforts made to prevent subject and observer reactivity, were explained. Finally, the stages of the study, the experimental design, and the method for analysis of the data was given.
CHAPTER IV

ANALYSIS AND DISCUSSION OF THE DATA

This chapter will discuss the results of the study and will show the effects of the interventions on each of the subjects, as well as discuss the reliability of the observations.

Reliability

Reliability was checked at least once during each phase of the study for each subject in the study.

Factors such as observer training, frequency of the behavior to be recorded, and the instrument utilized in recording the behavior can affect the degree to which the data are considered to be reliable. If the frequency of the behavior is high, the percentage of agreements will tend to be high. In this study the reliability was 100 percent for all subjects. Table 1 represents reliability for all subjects.

Discussion of Reliability

Event recording was used to record the singular weekly occurrence on non-occurrence of the behavior of interest--the teaching of a physical education lesson by
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</table>

*Subject mortality--student report and in-school observer agreements (subjects refused to self-report or communicate with investigator).
by the subjects. Since there was only one behavior to be observed, and since--with the exception of baseline--each subject had an assigned time and day during which they could teach a physical education lesson, the possibility of accurate observation was great. The subject self-reported that she taught or did not teach a physical education lesson and these reports were checked with the in-school observer to determine agreement or disagreement. When a disagreement did occur--the subjects reporting conduct of a physical education lesson and the observer reporting non-conduct--the investigator attempted to resolve the disagreement by asking the subject to provide additional information regarding when, where, and what was taught. If this method was not successful in solving the disagreement, the students were asked if they had "another gym class," and if so, what they did and where the lesson took place. Disagreements did occur on three occasions, and on all three occasions the subjects had taken their classes outdoors for physical education and the in-school observer failed to look outside for the class. During these three instances the students informed the investigator that they had gone outside for a physical education class with their teacher.

Subject ten refused to self-report beginning with Intervention II. This subject stated that she considered
the letter from the principal to be an accusation of non-compliance with minimum state standards of education relevant to the teaching of physical education by her. Because subject ten refused to self-report or to communicate with the investigator during Interventions II and III, reliability checks and recording of the occurrence or non-occurrence of the behavior of interest was achieved by asking the in-school observer to observe the subject each week and also through informal discussions with the students in the subject's class regarding what they did during the previous week at school.

Observer training in this study was quite simple. The in-school observer was given a copy of the weekly follow-up plan and a copy of the schedule containing the subject's reserved gymnasium time. During each phase of the study the observers were asked to observe and report to the investigator the activity (if any) conducted by the subject. The self-reporting instrument used by the subjects, also, was very simple. The subject was provided a check list of activities to conduct as a follow-up physical education lesson. The subject was to circle the skills taught, and if a lesson other than the provided follow-up was taught, to describe what was taught. Also, if the subject taught no physical education lesson, the subject was requested to explain why this happened. This sheet
was returned by the subject to the physical education specialist's school mailbox.

Presentation of the Data

At School A, the five subjects taught no physical education lessons during baseline but began teaching lessons during the combined effect of scheduled time, principal input and the provision of in-depth lesson plans. At School A the cumulative lessons taught totaled, during intervention, twenty-five--an increase from zero to twenty-five.

At School B, the three subjects taught a total of one lesson during the five weeks of baseline, but this increased to a total of fifteen--an increase of fourteen lessons.

At School C, the two subjects taught one lesson during the six weeks of baseline and eight more during the intervention.

Figure 2 shows the data for the ten subjects at the three schools with the data graphed cumulatively for lessons taught.

During baseline the ten subjects taught a total of two lessons of a possible forty-seven for an occurrence of 4 percent, i.e., they taught, as a group, physical education lessons only 4 percent of the time (see Table 2). During the combined interventions of scheduled time,
Figure 2. Cumulative Lessons Taught at Schools A, B, and C.
principal input, and in-depth lesson plans, the total possible lessons that could have been taught was ninety-three. Of this total, the subjects taught forty-eight lessons for an occurrence percentage of 52 percent. The increase of 48 percent from 4 percent during baseline to 52 percent during the interventions would seem to indicate that there was a significant increase in the incidence of lessons taught by the subject.

Figure 3 shows the data for the ten subjects during the baseline and three interventions with the data graphed cumulatively. Baseline was followed by Intervention I which consisted of providing a specific reserved time in the gymnasium during which the subjects could teach a thirty-minute physical education lesson. Intervention II consisted of adding the principal's emphasis on physical education, and Intervention III provided the addition of in-depth physical education lesson plans for the subject's use.

During the baseline phase, subject one taught no physical education lessons, taught one during Intervention I, two during Intervention II, and two during Intervention III, for a total of five lessons taught during the fourteen weeks of the study. During the study both subjects two and three taught six physical education lessons, none during baseline, two during Intervention I, two during Intervention II, and two during Intervention III. Subject four taught only one
Figure 3. Cumulative Lessons Taught by Subjects
physical education lesson. This occurred during Intervention I. The fifth subject taught eight lessons; none during baseline, two during Intervention I, three during Intervention II, and three during Intervention III. Subject six taught one lesson during baseline, during Intervention I, two during Intervention II, and one during Intervention III. The seventh subject of the study taught no lessons during baseline, two during Intervention I, two during Intervention II, and one during Intervention III. Subject eight taught four lessons—none during baseline, two during Intervention I, one during Intervention II, and one during Intervention III. Subject nine taught eight lessons during the study. She taught one during baseline, three during Intervention I, three during Intervention II, and one during Intervention III. Subject ten taught only one lesson which occurred during Intervention I.

Discussion of the Data

Subject one taught no physical education lessons during baseline but did teach five lessons during the Interventions. She taught one lesson during Intervention I, and stated that the time slot reserved for her to conduct a physical education lesson conflicted with her morning schedule, particularly her reading groups.

The physical education lesson that she conducted during the sixth week of the study consisted of exercises done in
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<td>48/93 52%</td>
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Figure 4. Cumulative Lessons Taught by Subjects 1 and 2

0 Reliability check
the classroom. During week seven, the subject reported that she did not have enough time to conduct a physical education lesson and that the class was noisy and unruly during week eight and she withheld physical education as punishment for this misbehavior. The first week of Intervention II began with week nine which was a shortened week with school being dismissed for spring vacation. The subject again reported that she did not have sufficient "extra" time to conduct a physical education lesson.

During baseline, the provided follow-up physical education lesson involved ball skills. Throughout Intervention I, and continuing through week nine in Intervention II, the provided follow-up lesson involved the following skills: gymnastics, stunts, and tumbling. The subject did not teach the provided lesson during this time and had, in fact, taught only one physical education lesson--exercises in the classroom.

During the tenth week of the study and continuing through week twelve, the provided follow-up lessons involved the use of the parachute. The subject did teach the provided follow-up lesson during weeks ten and eleven. During week twelve--the first week of Intervention III--the subject was to continue using the parachute follow-up lesson; however, she taught no physical education lesson. During week thirteen the subject was provided two in-depth follow-up lessons--one involving the parachute, the other involved practicing field day activities. Subject one taught neither lesson but rather conducted
a physical education lesson involving the use of a dance record. The record activity involved Mexican folk dances—a personal interest of subject one. Week fourteen was the first week of dance activities taught by the investigator. Again the subject was provided two in-depth follow-up lessons that could be used. The subject could practice field day activities or dance. Subject one did not use the dance follow-up but did take her class outside to practice field day activities.

During the fourteen weeks of the study, subject one taught five physical education lessons, three of which were provided by the investigator and two were devised by the subject. The subject taught no physical education lessons during baseline yet the provided follow-up lessons during this time period were easy to conduct and reasonably safe—ball skills using playground balls. Only one physical education lesson was taught during Intervention I, and this lesson did not involve the provided follow-up lesson. Subject one demonstrated, both by verbal responses and by failure to conduct physical education lessons, a negative attitude regarding the importance of physical education. Subject one viewed physical education as a reward for good classroom behavior and as a means by which students could be calmed down rather than a right as provided by State of Ohio minimum standards of education.

