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ABSTRACT

This volume is the first of a series reporting evaluation findings on the impact of Project Developmental Continuity (PDC) on institutions, classroom staff, parents and children from the time the children entered Head Start through the first grade. PDC was begun in 1974 with the purpose of ensuring that disadvantaged children receive continuous individualized attention as they progress from Head Start through the early primary grades. Implemented at 15 sites, distributed across Department of Health, Education, and Welfare regional offices and the Indian and Migrant Program Division, PDC emphasizes the involvement of administrators, classroom staff and parents in formulating educational goals and developing a comprehensive curriculum. This volume is intended as an introduction to the PDC program and to the purpose, methods and guiding framework of the longitudinal evaluation. In Chapter I, a brief history of the PDC program and its evaluation are presented, the overall design of the longitudinal study is described and data available as of the spring of the test-cohort children's first grade year (1979) are reviewed. In Chapter II, the conceptual framework guiding the study of PDC processes and effects is recounted. The data collection and analysis procedures used are described in Chapter III. A brief summary is presented in Chapter IV. An appendix delineating PDC variables, data sources and hypotheses is included. The actual impact findings as of Spring 1979 are reviewed in the five other volumes of the series (Volumes II-VI). (Author/RH)

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Interim Report X: Assessment of Program Impact Through First Grade

Vol. I

The Context, Conceptual Approach and Methods of the PDC Evaluation

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AN EVALUATION OF PROJECT DEVELOPMENTAL CONTINUITY
INTERIM REPORT X

ASSESSMENT OF PROGRAM IMPACT THROUGH FIRST GRADE, VOLUME I: THE CONTEXT, CONCEPTUAL APPROACH AND METHODS OF THE EVALUATION

December 1980

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Table of Contents

Table of Contents
(continued)

Acknowledgments

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That influence will be the direct result of the concern for effective programs which has consistently been evidenced by members of the program staff of ACYF. We wish to extend our thanks to Ray Collins, Jenni Klein, Austine Fowler, and Stephen Bedi, who have been supportive of the evaluation effort and interested in the implications of our evaluation results for Project Developmental Continuity and for other ACYF initiatives.

Special thanks go to the coordinators of the PDC sites for their invaluable assistance with the myriad necessary data collection activities. We extend our thanks to those individuals who were coordinators at the time of the grade 1 data collection (1979) and to those individuals who are coordinators at this time: Jesse Beard, Stephen Bedi, Tony Bozich, Nazario Carrillo, Glenda Dodd, Deloris Johnson, Beatrice Kenney, Sande Kirby, Patricia Lanier, Mary D. Levermann, Betty Minor, Geraldine Sanders, Fannie Smith.

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Working with the students, teachers, and parents a dedicated team of local data collectors, testers, interviewers, and observers has diligently tracked down students, arranged observation and interview schedules with teachers, located parents, and scheduled (and re-scheduled) interviews as necessary. The national evaluation of PDC has depended upon the energies and professional skills of these individual consultants who mastered the

data collection procedures and then applied those procedures in the field to gather all of the information upon which this evaluation report is based. Many of these individuals, trained during the first year of data collection in 1975, have continued to work with us over the years. Their long-term efforts have enhanced the quality of this evaluation.

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INTRODUCTION

Project Developmental Continuity (PDC) was begun in 1974 by the Administration for Children, Youth and Families (ACYF) as the first large-scale demonstration of coordinated programming between Head Start centers and public schools at fifteen sites distributed across the HEW regional offices and the Indian and Migrant Program Division. It is hoped that the single most important effect of this undertaking will be to enhance the social competence of the children served--that is, to increase their everyday effectiveness in dealing with their environment (at school, at home, in the community, and in society). PDC also aims to bring about broader and more intensive involvement of parents and teachers in the governance of school affairs.

As part of the overall Head Start improvement and innovation effort, PDC emphasizes the involvement of administrators, classroom staff, and parents in formulating educational goals and developing a comprehensive curriculum. The object is to ensure that children receive continuous individualized attention as they progress from Head Start through the early primary grades. If the program is successful, existing discontinuities between Head Start and elementary school experiences will be reduced by PDC mechanisms that encourage communication and mutual decision-making among preschool and elementary school teachers, administrators and parents.

School organizations at the fifteen sites received funding to design and implement seven prescribed program components: administration, education, training, developmental support services, parent involvement, services for the handicapped, bilingual/bicultural and multicultural education. The component areas are described in more detail in a later section of this report.

At the same time that projects were instituted, the High/Scope Educational Research Foundation was awarded the evaluation contract, the major purpose of which was to provide ACYF with information that would assist it in its efforts to design effective programs for children. The contract called for the collection and analysis of process and impact data involving both quantitative and qualitative methodologies.

The evaluation has proceeded in two phases. From 1974 to 1978, evaluation activities were aimed at analyzing program implementation and asserting the feasibility of doing a five-year longitudinal study that would follow one cohort of children from the time the entered Head Start until they completed third grade.[1] After judging the study feasible, ACYF funded the current phase of the evaluation (1979-1982) to examine the impact of PDC on participating institutions, teachers and classrooms, parents and children in eleven of the twelve sites still participating in the project.

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[1] The results of this phase of the evaluation are described in: Love, Granville and Smith, 1978; Smith, Love, Morris, Spencer, Ispa and Rosario, 1977.

The present document, The Context, Conceptual Approach and Methods of the Evaluation, is the first of a series reporting impact findings as of spring of the study cohort children's first-grade year (1979). Other volumes in the series include:

- Volume II, Impact on Institutions. Describes findings dealing specifically with PDC's impact on the institutional policies and procedures of participating Head Start centers and elementary schools. These findings are presented in the context of the varied social educational settings surrounding PDC.

- Volume III, Impact on Parents. Investigates the impact of PDC on the parents of children in the evaluation cohort and, in a preliminary fashion, the relationship between family characteristics and outcome variables.

- Volume IV, Impact on Teachers. Reports impact findings on teachers and classrooms. These impacts reflect treatment-related outcomes as well as outcomes regardless of treatment.

- Volume V, Impact on Children. Presents the findings of analyses of PDC's impact on the PDC evaluation's cohort of children as of the end of grade 1. The volume also contains some preliminary examinations of the relationship between variables in the teacher, parent and child domains.

- Volume VI, Summary of Impact on Institutions, Teachers and Classrooms, Parents and Children. Summarizes the evaluation results for 1979, when the cohort of children being studied in the evaluation had completed grade 1. Results are presented for each of the four major areas: institutional policies and procedures, teacher attitudes and behaviors in the classroom and with parents, parent attitudes and behaviors in relation to their child's school, and the achievement of children. In addition, the volume summarizes the initial analyses of interrelationships between the four major areas, such as the relationship between teacher attitudes and parent behaviors concerning involvement with their child's school.

This volume serves as an introduction, providing a detailed description of the PDC program and the purpose, methods and guiding framework of the impact evaluation. It is organized into three major sections, plus a summary and a technical appendix. The first section presents a brief history of the PDC program and its evaluation, describes the overall design of the longitudinal study, and reviews what data were available for analyses as of spring of the test-cohort children's first grade year (1979).

In Section II, we describe the conceptual framework guiding the study of PDC processes and effects. This framework has made it possible for us to "model" the concept of Project Developmental Continuity as well as the kind and direction of change necessary for its institutionalization. It is presented as two different "models": a conceptual model that describes ideally the intended effects of PDC, and an analytic model that describes operationally the change flow expected and required to bring about the intended effects.

The data collection and analysis procedures required by a study of this magnitude and complexity are discussed in Section III under the general title of "Methods." This is followed by the volume summary. The appendix describes the PDC variables, data sources and hypotheses.

I

THE CONTEXT AND PURPOSE OF THE PDC EVALUATION

The purpose of this section is to provide a description of Project Developmental Continuity (PDC) and to discuss the overall purpose of the evaluation. We begin with the origins and development of the PDC program and then discuss the purpose, design and information needs of the evaluation.

The Origins of PDC

As a national demonstration program within Head Start, Project Developmental Continuity belongs to a family of experimental efforts undertaken by the Administration for Children, Youth and Families that has included Parent-Child Centers, Home Start, Health Start, the Parent-Child Development Centers, and the Child and Family Resource Program. As a group, these experimental programs "ensure that Head Start is provided with a continuing supply of tested and proven approaches to serving children..."[1]

The particular mission of PDC, as it was planned in 1972-73, was to respond to evaluation data which appeared to demonstrate that Head Start's impact on children was short-lived:

> *Evaluation and research results document clearly that children who attend Head Start are more elevated in their functioning than children who do not. However, the research also shows that this superiority fades during the early primary years unless the child is involved in a special program which builds upon the benefits of the pre-school experience. Based on these observations, a new experimental effort will focus on ways of providing developmental continuity between Head Start and the early school years.* (Office of Child Development, planning document, no date; see footnote 1.)

Thus, PDC established Head Start-public school coordination as a central feature, in addition to maintaining the features of other Head Start programs such as parent involvement, health and nutrition services, services for handicapped children, and staff support and training. In a subsequent planning document, ACYF further articulated the goals of PDC:

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[1]Office of Child Development, "FY 1973 Goals and Plans for Improvement and Innovation in Project Head Start," no date.

This project is designed to enhance the social competence of each participating child, that is, to increase each child's everyday effectiveness in dealing with his environment and responsibilities in school and life. Specific goals of the project are: (1) to assure continuity of experience for children from preschool through the early primary years by stimulating cognitive, language, social-emotional and physical development, promoting educational gains for children through development of social competence; and (2) to develop models for developmental continuity that can be implemented on a wide scale in Head Start and other child development programs and school systems.[1]

Development of the PDC Program

The PDC program began in 1974 at 15 sites distributed across the ten HEW regional offices and the Indian and Migrant Program Division. The entire first year of program operation was designated a planning year. During the planning year, staff were hired, component area task forces were appointed, and detailed plans for actual implementation were initiated.

During Year II (1975-76), 14 sites (the New York program had withdrawn) comprising a total of 42 Head Start centers and elementary schools, began to implement their plans. Program Year III (1976-77) was officially designated the "implementation year" in the original project design, by which time programs were expected to be fully implemented and operational. During the implementation year, evaluation staff began to collect data on the cohort of children who entered PDC and comparison Head Start centers.

Years IV-VI (1977-81) are continuation years. During this period, programs are expected to continue receiving funding as they move toward "institutionalization" or integration within the educational system of the local school districts, which will then assume all fiscal responsibility for the programs as of mid-1981.

At present, 12 sites are participating in the demonstration project. The program in New Jersey withdrew at the end of Year II, and the West Virginia program ceased operations at the end of Year IV. Sites included in the evaluation as of spring 1979 are located in California, Colorado, Connecticut, Florida, Georgia, Iowa, Maryland, Michigan, Texas, Utah, and Washington. The Arizona site remains part of the demonstration project, but has not been included in the evaluation since 1978 when a complete program case history was written (see Interim Report VII, Appendix D).

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[1]Administration for Children, Youth and Families. Research, Demonstration and Evaluation Studies, Fiscal Year 1978. Washington, D.C.: Author, 1977.

The Two Program Models

The Head Start-public school coordination required by PDC was initially defined in terms of two program models. In the Preschool-School Linkages approach, administratively separate Head Start and elementary programs were brought together by the device of a PDC Council, whose membership included teachers, parents, administrators from both organizations, and community representatives. In the Early Childhood Schools approach, Head Start and elementary programs were combined both administratively by the Council and physically in the same building, thus creating a new institution. In practice, as the programs have evolved over time, the distinction between these models has blurred; there are now, in fact, a wide variety of specific mechanisms that allow for the coordination required by PDC.

PDC Guidelines

To support the implementation of PDC, the Program Development and Innovation Division within ACYF designed several vehicles: national program guidelines, training and technical assistance contractors, and national workshops. In spring 1974 a document entitled "Guidelines for a Planning Year" was distributed to prospective sites to serve as a guide for preparing initial proposals. These guidelines were revised in September 1974 and supplemented by periodic "program letters" issued by the national office. These early guidelines contained both requirements for the development of program components and suggested activities within each component.

