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ABSTRACT

Described is the evaluation of 32 model projects involving 160 children (birth to 8-years-old) in the f derally funded Handicapped Children's Early Education Program (HCEEP). The steps involved in developing six data collection instruments, (including a child-based measure of achievement, four measures of project effectiveness, and an instrument to determine the child's handicapping condition), sampling procedures, and methods of training data collectors are among the aspects of information collection detailed. A section on data treatment covers coding and processing as well as methods for analyzing HCEEP impact on different types of children, parents, and projects. Evaluation results are reported for program impact on child growth (including consideration of age, sex and primary handicap), verification of handicapping condition and service needs assessment, parent survey, cost analysis, followup of graduates, and replication and dissemination strategies. Specifications of a system to continually monitor HCEEP effectiveness are provided in a section comprising nearly one-half of the document. A final chapter summarizes principal results and conclusions. (CL)

FINAL REPORT

on

EVALUATION OF HANDICAPPED CHILDREN'S EARLY EDUCATION PROGRAM (HCEEP)

to

BUREAU OF EDUCATION FOR THE HANDICAPPED
U.S. OFFICE OF EDUCATION

May 14, 1976

by

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PREFACE

This report presents the results of an evaluation study conducted by the Columbus Laboratories of Battelle Memorial Institute under a contract with the Bureau of Education for the Handicapped, U.S. Office of Education, Department of Health, Education, and Welfare. The study is entitled, "Evaluation of Handicapped Children's Early Education Program (HCEEP)". The study was conducted under Contract Number OEC-0-74-0402 from September 21, 1973 through March 29, 1976. At Battelle, the study was administered by Mr. George Rosinger, and conducted by Dr. John R. Stock assisted by Mrs. Jean A. Newborg, Mrs. Linda L. Wnek, Dr. E. Allen Schenck, Mr. John R. Gabel, Mrs. Margaret S. Spurgeon, Dr. Horace W. Ray, Mr. Daniel E. Molnar, Dr. Dennis N. McFadden, and Dr. Lois H. Molholm.

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FINAL REPORT

on

EVALUATION OF HANDICAPPED CHILDREN'S
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to

BUREAU OF EDUCATION FOR THE HANDICAPPED
U.S. OFFICE OF EDUCATION

from

Battelle
Columbus Laboratories

March 26, 1976

CHAPTER I. INTRODUCTION

Experiences in the early years of the child's development--one to five--are now recognized as having substantial impact on later ability and achievement. Deutsch demonstrated in the 1960s that some kind of formal preschool experience (preschool, day-care, or kindergarten) was associated with higher intelligence test scores and this effect was found even as late as the fifth grade.[1] Similarly, Bloom gathered evidence which indicated that the "early environment, during the first five to seven years of life, is the significant one for intellectual development".[2] McFadden documented Bloom's premise in his examination

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[1] Dowley, Edith M., "Perspectives on Early Childhood Education", in Anderson, Robert H. and Shane, Harold G., As the Twig is Bent, Houghton Mifflin Company, Boston, 1971, pp. 12-21.

[2] Edwards, Esther P., "Kindergarten is Too Late", in Anderson and Shane, op. cit, pp. 275-285.

of the impact of enrichment programs as well as deprivation conditions in young children.[3] Researchers are now looking to early life experiences for causes of learning problems in later life. Learning problems, researchers hypothesize, can be traced to family relationships, early physical, emotional, and linguistic environments, as well as to heredity.[4] This renaissance of interest in the young preschool-aged child has been accompanied by a surge of activities in early childhood education, activities supported by lower, middle, and upper class Americans. For example, the 1960s spawned a variety of industry-related day-care centers for female employees, profit-making preschool and day-care enterprises in the middle-class suburbs, as well as the social experiment Head Start for disadvantaged preschoolers.

Early childhood education for affluent as well as disadvantaged children has come of age. So it has also for the most disadvantaged of children--the child with physical, emotional, or learning handicaps. In the recent past, such children were destined to become dependent for life upon family and society. Special educators now believe that "more than 50% of handicapped youngsters can have their condition substantially improved, sometimes even cured, if they get help and attention early enough".[5] The Bureau of Education for the Handicapped (BEH) estimates

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[3] McFadden, Dennis N., "Final Report on Preschool Education" to Ohio Department of Education, Battelle Memorial Institute, Columbus, Ohio, 1969.

[4] McDonald, Phyllis L. and Soeffring, Marylane, "Prevention of Learning Problems: Capsule Summaries of Research Studies in Early Childhood Education", Exceptional Children, Vol. 37, May 1971, pp. 681-686.

[5] See Interim Emergency Report of the National Advisory Committee on Handicapped Children printed in Hearings Before General Subcommittee on Education of the Committee on Education and Labor, House of Representatives, First Session on H.R. 8600 and H.R. 9065, July, 1969, U.S. Government Printing Office, Washington, D.C., p. 209.

that there are approximately one million preschool-age handicapped children in this country.[6] Many of these children receive little or no services; the burden on families and the waste of human potential are tremendous. The toll arising from non-provision of ameliorative services is great in both humanitarian as well as economic terms.[7] The unmet needs of these handicapped preschoolers prompted the enactment of the Handicapped Children's Early Education Assistance Act of 1968, which was influential in the establishment of demonstration preschool programs for handicapped children throughout the country. The study reported herein is an evaluation of the impact of the demonstration preschool programs.

Background of Study

In endeavors to develop a national commitment to "full, equal educational opportunity for every handicapped child", the Bureau of Education for the Handicapped by means of the Education of the Handicapped Act (P.L. 92-230), Part C, has funded a variety of preschool projects designed to meet the educational needs of young handicapped children, ages birth to 8.[8] These programs provide educational and therapeutic services to children, parent participation activities, evaluation and research, and manpower training. During the 1974-75 school year approximately 6,000 children identified as mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, emotionally disturbed, crippled, other health impaired, and multihandicapped, were served in 155 programs funded

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6 Martin, Edwin W., "Bureau of Education for the Handicapped Commitment and Program in Early Childhood Education, Exceptional Children, op. cit. pp. 661-663; and U.S. Department of Health, Education, and Welfare, "Program Description: Handicapped Children's Early Education Program", Public Law 91-230, Part C, Title VI, Washington, D.C., October 25, 1971.

7 For example, the National Advisory Committee estimates that it costs society a minimum of $75,000 to care for an institutionalized mentally retarded person over the period of his lifetime. See First Annual Report, National Advisory Committee on Handicapped Children, January 31, 1968, p. 39.

8 Martin, Edwin W., op. cit., pp. 661-663.

through the HCEEP. HCEEP projects are expected to include the following components: parent participation in the planning, development and operation of the projects; coordination with local public schools; coordination with community agencies; therapeutic and educational services to enrolled children; and dissemination and replication of effective programs and educational techniques. Though programs funded under the HCEEP must develop procedures for evaluating project efforts, there has been little basis for BEH to conduct a comprehensive across-project evaluation of the efficacy of the program as a whole. The study described in the following pages was designed to provide a firm procedural and data base for evaluation of preschool education for the handicapped which should be of similar value in improving program design and impact.

Objectives and Scope

The overall objectives of the study were twofold:

(1) To conduct an evaluation of the impact of the Handicapped Children's Early Education Program (HCEEP) in carrying out its objective of meeting the educational needs of young (0-8 years) handicapped children.

(2) To develop plans for a monitoring and reporting system to facilitate the evaluation of HCEEP effectiveness on a continuing basis.