The most dramatic change in subject one's behavior occurred during Intervention II when the school principal gave each teacher a letter emphasizing adherence to state minimum
standards and emphasized physical education in particular (see principal's letter). Also, during Intervention II, the principal was instructed to praise those subjects who taught physical education lessons and to prompt those who did not conduct physical education lessons to conduct them in the future. Subject one taught two physical education lessons (both the provided follow-ups) during the three weeks of Intervention II.

The conduct of physical education lessons by subject one continued to increase during Intervention III--the provision of in-depth follow-up lessons. During the three weeks of Intervention III, the subject taught two physical education lessons--one of which utilized the provided in-depth, follow-up lesson. With the addition of the in-depth, follow-up lessons to the principal's emphasis, subject one's behavior continued to move in the desired direction.

It appears that simply providing a reserved time for subject one to teach physical education was not effective in producing a change in the subject's behavior. However, when the principal emphasized physical education's importance and in-depth lessons plans were provided, the subject did conduct physical education classes more frequently.

During baseline, subject two taught no physical education lessons. She taught two lessons during Intervention I, two during Intervention II, and two during Intervention III. This subject was a substitute teacher and reported to the
investigator that she was attempting to get the class "under control" and that when she felt more secure regarding class control, she would teach physical education. During week seven, and using the provided gymnastics lesson, she taught her first physical education lesson. During week eight, she took her class outside and taught tetherball rules. During the first week of Intervention II, the subject took her class out early for recess, but this was not instructed time and could not be considered a physical education lesson. She taught the provided follow-up lesson during week ten and a lesson of her own choosing (group games) during week eleven. The subject taught no physical education lesson during week twelve--the first week of Intervention III. She reported that it had rained and that she was unable to take her class outside. The subject, however, could have taken her class to the gymnasium but did not. During weeks thirteen and fourteen, subject two taught the provided follow-up.

Because the subject's behavior was moving in the desired direction at the time that Interventions II and III were implemented, no one intervention can be said to be most effective. However, when comparing the combined effect of the three interventions to baseline, it can be said that the three interventions did effect an increase in the incidence of physical education lessons taught by subject two.

During baseline, subject three taught no physical education lessons. During the four weeks of Intervention I subject
three taught two physical education lessons--neither of which were the provided follow-up lessons. The subject said that she "did not have enough time "to teach physical education" during weeks five and six. She did teach lessons during weeks seven and eight. She taught ball skills during week seven and tetherball rules during week eight. These activities were not the provided follow-up lessons--gymnastics. Week nine began Intervention II. This week was a four-day week, and the subject taught no physical education lessons, citing lack of time as her reason for non-conduct. During week ten, the subject taught group games and used the provided follow-up (parachute activities) during week eleven. During Intervention III, the subject taught two physical-education lessons (weeks thirteen and fourteen). Both were the provided follow-up. She taught nothing during week twelve. She said she was "too busy" to teach physical education.

Subject three taught six physical education lessons--three involving the use of the provided follow-up lessons. The subject taught parachute activities and field day skills but taught no gymnastics and expressed concern regarding her ability to teach it. She was particularly concerned about student safety should she attempt to teach gymnastics. Although this concern might explain why she did not use the gymnastics lesson plan, it does not explain the subject's failure to conduct some type of alternative physical education lesson.
Figure 5. Cumulative Lessons Taught by Subjects 3 and 4.
As was the situation with subject two, no single intervention can be said to be most effective in increasing the incidence of lessons taught. However, the combined effect of the three interventions in comparison to the baseline data does indicate that the three did increase the incidence.

Subject four's behavior remained basically unaffected throughout the study. During baseline and the three interventions, she taught one lesson. She taught tetherball skills (not a provided follow-up) during week eight. When the subject was asked why she was unable to conduct physical education lessons, she stated that the reserved time scheduled for her interfered with her reading groups. The subject could have made adjustments in her lesson plans to include physical education or she could have traded gymnasium time with another teacher. She, however, did not do this and taught only one physical education lesson.

Had the principal been more insistent with this subject, the frequency of physical education lessons taught could have increased. It seems, however, that the principal was unwilling to exercise sufficient prompts to produce the desired outcome.

Subject five conducted more physical education lessons than any other subject at School A. She conducted no physical education lessons during baseline, and none during
the first week of Intervention I. She said that she would have taught a physical education lesson during week five—the first week of Intervention I—but a fire drill held during the time reserved for her class to use the gymnasium prevented it. The in-school observer verified this incident. During week six, the subject conducted the provided, gymnastic-related, follow-up lesson. An assembly was held in the gymnasium during week seven's assigned gymnasium time and again she did not teach physical education. During weeks eight, nine, ten, and eleven, she conducted the provided follow-up physical education lesson. She taught ball skills rather than the parachute follow-up lesson during week twelve, and taught the provided follow-up lessons during the thirteenth and fourteenth weeks.

Like subject two and three, the behavior of interest of subject five was moving in the desired direction when Interventions II and III were presented and, therefore, cannot be said to have caused an increase in the behavior of interest. The increase in lessons taught did increase more rapidly during interventions II and III than during Intervention I. The subject was prevented from using the gymnasium during Intervention I at two assigned times due to a fire drill and an assembly; however, she could have conducted a classroom activity or attempted to use the gymnasium at another time. The subject taught seven
Reliability checks

Figure 6  Cumulative Lessons Taught by Subjects 5 and 6
provided follow-up lessons and one lesson of her own. The nature of the physical education activity taught had no effect on what this subject taught. She expressed interest in physical education and followed the units taught by the investigator with a related follow-up lesson. It appears that the provision of a specific time and location was sufficiently effective to induce this subject, who already valued physical education, to conduct a second physical education lesson each week.

Subject six conducted one physical education lesson during the five weeks of baseline. This lesson was the provided follow-up utilizing ball skills. The physical education lesson that she taught occurred during the fourth week of baseline. She taught none during week five and said that "she did not have enough time" to conduct a physical education lesson.

Intervention I began with week six. The subject taught the provided follow-up lesson during weeks six and seven (gymnastics). During week eight the subject reported that she was unable to use the gymnasium because it was being used for Easter play practice. The subject taught no physical education lessons during week nine, gave no reason, but vowed to increase the regularity of lessons taught.
Intervention II began with week ten, and although the subject did not teach the provided follow-up lessons, she did conduct a physical education class. She also taught a physical education lesson during week eleven but was unable to do so during week twelve because the custodian had not cleaned the gymnasium, which also functions as a lunch room. The custodian verified this information.

The subject did not teach a physical education lesson during week thirteen—the first week of Intervention III—but did conduct the provided follow-up during week fourteen.

The subject taught six physical education lessons—one during baseline and five during the nine weeks of the interventions. The subject was unable to use the gymnasium on two occasions due to a fire drill and play practice.

The subject taught two of three possible lessons during Intervention II and the impact of the principal during this intervention served to prompt the subject to renew her efforts to conduct physical education lessons. The subject mentioned to the investigator that the principal had urged her to be more consistent in conducting physical education classes and that she intended to do so.

Of the six physical education lessons taught by the subject, four were the provided follow-up lessons. The
subject taught ball skills, gymnastics, and dance follow-up lessons. She taught no parachute activities but instead she taught another gymnastic lesson, although it was not a provided follow-up at the time that it was taught. The subject expressed no dislike for parachute skills. In fact, most subjects told the investigator that they enjoyed parachute skills and had taught it in previous years. The number of gymnastic follow-up lessons taught would seem to indicate that she did not feel insecure in instructing her class in this somewhat dangerous activity area.