At the beginning of the start-up year (November 1975) the "PDC Implementation Year Guidelines" were published, describing basic elements that were to be present in each PDC program and clarifying for the programs the distinction between required elements and suggested activities. These guidelines became the basic mechanism for guiding program implementation activities from fall 1975 through summer 1978 when another revision was issued. The revised 1978 guidelines differed from the previous versions primarily in their attempt to consider the matured status of the programs and in an added concern with self-assessment and formative evaluation. Over time, the needs of the various programs diverged and, within programs, the needs of different components varied. Thus, the guidelines now encourage programs to adjust their component activities to current needs rather than to follow a prescribed schedule of activities across programs. The seven program components described in each of the guidelines are the following:

- Administration: administrative coordination between and within Head Start and the elementary school(s)
- Education: coordination of curriculum approaches and educational goals
- Training: preservice and inservice teacher, staff and parent training in program-related areas

- Developmental support services: comprehensive services (medical, nutritional, and social) to children and families
- Parent involvement: parent participation in policy making, home-school activities, and classroom visits or volunteering
- Services for the handicapped: services for handicapped children and children with learning disabilities
- Bilingual/bicultural and multicultural education: programs for bilingual/bicultural or multicultural children.

The guidelines have consistently outlined requirements and suggestions in these seven areas. They have established areas of program responsibility while leaving specific manifestations open to local initiative and interpretation. As such, they represent a unique approach to educational change. Rather than dictate very specific innovative changes, the guidelines provide a framework for innovation. There are at least three reasons for this characterization of the guidelines.

First, PDC is not a single discrete innovation. Much of the literature on educational change describes one of two types of innovation: (a) the implementation of a new curriculum element such as the "new math" or a special reading program, or (b) the creation of "new schools"[1] (for examples of the former see Berman & McLaughlin, 1975; Fullan & Pomfret, 1977; or Gross, Giaquinta & Bernstein, 1971; for examples of the latter, see Deal, 1975; Miles, 1978; or Smith & Keith, 1971). PDC, however, is not quite like either of these innovations. It is, on the one hand, far more comprehensive than any of the discrete innovations reported by Fullan and Pomfret: the guidelines require a particular type of curriculum, plus a program for bilingual/bicultural and/or multicultural children plus a program of services for handicapped children, plus a parent involvement program, and so on. Yet, unlike "new schools," PDC programs began with a set of guidelines that provided some explicit direction for planning activities.

We might think of the guidelines, for example, as prescribing a detailed set of planning procedures (the PDC Council, parent involvement in planning services for handicapped children, and so on) and then sketching what the products of that planning should look like (the PDC curriculum must be developmentally appropriate, emphasize individualized instruction, and so on). This means that at most sites PDC has resulted in two kinds of innovation: one large (the new mechanisms for planning and decision-making) and several smaller (the programs and activities created through those mechanisms). The outline of the large innovation (the framework)

[1]Miles, Sullivan, Gold, Silver, and Wilder (1978) define a "new school" as, "...a total school program (not a minor project, course, or other innovation) which is created more or less de novo (is not simply a redesign of an existing school) and which its creators experience as different from their own past experiences."

was mapped explicitly by ACYF, and in that respect PDC resembles some of the more discrete "packaged" innovations described in the literature. The smaller innovations resulting from that framework, however, had to be planned independently by each local project; in this respect PDC resembles some of the "new schools."

Second, the units of change in PDC are not isolated classrooms or schools, but parts of several schools or centers. PDC extends beyond single classrooms and encompasses parts of the elementary schools and the Head Start centers with which it is associated. To the extent that the project extends beyond individual classrooms, it has much in common with new schools: basic changes are being made not only in what individual teachers do within their own classrooms, but also in how those teachers interact with one another, in how decisions are made, and in the range of services that are offered to the whole child. However, because PDC involves less than the whole of any one school, but perhaps parts of several schools the situation is also more complex than faced by new schools. Local PDC projects require the involvement of elementary school principals and Head Start center directors whose time and energy has to be divided between PDC and non-PDC teachers. They have to contend with non-PDC teachers who are at best uninvolved in the project and occasionally antagonistic. They are faced, on occasion, with conflicts between the aims and methods of PDC and the programs in the rest of the center or school. Perhaps most troublesome has been the task of establishing and maintaining communication among teachers who are located in separate buildings. Adequate communication has been found difficult enough to achieve in self-contained new schools; the problems are compounded when the participating classes are sometimes miles apart.

Third, PDC is designed to create linkages between two distinct programs rather than to change a single existing program. Most of the literature describes attempts to change one program, either by introducing new curriculum packages in the classroom or by completely restructuring the school. PDC has elements of this, but it also has another overriding objective: to bring about continuity between the local Head Start and early elementary programs. Aside from the difficulties caused by the participating programs residing in different buildings, the fact that two distinctly different programs are to be linked introduces its own complications. For example, at most sites, even those with Early Childhood Schools, two separate administrations are involved. Programs that had existed separately for years are now expected to coordinate their planning and other activities.

The analyses of program implementation conducted during the first phase of the evaluation found considerable diversity among the PDC programs in their response to this approach to innovation, but as our phase one final report concluded:

> *The approach ACYF adopted for PDC was one of providing a 'framework for innovation' rather than dictating specific innovative practices. Within this framework a number of strong local programs have developed. From the perspective*

of extensive implementation data, it seems that the PDC framework offers a potentially effective model of educational change. As the evolution of PDC continues over the next few years, the models for continuity should become stronger and clearer. (Love, Granville & Smith, 1978, p. 49)

Training and Technical Assistance to Sites

From the outset, ACYF has worked with a Training and Technical Assistance (T&TA) contractor. Although there have been changes in the organizations providing these services, the basic ACYF T&TA philosophy has remained consistent. The T&TA contractors have provided resources to the PDC sites, collectively and individually, by developing or collecting materials and references relevant to the concepts involved in PDC or to activities required for implementation. T&TA staff have represented various fields of expertise important to PDC programs, such as developmental psychology, educational administration, teacher training, and multicultural education. But in addition to being able to assist local PDC sites in specific areas, field specialists assigned to each site by the T&TA contractor have dealt with general implementation themes, such as ways to achieve participation in the planning process by all the groups concerned with PDC.

One of the most important methods of providing support for the local sites has been the national workshops. Approximately twice a year, ACYF has used the T&TA contractors to manage these workshops, which staff from each PDC site attend. The conferences have had different themes which have enabled participants to focus on topics of particular concern, such as multicultural education, parent involvement, or preparing for local institutionalization of PDC once federal funding ceases. Participants have included parents, teachers and school administrators in addition to the PDC staff. Outside experts have been invited to conduct workshops at these meetings and evaluation contractor staff have attended to facilitate communication with the programs about evaluation activities.

Purpose of the PDC Evaluation

The major purpose of the PDC evaluation is to aid the Administration for Children, Youth and Families in its efforts to design effective programs for children. The evaluation was planned in two phases: the first to determine the feasibility of conducting a longitudinal study of PDC (1974-1977) and the second to carry out that study as one cohort of children progresses from Head Start through the third grade (1977-1981).

Efforts to describe and analyze program processes began during the PDC planning year (1974-75) with the preparation of site case studies. During the following year the design for the full Implementation Study was finalized and pilot data were collected at five sites to evaluate the applicability of the interview forms and the procedures for rating implementation levels. On the basis of the analysis of the pilot data, modifications in procedures were made and a major instrument for assessing implementation, the Implementation Rating Instrument (IRI), was finalized.

During the third program year, this instrument was applied to the interview data and other documentation from nine sites to provide a comprehensive assessment of implementation activities in PDC. Three additional sites were included in various documentation activities but did not receive the systematic implementation ratings. At the thirteenth site, a Navajo program in Arizona, a case history approach to assessing both implementation and impact was taken.

Overall Design of the Phase II Longitudinal Study

The longitudinal study design was established by the original evaluation RFP in 1974. It specified that one cohort of PDC children and their families would be identified and repeatedly assessed, from the time the children entered Head Start until they completed third grade. It further specified that the performance of these children was to be contrasted with that of a comparable group of children who had also attended Head Start, but who went on to attend non-PDC elementary schools. Comparison-group children were selected because the schools they were to attend were judged similar in important respects to the PDC schools. Considerable effort was devoted in the first phase of the evaluation to determining which schools should serve as comparisons for the PDC schools, and a survey was conducted in spring 1979 to obtain updated information on the comparability of the schools.

In light of continuing controversy regarding Head Start's effectiveness, it is critical that the nature of the PDC evaluation design be understood: the comparison group consists of children who also attended Head Start. In other words, the PDC evaluation was designed to compare the effects of Head-Start-with-continuity against Head-Start-without-continuity; it was not designed as an evaluation of the Head Start program, per se. The reader should bear in mind when judging our findings that both groups--PDC and comparison--comprise Head Start children and their families.

Information Needs of the Longitudinal Evaluation

In designing Phase II of the PDC evaluation considerable attention was directed toward articulating a wide range of information needs that would be of interest to planners of Head Start programs and to policy makers. The evaluation RFP for the second phase identified four domains of interest related to program impact: information on parents, on teachers,

on the institutions, and on children. Section II contains a thorough discussion of the variables on which information is being collected, within the framework of our analysis of the PDC treatment and our conception of the directions of influence among the domains of impact. Here we present brief descriptions of the domains of the Phase II data collection effort (which began in spring 1979).

Information on parents. In order to more fully examine program effects on parents, a Parent Interview was developed and administered to all parents whose children were being tested. Information was obtained on the parents' involvement in school activities, on parent-child activities in the home, and on the parents' perceptions of the extent to which the school is helping them meet the needs of their child. In addition, parents were asked to judge their child's progress in school as an added indicator of child impact.

Information on teachers. Extensive information has been acquired about PDC and comparison-school teachers and the classrooms the test-cohort children attended. A Teacher Interview and a Classroom Observation System were designed to collect this information. The Teacher Interview was administered to all teachers with test-cohort children in their classes and to a subsample of teachers at all other grade levels, Head Start through third. The interview was designed to obtain information on activities that promote continuity, the use of school and community resources in the classroom, the presence of a multicultural perspective in the classroom, the involvement of parents, and the instructional approach. The Classroom Observation System was used to collect data from two full days of observation in first-grade classrooms containing test-cohort children. The observation system provided extensive data on the actual instructional process, supplementing teacher interview data with direct observation. Information collected with this instrument includes the teacher's approach to individualized instruction, the diversity of instructional activity, effectiveness in classroom management, the quality of intellectual stimulation, the structure of the classroom environment, use of community resources in the classroom, the extent to which the needs of handicapped children are met, the presence of a multicultural perspective, evidence of continuity, and the overall classroom climate.

Information on institutions. As will be discussed in Section II the policies and procedures of the institutions involved in the PDC demonstration are of crucial importance to effective service delivery. Therefore, it was decided to collect as much data bearing on institutional policies and procedures as possible. Data were collected from multiple sources, including: (a) an administrator interview, (b) case studies, (c) site visits, and (d) site records.

Information on children. The area of child impact presents the greatest potential for a true longitudinal study within the context of the PDC evaluation. Therefore, for the Phase II study, modifications in the child measurement battery were kept to a minimum in an attempt to maintain consistency with the first phase. Four areas define the range of child measures adopted: (1) academic skills and abilities; (2) social-emotional development; (3) health and nutrition; and (4) learning attitudes. A variety of approaches have been used to collect this information, including tests, ratings and school records. In addition, it may be possible to derive indices of children's classroom behavior from the classroom observation data.

II

A FRAMEWORK FOR STUDYING PDC'S PROCESSES AND EFFECTS

The evaluation has been largely shaped by a particular conception, derived from the PDC guidelines, of the intended effects of PDC and the sequence of changes expected and required to bring about those effects. Before describing the design and methodology of the evaluation, we will in this section attempt to make this conceptual framework more explicit. This discussion has three parts. In the first two, we present a general model of the intended effects of PDC, along with a consideration of the PDC "treatment" and how, as described in the guidelines, it was intended to produce the desired effects. In the third part we describe the process that was used to move from the basic framework to the specification of particular variables and appropriate data collection instruments for this phase of the evaluation.