The first objective entailed the construction and application of child-based measurement scales for purposes of determining the impact of the Program in terms of enhancing the progress, growth, and skills of children participating in the program. In addition to the child-based

measures of progress, instruments and procedures were developed to obtain information concerning project-based measures of effectiveness. More specifically, data was collected on (a) extent and effectiveness of parental involvement in projects , (b) program expenditures among categories of handicapped children, (c) extent and quality of replications stimulated by HCEEP projects, and (d) the number of "graduates" of HCEEP programs that are enrolled in appropriate school or preschool programs, and the adequacy of their functioning in these programs.

The second objective entailed the review of data collection experiences for purposes of modifying and refining the procedures, instruments, forms, etc., to be included in the project monitoring and reporting system. This system, when implemented, will enable the U.S. Office of Education (USOE) to continually monitor and evaluate on an overall basis the progress of various categories of handicapped children in various HCEEP projects and types of projects. The system also was designed to enable HCEEP project directors to efficiently collect follow-up data on children who have left their programs, in order to obtain improved evaluation of their individual projects.

Organization of Report

The remainder of the report is organized into six chapters. Chapters two through five are in the order consistent with the sequence of events in the conduct of the study. Chapter two describes the steps involved in the development of the data collection instruments and discusses the content of each instrument. Chapter three discusses the data collection procedures including the sample selection procedures and the training of data collectors. Chapter four presents the data analysis and data processing methods and procedures for data collected with each instrument. Chapter five discusses the evaluation results for each subject of analysis: program impact on child growth, verifying handicapping conditions and assessing service needs of children, parent involvement, project costs analysis, follow-up of HCEEP "graduates", and replication and dissemination strategies of HCEEP projects.

Chapter six is self-contained. It presents the preliminary design for a Monitoring and Reporting System proposed by Battelle for use by BEH to assess the effectiveness of HCEEP projects on an ongoing basis. The design considers data collection forms and procedures, system specifications, operating requirements, and implementation requirements.

Chapter seven presents a discussion of the principal results of the evaluation study and the conclusions derived from these results. Each subject of analysis is covered in the conclusions presented.

The appendices to the report presents each of the data collection instruments used and the procedures for use, instructions for and qualifications of the Verifying Psychologists, parental permission forms, bibliography of the source tests used in the development of the Children's Early Education Developmental Inventory (CEEDI), definition of the domains and subdomains covered by the CEEDI, scoring sheets for each of the five CEEDI domains, and the statistics reflecting the psychometric properties of the CEEDI.

CHAPTER II. DATA COLLECTION INSTRUMENTS

This section describes the development of, and types of information obtained from, the various data collection instruments. The instruments are:

(1) The Children's Early Education Developmental Inventory (CEEDI), the child-based measure

(2) Instruments to obtain information on project-based measures of effectiveness, namely:

  (a) The Parent Survey Form

  (b) The Graduate Follow-Up Forms

  (c) The Cost Information Form

  (d) The Replication Information Form (consisting of two separate forms containing similar items)

(3) The Verification of Handicapping Condition Report Form (VHCRF).

In addition to these instruments, additional documents were produced. These include parental permission forms to be signed by parents of children to be assessed via the CEEDI and those graduates to be followed-up. In addition, a package to instruct verifying psychologists in completion of the VHCRF was developed. Information related to the development of the CEEDI is presented in Appendices F-I. Each of the project-based instruments and the documents listed above are included in Appendices A-E. Also, at the end of this section, the pilot testing of child and project-based instruments is described.

Development of Child-Based Measures

General Considerations and Constraints

The purpose of this task was to develop child-based measurement scales for assessing the achievement of children served by the HCEEP projects. More specifically, a measurement procedure was to be designed which would be utilized in evaluating the effectiveness of the HCEEP Program.

The child-based measurement procedures were designed to satisfy several key constraints. First, the scales were designed in a way that maximized, to the extent possible, their applicability across various handicapping conditions and across the wide diversity of early childhood development projects sponsored by the HCEEP program. Satisfying this constraint required the development of a universal "yardstick" for measuring student progress: one which would yield a common base of information useful in judging the effectiveness of individual projects, groups of projects with children having similar handicapping conditions, and aggregate program effectiveness as well.

A second key consideration centered around designing the scales so that, to the extent possible, progress of the handicapped children would be measured in terms of gains made toward the acquisition of skills characterizing the development of normal children. Satisfying this constraint required that the common dimensions underlying the "yardstick" measurement scales would be the universe of behaviors which characterize the normal growth and development of young children. Moreover, child progress would be measured along common dimensions defined in terms of normal development and growth which implies that the various projects have as their common goal the optimal development of their children toward normal functioning.

A third constraint posed for the child-based measure was to design the measurement scale in a way which would not penalize children because

of the unique aspects of their handicapping conditions. Selection of items for inclusion in the scales took into account these unique aspects. Additionally, the procedures for administering the scales and in scoring the results were to include consideration of and compensation for the handicapping condition of the children in a way which would not compromise the general applicability of the scales or validity of the scale scores as an index of normal growth and development.

Another constraint had to do with selection of items which reflect change in growth during the project year, even for severely handicapped children. Satisfying this constraint required the use of a basal age concept in establishing a base line of performance for each child. Consideration was also given to providing sufficient ceiling for potential development of each child as well. What was required in resolving this constraint was a downward and an upward extension of the "behavioral competencies" characterizing normal development in a way which took into account differences, along a dimension of normal development, in the ranges of skills for various handicapping conditions.

Another important constraint involved the design of standardized procedures for administering the measurement scales. One aspect of this constraint had to do with designing directions for those who use the instruments, i.e., outside examiners and teachers. The directions must be precise, yet clear and understandable. Also, there was a need to specify what the examiner or observer should know about the various conditions of the handicapped children to administer the instruments correctly and to accurately score the results. The standardized procedures specify guidelines for deciding which items on the scale may be appropriately omitted for a given handicapping condition, circumstances under which those items need not be excluded for that condition, and clear distinction between these two possible cases.

The development of the CEEDI scales was based on the concept of milestones. Briefly stated, this concept implies that the normal pattern of child development follows a sequence in the attainment of skills, with each skill generally dependent for its development upon the successful acquisition of the one preceding it. The concept has several implications

for scale design. First, it makes possible the use of "scale steps" reflecting levels of performance which a child generally must acquire before he can proceed further in his development. Each of the series of scale steps is based on an expected performance level consistent with the functioning of normal children.

Another important implication of the concept of milestones has to do with differential measurement. The functioning of normal children can be arbitrarily separated into several dimensions of development each of which reflect a separate, but related, sequence in skill acquisition. The five dimensions of development selected for the child-based measures were cognition, communication, adaptive behavior, personal-social, and motor skills. Subsequently, these dimensions were defined in terms of several "subscales". A series of "scale steps" or milestones of performance were defined for each subscale. These make possible the collection of information useful for judging how well children are developing in specific areas of growth.

Finally, the most significant feature of the concept of "milestones" is the inherent capability of such scales to establish criterion performance levels for children not functioning at normal levels, e.g., handicapped children. Although the scales are anchored to "normal functioning" in terms of their validity, they were designed to have wide applicability across handicapping conditions and to specify varying criterion performance for any given handicapping condition.