Subject six's behavior increased when Intervention I was implemented. However, it ceased increasing and did not increase again until Intervention II was presented. As in the case of Intervention I, the behavior of interest in Intervention II also stopped increasing and an increase was not recorded until the presentation of Intervention III. Intervention III was of short duration and could, also, have leveled off had it included more weeks. When the three interventions are compared to the baseline data of one lesson taught in six weeks, it is apparent that the package intervention increased the incidence of the lessons taught.

Subject seven taught no physical education lessons during the five weeks of baseline. Also, the subject did
not teach a physical education lesson during the first week of Intervention I. During weeks seven and eight she taught physical education lessons involving exercises. The provided follow-up lessons involved gymnastics. She taught no physical education lesson during week nine and stated that she did not feel comfortable with gymnastics. Intervention II began with week ten. The subject taught ball skills instead of using the provided follow-up lesson involving parachute skills. During week eleven, the subject took her class to the gymnasium at the assigned time but was unable to conduct a physical education lesson because an assembly was being conducted. She returned to her classroom and taught throwing and catching skills with yarn balls. During week twelve, the subject was prevented from using her assigned time in the gymnasium because the custodian did not have the gymnasium cleaned after lunch. She returned to her classroom and taught no physical education lesson. Week thirteen began Intervention III. The subject taught a physical education lesson involving ball skills. The provided follow-up lesson involved parachute or field day skills. During week fourteen the subject was given a follow-up lesson involving dance skills. She taught no physical education lesson that week and offered no reason for her non-compliance.
Subject seven conducted no physical education lessons during the baseline phase of the study, two lessons during the four weeks of Intervention I, two during the three weeks of Intervention II, and one during the two weeks of Intervention III. The subject taught none of the provided follow-up lessons. There appeared to be no reason for her selection of the physical education activities that she presented to her class. During baseline the provided follow-up lessons involved ball skills. She taught no physical education lessons during this phase yet taught ball skills during Intervention I when the provided follow-up involved gymnastics. She expressed to the investigator an interest in dance skills but when she was given a provided follow-up lesson involving dance, she taught no physical education lesson at all.

The subject had not taught a physical education lesson during baseline but did teach two physical education lessons during Intervention I and she taught two lessons during the three weeks of Intervention II. She reported to the investigator that the principal had urged her to be certain that she was personally conducting physical education lessons and that she, like subject six, intended to comply. The subject taught one lesson during Intervention III but it was not the provided follow-up lesson.

Subject seven taught no lessons during the baseline phase, yet taught five lessons during the nine weeks of
Interventions I, II and III. The combined impact of the three interventions, in comparison to a zero baseline, seemed to have resulted in an increase in the incidence of physical education lessons taught. Both subjects six and seven reported to the investigator that the principal had informed them that he wanted them to teach physical education and based on their verbal communication to the investigator, the principal's input seems to have been an important factor in the conduct of physical education lessons by these subjects.

Subject eight taught no physical education lessons during the baseline phase. She took her class to the gymnasium during week two to use the ball skill follow-up lessons; however, she was unable to unlock the storage room (where physical education equipment was stored) and could not teach the ball skill lesson. She returned with her class to the classroom and taught no physical education lesson. During the first two weeks of Intervention I, the subject taught no physical education lessons. She reported that a fire drill prevented her from using her assigned gymnasium time during week six and that she "was not motivated to do anything during week seven." She taught two follow-up lessons during weeks eight and nine. Intervention II began with week ten and the subject reported that she intended to teach a physical education
lesson but "she forgot." She attempted a follow-up lesson during week eleven but was unable to use the gymnasium because the custodian had not completed cleaning it following the lunch period. The custodian verified this report. During weeks twelve and thirteen she taught the provided parachute-related follow-up lesson. Week thirteen was the first week of Intervention III. She was assigned recess duty during her reserved gymnasium time during week fourteen and was unable to gain access to the gymnasium. The impact of the principal was not as great with this subject as it was with subjects six and seven. The subject did not mention that the principal had urged her to conduct physical education lessons. However, during Intervention II, which involved the principal's input, the subject did not object to teaching the provided follow-up lesson. When she taught a physical education lesson she used the lesson provided by the investigator. According to the subject the main obstacle to her consistent conduct of physical education lessons involved her feelings of low morale and a lack of enthusiasm for teaching.

The combined effects of the three interventions in comparison to the absence of lessons taught during baseline would indicate that the provision of a reserved time, principal praise and prompts, and in-depth follow-up lessons contributed to a modest increase in the incidence of lessons taught by the subject.
Figure 7. Cumulative Lessons Taught by Subjects 7 and 8.

Reliability checks
Subject nine taught one physical education lesson during baseline and used the provided follow-up lesson involving ball skills. She refused to teach the gymnastics and related stunts follow-up lessons. She informed the investigator that she had been injured during a gymnastics exercise in a college physical education class; and while she was not opposed to the teaching of gymnastics, she was aware of the injury potential to students and that she felt quite uneasy about personally teaching the skills to her class. Although she said that she would teach parachute activities instead of gymnastics, she taught no physical education lessons during weeks five and six in baseline and week seven in Intervention I (gymnastics unit). During week eight, the subject taught two physical education classes. One involved recently purchased playground climbing apparatus and the other involved the use of parachute activities during the scheduled, reserved gymnasium time. The subject taught no physical education lesson during week nine—the last week of the gymnastics unit and offered no reason for the non-conduct of a lesson. The subject did not teach the provided follow-up lesson during week ten but did take the class outside for additional instructed use of the climbing apparatus. The subject reported that she and another teacher were the only faculty members to instruct the
students in the proper use of the equipment. She also stated that she believed this was important because the students were not using the equipment properly and safely and that the more knowledge the students had about the equipment, the more likely they would be to use it.

Intervention II began with week eleven. The provided follow-up lesson at this time involved the use of the parachute. The subject, however, took the class outdoors for group games. Due to rainy weather, she was unable to conduct an outdoor physical education lesson during week twelve as she had intended. Instead, she taught the provided follow-up lesson in the gymnasium using the parachute. During week thirteen the subject taught kickball instead of the provided follow-up lesson. The school year was concluding and week fourteen was the last week of elementary physical education in the school system. This week was the only week of Intervention III at School C. The subject taught kickball again and did not teach the in-depth follow-up, physical education lesson that was provided by the investigator. The subject indicated that she taught kickball because she wanted the class to be able to play a game at recess that required a small amount of equipment--one ball. She also stated that she wanted the class to gain social skills through this interaction in group games.
This subject taught nine physical education lessons which was the most taught by any subject in the study. She expressed concern regarding teaching gymnastics and, in fact, taught no gymnastics lessons. She taught parachute activities during the gymnastics unit and during the parachute unit taught outdoor activities. She was not opposed to conducting physical education lessons but did not seem to see the necessity of conducting a follow-up lesson related to the lesson taught by the physical education specialist (the investigator). The subject's behavior remained virtually unchanged during baseline but did move in the desired direction during Intervention I with the behavior of interest continuing to increase throughout Intervention II and Intervention III. Since the behavior of interest was moving in the desired direction at the end of Intervention I, the presentation of the principal's emphasis in physical education in Intervention II cannot be said to have caused the behavior to continue to increase. Likewise, when Intervention III was implemented, the behavior of interest was still moving in the desired direction. Intervention III, in the case of subject nine, cannot be said to have affected the behavior of interest for three reasons. First, as stated, the behavior of interest was moving in the desired direction at the time of intervention. Second, Intervention III lasted only one
week—to short a time period from which to draw conclusions; and, third, Intervention III involved presenting the subject with a more comprehensive lesson plan with the intended purpose being the conduct of the follow-up lesson by the subjects, especially those who felt inadequate in the area of physical education instruction. This subject chose not to use the provided follow-up lesson, but rather, taught another lesson. For subject nine, the provision of a specific, reserved time in the gymnasium during which she could teach physical education served to effect a change in the desired direction in the behavior of interest. It is believed by the investigator that the addition of the principal's emphasis on physical education served to accentuate the subject's behavior. From the beginning of Intervention II, the subject taught a physical education lesson each week.