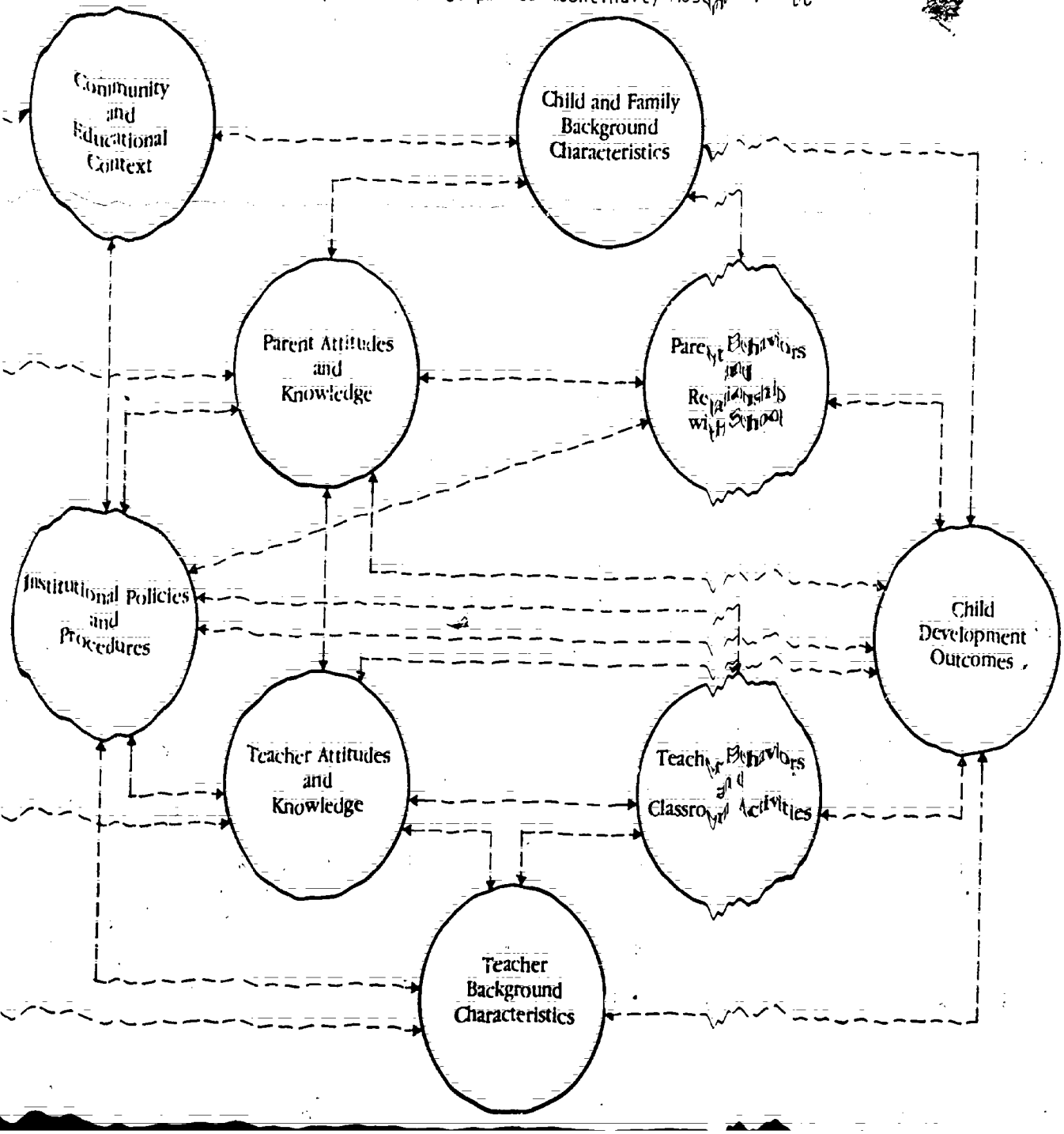
Some Orienting Assumptions: The Concept of Developmental Continuity

The basic assumption underlying the PDC program and consequently this evaluation is that the condition of developmental continuity implies a complex interaction involving an array of factors, both within and outside the school. As a result of this assumption, PDC was designed to be a comprehensive intervention into many aspects of the school, home and community. However, although the implications of this basic assumption pervade the program, the PDC guidelines never fully explicate this assumption.

In order to design an evaluation that is sensitive to the particular goals of the PDC program it was necessary to distill from the guidelines the concept of developmental continuity that appears to have shaped program guidelines. Figure 1 summarizes the results of this exercise. We must emphasize that this conceptualization is not at present a theory to be tested by the data. Rather, it represents an orienting framework that has provided a basis for generating an analytic model, out of which have come research questions, variables, and data collection methodologies. We have used this orienting framework to guide the analysis and reporting of evaluation data.

Simply stated, the conception of developmental continuity implicit in PDC suggests an interactional model that appears to include: (a) a child's intellectual, social, and physical development and background and experiences in home and school; (b) the attitudes, knowledge and background characteristics of parents and teachers; (c) the policies and procedures that prevail in the public school or Head Start center; and, (d) the broader political, social and economic context of the school district and community.

Figure 1
The Conception of Developmental Continuity Assumed in PDC



We will return later to consideration of how each of the classes of factors in Figure 1 was defined operationally for this evaluation, and of what variables were measured in each domain. For the moment, however, the following general definitions will suffice:

- Child development outcomes. These, of course, are the ultimate concern of the PDC program. The stated goal of PDC is to enhance children's "social competency." According to the guidelines, social competence includes intellectual achievement, health and nutrition, social-emotional and language development, physical and mental health, and learning attitudes.

- Parent behaviors. This domain includes parent behaviors toward the child in the home, and the role that the parent plays in school life.

- Parent attitudes and knowledge. Especially important in this domain are parent attitudes toward the school or center and parent knowledge of child development and available community resources.

- Teacher behaviors and classroom activities. This domain refers to the child's experiences in the classroom and to the role of the teacher in these experiences. It includes the physical environment that the teacher creates for the child in the classroom, the instructional approach that the teacher employs, the management style of the teacher in his/her dealings with the class, and the general climate that the teacher establishes in the classroom for the children.

- Teacher attitudes. A broad and often-noted domain in the program guidelines, this category refers to teachers' instructional practices and their perceptions of, and attitudes toward parents, particularly parent involvement in their classrooms, and their personal educational philosophy.

- Institutional policies and procedures. This domain includes the activities and procedures that are found outside the classroom, but which influence what goes on in the classroom. Such policies and procedures include the decision-making bodies and mechanisms that exist in the school, the management structure found in the school, procedures for providing services to children either inside or outside the classroom, patterns of communication and coordination in the school and between the school and other institutions, and training that the school provides for teachers, parents, and staff.

- Community and educational context. No school or family exists in a vacuum. The program guidelines recognize that everything that occurs in either setting is shaped and on occasion constrained by cultural, political, and economic factors in the community, and by priorities, policies, and programs of the school district. Another important feature of the community context is the services for families and children that are available from agencies outside the school.

- Child and family background. Although not generally susceptible to change by school programs, the background of the child and his or her family are recognized in the guidelines to be important determinants of development. This domain includes such factors as ethnicity, SES, parents' education and employment status, language spoken in the home, and prior preschool experience.

- Teacher background characteristics. The guidelines say little about particular effects of specific background characteristics, but they and the literature do suggest that such factors are important influences on the teachers' behavior and ultimately on child development. The guidelines refer specifically to certain experiences that at least some prograr teachers should have had, such as training in bilingual education, or training in child development; the literature also suggests that ethnicity, number of years of teaching experience, and experience in special projects also influence teachers' professional behavior.

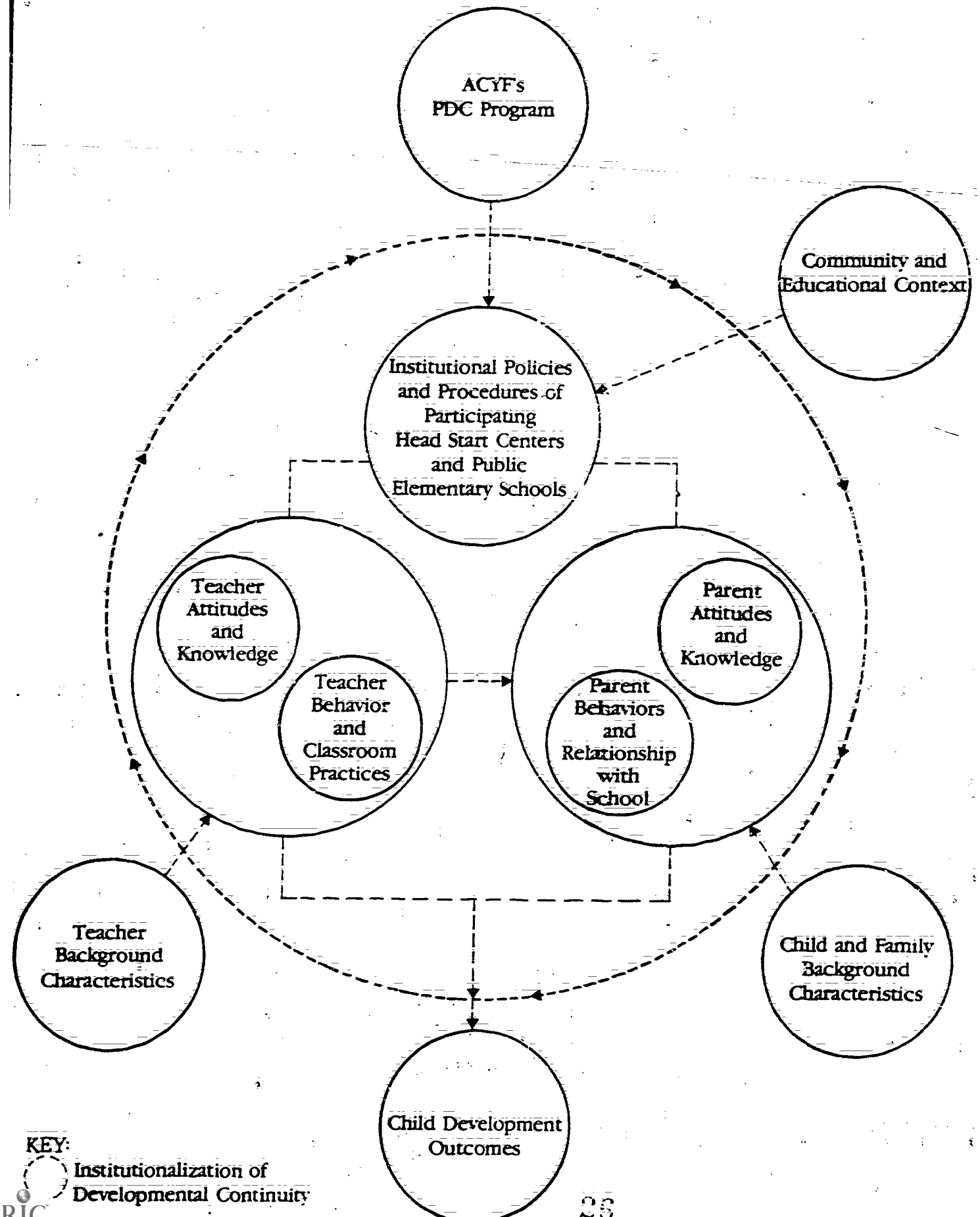
The PDC guidelines do not discuss the precise interactions that are assumed to exist among these various factors. Consequently, Figure 1 portrays only a cycle of continuous interactions that is driven by incremental changes acting on each other in a positive way. One objective of this evaluation will be to explore and describe the strength and direction of relationships between variables within each domain.

However, the guidelines are quite clear in specifying an order in which changes occur to produce impacts on elements of the interactive cycle represented in Figure 1. Any program that seeks to create developmental continuity must first impact on institutions, and through them on parents and teachers, before it impacts on children. Figure 2 presents an analytic model that describes the direction of this change flow.

As shown, PDC is expected to produce first certain interactive conditions favorable to the institutionalization of developmental continuity, which are then expected to lead to changes in child development outcomes. The operational strategy for producing these favorable conditions is to bring about the institutional or structural changes that then make it possible for institutional actors (administrators, teachers and parents) to engage in educational practices that are mutually reinforcing and developmentally continuous. At first, it is expected that the change flow will be moderated by the community and educational context as well as teacher, child and family background characteristics. But ideally, of course, the expectation is to create a chain of interactive changes that spread over time to eventually produce the kind of developmental cycle illustrated in Figure 1. In a sense, then, the analytic model of Figure 2 represents an early stage in the PDC implementation process, and the ultimate steady state is represented by Figure 1.