Method

Prior to the actual development of the child-based measure, the Battelle team sought to familiarize themselves with evaluation instruments and procedures used by the HCEEP projects. Recommendations of candidate projects that had developed such instruments and techniques were

obtained from the BEH and TADS.* Subsequently, six projects were selected, and site visits were made. The projects were: Portage Project, Portage, Wisconsin; University of Washington, Seattle; Medford Preschool Project, Medford, Oregon; Chapel Hill Outreach Training Project, Chapel Hill, North Carolina; University of Illinois, Champaign; and Rutland Center, Athens, Georgia. During the site visits, information was obtained on specific instruments used, how they were developed, the use(s) to which they were put, methods and conditions of administration, adaptations made for handicapped children, etc. This information was related to the already generated specifications for developing the child-based measure. In addition to providing input for specifications and background information on the then current state-of-the-art in early childhood evaluation, the on-site visits yielded several instruments and techniques that were subsequently utilized, to some extent, in the development of the child-based measure.

During the actual development of the child-based measure, seven major interrelated steps were accomplished. These steps are:

(1) Identification of Domains to be Measured

(2) Development of Item Pool

(3) Selection of Milestones

(4) Development of Items for Child-Based Measure

(5) Development of Administration Manual

(6) Development of Scoring Rationale

(7) Development of Validity and Reliability Rationale.

The following sections briefly describes the activities associated with each of the seven steps.

* Technical Assistance Development System

(1) Identification of Domains to be Measured. Prior to as well as during the development of the item pool, the domains to be measured were considered. At this stage of test development, five domains were tentatively selected as areas of measurement. The domains identified, which were considered to encompass behavior across all developmental areas, were: communication, cognitive, personal-social, adaptive, and motor. The domains later became the five scales in the CEEDI.

Consideration was also given to subdomains or subdimensions which made up each of the domains. Tentative definitions of each domain/subdomain were generated to provide guidelines in selection and appropriate placement. The subdomains and their definitions were periodically reviewed for revision. Definitions of the subdomains which comprise each of the five major domains are presented in Appendix G.

(2) Development of Item Pool. The initial activity in this step was to identify and select sources of items. Since the child-based measure was to reflect the current state-of-the-art, items were selected from comprehensive instruments (standardized and non-standardized) that are commonly used for measuring critical skills in early childhood (birth through age eight). While most of the source instruments were designed primarily for use with non-handicapped children, some were for evaluation of children with specific handicaps. Thus, two item pools were generated, with items designed for non-handicapped children representing the majority of the items. Appendix F presents a bibliography of test sources utilized in the development of the scales.

Over 4000 items from source tests were analyzed in the effort to develop the item pool. Each item was transferred onto individual cards along with information on age norms; domain/subdomain placement by source test; administration procedures; reliability, validity, and scoring information. The use of cards allowed for subsequent grouping and re-grouping of items.

In many instances, the same behaviors were measured on a number of different source tests; therefore, the items measuring the same skills were clustered together, and a label name was applied. From the clustering of the many items by the behavior measured, behaviors were sequenced from birth through eight years of age to portray the functioning of normal children at certain periods of their development.* Eleven age categories were utilized, with a six-month span during the first two years and a one-year span after two years of age.

(3) Selection of Milestones. To identify the "milestones" from the comprehensive list of behaviors generated from the test sources, each cluster within each of the five domains was subjected to review and analysis by a group of experts in the area of child growth and development. The clusters of behaviors were rated in terms of their criticality or importance to the development of the child. Criteria used in making judgments concerning the criticality of a behavior were as follows: (1) the importance of the behavior to the child's development toward normal functioning in life, (2) the degree of support by professional knowledge and literature of the behavior as a milestone in early development, (3) the amount of acceptance among educational practitioners as a critical skill or behavior for the child to possess or acquire, and (4) the degree to which the behavior is amenable to educational intervention and instruction. Subsequent to the identification of milestones from those behaviors measured on existing test instruments, gaps were identified where milestones were missing. Additional sources (e.g., research) were consulted and the missing milestones obtained.

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* At this stage, sequencing of item clusters by age resulted in only a crude, tentative listing. This was because of the considerable variation in age placement of similar items from different source tests. That is, one behavior may have been placed in such diverse categories as 4-6.5 months, 3-7 months, and 6-8 months. In the final placement in the CEEDI, reliability and validity information from source tests was utilized to determine "best" age placement.

The critical behaviors, or milestones, were next organized within the five major areas of development into smaller units or "subdomains", e.g., perceptual discrimination, attention, etc. The subdomains* were delineated to make it possible for the user of the instrument to collect information useful for determining how well children are developing in specific areas of growth. In addition, each milestone was judged regarding handicapping conditions for which modifications in administration or alternate items would be necessary.

(4) Development of Items. After the identification of the first list of milestone behaviors within the five domains, items were then developed which would assess these behaviors in the best way possible. For each item in the five Scales (with the exception of the Personal-Social Scale), a Standard Administration Procedure and Considerations for the Handicapped were developed.** The Standard Administration Procedure specified the behavior being assessed, materials needed, procedure for the administration of the item and the criteria for a credited response. For many handicapped children, especially those manifesting some developmental lag or retardation, the standard administration of the items is appropriate and will provide the needed assessment information, i.e., status in terms of normal development, and specific strengths and weaknesses.

Wherever necessary and possible, special considerations and modifications for children having various severe handicapping conditions were developed. These special considerations and variations were used in administering the standard procedure and/or scoring. The five handicapping conditions for which special considerations and modifications are provided are as follows:

- Severe Motor Impairment of the Lower Body and General Musculature: this includes major motor

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* Appendix G presents the definition of subdomains included under each of the five domains.

** Most items from the Personal-Social Scale have no Considerations for the Handicapped since the Observation and Parental Report procedures for administration are used.

problems throughout large muscle systems of the body (with the exception of the arms and hands) or where the handicap primarily involves only the legs and feet.

- Severe Motor Impairment in the Arms and Hands: this includes difficulty in using arms, arms and hands, or just hands.
- Severe Visual Impairment: this includes legal blindness and severe visual handicaps.
- Severe Hearing Impairment: this includes severe hearing impairment with an accompanying major difficulty with language.
- Severely Speech Impaired: this includes difficulty with expressive speech.

In some cases an alternate item was developed. The alternate item attempts to measure a behavior similar to that assessed in the standard item in those cases where a handicapping condition makes it impossible to elicit the desired behavior in the manner prescribed in the standard procedure. An alternate item was developed in only those cases where there was a very good possibility that the behavior or skill, because of a handicap, could not be displayed in response to the standard procedure. Almost all of the alternative items provided in the child-based measure were developed for the Cognitive Scale because of the nature of the behaviors being assessed on this domain, e.g., concept, reasoning, memory, etc.

For each behavior measured in the scale, careful consideration was given to the best means of obtaining the desired information. Three different procedural methods were developed to obtain information regarding the child's ability to perform the behavior specified in the item. These procedures are: Structured, Observation, and Parental Report. The three types of procedures are utilized to provide the administrator the best

possible means for assessing the specified behaviors. For any one item, one or some combination of the procedures were suggested for use in collecting the required information.

The Structured procedure requires that the desired information be obtained in a controlled setting in which materials are manipulated or stimuli are provided by the administrator in order to elicit the desired response from the child. The Structured procedure is most commonly administered to one child; however, in some cases use of this procedure with a small group of children is appropriate.

The Observation procedure is utilized for behaviors that are best assessed in a natural setting such as that of the normal ongoing activities of the classroom or the home. The criteria for credit in many of these items require that the behavior be demonstrated not just once, but consistently when presented with the appropriate situation or stimulus conditions. Thus, in some cases, e.g., in the assessment of social interaction, observation of the child's behavior in given situations over a period of time is recommended as the best means to measure performance.