Subject ten conducted no physical education lessons during Baseline, one during Intervention I, none during Intervention II, and none during Intervention III.

The subject was absent from school the entire week of week five in Baseline. She returned to school during week six and explained to the investigator that she "hated to teach physical education and that she never taught it. During week eight the subject taught her only physical education lesson of the study. It included classroom
Figure 8. Cumulative Lessons Taught by Subjects 9 and 10.
games involving balance and pursuit skills. At the beginning of Intervention II, subject ten, as well as all other subjects, received the letter of emphasis regarding physical education from the school principal. Subject ten became angry and viewed the letter as an accusation of non-compliance with minimum standards of education. From the beginning of Intervention II, the subject refused all participation in the study and did not communicate with the investigator. The investigator was able to continue taking data on the subject by asking the observer to observe each reserved gymnasium time assigned to the subject and to verify these findings through discussions with the students in the subject's class.

None of the interventions effected a change in the subject's behavior. It appears that these interventions were not powerful enough to cause the subject to conduct a physical education lesson. It is believed that, had the principal played a more active role in prompting and praising the subject to conduct physical education lessons, the behavior of interest could have moved in the desired direction.

It is important that a few words be said regarding the use of the multiple baseline design in this study. This study employed a two-tiered multiple baseline. The successive interventions can be interpreted only cautiously.
since there is no return to baseline after each intervention. This failure to return to baseline was necessary due to the nature of the interventions used. Intervention I consisted of scheduling a specific time during which the classroom teacher could conduct a physical education lesson in the gymnasium. The teacher would have arranged her lesson plans to include this time slot and to have removed it in a return to baseline would have resulted in considerable objections from staff members as well as disrupted the planning and teaching of other subject matter.

It was not likely that the principal would tell the subject to disregard his letter of emphasis regarding their teaching of physical education. Even though the principal might cease to praise and prompt teachers to conduct physical education classes during a return to baseline following Intervention II (principal's input), it is likely that the subject would continue to remember the importance attached to the principal's stated feelings regarding physical education and that the impact of the letter, and previous praise and prompts would not be easily reversed. It is, then, for these reasons that a return to baseline was not used; and although inferences of causal relations may be difficult regarding the impact of each intervention on the teaching of physical education, it is evident that a marked increase in the incidence of physical
education can be attributed to the combined influence of the three interventions (4 percent during baseline and 52 percent during the three interventions).

Intervention I--the provision of a specific time each week during which the subjects could have sole use of the gymnasium--resulted in an increase in the incidence of physical education lessons taught.

The addition of the principal's input was expected to be a forceful intervention, but since the behavior of six of the subjects was moving in the desired direction at the time that Intervention II was presented, it cannot be said that this intervention caused the behavior of interest to continue to increase. During Intervention II, the subjects taught one less lesson than during Intervention I (17 vs. 18); however, this was accomplished in fewer possible lessons (30 vs. 40). The percentage of lessons taught in Intervention II was 57 percent compared to 45 percent during Intervention I. When the emphasis of the principal regarding the importance of physical education was added to the already existing scheduled gymnasium time, the incidence of physical education lessons taught increased. Although there was an increase in the frequency of lessons taught during Intervention II, these subjects were unaffected. In fact, the percentage of lessons taught by these subjects was lower than during Intervention I.
As stated previously, caution must be exercised in making inferences of causal relations without return to baseline. However, when comparing the baseline data to the interventions of schedule time, principal input, and in-depth lessons, it is apparent that the incidence of physical education lessons taught by the subjects markedly increased.

One aspect of this study that was not adequately addressed involved follow-up data. This study terminated at the end of the school year, and the researcher was assigned to a high school physical education position and was no longer in contact with the subjects. One subject retired, one subject was not rehired for the school year (subject two was a substitute teacher), and three were reassigned to other schools. Due to these events, follow-up data was not compiled. This should definitely be attended to when replication of this study is considered.

**Principals**

The impact of the school principal was to be an important aspect of the study. It was expected that his role in the study, that is, his attitudes regarding the value of physical education, would be a powerful intervention in effecting an increase in the number of physical education lessons taught by the subjects. It was believed that if the principal conveyed his value of physical
education to the subject and required them to teach physical education, then the intervention would be powerful.

School A's principal expressed great enthusiasm and support for this study. He encouraged the teachers to conduct physical education lessons and was the author of the letter given to all subjects emphasizing physical education. He issued periodic reminders to the subjects in general regarding adherence to minimum standards of education.

School B's principal, in addition to giving the teachers the letter of emphasis on physical education, frequently prompted each subject to conduct physical education lessons.

School C's principal, although enthusiastically endorsing the study, only issued the letter of emphasis regarding physical education but did not praise and prompt subjects to conduct physical education lessons. Unfortunately, no data was collected regarding the frequency of principal praising and prompting. It is quite possible that the principals at the three schools involved in this study varied considerably in their use of praise and prompts. It is also possible that each principal varied the frequency of use of praise and prompts within schools based on time of day that the subjects were scheduled to
use the gymnasium and what responsibilities the principal had at that time. These possibilities between school and within school variations of principal involvement may have had an effect on the occurrence or non-occurrence of the lessons being taught during Intervention II. It was believed by the investigator that the emphasis of the principal regarding the importance of physical education when added to the already existing reserved time for the conduct of physical education lessons would serve to increase the incidence of lessons taught. It is believed by the investigator that the principals were not as active in their participation in the study as they had originally indicated they would be.

School A

At School A no physical education lessons were taught by the five subjects (subjects 1, 2, 3, 4, and 5) during the Baseline phase, but twenty-six lessons were taught during the three interventions. The mean number of lessons taught by each subject at School A during the study was 5.2 lessons. The median was six. Subject four taught only one physical education lesson and lowered the mean. Without subject four the mean was 6.25 lessons taught.

School B

At School B, one physical education lesson was taught during Baseline and fourteen lessons taught during the
three interventions by the three subjects (subjects 6, 7 and 8). The mean number of lessons taught during the study at this school was five. The median was also five.

School C

There were only two subjects at School C. They taught one lesson during Baseline at this school. Subject nine conducted more physical education lessons than any other subject in the study (9) while subject ten taught only one lesson. The mean for this school was five lessons taught.

Social Validity

Some mention of the social validity of this study is appropriate. First, are the goals of the study really what society desires? Second grade level students are entitled by state law to two thirty minute physical education classes per week. It was the purpose of this study to ensure that these students' rights were accommodated.

A second consideration involves the procedures used to attain the desired goals, i.e., do the ends justify the means and do the consumers consider the treatment to be acceptable? In this study, the procedures involved providing a specific time in the gymnasium that was reserved for the subjects' and their classes' use. The subjects enjoyed this and it reduced conflicts regarding
gymnasium use. The second procedure implemented in this study included a letter of emphasis from the principal and the use of praise and prompts by the principal to increase the incidence of physical education lessons taught. Three subjects mentioned to the investigator that their principal had prompted them to teach physical education. They expressed no negative feelings about this; and in fact, vowed to "do a better job" in teaching physical education. The third procedure used in this study involved the provision of more comprehensive in-depth lesson plans for the subjects' use. Two subjects expressed appreciation to the investigator for these lessons. All three interventions were mild and naturally occur in schools every day. With the exception of subject ten's objection to the principal's letter of emphasis, no subject reacted negatively to any of the procedures.

The third consideration in discussing social validity involves effects. Are consumers satisfied? The incidence of physical education lessons taught by the subjects increased during the interventions yet only one negative reaction from the subjects was emitted. Follow-up statements from the subjects indicated that they were satisfied with the results; and in fact, would like to have had better results.
Subjects four and nine were unaffected by all three interventions. For these subjects, more forceful contingencies were needed.