Figure 2

The Change Flow Assumed in PDC



Zebulon's Black Box (cont'd.)

p. 112 Problem: "Martha put her hands over her ears and screamed."

Suggestion: Is it not likely that Martha's brother would also be alarmed in this situation?

Home in the Valley

Suggestion: Read Never Done by the Corrective Collective for a contrasting view of the hardships faced by the Scottish settlers in Red River.

Decision at Blackfoot Crossing

Comment: This excellent story has a good section on democracy within the Blackfoot Confederacy.

p. 134 Comment: "We are many and they are few." Is this the case now? Discuss how the nineteenth-century Indian population was reduced by wars, disease, reserve life, etc.

Note that the importance of women's work is addressed in this story. The survival of the tribe depended on male and female cooperation.

Death of a Blackfoot Chief

p. 145 Comment: "And the white man's prayers have all ben told." Discuss why he says this. Many Indians adopted Christianity to become "civilized" like white people. Does Crowfoot believe fully in this new religion? How do we know? Find out about native religious beliefs before Christianity was introduced to the Indians.

A Dog and a Glacier

p. 161 Problem: "Man and his do ."

Suggestion: Instead of this sexist terminology, words could be chosen that would not exclude females. Women and girls also develop friendships and work with dogs. Have the girls in the class talk about their dogs.

What Is the PDC Treatment?

We have noted that the ultimate goal for the PDC program is to enhance the social competence of the children it serves by providing developmental continuity. Some of the assumptions implicit in the guidelines about the interactive factors involved in this process have already been examined. The question we must ask next is exactly how the PDC project was intended to impact upon the factors that the guidelines assume will be present in developmental continuity. In other words, what is the PDC treatment?

Again, the program guidelines offer the best starting point for answering this question. In the introduction to these guidelines the following statement appears:

> "Project Developmental Continuity is aimed at promoting greater continuity of education and comprehensive child development services for children as they make the transition from preschool to school...Developmental Continuity, as it is used here, can be defined as planned programs, structures, systems, or procedures by which adults provide children with experiences that foster and support continuous development." (emphasis added)

Project Developmental Continuity seeks to enhance children's social competency by creating greater continuity among children's experiences in the school and between children's home and school experiences. The guidelines do not attempt to specify what continuity of experience should look like, but instead outline a set of planned programs, structures, systems, or procedures that, if implemented, will result in the desired continuity. These structures, then, are the basic PDC treatment that should be present at all sites; within this general framework each site is free to develop its own program.

Table 1 contains brief descriptions of the structures or programs prescribed in the guidelines for project sites. These prescriptions outline a set of activities for all PDC programs to implement. Following the earlier model, these guidelines are aimed at the classroom, at parents, and at the school or center as an institution.

Identifying an Evaluation Methodology Appropriate for the PDC Treatment

Having specified the PDC treatment as described in the guidelines, the next step was to develop an evaluation design that was appropriate to the goals of the PDC program. Although this process also began with the program guidelines it was necessarily shaped by other considerations

Table 1

The PDC Treatment as Described in the Guidelines

Planned Programs, Structures, Systems or Procedures that Foster and Support Continuous Development

At the Institutional Level

Planning and Decision Making

1. Formalized broad representation in decision-making groups including parents, staff (Head Start and elementary), community representatives involved in education, health, nutrition, and social services.
2. Procedures for ongoing discussion and refinement of the curriculum that include parents, teachers, aides, etc.
3. Establishment of a formal or informal internal assessment system for monitoring the school's progress toward meeting its goals and objectives.

Management

1. Assign responsibility for education, handicapped, bilingual, etc. to specific individuals at Head Start and elementary levels.
2. Provisions for coordination from Head Start through grade 3 of services to meet the educational and social needs of handicapped and bilingual children.
3. A coordinated parent involvement program from Head Start through grade 3.

Training

1. Provide training on decision making and policy making for members of decision-making groups.
2. Provide training on the goals and objectives of both the Head Start and elementary programs.
3. Provide training to make staff and volunteers sensitive to special needs of handicapped children.
4. Provide training for parents in how to work with teaching and administrative staff.
5. Provide training for classroom volunteers.
6. Provide training for parents in how to work with their own children.
7. Provide training for parents in child growth and development.

Table 1
(continued)

Training (continued)

8. Provide training for parents in available community resources.
9. Provide training for teaching staff in meeting the needs of bilingual children.
10. Provide training for teaching staff in the principles of first aid, health, and safety practices.

Communication and Coordination

1. Communication between decision-making bodies and Head Start and elementary school parents.
2. Regularly scheduled communication and coordination between Head Start and elementary teaching staff.
3. Continuity of record-keeping, Head Start through grade 3.

Provision of Services

1. Provision of a broad range of medical, dental, mental health, and nutrition services.
2. Comprehensive screening and diagnostic assessment of every child upon enrollment.
3. An annual survey to identify handicapped children.
4. Provision of an interpreter when needed.

At the Level of Classroom Activities

A Continuous Coordinated Curriculum

1. Develop or adopt a compatible, coordinated curriculum from Head Start through third grade.
2. Have a curriculum that facilitates the learning of basic educational skills for reading, writing, and computation.
3. Have a curriculum that provides continuity of educational and developmental experiences, Head Start through grade 3.
4. Develop a curriculum plan that includes goals and objectives statements in each subject or developmental area.

Table 1
(continued)

Individualized Instruction

1. Curriculum must be developmentally appropriate.
2. Instruction must be individualized.
3. Develop a diagnostic and evaluative system that enables teacher to pinpoint developmental levels of each child based on the child's diagnosed strengths and weaknesses.
4. Former teachers consulted when planning educational objectives.

Multicultural Perspectives

1. Provide bilingual/multicultural classroom activities, materials and resource persons for all children.
2. Develop a compatible Head Start-elementary school approach regarding bilingual education.

Classroom Services for Handicapped Children

1. Handicapped children mainstreamed to the maximum extent possible.
2. Early diagnosis and evaluation of children with learning disabilities.
3. Special materials, structural changes, or classroom reorganization provided as appropriate for accommodating handicapped children.

Whole-Child Perspective

1. Have a curriculum that encourages the physical and social-emotional growth of children.
2. Health education and nutrition integrated with other educational objectives and activities.
3. Meals and snacks used as an opportunity for learning.
4. Provide nutritional services that reinforce good aspects of foods served at home.
5. Familiarize children with health services they will receive prior to delivery.

Use of Community Resources

1. Bilingual/multicultural resource persons used in the classroom.

Table 1
(continued)

At the Level of the Home and Home-School Activities

Home-School Communication

1. Parents involved in planning educational objectives for their children.
2. Parents given summary of records on health, medical services and immunization.
3. Parents familiarized with available health services.

Parent Involvement in School Life

1. Parents involved in all decision-making bodies.
2. Parents involved in all school decisions.
3. Activities provided for parents that relate to cultural dynamics.
4. Parents used as resource persons in the classroom.
5. Parents involved in classroom activities, special parent events, activities that stress home-school continuity.
6. Parents involved as observers, aides or volunteers in the classroom.

Home Activities with Children

1. Parents encouraged to become involved in health care process.

as well. First, PDC is not a static program, launched and maintained by an immutable set of guidelines. Local programs through their experiences and interactions with national ACYF staff have created altered perceptions of what PDC is and should be. These altered perceptions had to be accommodated in the evaluation design. Second, the PDC evaluation itself exists within a broader research and policy environment. New issues and questions are emerging regularly that could appropriately be addressed in the PDC evaluation without compromising the basic evaluation objectives. Consequently, certain research questions and variables have been added to the study in response to ACYF information needs that are not necessarily unique or even directly tied to the PDC treatment as defined in the guidelines. Finally, there are many audiences for the PDC evaluation, each with its own information needs. These audiences include policy makers in Washington, the research and evaluation community, and of course practitioners in the field. Insofar as possible, the needs of these audiences have been accommodated within the evaluation design.

Before outlining the research questions and associated variables for the evaluation, a few words are in order about the process that was used to develop the study. The RFP for the second phase of the evaluation specified that the contractor was to examine the impacts of the PDC program on children, on parents, on teachers, and on the schools and centers as institutions. The RFP also specified that these impacts were to be assessed using a variety of structured and unstructured methodologies, from classroom observations to interviews and document analysis.

Early in the contract, several representatives from the various constituencies of the PDC program were invited to High/Scope's Ypsilanti, Michigan headquarters to "brainstorm" about the PDC treatments and the impacts that could plausibly be expected in each impact domain. This panel included a coordinator from the PDC project in West Virginia, a technical assistance consultant familiar with several sites, and a former ACYF project officer familiar with ACYF's policies. The panel met with High/Scope staff for three days and produced a long list of (a) plausible impacts and (b) variables that might be measured to assess these impacts.

This initial and admittedly massive list of impacts was next sorted, pruned, refined, and revised by project staff and presented to the PDC Advisory Panel in October 1978. Breaking into work groups that concentrated on each impact domain, panel members worked with project staff to further prune the list and to establish priorities among the many variables that might be assessed in each area. This refined list became the basis for all instrument development. Further modifications and refinements have been made to this basic list as new information needs have been identified through ongoing interactions with PDC program staff at ACYF.

Research Questions, Constructs, and Variables

This phase of the PDC evaluation is designed to address three basic questions:

1. *What impact has the PDC program had on (a) children's development, (b) parents' knowledge and attitudes, (c) parents' behaviors, (d) teachers' attitudes and knowledge, (e) teachers' behavior and classroom activities, and (f) institutional policies and procedures?*

2. *Irrespective of treatment, what factors or patterns of factors help account for meaningful outcomes in each domain?*

3. *To what extent do these factors affect the relationship between the PDC program and its impacts?*

Stated differently, the first task of the PDC evaluation is to determine PDC program effects through comparisons of PDC and comparison teachers, parents, and children on selected variables. For example, the frequency of parent visits to PDC and comparison schools is compared to determine whether PDC has had any impact on that aspect of parent involvement in schools. The next task is to explain the results of these comparisons using whatever qualitative and quantitative information is available. For example, at sites where there are relatively few or no differences between PDC and comparison parents' involvement in the school, we may find that the comparison schools have instituted a parent involvement program patterned after PDC's. It might be reasonable to conclude from this that, contrary to appearances, PDC has indeed had an impact upon parent involvement in the schools in question, and that impact has diffused to the comparison institutions.

Having examined the similarities and differences between PDC and comparison groups along various dimensions, the final task for the evaluation is to examine the relationships among child, parent, teacher, institutional, and community variables, disregarding the PDC/comparison grouping. Extending the preceding example, we might discover that schools with active and successful parent involvement programs, be they PDC or comparison, tend to have similar institutional policies or procedures (such as regular newsletters, parent training programs, and designated parent involvement coordinators) that foster greater involvement by parents in school activities. While findings such as these may not reflect directly on the effectiveness of the PDC treatment, they would be of obvious interest to educators and policy makers wishing to expand the role of parents in school programs.

Constructs Addressed by the Evaluation

As we have said, a pervading concern in the design of this evaluation has been ensuring that the domains and variables measured are indeed relevant and appropriate to the objectives of the PDC program. The development process that was followed to accomplish this end has already been described. Following this process a set of constructs was identified in each impact domain for attention by the evaluation. These constructs are listed in Table 2.

For the most part, these constructs follow the conceptualization of the PDC treatment that was mapped in the program guidelines and refined by ACYF and project staffs (see Table 2). Thus, the constructs described in the table generally represent the areas in which PDC was supposed to have impacts, and areas in which the nature and direction of PDC/comparison differences could be predicted. There are some exceptions to this general rule, however. Most exceptions are found in the domain of Teacher Behaviors and Classroom Activities, where several constructs--Structure and Content of Classroom Environment, Classroom Climate, Intellectual Stimulation, Classroom Management, and Instructional Approach--were added despite the fact that the guidelines are virtually silent about the specific impacts that PDC should have in these areas. They were included in the evaluation because other research has indicated that behaviors in each may contribute significantly to child development outcomes. Although few hypotheses could be formulated about PDC/comparison differences in these areas, they were nonetheless included because of their potential utility in answering Research Questions 2 and 3.