In those cases where the behavior in question could not be assessed in a structured setting by the administrator, or when the administrator would not have an opportunity to observe the behavior during normal contacts with the child, the Parent Report procedure was used. In the Parental Report procedure, specific questions concerning the child's behavior are directed to the parent, or parents, of the child. The parent is asked to report on the child's behavior under the given conditions and is, in most cases, asked to indicate the frequency of occurrence of the behavior in the given situation. The Observation procedure differs from the Parental Report procedure in that in Observation the administrator makes direct observations of the child during the course of his contact with the child in the program. In the Parental Report method, the parent is asked to supply information about the child based on his knowledge and recollection of the child's typical behavior in given situations. Thus, the Parental Report is more of an historical report than a direct observation.

Following the writing of test items, the items were sequenced by age for each domain. Information obtained from a review of validity and

reliability data of source tests as well as research findings was utilized in final placement decisions. (See Step 7 for discussion of this activity.)

The end result of Step 4 was a sequence of 362 test items which assessed child growth and development in five domains with the following separately bound Scales: Motor, Cognitive, Communication, Personal-Social, and Adaptive. The distribution of items by age and Scale is presented in Table 2-1.

(5) Development of Administrative Manual and Test Kit. Following the development of test items, the administration manual was written and a kit was assembled. The manual presented the development and purpose of the instrument, a description of the CEEDI, general procedures for administering the Scales, scoring procedure, and bibliography. Concurrently, a test kit was developed. This consisted of visual materials created by Battelle, and other objects, toys, etc., either made by Battelle or purchased. Some materials needed for the administration of the Scales are not provided in the kit, however, and must be obtained by the administrator or the program staff. The decision to have the preschool staff obtain some of the needed materials was made for several reasons. First, it was impractical to prepare and package all of the materials needed, since it would require a large and cumbersome package to manage. Second, the material has educational value for the child which exceeds its value in the testing situation. Therefore, most of the material should be available in the program to help the child make progress toward the attainment of the milestone behaviors between testing periods. Finally, using readily available material makes it possible to recommend that parents obtain, or adapt materials or toys that they already have at home, to help the child make the necessary developmental progress. Also, if materials are lost, or, if additional items are needed of this type for instructional purposes, they can be obtained by the program staff with little difficulty.

A listing of all materials required and their sources (i.e., kit or test administrator) was included in each Scale manual.

TABLE 2-1. NUMBER AND DISTRIBUTION OF TEST ITEMS

	MOTOR	COGNITIVE	COMMUNICATION	PERSONAL-SOCIAL	ADAPTIVE	TOTAL
0 to 5 mos.	9	5	5	8	8	35
6 to 11 mos.	11	3	5	4	8	31
1-0 to 1-5 yrs.	10	1	4	5	3	23
1-6 to 1-11 yrs.	4	5	2	3	5	19
2 to 3 yrs.	10	5	7	14	10	46
3 to 4 yrs.	7	7	10	9	7	40
4 to 5 yrs.	8	7	8	10	5	38
5 to 6 yrs.	7	9	3	15	8	42
6 to 7 yrs.	7	7	4	7	6	31
7 to 8 yrs.	8	7	5	8	4	32
8 to 9 yrs.	7	6	3	5	4	25
TOTAL	88	62	56	88	68	362

(6) Development of Scoring Rationale. During the development of individual test items, the rationale for the scoring procedures was being formulated. It was determined for each of the five domains, a score would be determined, and that Basal and Ceiling Levels would be established. The following sections describes the scoring procedures in more detail.

Establishing Basal and Ceiling Levels. Due to the large number of items in each of the five Scales, administration of all items for each child would consume too much time. Also, even the most superficial familiarity with the child, e.g., knowing his age, would make the perfunctory administration of many items a useless expenditure of time. Consequently, certain procedures should be followed which will preclude the administration of those items which contain behaviors that the child has obviously attained and surpassed and/or those which he obviously has yet to obtain.

Within each Scale, in general, an item which falls within the age category immediately below the age of the child should be administered first. If there is additional knowledge of the child which indicates that starting with an item in a higher or lower age category would be desirable, the starting point should be adjusted accordingly. If the child passes the item selected for the starting point, the next highest item should then be given. This should be continued until the child fails to pass an item. If the child has passed at least three consecutive items in a row, the item just below the one he failed to pass defines his Basal Level. If the child has not passed at least three consecutive items in a row, the administrator should give the item just below the starting point item and continue backward until the child has passed three consecutive items in a row. The highest item in this sequence of passes defines his Basal Level. If the child fails to pass the starting point item, the administrator should select a second starting point item in the next lowest age category and proceed exactly in the manner described above.

Once the Basal Level has been established, items should be administered until the child fails to pass at least three consecutive items in a row, i.e., continually higher consecutive items should be given until

this sequence occurs. The highest item passed before this sequence occurs defines the Ceiling Level. If during the establishment of the Basal Level the child once or more failed to pass at least three items in a row, the highest item passed before the lowest such sequence defines the Ceiling Level.

Due to the allowable variations between and within the item administration procedures, viz., Structured, Observation, and Parental Report, this method of establishing Basal and Ceiling Levels will not normally proceed as smoothly as it can be described. The necessity of scheduling time for administrating items employing Structured procedures and for meeting with parents for items employing the Parental Report will not always be consistent with the timing for completing Observation items.

The procedure described above is to be followed. Items should be administered in their proper sequence for which administration is possible, reasonable, and/or desirable at that time* until the child passes three items in a row, but not necessarily in strict sequence. The number of the highest item in this sequence defines the child's probable Basal Level. The actual Basal Level must be determined at a later time when the items passed over have been administered. The same strategy should be used to establish the probable Ceiling Level. That is, the number of the highest item that the child passes before he fails to pass three consecutive items in a row, for which administration is possible, reasonable, and/or desirable, stands as the probable Ceiling until the items skipped have been administered.

Scoring Individual Items. The procedure for scoring individual items was designed to be as simple as possible without losing important remarks or qualifications about the child's responses. Each item administered to the child is scored as a "Passed" or "Not Passed". The criteria for passing are stated in the Scale. If an item is omitted

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* Testing is most likely to be broken up into segments based upon using the same adminstration procedure (Structured, Observation, or Parental Report).

for reasons other than its being outside of the range between the Basal and Ceiling Levels,* or, if the child refuses to respond, the item is to be scored as a "Not Passed". However, provision is made on the scoring sheet** for each Scale (in the "Other" column) to indicate omissions (O) and refusals (R). Provision is also made for indicating if the "Considerations For the Handicapped" or an Alternate Item was used. Space is provided for each item for remarks or notes which the administrator feels are relevant to determining whether the child should receive a "Passed" or "Not Passed" and, perhaps more importantly, remarks which are deemed relevant to judging the validity of the item for assessing the child's behavioral development.