The percentage of lessons taught during Intervention III was equal to that of Intervention II. It was believed that the addition of in-depth lesson plans for subject use (a mild intervention) when added to the continued emphasis of the principal and scheduled gymnasium time would result in a percentage of lessons taught that would be greater than that of Intervention II. This did not occur. At School B (three subjects) Intervention III lasted two weeks and at School C (two subjects) only one week. It is possible that the frequency might have improved had the intervention been of longer duration. A further possible explanation might be that the principals of the three schools were less involved in praising and prompting the subjects during this time. However, since there is no data on the principal's involvement, this is only guesswork. Also, since this intervention occurred near the end of the school year, the subjects may have been involved with final school records and other year-end preparation and failed to conduct classes in physical education. Again, the investigator has no data to support this statement which is only supposition.
Summary of Results

During baseline two physical education lessons were taught by the subjects in this study. However, after implementation of the interventions, the frequency of lessons taught by the classroom teachers increased to 52 percent. While this frequency is lower than would be desired in most school settings, it was a considerable improvement over baseline.

Teacher Statements

After the study was completed, each subject was given an information sheet which informed the subjects regarding the nature of the study and were asked to return the completed sheet by U.S. mail (a self-addressed stamped envelope was provided) to the investigator. The subjects were asked to respond to two questions:

1. What do you see as the major reason why teachers in general and yourself in particular encountered difficulty in conducting physical education lessons, and how might this be corrected in the future?
2. What rewards do you feel would be effective in getting yourself and other classroom teachers to more consistently conduct physical education lessons?
Subject 1

The subject failed to respond.

Subject 2

Question 1: "My scheduled gym time was Thursdays at 9:30 A.M. I did not wish to take my children to gym so early. I preferred to have the follow-up outdoors later. Also, I never really understood your follow-up lessons that well to feel confident in performing them. I suggest the specific behaviors of the children be briefly outlined, also."

Question 2: "There shouldn't need to be any rewards given."

Subject 3

Question 1: "My second gym period was scheduled during my reading group time. You know the ol' saying, What's more important--reading or gym? I have mixed feelings--I feel physical education is very important but so again is reading.

Question 2: "Treat teachers to an ice cream sundae."

P.S. "You do a fantastic job with the kids. Better than I can. Maybe that's why I sometimes 'didn't have time' to teach p.e."
Subject 4

Question 1: "Due to lunch in the multipurpose room and a large school, all classes cannot be given enough time. Principal says we can only take them outside at the time scheduled. This might be changed. Glass on the playground due to bottles--this creates a hazard. A.M.--we have cross-reading and anything in the morning disrupts several schedules."

Question 2: "Better physical fitness--children love gym. Money should be available for full-time art, phys. ed., and music. Many of us feel we are not qualified to put on a first-rate program in these areas. Also, lack of time makes it hard to do as much as you would like. Sorry for this delay--I've just come up for air."

Subject 5

Question 1: "The difficulty lies in priorities. Teaching reading and math and all the other required subjects or an extra gym class. In our neighborhood very little of the academics are stressed after school hours. I feel it is important that we work extra hard on it during the time they are here."
Question 2: "I don't feel anyone expects an award or wants one for conducting a gym class. The reasons why it isn't done are stated above."

Subject 6

Question 1: "Any equipment needed could be listed first at top of plan with where to find it so it isn't time-consuming to look for it.

Question 2: "I enjoy teaching p.e. but would like more equipment and record activities that we could use. They should be readily available."

Subject 7

Question 1: "Our gym assignment covered afternoon recess so that meant no break every Monday. When you have thirty minutes for gym--to set up what takes the least amount of time. Even then you end up with 20 minutes gym time by the time you get out and put away the equipment."

Question 2: "I feel that most teachers prefer to choose what they do, and leave the more difficult areas of gym--movement, mats, dance, etc., to the gyn teacher. We can do the games, jumping rope, ball handling."

Subject 8

Question 1: "1. Gym not available"
a. being cleaned
b. other programs
2. Equipment either not there or locked up.
3. Assigned to playground duty at my gym time.
4. Pressure to complete other 'chores.'
5. Student cooperation"

Question 2: Arrange time allocation requirements realistically. Have a kind of field day or some other event to share with parents and/or other classes at some time.

Subject 9

This subject failed to reply.

Subject 10

This subject failed to reply.

After receiving the letters from the subjects regarding problems encountered that prevented, or at least, made difficult the subjects teaching physical education lessons, and after recording reasons given by the subjects during the study for not teaching physical education; the investigator was able to compile a list of reasons for not teaching physical education.
The most frequently given reason was that they were "too busy" or that "there was not enough time." Columbus Public Schools' weekly time allotment for elementary schools provides a weekly allocation of 1,650 minutes. With a six and one half hour school day the subjects had 1,950 minutes per week in which to meet the minimum standards of education (1,650 minutes). This allows an extra 300 minutes per week or one extra hour per day. The classroom teacher could, in fact, have taught an extra thirty minute physical education class every day and still had an extra thirty minutes remaining.

At times the classroom teacher was prevented from teaching physical education lessons by events over which she had no control. Events such as Christmas play practice or Election day voting being conducted in the gymnasium prevented use by the subject. Failure of the custodian to clean the gymnasium after lunch and conflicts with other school schedules such as reading groups, field trips, recess duty, and fire and tornado drills at times prevented the subjects from teaching physical education lessons.

The condition and availability of the indoor and outdoor facilities, also, affected the teachers decision to conduct physical education lessons. At School A the playground often had broken glass on the blacktop surface
and teachers were reluctant to take their classes outside. At School B, the equipment was locked in a storage area and teachers were at times unable to unlock the storage room. School C was the smallest of the three schools and had the largest outdoor area. The subjects at this school had more opportunities to use the indoor and outdoor facilities simply because there were fewer other classes with which to have scheduling conflicts.

The subjects in this study listed several reasons for not teaching physical education; some valid, most not. The subjects could, in most instances, have effectively adjusted to both the real and imagined impediments to their teaching of physical education. They do this regularly in their other classroom activities.

**Results and Related Literature**

In the review of the related literature Lightfoot (1978), Hertz (1978), McGuire (1979), and Denno (1977) identified problems many faced by teachers. This study found similar problems. Subjects stated that they were too busy with "the basics" not motivated, students were uncooperative, tired, etc.

Previous studies by Delquadri and Guild (1974); O'Leary and O'Leary (1977); and O'Leary, Becker, Evans, and Sandargas (1969) found that rules alone without contingencies have little effect on subject behavior.
This was consistent with the data obtained during baseline in this study. Teachers knew that state standards required them to teach a physical education lesson but they did not. There were no contingencies in effect to ensure that the subjects followed prescribed rules regarding teaching physical education.

Previous studies indicated that praise and feedback were often effective in changing subject behavior. Since accurate assessment of the principals' use of praise was not done, it is not possible to compare the results of this study to those findings.

Studies of instructionally effective schools indicated that the principal possessed strong leadership characteristics, had high expectations for student and teacher performance, was highly task oriented, was directive, had clear goals, worked closely with specialists, and was assertive. One of the principals in this study possessed several of these characteristics. The other two, however, did not demonstrate that they possessed them. The results of this study do not indicate that these three principals played an important role in effecting a change in the subjects' behavior. Future research should be aimed at gathering more complete data on the principals' potential role as a change agent.
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<th>Frequency</th>
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<td>Not enough time/Too busy</td>
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<td>Gym not cleaned after lunch</td>
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<td>Fire drill</td>
<td>3</td>
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<td>Cross-group reading</td>
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<td>Did not like P.E.</td>
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<td>Assembly</td>
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<td>Rain</td>
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<td>2</td>
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<tr>
<td>Forgot to do</td>
<td>2</td>
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<tr>
<td>Teacher absent from school</td>
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<td>Teacher not motivated</td>
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CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter provides a summary of the study. Conclusions are drawn from the results of the study and recommendations for additional investigations are also made.