Variables and Data Sources

For each construct in every domain an array of variables was identified through consultation with ACYF, local project staff, and outside experts, following the procedures outlined earlier. For each variable, decisions were made about the best sources of information and data collection methodology. Wherever possible an attempt was made to "triangulate" on the desired information by collecting data on the same phenomenon in multiple ways from different sources. Table 3 lists the data collection instruments and methods developed for the evaluation; more extensive descriptions of the instruments can be found in Volumes II, III, IV, and V of the series. The appendix in this volume contains a list of the variables addressed by the evaluation, the sources for information on each variable, and the hypothesized directions of treatment effects.

Table 2

Domains and Constructs Addressed by the PDC Evaluation

Child Development Outcomes

- Academic skills and abilities
- Health and nutrition status
- Social-emotional development
- Learning attitudes
- Classroom behavior

Parents' Behaviors

- Role of parents in school life
- Parent-child activities in the home

Parents' Knowledge and Attitudes

- Parents' attitudes toward the school as an institution
- Parents' perceptions of the schools' help in meeting the needs of their families

Teachers' Behaviors and Classroom Activities

- Structure and content of classroom environment
- Delivery of special services to children
- Classroom climate
- Meeting needs of handicapped children
- Intellectual stimulation
- Home-school continuity
- Contacts with other teachers
- Instructional approach
- Classroom management
- Individualization of instruction
- Use of community resources
- Meeting affective/emotional needs
- Multicultural perspective

Teachers' Attitudes

- Attitudes toward parental involvement
- Perceptions of change
- Attitudes toward the school/center

Institutional Policies and Procedures

- Planning and decision making
- Provision of services
- Use of community resources
- Communication and coordination
- Training

Table 3

Data Collection Methodologies*

Child Development Outcomes

Instrument	Type	Abbreviation
Peabody Individual Achievement Test	Individually administered published test	PIAT
McCarthy Scales of Children's Abilities	Individually administered published test	MSCA
Bilingual Syntax Measure	Individually administered published test	BSM
Preschool Interpersonal Problem Solving Test	Individually administered published test	PIPS
Child Interview	Semistructured interview followed by interviewer ratings	CI
Child Rating Scale	Teacher ratings of individual children	CRS
Pupil Observation Checklist	Tester ratings of child's behavior during test administration	POCL

Parents' Attitudes, Knowledge, and Behaviors

Parent Interview	Structured interview with parents of children in test cohort	PI

*See Appendix A for complete descriptions of instruments.

Table 3
(continued)

Teachers' Attitudes, Knowledge, and Behaviors

Instrument	Type	Abbreviation
Teacher Interview	Structured interview	TI
Classroom Environment Observation	Checklist and rating form	CEO
Classroom Activities Record	Time-sampling observation and rating form	CAR
Focused Observations	Semistructured observations and rating form	FO

Institutional Policies and Procedures

Administrator Interview	Structured interview	AI
Case Studies	Documents prepared by Pacific Consultants for ACYF in 1978-79	--
Site Visits	One-week visits by High/Scope staff	--
Site Records	Minutes, training records, etc. kept by local project staff	--

III

METHODS

Data Collection Procedures

To establish a data collection routine that would result in data of the highest possible quality, the procedures followed in the preceding data collection periods were continued, with minor modifications:

- An organizational structure for individuals involved in the data collection effort was outlined, role responsibilities were defined, and detailed training manuals were produced.
- Training models were designed that specified tester and observer performance standards and provided for sessions with large-group, small-group and individualized instruction, daily reviews of each field staff's performance, and discussion of potential problems.
- Onsite monitoring of field staff by trainers was conducted prior to the start of the actual data collection.
- During the data collection period, testers were responsible for monitoring each other's performance on a weekly basis.
- Site coordinators collected completed data each week and checked it for obvious errors or omissions before sending it to the High/Scope Foundation.

Each of these procedures is discussed below.

Field Organization

Job announcements for tester and/or observer positions were posted in all sites by the local PDC staff. Applicants were then interviewed by High/Scope staff and final hiring decisions were based on their teaching experience (in the case of observers) or experience in working with children (in the case of testers), as well as their performance on a mock test or interview and their perceived ability to interact effectively with school staff. The roles of the personnel who conducted field data collection (observers and testers) were explicitly defined in the High/Scope PDC Field Procedures Manual in order to clarify and systematize responsibilities in administering the spring 1979 measures, which included[1]:

[1]For detailed descriptions of these measures, see Volumes II, III, IV and V in the series.

1. First grade child measurement battery:

   - Peabody Individual Achievement Test (PIAT)
   - McCarthy Scales of Children's Abilities (MSCA)
   - Bilingual Syntax Measure (BSM)
   - Preschool Interpersonal Problem Solving Task (PIPS)
   - Child Rating Scale (CRS)
   - Pupil Observation Checklist (POCL)
   - Child Interview (CI)

2. Structured interviews:

   - Teacher Interview
   - Parent Interview
   - Administrator Interview

3. Observation System

   - Classroom Environment Observation (CEO)
   - Classroom Activities Record (CAR)
   - Focused Observations (FO)

The observers were responsible for conducting the classroom observations and the teacher interviews while the testers collected the child data. The Parent Interview and Administrator Interview were administered by both testers and observers, although this procedure varied from site to site depending on the workload of each group. In addition to actual testing, interviewing and observing by field staff, one tester and observer from each site was designated site coordinator. Site coordinators' responsibilities, in part, included informing the site's PDC coordinator about the start of the data collection; setting up and chairing a meeting with the first grade teachers involved in the evaluation, or contacting them individually; maintaining regular contact with High/Scope's liaison person to monitor the site's data collection effort and to discuss any problems the site was experiencing; and checking the completed data each week before mailing the forms to High/Scope for processing. From start to finish the data collection effort took approximately nine weeks at each site.

Training Procedures

Training sessions for both High/Scope trainers and PDC data collection field staff were held in March 1979 at the High/Scope Conference Center in Clinton, Michigan. Since all five High/Scope tester-trainers had been involved in previous PDC training sessions, a brief, one-day session was scheduled for them during which they reviewed and practiced the child

measures and discussed the tester-training agenda and training methods. There was no training session, per se, for the High/Scope observer-trainers, since all three trainers had been involved in the three-month-long process of developing the High/Scope PDC Observation System. PDC field staff (observers and testers) attended separate training sessions for most of the time; a seven-day training workshop was scheduled for observers while the testers attended a four-day training session. Training sessions attended by both observers and testers included those on interviewing techniques and field logistics.

Tester training. During the tester training session, each test was presented and practiced in small groups. Practice sessions involved the use of test "scripts" which consisted of test instructions, child responses, and rationales for scoring. In using the scripts, two testers would pair up and one (the "child") would perform as indicated on the script while the other tester administered the test without the script. This provided an excellent learning situation because the child responses included in the script covered all the administration rules and gave the testers a chance to work with and correct each other. Also, since the majority of testers were experienced PDC testers they were able to help the new testers with test administration procedures and give advice on their "tried and proven" techniques for establishing rapport and interacting with children and teachers.

In order to insure that testers administered the tests in a standard manner, each tester was systematically "checked-out" on all of the child measures before the end of the training session. During this procedure, a High/Scope trainer played the role of the child (also recording the "child's" responses) while a tester administered one or more of the child measures to her. The High/Scope trainer (acting as the child) responded in standard ways to each item on each test in order to insure that : (1) each tester was exposed to the same situations, and (2) the trainer could assess the tester's handling of critical child responses. For example, on the Child Interview, there are specific things for a tester to say if a child gives an unrelated answer, a repeated answer, refuses to answer, and so on. By exhibiting all these behaviors in the check-out situation, trainers were able to assess the tester's understanding and expertise in administering each of the child measures.

Standards were set for acceptable performance during the tester check-outs, and if these standards were not met, additional training and practice was prescribed. Check-outs were then repeated at a later time during the training session to insure correct test administration.

Interviewer training. The High/Scope PDC Interviewer's Manual was distributed to the entire group at a joint training session and sections pertaining to pre- and post-interviewing activities and interviewing techniques were read and discussed with the entire group. The training for observers then focused specifically on the administration instructions for the Teacher Interview. Observer-interviewers were trained in using the Teacher Interview Global Ratings by listening to audiotape recordings

of staged interviews and completing the ratings based on what was heard. The tester training focused on preparing testers to administer the Parent Interview and Administrator Interview. In those sites where the observers were also going to conduct parent and/or administrator interviews, training for the observers was provided by the site's testers.

Observer training. Training in the three components of the observation system relied on a variety of activities and subsequent group discussions to bring the observers to criterion levels of performance. Training in the Classroom Activities Record (CAR) and Focused Observations (FO) began with a large-group discussion of the forms and coding categories, followed by application of these categories to scenarios created by the High/Scope trainers. After becoming familiar with the basic category definitions, observers practiced by viewing videotapes of actual classroom activities and coding the activities. Again, individual judgments were discussed in a large-group session. Skill levels were checked at the end of the training using a criterion videotape that all trainees observed and coded. Training in the Classroom Environment Observation (CEO) was accomplished in small groups using color slides of classrooms. Separate carousels were set up in various locations around the training facility, with each carousel containing a set of slides from a single classroom. Observers worked in teams of three to observe each set of slides and complete the CEO form as a group. Criterion performances were then checked by having all trainees observe and rate slides of a single classroom and then compare their judgments with those of the trainers.

Monitoring

Onsite tester monitoring. Onsite monitoring occurred the week following the training session in all sites where new testers had been hired. During the monitoring session each of the testers administered the PDC measures to a child while a High/Scope trainer observed the interaction. After the session, the High/Scope trainer provided feedback (if necessary) to the tester on ways to improve her interactions with children. This monitoring procedure served two purposes: (1) it gave the trainer an indication of how well the new tester was able to establish rapport and interact with children; and (2) it helped alleviate some of the anxieties the inexperienced testers felt about administering the measures to children. The tester also administered the Parent Interview to a local parent while the trainer-monitor observed her. Again, the tester's performance was discussed and additional training was provided if necessary.

Onsite observer monitoring. The onsite monitoring of observers at all sites was the responsibility of the High/Scope observer-trainers and occurred during the week following training. Each observer was required to tape-record an interview with a teacher and to complete the global ratings of that interview. These tapes were evaluated by the High/Scope monitor and discussed with the observer during the monitoring visit. Monitoring of the various components of the classroom observation system was accomplished by having all of the observers at a particular site spend one day together

in a classroom with the High/Scope monitor and use all components of the observation system. Global ratings of these observations were then completed separately by the observers and monitor. Following these observations and ratings the observers and the monitor met as a group to discuss their judgments. Additional training was then provided as necessary.

Weekly tester monitoring. During the course of each testing week, testers at each site alternately monitored each other. One tester acted as monitor and simultaneously completed the test booklets and the individual monitoring forms for each test. After the session, the "monitor" and tester discussed any errors and the monitoring booklets and forms were sent to the supervisor of field operations at the High/Scope Foundation to be reviewed.

Weekly Pre-Transmittal Data Checks

Both observers and testers were required to give or send their completed data to their respective site coordinators at the end of each week. These staff then checked the tests, observation booklets and interview forms for recording/scoring errors. (Site coordinators and testers reviewed a checklist specifying what to look for when reviewing each completed booklet, e.g., "Is the identification complete?" "Did the interviewer fail to give a second trial when it should have been given?" "Did the interviewer skip an item?") Errors were pointed out to the particular tester or observer and, if necessary, further training was provided by the site coordinator. The site coordinators also kept track of all completed data (in addition to the individual records each tester and observer kept) and were responsible for mailing the completed data to the High/Scope Foundation on a weekly basis.

Recording and Scoring of Data

In addition to the site coordinators' pre-submittal check, data collected by the testers and observers were also checked by the supervisor of field operations at the High/Scope Foundation. The supervisor of field operations identified any errors in recording or coding and notified the site coordinators, who then discussed the errors with the testers and observers at the site.

Once the raw data were screened for accuracy at High/Scope, they were sent to the Foundation's data processing section to be tagged with unique identification numbers for each student, teacher, parent and administrator, scored and verified, and then keypunched and verified.

Data Collection Sequence

Once the sample children for the evaluation were located in the district schools, the field staff divided the classes among themselves. In making these divisions two factors were taken into account: (1) the order in which the classes were to be completed was such that testers and observers would be collecting data simultaneously in the PDC and comparison schools, and (2) each field staff member would be testing or observing in both PDC and comparison classes, thus eliminating the possibility of tester or observer bias for either group.