For the most part, the scoring sheet is the same for each of the five Scales with the exception that the number of items varies. The first column identifies the item by its sequence number. The second column indicates the age category to which the item belongs. The third column indicates the procedure options and preferences, S = Structured, O = Observation, P = Parental Report. If there is no preferred procedure among two or three procedures, a slash (/) is placed between the equivalent procedures. If there is a preferred procedure(s) the most preferred is noted first and then is separated by a hyphen from the less preferred. For example, "S-O/P" means a Structured procedure is preferred to either Observation or Parental Report and the latter two are considered equivalent. The letters "O-P" indicate that the item cannot be given using a Structured procedure and that Observation is preferred to Parental Report. The fourth column contains a short verbal description of the item. The fifth, sixth, and seventh columns are for checking "Passed", "Not Passed", or "Other". "Other is checked if the item is omitted (indicate with O), or refused (indicate with R). The next two columns are to be checked if the item was modified through Considerations for the Handicapped, or replaced by an Alternate Item, respectively. The last column is for any relevant remarks either for the administrator's use or for commenting on the item's validity.

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* An item may be omitted in those cases where a child's handicap makes it impossible for the child to respond. For example, a paraplegic child would not be able to walk, thus the item would not be administered.

** Scoring sheets for all five domains are presented in Appendix H.

Obtaining Domain Scale Scores. After all necessary items have been administered to the child in any one of the five Scales, the Scale score is calculated. This is done by the following three steps:

(1) Note the sequence number of the Basal Level item.

(2) Count the number of items passed beyond the Basal Level.

(3) Add the number of items passed beyond the Basal Level to the sequence number of the Basal Level item.

The number resulting from these steps is the child's Scale score for that domain

Due to the experimental nature of these Scales, only two interpretations of a child's score are recommended at this time. First, the higher the score is, the greater the child's development is within a domain. If one were to compare one child's score at two points in time, i.e., his progress or lack of progress, or two or more children's scores at the same point in time, larger differences in domain scores probably would indicate larger differences in development. However, any comparisons of changes or differences in domain scores should be done with great caution. Second, the value of a child's score may be identified with the age category of the item bearing that sequence number. For example, if a child's Communication score is 43 and item Cm43 falls in the 5-6 age category, the child's Communication development may be interpreted as falling in that age category.

The second interpretation is considered important due to the varying number of items from one domain to another. If any diagnostic value is to be gained from the scores, it would be to point out the domains in which the child is strong or weak relative to normal development. By making the number of items passed equivalent to the item which represents the same number in the normal developmental sequence, the relative developmental position of the child's score can be obtained. After all five scores have been so interpreted, diagnostic comparisons can be made.

(7) Develop Validity and Reliability Rationale. Several procedures were followed to increase the probability that the child-based measure would yield a high degree of validity and reliability. Specifically, careful attention was given to selecting items that measured dimensions of the five domains, placing items in the appropriate sequence and age category, and developing administration procedures that were sufficiently structured to obtain consistent measures. The selection of items is discussed earlier under Steps 1 and 2. To structure and facilitate this activity, considerable attention was given to comprehensively defining the domains/subdomains and ensuring that each subdomain was represented across age categories.* The subdomains were defined prior to development of the item pool and were periodically reviewed to determine the need for revision. Finally, all items were subjected to a rating by the test development team to arrive at a consensus regarding subdomain category.

A second procedure utilized to increase validity and reliability of the child-based instrument was related to age placement of behaviors. The technical manuals of source tests, where they existed, were reviewed to evaluate age norm data for each source test to aid in developing guidelines for assigning the milestone behaviors to appropriate age levels. The age norm data for essentially the same behaviors that was included as different items in multiple source tests were compared and analyzed to determine the age level at which the behavior might be most appropriately placed.**. In cases where source tests varied considerably on age placement, the standardization procedures and data,*** to the extent they were available, were consulted.

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* Obviously, some subdomains (e.g., academic skills) could not or should not be included in all age categories from birth through eight years of age.

** Not all source tests anchored behaviors (items) to age levels. In addition, some tests did not adequately define an age level; i.e., because of the lack of a manual, it was difficult to determine if a "two-year old" level meant the task was thought to most likely occur at 1.5 to 2 years (within the second year of life), or after the second birthday was reached (the third year of life). This resulted in disregarding the age attached when there was no definition. The behavior itself was still included, however, to assist in defining milestones of development.

*** That is, population characteristics, proportion of subjects passing each item, etc.

In some cases task analyses, previous research, and medically-based data were utilized. This procedure allowed, at a minimum, a judgment that placed a behavior at the beginning, middle, or end of any one age category.

The discrepancy on age placement of a behavior was resolved in many cases through examination of related behaviors in a domain/subdomain. For example, there is an established sequence of behaviors that precede thumb-forefinger opposition. While various tests may place steps of the progression at different ages, it is still possible to sequence the behaviors. Generally, the age placement of at least one behavior in the sequence could be anchored in normative data. Thus, age levels of preceding behaviors could be placed relative to the anchored behavior.

Finally, the probability of increasing validity and reliability of the child-based measure was improved by detailing procedures by which the instrument was administered. For each test item, specific behaviors, materials, procedures (including verbal instructions, use of demonstration, etc.) and criterion for scoring were written. Providing instructions in such detail increased the probability that reliable results would be obtained in a test-retest situation or if several test administrators assessed the same child. Further, the administration manual accompanying the five Scales detailed the background and intended use of the instrument, and specific procedures associated with administering and scoring the CEEDI. For persons who would not have extensive experience in assessing children, general considerations in testing children are also presented.

The procedures to ensure high reliability and validity appear to have yielded the desired results. Analysis of the pre- and posttest data indicates a reliability coefficient of .80 to .90 for each of the five Scales. Furthermore, analysis of the relationship of CEEDI scores with age revealed that the scale demonstrates the expected relation to age. See Appendix I for a further discussion of these and other CEEDI psychometric characteristics.

Project-Based Measures

Parent Interview Form

The purposes of the Parent Survey Form were to determine from the parents' responses indications of (a) current parental expectations of the child's progress; (b) extent of parental participation in the project and the attitudes toward that participation; and (c) extent and nature of learning activities in which both parent and child participate while at home. More specifically, the Parent Survey was designed to elicit information on the following:

- Parents' knowledge of services delivered to their children by the projects
- Parental satisfaction/dissatisfaction with these services and the staff delivering them
- Extent of and attitudes toward parent and family participation in the projects
- Parents' perceptions of their children's progress as a result of project experience
- Parents' perceptions of their children's responses (likes and dislikes) to the projects
- Extent of and attitudes toward parent participation (at home or on-site) in learning activities prescribed by the projects.

The Parent Survey Form was designed to be administered by a Battelle data collector in a structured personal interview. Respondents were the parents of children who had been pre- and posttested with the CEEDI. The interview generally took about one-half hour to administer, and was conducted in the project setting or the parent's home.

Graduate Follow-Up Forms

The main purposes of the "graduate" follow-up are to (1) verify a child's placement subsequent to leaving the project, (2) determine the current severity of his handicapping condition, and (3) assess the level of his social and cognitive development in relation to his peers in his current placement setting. The Follow-Up Form also serves to assess (4) the extent and availability of follow-up data maintained by projects, and (5) the nature and level of interaction between the project and the placement setting personnel.

The Student Follow-Up Form consists of two major parts. Part I, directed to the model projects, required information (1) summarizing placement settings of May through August 1974 graduates (i.e., numbers in special classes, regular classes with or without ancillary services, or in other or unknown settings), and (2) for each individual graduate reported for the May through August period (i.e., code number, program entrance and termination dates, services received, primary handicapping condition, and placement setting).

Part II, consisting of 28 items plus a checklist, was directed toward the placement setting and consists of questions designed to elicit, via personal interview, the following information from the sources indicated.

(1) Administrator of placement setting

- Verification of child's enrollment
- Extent of interaction with HCEEP relating to child's placement
- Nature of interaction with HCEEP relating to child's placement.