Review of the Study

The primary purpose of this study was to determine if a package intervention would produce a desired change in the behavior of interest, that is, the conduct of physical education lessons taught by the second-grade teachers who participated as subjects. The package intervention consisted of scheduling a specific time during which the classroom teacher could conduct a physical education lessons, the use of praising and prompting by the principal to encourage teachers to conduct physical education lessons, and the provision of in-depth lesson plans by the investigator.

The investigator wanted to know if the teachers at the three schools to which he was assigned as an elementary
school physical education specialist were conducting physical education lessons and, if so, what were they teaching and, if not, why were they not teaching physical education lessons. The baseline phase of this study provided this information. Physical education lessons were not being taught at the three schools by the classroom teachers. In fact, only two physical education lessons were taught during Baseline by the ten subjects (out of 47 opportunities). The investigator also wanted to know what prevented the classroom teachers from conducting a physical education lesson. The subjects were given a reply sheet on which they were to report what physical education activities, if any, were conducted and to explain why this behavior occurred or did not occur. The subjects often verbally elaborated on these reasons when they met the investigator on his weekly visit to their school. The three main reasons given were: unavailability of the gymnasium, lack of time in which to teach all required subject material, and a feeling of inadequacy regarding teaching physical education. It was with this concern in mind that the investigator began a package intervention to address this problem.

The investigator first provided the subjects a scheduled time during which they could conduct physical education lessons. Second, the subjects were encouraged to use
this time, were praised by the principal when they taught physical education and were prompted by him when they failed to conduct a physical education lesson. Finally, the subjects were given in-depth physical education lesson plans to use in the course of their teaching.

Rather than presenting all three aspects of the intervention at the same time, the investigator elected to present the subjects with each of the three phases separately. It was hoped that this would provide information regarding the impact of each phase of the intervention as well as the impact of the combined effects of scheduling, principal emphasis, and in-depth lesson plans.

During Intervention I (a scheduled, reserved time during which the subjects could teach physical education) all subjects achieved an increase in the number of physical education lessons taught. For six of the ten subjects, the behavior of interest was increasing when Intervention II was presented. Four subjects' behaviors were leveling off. Ideally, interventions should be implemented when behaviors have leveled off or are moving counter-therapeutically. However, in order to complete the study before termination of the school year, and in order to avoid induction effects, all subjects in each school were intervened upon at the same time. Therefore some subjects were presented with
Intervention II while the behavior of interest was moving in the desired direction. Although it cannot be said that Intervention II produced an increase in the number of lessons taught by those subjects whose behavior was still increasing at the time of the implementation of this phase, six of the subjects did demonstrate an increase in the percentage of lessons taught (lessons taught/total possible) during Intervention II.

Intervention III was implemented when six of the subjects' behaviors were increasing in the desired direction. The implementation of Intervention III, therefore, cannot be said to have caused the behaviors of these six subjects to increase. Two subjects' behaviors had leveled off and then increased during this intervention. They did use the provided follow-up, in-depth lesson. Two subjects remained unaffected as they had throughout the study.

During Baseline only two of the forty-seven possible lessons were taught by the ten subjects (4%). During Intervention I, eighteen of forty possible lessons (45%) were taught. During Intervention II, seventeen of thirty (57%) lessons were taught and thirteen of twenty-three possible lessons were taught (57%) during Intervention III. During these three phases of the study, the total
percentage of lessons taught compared to the total possible was 52 percent. While this percentage is important, it does not constitute valid social significance, i.e., it is still too low.

**Conclusions**

The investigator wanted to determine if the conduct of physical education lessons taught by second-grade level classroom teachers could be increased. Baseline data indicated that virtually no physical education lessons were being taught by the subjects. Although it would have been most desirable to have the subjects teach a lesson that was relevant to that being taught by the physical education specialist (the investigator), the baseline data indicated that the subjects were not taking their classes to the gymnasium, and the investigator's most pressing problem was to first get the subjects to take their classes to the gymnasium and to conduct a physical education lesson. This teaching of a physical education lesson became the dependent variable. The use of a package intervention was utilized to effect an increase in the number of physical education lessons taught by the ten subjects. Due to the implementation of the interventions while behaviors were increasing in the desired direction,
it cannot be said that any one intervention was more powerful than another. However, the combined effect of the three interventions did result in an increase in the incidence of physical education lessons being taught by the subjects. These interventions were mild and natural yet effective with eight of the subjects. These interventions were events or actions that would normally occur within an elementary school environment. A gymnasium-use schedule would most probably be developed. Principals do praise and prompt teachers and they do emphasize activities that they feel are important and, finally, materials such as lessons for teacher use are often made available. It appears that the interventions had a cumulative effect. Intervention I produced the most dramatic effect. When the subjects were scheduled a specific time in the gymnasium during which they could conduct physical education classes, the subjects taught eighteen physical education lessons. When Intervention II was added to Intervention I, the incidence of physical education lessons taught continued to increase. Intervention III was perceived by the investigator to be mild, and when it was added to the effects of scheduling and principal input, the behavior of interest remained at 57 percent. No conclusions regarding Intervention III's input on subjects nine and ten can be drawn. For these subjects the intervention was in effect for only one week. However, twelve of the thirteen lessons
taught during Intervention III (which involved providing the subject with in-depth and more comprehensive lesson plans) did include the use of the provided follow-up lessons. It therefore seems that the provision of comprehensive lessons for use by classroom teachers in the conduct of physical education lessons did effect a change in the subjects' behaviors. The subjects did, more frequently, teach the provided follow-up lessons during Intervention III than they did during the other interventions.

It is the conclusion of the investigator that a combination of mild interventions can increase the incidence of physical education lessons, and that when teachers have a specific time available for the conduct of physical education lessons, and when the teacher is aware that the principal feels that physical education is important, the teachers will more frequently teach physical education. Furthermore, when teachers are provided in-depth lesson plans, they will teach them if they have a specific time during which they can be taught and if they perceive the principal's attitude to emphasize physical education.

**Subject One Summary**

Subject one taught no physical education lessons during baseline and was relatively unaffected by Intervention
I, teaching only one physical education lesson during this time. Intervention II was most effective with this subject. She responded to the principal's praise and prompts with two physical education lessons during the three weeks of this phase. Her behavior was increasing at the implementation of Intervention III and, therefore, this third intervention cannot be said to have caused the behavior of interest to continue to increase. For Subject One, Intervention II (principal input) was most effective.

Subject Two

Subject Two taught no lessons during Baseline but did begin teaching physical education lessons during Intervention I. This behavior was increasing at the time of the presentation of Intervention III and due to this, Intervention II cannot be said to have effected a change in the subject's behavior which continued to increase and her behavior continued to increase in Intervention III. For this subject the provision of a reversed time in the gymnasium seemed sufficient to increase the subject's conduct of physical education lessons.
Subject Three

During Baseline the subject taught no physical education lessons. During Intervention I she taught physical education lessons and this behavior was increasing when Intervention II was presented. Due to the behavior of interest moving in the desired direction at the point of intervention, Intervention II cannot be said to have effected a change in the subject's behavior. This behavior continued to increase throughout Intervention II and Intervention III. For Subject Three the most effective aspect of the interventions was the scheduling of reserved time.

Subject Four

Subject Four taught no physical education lesson during Baseline and only one lesson during the remainder of the study. No intervention proved effective in increasing the number of lessons taught by this subject. Possibly, had the principal been more emphatic with this subject during Intervention II, an increase might have occurred. However, no principal at the three schools was willing to become too forceful in this regard.
Subject Five

Subject five taught no physical education lessons during Baseline. During Intervention I the subject's behavior was moving in the desired direction when Intervention II was presented, and this continued throughout Intervention II and Intervention III. Since the behavior of interest was increasing when Interventions II and III were presented, it cannot be said that they effected a change in the subject's conduct of physical education lessons. For this subject Intervention I was most effective in producing a change in the behavior of interests.