Data Analysis Procedures

Six types of analyses were performed on spring 1979 data:

- descriptive characteristics of PDC and comparison group samples for which data were collected in spring 1979;
- attrition patterns in the spring 1979 samples, and their consequences;
- characteristics of the instruments in the spring 1979 PDC battery;
- effects of the PDC program on participating children, both over time and as of spring 1979, when most of the children were in grade 1;
- analyses of effects of PDC on parents, on classrooms and teachers, and on schools and institutional settings;
- analysis of relationships among teacher, parent and child variables.

Brief descriptions of the procedures used in these analyses are given below.

Descriptive Characteristics of the Samples

In order to understand the composition of the PDC and comparison samples for which data were collected in spring 1979, descriptive statistics were computed and tabulated for these samples at each site and for all sites combined. There are descriptive statistics for the full sample of children tested, for the sample of parents interviewed, for the sample of teachers interviewed, for the sample of classrooms observed, and for the sample of administrators interviewed.

Previous reports have defined an analytic subsample for child-level analyses, a subsample which excluded children with defined handicaps or with a dominant language other than English. The analytic subsample, in other words, has in the past been smaller than the full sample for whom data were collected. In analyses of spring 1979 data, the full sample was employed except for longitudinal designs including pre-1979 data where children judged to be Spanish-dominant had to be excluded. The rationale for inclusion of handicapped and Spanish-dominant children in the analytic sample for this report is discussed in Volume V of this series.

Attrition Patterns

Representativeness of remaining sample children. Children who departed the PDC and comparison group samples through spring 1979 were compared with the children remaining in the study samples on a number of background variables and on fall 1976 test scores. The purpose of these analyses was to determine whether any differences between these two groups of children could be identified; such differences would indicate that selection effects had operated to diminish the representativeness of the samples remaining. The hypothesis of attrition-induced changes in the samples was evaluated by means of univariate and multivariate one-way analyses of variance, and for nominal data by chi-square analyses.

Comparability of remaining samples. The samples of PDC and comparison group children tested in spring 1979 were compared on background variables and entry-level test scores to determine whether these groups might still be considered equivalent in their characteristics at the time of program entry (fall 1976). Again, univariate and multivariate one-way analyses of variance and chi-square tests were employed.

Characteristics of the Instruments

Child impact measures. Because the principal instruments assessing child-level outcomes in the spring 1979 testing battery have, in earlier PDC analyses, passed through at least two screenings based on psychometric criteria, no further screening was considered necessary before data collected with these instruments were entered into outcome analyses. Psychometric analyses were performed principally for purposes of further instrument definition and documentation. These analyses included:

- overall central tendency, dispersion and distributional characteristics of summary scores or scale scores (usually as means, standard deviations and histograms)
- assessments of reliability (as internal consistency estimates)
- assessments of validity
- assessments of stability

- assessments of sensitivity to change
- variable intercorrelations
- factor structures
- relation to an assessment of "social competence"

Parent, child and teacher interviews. Since spring 1979 was the first year in which these instruments were administered, scaling and scoring procedures used to report results from these instruments were kept at a fairly direct, item-level approach in many cases. To this point, analyses of these instruments have focused mainly on item properties in order to guide instrument modifications where required for spring 1980 re-administration. Consequently, findings remained primarily at the item level. Where appropriate, however, scale properties were produced, including internal consistency and item intercorrelation values. At the item level, the principal data consisted of central tendency, dispersion, and distributional values for each item.

Classroom observation system. The full system of classroom observation data can be broken down, for instrument-description purposes, into three parts:

- questions about the classroom environment (21 questions from the Classroom Environment Observation);
- global and summary ratings (five-point scale questions from the Classroom Environment Observation, Classroom Activities Record and Focused Observation Instruments I, II and III);
- the transformed (classroom-level) variables summarizing the Classroom Activities Record sheets for each classroom.

The questionnaire items from the Classroom Environment Observation are described in Volume IV in terms of the overall response distributions for each question. Global and summary ratings are described in terms of response distributions for each scale item as well as scale totals.

Analytic Strategies for Examining PDC's Influence

Analytic strategies for measuring PDC's effects are described briefly here.

Strategies for examining PDC's influence on children. A number of analytic questions were posed:

1. *Is there a difference in the growth curves of the PDC and comparison groups over time, considering each outcome measure separately?*

2. *Has a difference between the PDC and comparison group children emerged between assessments in the spring of their kindergarten year and spring of their grade 1 year, considering each outcome measure separately?*

3. *Is there a difference between the PDC and comparison groups in outcome profiles combining all child impact measures obtained in spring 1979?*

These questions were addressed through multivariate analyses of covariance. The first two analytic questions were addressed by means of multivariate repeated measures analyses that examine one outcome area at a time, testing simultaneously for the occurrence of longitudinal growth trends and for the occurrence of different change patterns subsequent to children's kindergarten year. The third question was addressed through a single cross-sectional multivariate analysis of variance incorporating all child-outcome measures obtained in spring 1979 as dependent variables. Covariance adjustments of the data were performed in order to adjust for differences between treatment groups at entry, and to adjust for differences between treatment groups associated with sex, ethnicity and prior preschool experience.

Strategies for examining PDC's influence on parents. Analyses conducted for this interim report examining the issue of PDC's effects on parents concentrate on the identification of item-level differences between PDC and comparison parents in their responses to Parent Interview questions. Although additional research questions have been specified in this domain, the analyses necessary to answer them must await the preparation of summary and scaled variables.

Analytic techniques used to contrast PDC and comparison group parents' responses to the Parent Interview involve nominal- and ordinal-scale two-group comparison tests, such as chi-square.

Strategies for examining PDC's influence on teachers and classrooms. As for the data on parents, analyses in this interim report examining PDC effects on teachers and classrooms emphasize the identification of differences between PDC and comparison group teachers, and between classrooms in the two groups. Answers to more complex research questions already posed will be available in the future, as aggregate scales are studied and more complex summary variables prepared and analyzed.

PDC and comparison groups are compared on items and scales of the Teacher Interview, as well as the questions, summary and global ratings scales of the Classroom Observation System. As with Parent Interview data, analytic techniques used involve two-group comparisons and differ according to whether the variables are nominal, ordinal or interval in scale.

Strategies for examining PDC's influence on institutions. The spring 1979 Administrator Interview focused on:

- the ways in which decisions are made in school affairs
- the decision-making roles of various persons in the schools and centers
- the influences that might affect the ways in which teachers, parents and administrators assumed these roles.

In the present report, we examine the differences between PDC schools and centers and comparison institutions at the level of the items of the Administrator Interview, and we consider in a preliminary way the formation of more complex summary variables to deal with these issues. Although additional research questions have been specified at the level of institutional impacts, examination of these questions must await revision of summary variables and the integration of contextual and situational descriptions with Administrator Interview responses.

Analytic techniques used to contrast PDC and comparison group administrators' responses involved nominal- and ordinal-scale two-group comparison tests.

Strategies for examining relationships among teacher, parent and child variables. We have undertaken a preliminary examination of two fundamental questions:

- What is the relationship between variables in the various domains potentially affected by the PDC program, regardless of treatment?
- To what extent does the PDC program serve to modify these relationships?

These questions are addressed by examining the relationships between variables in the teacher, parent and child outcome domains. Our findings are presented in the several volumes of the present interim report.

In the volume on teachers, relationships between those teacher background characteristics, attitudes and behaviors thought to be affected by educational programs such as PDC are examined for all teachers regardless of treatment group. The relationships are then re-examined for evidence of interaction with the educational treatment.

In the volume on parents, relationships are examined in the same way between family background characteristics and possible program outcomes for parents.

In the volume on child impact measures, the relationships between parent and teacher background characteristics, as well as teacher outcomes, and child outcome measures for grade 1, are examined. Additional analyses explore the impact of educational treatment on the relations found.

Strategies used to examine relationships across the different domains are similar in all of the volumes. To answer the first of the two questions posed above, two-variable association patterns are examined for each pair of background and outcome variables. For instance, in the volume on parents, the relationship between maternal employment and participation in school committees is studied. To answer the second question, the relation between treatment and outcome is examined for each level of a background variable. Thus, in the above example for the volume on parents, the relationship between educational treatment and participation in school committees is examined separately for families with working mothers and families in which the mother is not working.

It is recognized that this strategy of successive two-variable comparisons is limited, in that it ignores issues of interrelation between variables within the same domain. In other words, it acts as though family background characteristics, for instance, were independent from one another, when it is known that they are not. Analyses of variable interrelations in this interim report, therefore, are presented as purely preliminary examinations of these important questions for PDC. Consequently, we view these analyses only as a test of whether such relations can be assessed with the study sample, as well as to identify the problems in their assessment through actual trials.

Techniques used for two-variable comparisons differ depending on the scale and level of each of the variables, and are described in the corresponding sections of each volume.

IV

SUMMARY

This volume is the first of a series reporting evaluation findings on the impact of Project Developmental Continuity (PDC) as of spring of the test-cohort children's first grade year (1979). It is intended as an introductory volume to the PDC program and to the purpose, methods and guiding framework of the longitudinal evaluation designed to assess PDC's impact on participating institutions, teachers and classrooms, parents and children. We have presented a brief history of the PDC program and its evaluation, described the overall design of the longitudinal study and reviewed what data were available for analyses as of spring of the test-cohort children's first grade year (1979). In addition, we have described the conceptual framework guiding the study of PDC processes and effects and the data collection and analysis procedures being used throughout.

The actual impact findings as of spring 1979 are contained in the five other volumes of the series (Volumes II-VI). Although important, the findings contained in those volumes are incomplete in terms of time, since many of our expectations for a program that changes the ways schools operate require years to be realized. Findings are also incomplete in terms of their breadth and depth. The volumes present the most basic analyses of the program's influence on children's development, on parents, on teachers and classrooms, and on the school system. There is a need to delve in future volumes into more complex relationships between parents and the schools, between classrooms and the children, and so forth, in order to better understand the nature of and reasons for PDC's influence. Because of the unique nature of the PDC demonstration project, that kind of search has great potential for providing information to program planners and policy makers in ACYF and other agencies concerned with preschool and early elementary education. PDC represents a very important Head Start innovation from a number of perspectives. From a developmental learning perspective, the proper degree of continuity of experience should enhance children's capacity to assimilate new experiences. From a teaching perspective, a concern with continuity should result in greater awareness of each child's educational needs and abilities and more appropriately designed classroom experiences. From a service-delivery perspective, the coordination fostered by PDC should result in more complete attention to children's needs, as well as to more efficient and economical services.

But perhaps the most significant contribution of PDC will be judged to be the coordination that was developed between Head Start programs and public schools and between school and home. Seymour Sarason has argued that Head Start in the 1960s began by attempting to "inoculate" children against the "disease of nonlearning" produced by schooling (Sarason, 1978, p. 837). By adopting this focus, Head Start created tensions between Head Start programs and the schools: "The net result was a further polarization between Head Start personnel and families, on

the one hand, and school personnel, on the other hand" (Sarason, 1978, p. 838). Many of the critical elements of PDC have been designed to reduce this polarization and to set the stage for the enhancement of children's learning.

As students of the educational change process have observed, however, basic, systemic changes do not happen quickly. In the five years of PDC's existence we have witnessed many important changes, some even dramatic and profound within local contexts. Whether these changes will ultimately lead to visible differences in the development of children is one of the most critical questions facing the PDC evaluation.