(2) Child's current teacher or therapist

- Extent and nature of interaction with model project relating to child's classroom behavior, progress, or handicapping condition

- Suitability of child's placement
- Current severity of child's handicapping condition
- Extent of child's parents' interest in relation to those of his peers' parents
- Level of child's social and cognitive skills in relation to those of his peers.

The final item, level of child's social and cognitive skills, was assessed through the use of two checklists which were to be completed by the child's teacher or therapist. Each checklist is comprised of 15 items, chosen from CEEDI and developmentally ordered. The teacher/therapist was to indicate whether or not the child typically shows the behaviors listed.

Cost Form

The purpose of the Cost Form is to obtain descriptive information on project costs relating to services provided to children having various handicaps. However, the information is not to be used for cost-benefit analysis purposes. The Cost Form is designed to determine costs of the following project elements.

- Personnel salaries - including project director, assistant director, teachers, therapists, secretaries, etc., and employee benefits
- Consultants
- Other project costs - including supplies and materials, equipment, travel, pupil transportation, other contracted services, construction, etc.
- Indirect costs.

In addition to providing the total expenditures, for each of the above elements projects were to indicate, by percentage, the source of funds (i.e., federal, state, local, private). For each cost element, the projects were to indicate the percentage of the total staff time directed to each of several major functions. Major functions include:

- Management and administration
- Instructional services to children
- Therapeutic services to children
- Services to parents
- Supplementary services to children and parents
- Screening services for admission
- Evaluation of children
- Curriculum development
- In-service training of staff
- Dissemination and replication
- Other functions

Instructions accompanying the Cost Form list the major functions with examples of the types of activities that may be included in each to assist the projects in providing this information.

Finally, to identify costs of services provided to children through project assistance but for which the HCEEP does not pay (e.g., public health service, free vision screening, etc.), each project was to identify these services and their estimated cost.

The Cost Form was designed to be completed by project personnel who are knowledgeable in fiscal matters, staff responsibilities, and provision of services in addition to education.

Project Replications Forms

Replications Form A. Form A of the Replications instruments is directed toward model projects to collect data on (1) characteristics of early education models which have stimulated replications and (2) dissemination processes by which these models stimulated replications. More specifically, questions are included to elicit the following types of information.

- Types of dissemination technqiues employed
- Nature of information and materials disseminated
- Organization and evaluation of dissemination plan
- Characteristics of dissemination "targets" and known replications
- Model program characteristics, including
  - number, age, sex, and ethnic composition of children served
  - project staff qualifications
  - sources of referrals
  - diagnostic and evaluative procedures
  - curriculum content and materials
  - services provided

In addition, a listing of complete and partial replications claimed by the model projects were to be reported through Replications Form A. A compilation of listings from the 32 projects provided the basis for selecting respondents for the Replications Form B.

Replications Form A is designed as a structured interview. Respondents are project staff familiar with the public relations aspects of the operation, and overall description of the project (i.e., population served, staff characteristics, curriculum, facilities, diagnosis, evaluation, etc.). Required time for completion is approximately one hour.

Replications Form B. Form B of the Replications instruments is designed to collect information from replications of HCEEP model projects relating to (1) the reasons for replication of features of particular projects and (2) the dissemination processes leading to these replications. Questions covering the following topics are included:

- Dissemination techniques through which replication was stimulated
- Extent of interaction between model and replication projects
- Nature of interaction between model and replication projects
- Features of model project replicated
- Reasons for replicating these features

In addition, questions designed to determine replication project characteristics corresponding to those collected for model programs are asked.

Form B is designed to be both a mail survey and structured personal interview. Persons named by model project personnel as having interaction with them were the designated respondents. Required time for completion of Form B is one hour.

Verification of Handicapping Condition Report Form

The primary purpose of the Verification of Handicapping Condition Report Form (VHCRF) is to determine the handicapping condition(s) of each child selected for assessment with the CEEDI.* Further, this information provides a basis for an assessment of the specific needs these children have for program services. The VHCRF is designed for completion by a licensed or credentialled psychologist.

In addition to identifying information about the child (i.e., code number, age, sex, and date of enrollment in the project), the form requires the following information:

(1) The primary and secondary handicapping conditions of each child, as judged by the psychologist on the basis of his/her contact with the child.

(2) The primary and secondary handicapping conditions of each child as judged by the project staff.

(3) Services other than educational which are judged by the psychologist to be needed by each child, and those being provided by the project or from other sources.

In addition, the form requires the psychologist to indicate the methods utilized in gathering data and arriving at the judgments reported.

Four methods were to be followed by the psychologist in gathering data upon which to make his/her judgments. These methods are described below.

(1) Initially, the child's record folder was examined. Information from case histories, specialists' reports, results of recently administered tests, and records of services utilized was sought and recorded, as appropriate.

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* This task is distinctly different from that of the data collector whose task involved assessing the developmental level of each child.

(2) Second the child was observed in the classroom and other settings, and notations on his skills and deficits were made. Observation for a total of at least one hour (broken into several smaller segments) was suggested

(3) Third, the child was assessed using appropriate instruments, if the first two methods did not yield enough information upon which to make judgment of the handicapping condition. Although Battelle provided a list of suggested instruments that would be appropriate, each psychologist selected those to be used

(4) Finally, the psychologist informally interviewed staff who who were familiar with the child and could provide reliable reports concerning service needs.

Based on the above steps, the psychologist made judgments and completed the VHCRF.

Summaries of existing specialists reports and test results, circumstances surrounding observations of the child, tests administered and results, and summaries of interviews with project staff were reported, as appropriate.

Pilot Testing of Instruments and Forms Clearance

With the exception of the Verification of Handicapping Condition Report Form,* all child-and-project-based instruments were pilot tested by Battelle staff. Three HCEEP projects in close proximity to Battelle**

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* The VHCRF was developed in consultation with two school psychologists employed by Battelle for assistance in this study. Consequently, it was determined that the pilot test of this instrument was not necessary.

** Located in Ohio, Michigan, and Pennsylvania.

cooperated in responding to and providing comment on the Graduate Follow-Up Form (Part I); Replications, Form A; and Cost Form. In addition, these projects provided information and arranged interviews to allow pilot testing of the Parent Interview Form, Graduate Follow-Up Form (Part II), and Replications, Form B.*

The CEEDI was pilot tested through cooperation with the Ohio HCEEP project and a local school district which provides special classes for handicapped children. Children who served as subjects included those who were deaf, visually impaired, physically handicapped, and developmentally delayed.** Two non-handicapped children were included in the pilot testing. Ages of the children ranged from six months to seven years.

After the pilot test, the CEEDI and the project-based measures were reviewed by two consultants retained by BEH, and by the HCEEP Program Coordinator.

Following revisions, the package of instruments and Supporting Statement was submitted to the U.S. Office of Education Forms Clearance Officer. The package was subsequently submitted to the Office of Management and Budget for Clearance. An OMB number (63-S-75035) was issued on October 15, 1975.

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* In the pilot testing, no more than 9 respondents per instrument were interviewed, or tested (in the case of the CEEDI). Any number exceeding 9 would have required OMB Forms clearance.

** The term "developmentally delayed" is applied by some projects to identify children who lag behind normal development in one or two skill areas (e.g., motor). The children generally are not mentally retarded, and with intervention activities usually can achieve skill levels within the normal range.