Subject Six

Subject Six taught one physical education lesson during Baseline and the behavior of interest had leveled off when the subject was presented with the first intervention. The subject taught two lessons during Intervention I, but the behavior leveled off again and did not increase until presented with Intervention II. The behavior leveled off once more and increased again during Intervention III. For this subject all three interventions were effective in increasing the number of physical education lessons taught. When presented with each
intervention the subject's behavior first increased but leveled off and did not move in a therapeutic direction until presented with a new intervention. During Intervention III the subject's behavior was still increasing when the study concluded. It is possible that the subject's behavior might have leveled off during this phase of the study, but the duration of this phase of the study was not of sufficient length to determine this.

Subject Seven

Subject Seven taught no physical education lessons during Baseline but taught two lessons during Intervention I. The subject's behavior leveled off but increased again when Intervention II was presented. The subject's behavior leveled off during Intervention II, but increased when Intervention III was presented. Like Subject Six, all three interventions were effective in increasing the incidence of physical education lessons taught by this subject.

Subject Eight

Subject Eight taught no physical education lessons during Baseline. During Intervention I the subject taught two lessons, and the behavior of interest was increasing when Intervention II was presented. Since the subject's
behavior was increasing when Intervention II was presented, it cannot be said that Intervention II produced an increase in the conduct of physical education lessons taught. However, the subject did report that the school principal had spoken to her regarding teaching physical education lessons. The subject indicated that although the principal had emphasized physical education, she was "not self-motivated" to do so. Her behavior was increasing at the end of Intervention II and, therefore, it cannot be said that Intervention III produced an increase in the incidence of physical lessons taught. For this subject Intervention I was most effective in producing an increase in the behavior of interest.

Subject Nine

Subject Nine taught one lesson during Baseline. When presented with the first intervention, her behavior quickly increased and was still increasing when Intervention II was presented. Since her behavior was increasing when Intervention II was presented, this intervention cannot be said to have produced an increase in this subject's behavior. The subject's behavior was still increasing when Intervention III was presented. Due to this continuing increase, plus the fact that Intervention
III at this school lasted only one week prior to the termination of the school year, Intervention III cannot be said to have affected the subject's behavior. For Subject Nine, Intervention I was most effective in increasing the behavior of interest.

Subject Ten

Subject Ten taught no lessons during Baseline and only one lesson during the three interventions. For this subject, no intervention proved effective in increasing the number of physical education lessons taught. Had the principal of School C been more emphatic in expressing his concern for physical education as an important aspect of the total education of the students, Subject Ten might have conducted physical education lessons, but he did not and she did not teach physical education. She told the physical education specialist that she did not like physical education and did not teach it. When the specialist informed the subject that it was required by state law and that the students were legally entitled to it, she stated that she still was not going to teach it.

Summary of Conclusions Regarding the Subjects

1. A package presentation of three mild interventions effected an increase in the inci-
1. Evidence of physical education lessons taught by eight of the subjects.

2. Providing subjects a specific time during which they could use the gymnasium increased the number of physical education lessons taught by eight subjects.

3. For two subjects, the package intervention was not effective in increasing the incidence of physical education lessons taught.

4. When provided in-depth lesson plans, the subjects were more likely to use them than one of their own choosing.

5. Some subjects' decision to teach the follow-up lesson or any lesson was affected by the nature of the activity being taught by the physical education specialist.

6. When the scheduled, reserved time for physical education follow-ups conflicted with reading groups, the classroom teacher taught reading and failed to teach physical education. They viewed this as a matter of priorities.
Recommendations

Future attempts to increase the incidence of physical education lessons taught by the elementary classroom teacher should provide for a more forceful and dynamic role to be played by the school principal. Although all three principals in this study promised support and cooperation, their actual participation was not as involved and their emphasis not as emphatic as the investigator had desired.

It is recommended that in future studies data be collected on the extent of principal involvement, i.e., the frequency of praise and prompts used by the principal. In this study this was not done and data is, therefore, not available to assess the role of that the three administrators played in the study.

More attention should be given to teacher scheduling concerns when assigning gymnasium reserved time. This would reduce the problems involving activities viewed by the classroom teacher as being of paramount importance, such as reading groups conflicting with physical education lessons.

This study involved second-grade urban teachers. It is recommended that future studies duplicate this study as well as use other grade-level teachers and be conducted in suburban and rural settings as well.
The subjects in this study often felt burdened by their teaching load and at times suffered from low morale. When duplicating this study, attention must be given to boosting subject morale and presenting the study in such a manner as not to be viewed as an additional teacher burden. It is recommended that the study be conducted at one school only as well as across several schools.

In this study subjects were at times intervened upon when their behaviors were moving in a desired direction. This was done to prevent subject reactivity and to ensure the completion of the study prior to the conclusion of the school year. It is recommended that future studies be conducted at the beginning of the school year which would allow for a longer study with opportunity for longer phases of the study and with no concern for conclusion of the school year prior to completion of the study. In order to take into consideration the increasing subject behavior, the intervention could be continued for that subject until the behavior leveled off while presenting another phase to other subjects whose behavior was not increasing.

Instead of presenting the three interventions separately, all three could be presented at the same time to all subjects in each school with the multiple baseline being conducted across the three school settings. This
combination of all three could be more powerful than each presented separately. It would, of course, present little information regarding the impact of each phase.

An additional possible option could include a daily fitness program instead of a weekly physical education lesson. This would be easy for the teacher to conduct and provide more flexibility in terms of facilities.

Eight of the ten subjects did increase their teaching of physical education lessons. It is not known if this behavior change was a permanent one or not as the school year concluded without an opportunity for immediate and long-range post checks.

The study did demonstrate the effectiveness of the use of mild interventions to increase an important desired teacher behavior that was previously not occurring.
APPENDIX A

LETTER TO TEACHERS ENCOURAGING TEACHER PARTICIPATION
FROM: JIM SCHWARZ
TO: STAFF

Now that we are well into the third month of the school year, I would like to take this opportunity to express thanks to you all for your cooperation and to suggest some ways that we might improve the P.E. at your school. Any suggestions or concerns that you might have, I would very much like to hear.

Again, thanks for your cooperation.

Problem areas:

Many parents are still sending students to school on gym-day in inappropriate attire, i.e., long and/or tight dresses, non-gym-type shoes (clogs, leather-soled, boots, platforms, etc.). Perhaps a reminder sent home to the parents could help prevent an injury.

Name tags continue to be a nagging problem. Without name tags it becomes extremely difficult for me to learn your students' names and to get the attention of a student or students who are off task. I see about 900 students each week and will probably not learn everyone's name, but name tags do help.

Although the E.S.P.-P.E. people have felt that the classroom teacher should remain with their class in order to more adequate facilitate the implementation of a follow-up lesson, it has not been my policy to require this and I see no reason for your presence. I realize that you have a very busy and often hectic day and need some time to yourself. However, there MAY be times when I need your cooperation in the gym due to the nature of the activity or a discipline problem. This will be a rare occasion but may happen.

Again thank you for your exemplary cooperation.
APPENDIX B

LETTER TO TEACHERS REGARDING STUDY
I will be conducting a study regarding gymnasium usage. Your participation is appreciated and you will be fully informed regarding the results of this study.

Thank you,

Jim Schwarz
You will be observing second-grade teachers to determine if they are conducting a second physical education lesson. I will provide you a copy of the provided follow-up lesson plan and a calendar on which to record the data. The teachers are not to know that you are collecting data. You will go to the gymnasium, look in, return to your office and record whether a lesson was being conducted. During warm weather it may be necessary to check the playground for the physical education class.