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Appendix

PDC VARIABLES
DATA SOURCES AND HYPOTHESES

Child Development Outcomes

Academic Skills and Abilities

Variables	Sources	Hypotheses
Reading recognition	PIAT	PDC > COMP
Math computation	PIAT	PDC > COMP
Verbal fluency	MSCA	PDC > COMP
Syntactic development	BSM	PDC > COMP
Progress in school	P. Int.: Ilm	PDC > COMP
Retention in grade	School records	PDC > COMP
Special education placement	Attendance & handicap info sheet	PDC > COMP

Health and Nutrition Status

Variables	Sources	Hypotheses
Height for age	Height and weight	PDC > COMP
Weight for height	Height and weight	PDC < COMP
Nutrition, knowledge, attitudes and habits	Child Interview	

Social-Emotional Development

Variables	Sources	Hypotheses
Attitude toward teacher	Child Interview: Part I	PDC > COMP
Sociability	POCL: 1	PDC > COMP
Aggressiveness	CRS: 2	
Dependence	CRS: 3	COMP > PDC
Self-assurance	CRS: 1	PDC > COMP
Social problem-solving	PIPS	PDC > COMP

Learning Attitudes

Variables	Sources	Hypotheses
Attitude toward school	PI:11i,11p	PDC > COMP
Engagement in school-related work at home	PI:12,13,14,15,16b,17	PDC > COMP
Attitude toward reading	Ch. Int.: Part II	PDC > COMP
extent of reading in school	1	
extent of reading outside school	2	
average extent of reading	mean of 1 & 2	
purpose of reading	mean of 3 & 4 (or sum)	
variety in reading	mean of 5 & 6	
Task orientation	POCL:2	PDC > COMP
Academic motivation	CRS:4	PDC > COMP
Attendance	Attendance & Handicap info sheet	PDC > COMP

Classroom Behavior*

Variables	Sources	Hypotheses
Child initiated interactions with teacher	FO: GR191/CAR: GR28	PDC > COMP
Children's attention to learning activities	FO: GR20	PDC > COMP
Children's respect for parents in the classroom	CAR: GR30	PDC > COMP
Level of classroom disruption	CAR: GR10	PDC < COMP
Noise level	FO: GR13	PDC < COMP
Respect for teacher and aide	FO: GR15/CAR: GR41,42	PDC > COMP
Cooperation with teacher	FO: GR16	PDC > COMP

*All data relating to child variables are at the classroom level.

Parent Behaviors

Role of Parents in School Life

Variables	Sources	Hypotheses
Parent involvement in school decision-making		
Making decisions about nature and operation of the program	AI: 1-6,11,12-17,22-27, 33-39,44-45,47,49,51,53	PDC > COMP
Making decisions on PDC Council, about curriculum goals, methods	PI: 6	PDC > COMP
Involvement with child's teacher about educational objectives	TI: 12c-e,15	PDC > COMP
Parent attendance at school for any reason	PI: 3	PDC > COMP
Parent involvement in classroom activities		
Nature of role in classroom resources person (BL)	PI: 4,6,8 / CAR	--
Frequency of participation	TI: 13,14,26f,h	PDC > COMP
Number of classrooms with parents present	CAR	PDC > COMP
Average amount of time spent by parents in classroom	CAR	PDC > COMP
Role of parents:	CAR	--
Circulating		
Large groups		
Small groups		
Individual ch.		
Content focus of parents:	CAR	--
Math		
Reading		
Etc.		
Evidence of parent involvement found in wall displays, notices	CEO	PDC > COMP
Rating: Evidence of efforts to involve parents	CEO: GR8	PDC > COMP
Rating: Do parents seem at ease in class?	CAR: GR29	PDC > COMP
Rating: Children's respect for parents in class	CAR: GR30	PDC > COMP
Involvement in non-classroom school activities (parent workshops, community support for millage)	PI: 5a-b	

Role of Parents in School Life (cont.)

Number of parents who work in school and nature of that work		PDC > COMP
Paid/Volunteer	PI: 8a-d	
Classroom/Non-classroom	CAR	
Nature, frequency, and direction of communication between school and home	TI: 6,26e,k PI: 4,6,6a,7a,20b-c	PDC > COMP

Parent-Child Activities in the Home

Variables	Sources	Hypotheses
Frequency and nature of parent-child learning activities		
School-related home reading activities	PI: 18g,h,19	PDC > COMP
Parent-initiated home reading activities	PI: 14,15	PDC > COMP
Frequency and nature of other parent-child home activities, e.g., games, outings, shared chores	PI: 18a-f	PDC > COMP
Availability of books or magazines at home	PI: 12,18a-f	PDC > COMP
Approach to homework	PI: 16a	--
Frequency of someone reading with child at home	PI: 14	PDC > COMP

Parents' Knowledge and Attitudes

Parents' Attitudes Toward the School as an Institution

Variables	Sources	Hypotheses
Parent attitudes toward teachers	PI: 11a-c,e,g,j-m, o-q,20d,e	PDC > COMP
Attitudes toward formal education	PI: 11m	PDC > COMP
Perception of school's receptivity toward their wishes	PI: 11n	PDC > COMP
Perception of school's acceptance of them in school activities	PI: 11d,e,9,9a	PDC > COMP
Perception of PDC program effects on children	PI: 11i,p;15,17	PDC > COMP

Parents' Perceptions of the School's Help in Meeting the Needs of their Families

Variables	Sources	Hypotheses
Helpfulness of school re:		
Children's health care, use of health services	PI: 10g	PDC > COMP
Child management techniques	PI: 10d,i	PDC > COMP
Knowledge of child's special needs, ability to meet	PI: 10a,20a	PDC > COMP
Knowledge and use of community services	PI: 10g,h	PDC > COMP
Parental personal development	PI: 10f,e	PDC > COMP
Getting to know other parents	PI: 10c	PDC > COMP

Teacher Behaviors and Classroom Activities

Structure and Content of the Classroom

Variables	Sources	Hypotheses
Room Arrangement:	CEO	--
Stationary desks/chairs,		
Movable desks and chairs in well-defined rows		
Movable desks and chairs in small groups		
Seating at small tables--no desks and chairs		
Seating at desks--tables available as a work space		
Rating: Organization of materials	CEO: GR1	--
Rating: Diversity in children's displayed products	CEO: GR2	PDC > COMP
Rating: Spaciousness of classroom	CEO: GR3	--
Rating: Attractiveness of classroom	CEO: GR4	PDC > COMP
Rating: Stimulating environment for learning	CEO: GR5	PDC > COMP
Rating: Accessibility of materials	CEO: GR7	--
Amount of Posted Information	CEO	--
Amount of commercial displays/posters/exhibits	CEO	--
Amount of teacher-made displays/posters/exhibits	CEO	--
Amount of child-made displays/posters/exhibits	CEO	--

Structure and Content of the Classroom (cont.)

Number of learning centers	CEO	--
Diversity of materials in learning centers	CEO	--
Types of instructional materials	CEO	--
Diversity of instructional materials	CEO	--

Instructional Approach Used in the Classroom

Variables	Sources	Hypotheses
Time spent by average child on subject/tasks/activities:	CAR	--
Math		
Spelling/phonics		
Reading		
Oral language		
Expressive writing		
Writing mechanics/punct.		
Second language		
First language other then English		
Science		
Social Studies		
Arts/crafts		
Drama		
Music/movement/dance		
Projects		
Play		
Other group discussion		
Housekeeping/clean-up/chores		
"Language arts"		
"Art"		
Discipline		
Announcements/assignments, etc.		
"Academics"		
"Non-academics"		
Time spent by teachers on subjects/ tasks/activities (same categories as above)	CAR	--

Instructional Approach Used in the Classroom (cont.)

Variables	Sources	Hypotheses
Grouping patterns: Overall Time spent by average child: a. In large groups working with an adult b. In small groups working with an adult c. Working individually with an adult d. Working independently in small groups e. Working independently as individuals	CAR	--
Grouping patterns: Math (same categories as above)	CAR	--
Grouping patterns: Reading (same categories as above)	CAR	--
Teacher Role: Overall Average time spent by teachers: a. Circulating b. Working with large group of children c. Working with small groups d. Working with individual (1-2) children e. Not interacting with children	CAR	--
Teacher Role: Math (same categories as above)	CAR	--
Teacher Role: Reading (same categories as above)	CAR	--
Criteria for grouping: Overall Ad hoc Ability: H/M/L Heterogeneous Bilingual/bicultural Learning disabled/handicapped	CAR	--
Criteria for grouping: Math (same categories)	CAR	--
Criteria for grouping: Reading (same categories)	CAR	--
Materials used: Overall paper and pencil commercial texts/readers workbooks/worksheets other books/magazines flashcards	CAR	--

Instructional Approach Used in the Classroom (cont.)

Variables	Sources	Hypotheses
blackboard		
audiovisual		
learning machines		
games/puzzles		
Materials used: Reading (same categories)	CAR	--
Materials used: Math (same categories)	CAR	--
Materials choice: Overall	CAR	--
Adult		
Child		
Materials choice: Reading	CAR	--
Adult		
Child		
Materials choice: Math	CAR	--
Adult		
Child		
Who used materials: Overall	CAR	--
Teacher only		PDC < COMP
One child at time		--
Some children		--
All children		PDC > COMP
Who used materials: Math (same categories)	CAR	
Who used materials: Reading (same categories)	CAR	
Pacing: Overall	CAR	
Adult		
Child		
Pacing: Reading	CAR	
Adult		
Child		
Pacing: Math	CAR	
Adult		
Child		
Diversity of Activity: Overall	CAR	
High		PDC > COMP
Medium		PDC = COMP
Low		PDC < COMP
Diversity of Activity: Reading (same categories)	CAR	Same as above
Diversity of Activity: Math (same categories)	CAR	Same as above
Children out of classroom (average # minutes/class)	CAR	--

Instructional Approach Used in the Classroom (cont.)

Variables	Sources	Hypotheses
Teacher out of classroom (average # minutes/class)	CAR	--
Rating: Structure, Math	CAR: GR5	--
Rating: Structure, Language	CAR: GR1	--
Rating: Child planning, Language	CAR: GR2	--
Rating: Child planning, Math	CAR: GR6	--
Rating: Diversity of activity, Language	CAR: GR3	--
Rating: Diversity of activity, Math	CAR: GR7	--
Rating: Grouping, Language	CAR: GR4	--
Rating: Grouping, Math	CAR: GR8	--

Delivery of Special Services

Variables	Sources	Hypotheses
Resource staff in classroom (number of classrooms)	CAR	PDC > COMP
Resource staff time in classroom (average number of minutes)	CAR	PDC > COMP
Role of resource staff Circulating Large groups Small groups Individuals	CAR	--
Resource staff: subject/content (same categories as before)	CAR	--
Out-of-class services: special ed.	CAR	--
Out-of-class services: health	CAR	PDC > COMP
Out-of-class services: library or resource center	CAR	--
Physical accomodations for the handicapped	CEO: GR10	--

Classroom Management

Variables	Sources	Hypotheses
Level of classroom disruption: Overall	CAR	--
ch. in lg. group w/teacher		
ch. in sm. group w/teacher		
ch. individually w/teacher		
ch. in sm. group w/parent		
ch. in lg. group w/parent		
ch. individually w/parent		
ch. in lg. group independently		
ch. in sm. group independently		
ch. individually independent		
Classroom disruption	CAR	--
Teacher time spent: discipline	CAR	--
Teacher time spent: announcements, etc.	CAR	--
Rating: Time spent controlling misbehaviors	FO: GR7	--
Rating: Preventing spread of misbehaviors	FO: GR8	--
Rating: Ability to deal with more than one thing at a time	FO: GR9	--
Rating: Delays and disruptions	FO: GR10	--
Rating: Waiting for assignments and tasks	FO: GR11	--
Rating: Teacher reasoning about misbehaviors	FO: GR12	--
Rating: Noise levels	FO: GR13	--
Rating: Teacher poise in classroom	FO: GR14	--
Rating: Children's respect for teacher	FO: GR15	--
Rating: Children's cooperation with teacher	FO: GR16	--
Rating: Overall quality of management	FO: GR17	--
Rating: Children's freedom to interact socially	FO: GR18	--
Rating: Peer teaching	FO: GR23	--

Classroom Climate

Variables	Sources	Hypotheses
Rating: Teacher encouragement of children's work	FO: GR18	PDC > COMP
Rating: Child initiated interactions with teacher	FO: GR19	PDC > COMP

Classroom Climate (cont.)