CHAPTER III. DATA COLLECTION

Sampling Procedures

To identify and carry out the collection of data, sampling plans and procedures were developed to select projects, children to be pre- and posttested, parents, former project children who had been placed in other settings upon termination with the project, and other sites claimed by model projects as partial or complete replications. The following section describes each of the sampling procedures followed.

Procedures to Select Model Projects and Children to be Assessed

The following steps were followed in selecting 32 model projects and 160 children* on whom data were to be obtained.

(1) All HCEEP projects that were in at least their third year of operation by the fall of 1974 were identified.

(2) For each of the projects identified, an estimate of the number of new enrollees** for the fall of 1974 was obtained.

(3) The projects were arranged in rank order, with those having the fewest new enrollees last.

(4) The number of new enrollees was added to obtain cumulative totals.

(5) Using a table of random numbers, 160 enrollees were selected, but with the restriction that no more than

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* These numbers correspond to those specified in the proposal to be involved in data collection efforts.

** For those programs operating on a year-round basis, a new enrollee was defined as a handicapped child who had one month or less of project experience as of September 1, 1974. For those programs that start in the fall, a new enrollee was defined as a handicapped child with no prior HCEEP experience.

32 sites be selected. As soon as the maximum of 32 projects was selected, only random numbers within the intervals of those projects were recorded. A lower limit of three and an upper limit of eight new enrollees per project were arbitrarily set to expedite data collection efforts and to avoid possible over-representation of the larger projects.

(6) Each of the 32 selected projects alphabetized names of new enrollees and assigned consecutive code numbers (i.e., 01, 02, 03, ...N). The master list of names and code numbers was retained by each project. Battelle utilized a table of random numbers to select the code numbers of the children on whom data were to be gathered.

In three cases it was necessary to select alternate projects. This was due to characteristics of the project or population, or unforeseen circumstances. That is, no direct services were provided to children, services were not of an educational nature, or new administrators reversed the decision of previous administrators to participate in the data collection effort. Alternate model sites were selected by returning to the rank order list of projects and selecting the project immediately following the original selection.

In some cases, the children selected prior to the Battelle visit could not be assessed during the visit. This was due primarily to decision by parents to withdraw the children from the project, and the unavailability of selected children for testing during the pretest visit (due to illness or other factors). Alternates for these children were selected, prior to or during the pretest visit using a table of random numbers.

Sixty-three programs were in at least the third year of operation in the fall of 1974. The 32 selected for inclusion in the sample represents 50.8 percent of the total. The 160 children selected represent 13.7 percent of the cumulative total of the estimated 1166 receiving direct services from the 63 projects.

Selection of Parents

The parents or guardians of all children posttested by Battelle were included in the sample. Interviews with parents whose children had been in the program during the entire school year allowed parental judgments based on more long-term experience with project operation. Parents of children who were pretested but not posttested were not included in the sample.

Procedures to Select "Graduates" For Student Follow-Up

"Graduates" were defined as those children who had left the 32 model projects between May and the end of August of 1974. The plan to sample this population utilized data obtained during the first visit to each project, and followed a procedure similar to that for selecting new enrollees.

Projects initially identified all graduates for the specified time period, alphabetized their names, and assigned consecutive code numbers (i.e., 01, 02, 03....N). The master list of names and code numbers were retained by the projects. Information sheets were completed by the projects for each graduate using only the code numbers for identification.

Utilizing the information obtained from each of the 32 projects, the following steps were followed in selecting graduates to be followed-up.

1. The number of graduates was recorded for each of the 32 projects. The list was ordered from the greatest number to the least.

2. To obtain approximately 100 children* to follow-up, it was determined that four children would be selected from the 10 projects reporting the most children, 3 children would be selected from the next 12 projects, and two children would be selected from the 10 projects having the fewest graduates.

* An N of 100 was determined based on time, travel, and financial considerations.

3. Using a table of random numbers, code numbers of individual children were selected for each project. Alternate code numbers were selected in the same manner in the event that it was not feasible to follow children originally selected.

Procedures to Select Replication Sites

The research plan called for data collection from programs claimed by model projects as partial or complete replications. Approximately 100 programs were to be surveyed by mail, and 15 were to be visited to verify that the mailed questionnaire was effective in obtaining the required information. During the initial visit to the model projects, listings of replications were obtained. Utilizing that information, the following steps were implemented in selecting a sample of replications.

1. A master list of all reported replications was created.
2. A sample list of replications from which information would be obtained was then compiled. For model projects reporting 8 or fewer replications, all replications were included in the sample. For model projects reporting more than 8 replications, a table of random numbers was used to select 8.
3. Every ninth replication site on the sample list was selected for a site visit. In the event alternates for site visits were necessary, the site following the original selection on the sample list was chosen. The balance was included in the mail survey.

Training of Data Collectors

Preceding both the fall and spring visits to the 32 model projects, an orientation/workshop was conducted by the Battelle staff for the nine data collectors. Each data collector had had similar previous field experience, was knowledgeable about handicapped children, and had previous testing experience. For the most part they were not experienced child psychologists,

however. Since the Children's Early Education Developmental Inventory (CEEDI) was designed to be used ultimately by HCEEP project personnel, who generally are not experienced child psychologists, it was determined that the use of experienced child psychologists for administering the CEEDI would not provide a valid test of its use.

A three-day training workshop was conducted prior to the fall site visits. The data collectors were trained in the use of the instruments to be administered during the initial contact with projects: CEEDI, Cost Form, Replications Form A, and Follow-up of Students--Part I. Instructions were given and discussed concerning obtaining signed informed parent permission forms prior to administering the CEEDI and selection of alternates, if necessary, the role of the local psychologists utilized by Battelle to assess the handicapping conditions and service needs of selected children was discussed. Assignment schedules and background information on individual model projects were provided to each data collector.

Prior to the spring visit to project sites, a half-day session was conducted to train data collectors in the use of the parent interview form and Follow-up of Students--Part II. Instructions were given regarding obtaining signed informed parent permission forms prior to interviewing teachers or therapists of graduates, and the method of selecting alternate graduates, if necessary.

Pretest Data Collection

Using the sampling procedures outlined earlier, 32 model projects were selected for inclusion in the study. Each project was contacted initially by letter, which requested cooperation from the HCEEP Program and provided a description of Battelle's data collection activities. Subsequently, the projects were contacted by telephone to confirm participation, determine the exact number of new enrollees, select children to be assessed, arrange details of the visit, and establish the dates and duration of the visit. Following the telephone call, a letter of confirmation was

sent to the projects. Included with the letter were copies of parent permission forms which were to be signed by parents prior to the arrival of the data collector.

In three cases it was necessary to select an alternate project. In one case, direct services to children were no longer being provided. In a second case, services provided were therapeutic rather than educational, and children traveled long distances infrequently to obtain services. In the last case, the original agreement by the director to participate was reversed by the project's advisory board.

During the initial (fall) contact with the 32 model projects, 5 different measures were obtained. Pretest child-based measures were obtained by Battelle data collectors using the CEEDI. In addition, the verifying psychologists employed by Battelle contacted the projects and independently proceeded to assess the children selected using the Verification of Handicapping Condition Report Form. (See a later section of this chapter for details of the verification contact.) Three project-based measures were also obtained by Battelle data collectors. Replications Form A was completed in a personal interview, and the Cost Form and Graduate Follow-up Form, Part I, were presented and discussed with the project director or coordinator. In many cases, a business officer had to complete the Cost Form, and other project staff had to complete numerous follow-up forms. In the event this could not be done during the data collector's visit on site, the Cost Forms were to be completed and returned to Battelle by mail as soon as possible.