The teachers that you will observe and the day and times assigned for physical education are:

<table>
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<th>Teacher</th>
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APPENDIX D

PRINCIPAL'S LETTER TO TEACHERS
Please do your best to help us meet an important minimum standard set for all schools by the State of Ohio's Department of Education. Each week, all 2nd graders should be involved in two (2) thirty-minute, supervised physical education classes. Knowing full well that it is difficult to meet each minimum standard, I ask that each 2nd grade teacher redouble her efforts to find a second 30-minute period each week for a supervised, purposeful physical education activity. There are time blocks yet available that could be used for this worthy purpose each week. This activity could be conducted in our gym, or outside, weather permitting. Please comply.
APPENDIX E

CONSENT FORM
PROTOCOL No. _________

--THE OHIO STATE UNIVERSITY--

CONSENT FOR PARTICIPATION IN
SOCIAL AND BEHAVIORAL RESEARCH

I consent to participating in (or my child's participation in) a
study entitled ___________________________________________
_________________________________________________________

________________________________________________________

(Investigator/Project Director or his/her authorized representa.)

has

explained the purpose of the study and procedures to be followed.
Possible benefits of the study have been described as have alternata-
tive procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional
information regarding the study and that any questions I have raised
have been answered to my full satisfaction. Further, I understand
that I am (my child is) free to withdraw consent at any time and to
discontinue participation in the study without prejudice to me (my
child). The information obtained from me (my child) will remain conﬁdential and anonymous unless I speciﬁcally agree otherwise.

Finally, I acknowledge that I have read and fully understand the
consent form. I have signed it freely and voluntarily and understand
a copy is available upon request.

Date: ____________________ Signed: _________________________

(Participant)

________________________________________________________

(Investigator/Project Director
or Authorized Representative) (Person Authorized to Consent
for Participant--If Required)

PA-027 (2/79) -- To be used only in connection with social and be-
havioral research for which an OSU Human Subject Review Committee
has determined that the research poses no risk to participants.
APPENDIX F

SAMPLE OF IN-DEPTH AND SIMPLE FOLLOW-UP LESSONS
FOLLOW-UP LESSON FOR WEEK OF MAY 18, 1981

MATERIALS: PARACHUTE, RECORD PLAYER, "RHYTHMIC PARACHUTE PLAY" RECORD.

ACTIVITIES:
1. SIDE 2: SONG 1
   1. HOLD PARACHUTE WITH RIGHT HAND: OVERHAND GRIP.
   2. FOLLOW DIRECTIONS ON RECORD
   3. SAFETY: DO NOT STEP ON THE HEELS OF THOSE IN FRONT OF YOU. IF YOU FALL, ROLL OUT OF THE WAY OF OTHERS.
   4. DISCUSSION: IMPORTANCE OF HOLDING THE CHUTE TIGHTLY. WHAT DO YOU HAVE TO DO TO KEEP THE HOLE IN THE MIDDLE OF THE ROOM?

II. SIDE 2: SONG 2
1. OVERHAND GRIP
2. LIFT PARACHUTE UP FOR UMBRELLA
3. REMIND THE CLASS THE SIGNAL FOR LETTING GO
4. DISCUSSION: WHAT HAPPENS IF WE MISS THE SIGNAL? HOW TO MAKE IT HOVER OVER US? WHAT IS THE DANGER OF CHASING AFTER THE CHUTE?

III. SIDE 2; SONG 5
1. FOLLOW DIRECTIONS ON THE RECORD IN DOING THE ROUTINE
2. YOU MAY REPEAT THE ACTIVITY
3. EMPHASIZE LISTENING TO DIRECTIONS

OUTDOOR ACTIVITIES:
INSTRUCT YOUR CLASS IN THE USE OF FIELD DAY SKILLS (YOUR CLASS WILL DO BETTER IN FIELD DAY SKILLS IF YOU PRACTICE THEM FIRST)
FOLLOW-UP PLAN FOR WEEK OF MAY 18, 1981 (cont.)

1. 50-YARD DASH
2. 100-YARD DASH
3. RELAY RACE (PRACTICE HAND-OFFS)
4. DISCUSS WATER BALLOON TOSS
5. BEAN BAG TOSS
6. RING TOSS
7. BASKETBALL SHOOT (USE BANKBOARD)
8. LONG JUMP (REACH OUT WITH HANDS)
GYMNASTICS AND STUNTS

FOLLOW-UP LESSONS

FOR 4/13/81

I. BALANCE BEAM
   A. Walk forward leading with left foot
   B. Walk forward leading with right foot
   C. Walk forward
   D. Walk backward

II. STUNTS
   A. Coffee-grinder
   B. Seat Circle (sit on floor and spin)
   C. Turk stand and sit
   D. Threat-the-needle

OPTION:

III. TAKE CLASS OUTSIDE TO PLAY TETHERBALL
APPENDIX G

SAMPLE OF SELF-REPORTING SHEET
USED BY TEACHERS
NAME _______________________

PHYSICAL EDUCATION FOLLOW-UP FOR 6/1/81

PLEASE COMPLETE AND RETURN TO MY MAILBOX BY YOUR NEXT DAY SCHEDULED FOR PHYSICAL EDUCATION (MORNING OF).

I.
   A.
   1.
   2.
   3.
   4.
   5.
   B.

II.

III. Did other activities; please describe what you did.

IV. Did nothing. Reason:

THANK YOU FOR YOUR KIND AND CONSIDERATE COOPERATING DURING THIS SCHOOL YEAR.

Jim Schwarz
APPENDIX H

SUGGESTIONS FOR IMPROVEMENT OF PHYSICAL EDUCATION LESSONS
JUNE 8, 1981

NAME ________________________

FINAL REPORT CONCERNING THE DISSERTATION OF JIM SCHWARZ

PLEASE COMPLETE AND RETURN TO ME THE ENCLOSED DATA

AS YOU KNOW I HAVE BEEN CONDUCTING A STUDY FOR MY DISSERTATION USING THE SECOND GRADE CLASSES AT MY SCHOOLS. I, ONCE AGAIN, WISH TO THANK YOU FOR YOUR COOPERATION AND TO ASK YOU ONE LAST FAVOR. THIS STUDY HAS BEEN AIMED AT GETTING THE SECOND-GRADE TEACHERS TO CONDUCT THE PROVIDED FOLLOW-UP LESSON. IT WAS NECESSARY TO KEEP YOU SOMEWHAT IN THE DARK SO AS NOT TO JEOPARDIZE THE VALIDITY OF THE STUDY. MANY TEACHERS ATTEMPTED TO CONDUCT THE FOLLOW-UPS BUT THE CONSISTENCY WAS NOT WHAT ONE WOULD HOPE FOR (USUALLY). I AM INTERESTED IN YOUR OPINIONS REGARDING HOW THIS MIGHT BE IMPROVED. THIS HAS IMPORTANT RAMIFICATIONS NOT ONLY FOR COLUMBUS PUBLIC SCHOOLS BUT ALSO FOR ALL LARGE URBAN SCHOOL DISTRICTS. SO, PLEASE RETURN THIS SHEET IMMEDIATELY.

1) WHAT DO YOU SEE AS THE MAJOR REASON WHY TEACHERS IN GENERAL AND YOURSELF IN PARTICULAR ENCOUNTERED DIFFICULTY IN CONDUCTING A FOLLOW-UP AND HOW MIGHT THIS BE CORRECTED IN THE FUTURE?

2) WHAT REWARDS DO YOU FEEL WOULD BE EFFECTIVE IN GETTING YOU AND OTHER CLASSROOM TEACHERS TO MORE CONSISTENTLY CONDUCT THE FOLLOW-UP (I KNOW IT IS OFTEN A CHORE TO TAKE THE CLASS TO THE GYM AND DO A P.E. LESSON!)?
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