Variables	Sources	Hypotheses
Rating: Children's attention to learning activities	FO: GR20	PDC > COMP
Rating: Encouragement to express personal experience, thoughts, etc.	FO: GR22	PDC > COMP
Rating: Were children treated fairly?	FO: GR24	PDC > COMP
Rating: Teacher enthusiasm	FO: GR26	PDC > COMP
Rating: Adult involvement and interest	FO: GR32	PDC > COMP
Rating: Adult support and encouragement of children	FO: GR33	PDC > COMP
Rating: Adult encouragement of children's competence	FO: GR34	PDC > COMP
Children's level of attention: Overall	CAR	PDC > COMP

Individualization of Instruction

Variables	Sources	Hypotheses
Adult/Child ratio: assigned	Basic Information Sheet	PDC > COMP
Adult/Child ratio: observed	CAR	PDC > COMP
Rating: Diversity of children's displayed work	CEO: GR2	PDC > COMP
Rating: Physical accommodations to handicapped	CEO: GR10	PDC > COMP
Rating: Evidence of children pursuing own interests	CEO: GR11	PDC > COMP
Rating: Diversity of activities, language arts	CAR: GR3 TI: GR3	PDC > COMP
Rating: Grouping, language arts	CAR: GR4 TI: GR4	PDC > COMP
Rating: Diversity of activity, math	CAR: GR7 TI: GR7	PDC > COMP
Rating: Grouping, math	CAR: GR8 TI: GR8	PDC > COMP
Rating: Individual pacing by children	CAR: GR9 TI: GR15	PDC > COMP
Rating: Sensitivity to special needs of handicapped ch.	FO: GR29	PDC > COMP
Discussed child needs with past teachers	TI: 9e	
Discussed need of children with resource people	TI: 9f	

Individualization of Instruction (cont.)

Variables	Sources	Hypotheses
Rating: Specificity of description	TI: GR9	
Rating: Level of record keeping	TI: GR10	
Rating: Knowledge of individuals	TI: GR11	
Rating: Individualization of instruction	TI: GR12, GR16	
Rating: Diagnostic system vs. general system	TI: GR13	

Use of Community Resources

Variables	Sources	Hypotheses
Frequency with which teacher uses community people/materials in the classroom	TI: 9h	PDC > COMP
Frequency with which teacher discusses roles/services provided by various community people	TI: 9i	PDC > COMP

Meeting the Needs of Handicapped Children

Variables	Sources	Hypotheses
Rating: Evidence of physical accomodations to handicapped children	CEO: GR10	PDC > COMP
Rating: Teacher encouragement of participation by handicapped children in classroom activities	FO: GR28	PDC > COMP
Rating: Teacher sensitivity to the special needs of handicapped children	FO: GR29	PDC > COMP

Meeting the Affective/Emotional Needs of Children

Variables	Sources	Hypotheses
Rating: Children encouraged to discuss personal experiences, thoughts, etc.	CAR: GR19 FO: GR22	PDC > COMP
Rating: Teacher warmth toward children	CAR: GR33 FO: GR27	PDC > COMP

Meeting the Affective/Emotional Needs of Children (cont.)

Variables	Sources	Hypotheses
Rating: Aide warmth toward children	CAR: GR34	PDC > COMP
Rating: Teacher encouragement	CAR: GR35	PDC > COMP
Rating: Adults try to make children feel wanted and accepted	CAR: GR39 FO: GR33	PDC > COMP
Rating: Adults try to make children feel competent	CAR: GR40 FO: GR34	PDC > COMP
Rating: Teacher handling of misbehaviors--reasoning vs. commands	FO: GR12	PDC > COMP
Rating: Children treated fairly and equitably	FO: GR24	PDC > COMP
Rating: Teacher sensitivity to affective needs of children	TI: GR14	PDC > COMP

Intellectual Stimulation

Variables	Sources	Hypotheses
Rating: Attractive/stimulating physical environment	CEO: GR4	--
Rating: Stimulating envirnment for learning	CEO: GR5	--
Rating: Instructional mode instructing vs. questioning	CAR: GR16	--
Rating: Extent of peer teaching, cooperation	CAR: GR18	--
Rating: Encouragement of children to discuss personal experiences, etc.	CAR: GR19	--
Rating: Encouragement of peer teaching	CAR: GR27	--
Rating: Stimulating environment for learning	CAR: GR31	--
Rating: Teacher encouragement of children's work	CAR: GR35	--
Rating: Teacher probing of children's statements	FO: GR1	--
Rating: Teacher encouragement of peer cooperation	FO: GR2	--
Rating: Teacher directing children to other resources	FO: GR3	--
Rating: Type of teacher questions, divergent vs. convergent	FO: GR4	--

Intellectual Stimulation (cont.)

Variables	Sources	Hypotheses
Rating: Teacher encouraging children to figure things out for themselves	FO: GR5	--
Rating: Teacher tries to get children to understand "why", not just facts	FO: GR6	--

Multicultural Perspective

Variables	Sources	Hypotheses
Frequency w/which teacher used materials/activities of cultures represented among students	TI: 9k	PDC > COMP
Rating: Promoting cultural understanding	CEO: GR6	PDC > COMP
Rating: Support for MC learning	CEO: GR9	PDC > COMP
Rating: Involvement of MC kids in activities	CAR: GR21	PDC > COMP
Rating: Promoting cultural understanding	CAR: GR22	PDC > COMP
Rating: Participation MC activities	CAR: GR23	PDC > COMP
Rating: Involvement of MC kids in activities	FO: GR30	PDC > COMP
Rating: Promoting cultural understanding	FO: GR31	PDC > COMP

Cross-Grade Continuity(Contacts with Other Teachers)

Variables	Sources	Hypotheses
Frequency of participation with teachers at same grade level on task force to plan curriculum	TI: 9a	PDC > COMP
Frequency of participation with teachers at other grade levels on task force to plan curriculum	TI: 9c	PDC > COMP
Frequency of informal meetings with same grade level teachers to plan classroom activities	TI: 9b	PDC > COMP

Cross-Grade Continuity (cont.)

Variables	Sources	Hypotheses
Frequency of informal meetings with other grade level teachers to plan classroom activities	TI: 9d	PDC > COMP
Frequency of discussion with past teachers of individual children	TI: 9e	PDC > COMP
Frequency of visits to HS centers (el schools)	TI: 9g	PDC > COMP
Frequency of visits and observations of other teachers in school	TI: 9j	PDC > COMP
Frequency of visits and observations of teachers in other schools	TI: 9l	PDC > COMP

Home School Continuity

Variables	Sources	Hypotheses
Average number of home visits conducted	TI: 11	PDC > COMP
Purpose of home visits:		
Inform parents of school happenings	TI: 12a	PDC > COMP
Get acquainted with parents	TI: 12b	PDC > COMP
Purpose of home visits:		
Get parent input re: teaching objectives	TI: 12c	PDC > COMP
Discuss home activities parents can do with their children	TI: 12d	PDC > COMP
Discuss educational/social problem of child	TI: 12e	PDC > COMP
Discuss parent's complaints about school	TI: 12f	PDC > COMP
Other	TI: 12g	PDC > COMP
Average % of parents who come to routine conferences	TI: 14g	PDC = COMP
Average % of parents who discussed problems with teacher	TI: 14k	PDC > COMP
Frequency of other kinds of contacts with parents (phone, letter, etc.)	TI: 16	PDC > COMP

Home School Continuity (cont.)

Variables	Sources	Hypotheses
Rating: Extent to which teacher is coordinating home & school	TI: GR20 FO: GR25	PDC > COMP
Parent behavior to assure continuity of experience for their children	PI: 18e-h,19	PDC > COMP
Rating: Teacher behavior to assure continuity of experience	FO: GR25	PDC > COMP
Rating: Parents comfortable in, listened to in classroom	CAR: GR29,30	PDC > COMP

Teacher's Knowledge and Attitudes

Attitudes Toward Parental Involvement

Variables	Sources	Hypotheses
Teachers' perceptions of advantages of parent involvement	TI: 17	--
Teachers' perceptions of disadvantages of parent involvement	TI: 18	--
Rating: Extent of teacher effort to invite parents into room	TI: GR17	PDC > COMP
Rating: Extent of teacher comfort in having parents in the room	TI: GR19	PDC > COMP
Rating: Extent of teacher concern for involving parents	TI: GR21	PDC > COMP
Rating: Extent to which teacher involved parents in activities in the classroom	TI: GR18	PDC > COMP

Attitudes Toward School/Center

Variables	Sources	Hypotheses
School/center as desirable place to work	TI: 27,28	PDC > COMP
Would teacher recommend school to parent?	TI: 29,30	PDC > COMP
PDC as desirable place to work	TI: 33,34	--
Would teacher recommend PDC to parent?	TI: 35,36	

Perception of Change

Variables	Sources	Hypotheses
Amount of change since 1975 in:		
Classroom content	TI: 26a-d,g	PDC > COMP
Home-school links	TI: 26e,k	PDC > COMP
Parent involvement	TI: 26f,h	PDC > COMP
Intraschool continuity	TI: 26i,j,l,m	PDC > COMP
Use of community resources	TI: 26n	PDC > COMP
MC perspective	TI: 26o	PDC > COMP
Health/nutrition activities	TI: 26p	PDC > COMP
Teacher/principal interactions	TI: 26q	PDC > COMP

Institutional Policies and Procedures

Planning and Decision-Making

Variables	Sources	Hypotheses
Formality of provisions for involvement of teachers, parents, and others in decisions about classroom curriculum/individualized instruction/resource allocation/personal matters	Administrator Interview (AI) Variables 10,19,28, 67,76,85,124,133,142, 181,190,199	PDC > COMP
Frequency of provision for formal involvement of teachers, parents, and others in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 37,47, 57,94,104,114,151, 161,171,208,218,228	PDC > COMP
Diversity of people involved individually/informally/formally in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 11-18 20-27,29-36,68-75, 77-84,86-93,125-132, 134-141,143-150,182-189,191-198,200-207	PDC > COMP
Frequency of teachers' individual/informal/formal involvement in decisions about classroom curriculum/individualized instruction/resource allocation/personal matters	AI variables 11,20, 29,68,77,86,125,134, 143,182,191,206	PDC > COMP

Planning and Decision-Making (cont.)

Variables	Sources	Hypotheses
Proportion of teachers participating in formal groups involved in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 39,49, 59,96,106,116,153, 163,173,210,220,230,	PDC > COMP
Cross-grade representation of teachers in formal groups involved in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 40-45, 50-55,60-65,97-102, 107-112,117-122,154-159,164-169,174-179, 211-226,231-236	PDC > COMP
Frequency of individual/informal/formal involvement of others from outside the school in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 14-16, 23-25,32-34,71-73,80-82,89-91,128-130,137-139,146-148,185-187, 194-196,203-205	PDC > COMP
Frequency of parents' individual/informal/formal involvement in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 12,21, 30,69,78,87,126,135, 144,183,192,201	PDC > COMP
Proportion of parents participating in formal groups involved in decisions about classroom curriculum/individualized instruction/resource allocation/personnel matters	AI variables 46,56, 66,103,113,123,160, 170,180,217,227,237	
The aforementioned measures (formality of provision, diversity of participants, degree of teacher involvement, degree of cross-grade continuity, degree of parent involvement) contrasted across categories of decisions (classroom curriculum, individualized instruction, resource allocation, personnel matters)	Administrator Interview	PDC's effect constant across decision categories

Communication and Coordination

Variables	Sources	Hypotheses
Assignment of responsibility for activities spanning Head Start and elementary levels	Case Studies Site Visits	PDC > COMP
Head Start-elementary coordination of services for handicapped children	Case Studies Site Visits	PDC > COMP
Head Start-elementary coordination of services for bilingual/multicultural children	Case Studies Site Visits	PDC > COMP
Head Start-elementary coordination of parental involvement program	Case Studies Site Visits	PDC > COMP
Communication between decision making bodies and Head Start and elementary parents	Case Studies Site Visits	PDC > COMP
Provisions for communication and coordination between Head Start and elementary staff	Case Studies Site Visits	PDC > COMP
Continuity of record keeping, Head Start-Grade 3	Case Studies Site Visits	PDC > COMP
Provisions for communication between parents and schools	Case Studies Site Visits	PDC > COMP

Provision of Services

Variables	Sources	Hypotheses
Provision of medical, dental, mental health, and nutrition services	Case Studies, Site Visits, Site Records	PDC > COMP
Screenings and diagnostic assessments of children	Case Studies, Site Visits, Site Records	PDC > COMP
Provision of language services (e.g., interpreters)	Case Studies, Site Visits, Site Records	PDC > COMP

Training

Variables	Sources	Hypotheses
Provision of training for teachers in: Child Growth & Development Individualized instruction Working with parents Meeting needs of handicapped Meeting needs of bilingual/MC children Philosophy and approach of schools and centers Home-school continuity Health education and resources	Case Studies Site Visits TI: 24	PDC > COMP
Provision of training for parents in: Program philosophy, goals Working with staff Decision and policy making Working with handicapped children Working with bilingual/bi-cultural children Health resources Preventive health practices	Site Visits Case Studies Site Records	PDC > COMP