Projects were asked to schedule interviews and assessment sessions for the data collectors. In general, one-half day per child was allowed for one-to-one administration of the CEEDI, interview with his/her teacher or therapist, and if necessary, contact with parents.* In addition, a total of one-half day was included to obtain project-based measures.

In most cases, assessment of children occurred at the project site. For projects that were home-based, however, the data collector went to the home.

In some cases, children selected for assessment were unavailable at the scheduled time (e.g., due to illness). When it became evident that

* All three approaches are used by the CEEDI to gather data.

the situation would exist for the duration of the data collector's stay, an alternate child was selected, written parental permission was obtained, and the alternate was assessed.

Nine data collectors began their visits to the 32 projects during the week of November 4. Two to five days were spent at each project, depending upon the number of children to be assessed. Visits to two sites were delayed from the original schedule due to a reversed decision to participate and a strike by professional staff members. All data collection was completed by the end of the first week of December, 1974.

Posttest Data Collection

During the second (spring) visit to the 32 model projects, three instruments were used. Posttest child-based measures were obtained via administration of the CEEDI. In addition, the Parent Survey Form was administered to parents of children from whom both pre- and posttest performance data on the CEEDI were gathered. Part II of the Graduate Follow-up Form was completed through interviews with administrators and teachers of the graduates' placement setting. Concurrent with data collection at the 32 model sites, site visits to selected replications were also conducted. (See the following section of this chapter for details regarding data collection from replications.)

The second contact with each project to arrange on-site data collection was initiated by a letter outlining the activities to be accomplished. Following this, telephone contact was made to finalize arrangements. Code numbers of graduates were selected and relayed to project personnel. Because it was expected that some graduates would be located in settings too far from the project to visit and that parents might be difficult to contact for permission, code numbers of alternates were also selected. The number of children to be posttested was obtained. Cooperation was solicited from projects in scheduling interviews with parents of children assessed and teachers/therapists of graduates. Based on information obtained during the telephone call, the number of days required for the spring visit was determined, and dates of the visit were tentatively scheduled. While the last

day of operation was a primary factor in scheduling dates, other commitments of projects and their internal posttesting were considered.

Following the telephone contact, a letter of confirmation was sent. This included parental permission forms to follow-up graduates. Project staff were to contact parents and obtain written permission prior to the arrival of the data collector.

In most cases, the data collectors returned to the same projects that they had worked with in the fall. For some projects which had a large number of children to posttest and, consequently a large number of parents to interview, a second data collector accompanied the first to obtain the project-based measures. Two additional persons were utilized to accomplish this.

The second round of visits to the 32 projects began in mid-April due primarily to early closing dates of those projects. All data collection was completed by the end of the first week in June.

Data Collection at Replication Sites

The sample of replication sites to receive the mail survey form and to be visited was selected at the end of March, 1975. When necessary, reminder letters and a second mailing of the forms were sent to nonrespondents.

Replication sites selected for a personal interview were initially sent a brief letter outlining the purpose of the study and the information needed. This was followed by a telephone call to arrange an interview and answer any questions. A letter of confirmation followed.

Because 13 of the 15 replications to be visited were in close proximity to some of the 32 model projects, data collection from the two sources were coordinated. The remaining two sites required separate trips.

Obtaining Parental Permission

In light of recent legislation addressing the subject of informed parental consent (P.L. 93-380), stringent measures were taken to

obtain parental consent and insure the anonymity of children involved in this study. A table of random numbers was used to select code numbers of children to be assessed via the CEEDI, and of those graduates to be followed-up. Master lists of names and code numbers were retained by project personnel, and only code numbers appeared on data collection forms.

Parental permission forms were developed for both populations of children. The first form authorized Battelle representatives to (1) administer the CEEDI, (2) examine record folders of the child, and (3) observe and assess the child's handicapping condition. The first item involved the Battelle data collector; the second and third pertain to a school psychologist who was employed by Battelle to determine primary and secondary handicaps and assess educational needs of each child.

In addition to the above three items, the form requested agreement from parents to be interviewed in the spring regarding their perceptions of the program.

A model permission form was sent to the projects. In some cases, projects requested permission that they be allowed to reword the contents. This was allowed to the extent that the four items listed above were still included in the form.

Data collectors assessed children via the CEEDI only after obtaining one signed copy of the permission form. A second copy was signed and dated by the data collector and maintained in each project's files.

Similarly, parental permission was obtained to interview teachers or therapists of children who had graduated from projects.

Verifying Handicapping Conditions

As mentioned previously in the discussion of the Verification of Handicapping Condition Record form (VHCRF), independent assessments of primary and secondary handicapping conditions were made by licensed or credentialed psychologists.* The procedures for this effort are outlined below.

The first step was to identify and contact qualified psychologists in the geographical areas of each of the 32 model projects participating in the study. Those persons retained to carry out the verification task

* A summary of the psychologists' qualifications is given in Appendix D.

possessed experience in assessing children and were familiar with educational programs for the handicapped.

After the sample of children was selected, a package of materials was sent to each psychologist.* The package included background information on the study, purpose of the task, detailed instructions on completing and returning the VHCRF, the appropriate numbers of VHCRFs, steps to be followed in contacting projects, essential background information on each project (i.e., director's name, address, telephone number, characteristics of population served, etc.), and code numbers of children to be assessed. Code numbers of alternates were also provided to the psychologists.

The psychologists contacted the projects and, after seeing the written parental permission forms, proceeded to gather data. Based on a variety of procedures discussed in an earlier section, independent judgments of handicapping conditions and service needs were made. Completed forms, along with vitae were returned to Battelle. A school psychologist experienced in assessing children reviewed the forms and test protocol for completeness, and a small number of follow-up contacts were made with individual psychologists when necessary.

* A sample package appears in Appendix C.

CHAPTER IV. DATA PROCESSING AND DATA ANALYSIS METHODS AND PROCEDURES

Confidentiality of Data

In order to safeguard the confidentiality of data, several procedures were followed with regard to each of the target populations.

The children who were assessed with the CEEDI as well as those graduates followed-up were selected using a random sampling procedures and code numbers. Each model project generated and maintained two alphabetical lists: one of all new enrollees, and one of graduates. Each list was numbered consecutively. The total number for each project was reported to Battelle. Names were not obtained by Battelle. Then a table of random numbers was used to select code numbers.

A code of identification numbers for all data sources was established for the data file relating identifying information and the study data.

Identifying information for respondents and projects was recorded only on the face sheets of instruments. Only code numbers were used to identify children as well as projects and all other respondents as data were entered into the computer data file. The cover sheets of the instruments were removed after coding and maintained in a locked filing cabinet along with the code of identification numbers. The cabinet was accessible to only the key project staff members. At the conclusion of the project, the cover sheets and code of identification numbers were destroyed. Thus, the confidentiality of data has been maintained.

Coding and Processing of Data

The data for children and projects, collected through the completion of all forms, was processed in the following manner. The completion and receipt of each form was noted in a log maintained throughout the data collection period. Each project and child, as mentioned above, were assigned a code number. As each form was received, this fact was recorded for the appropriate project or child. All forms were then edited by Battelle project personnel familiar with the proper content of each form. Any questionable responses were either corrected, whenever possible, or treated as missing data. The data from the child-based measures (i.e., the CEEDI answer sheets for both pretest and posttest), the parent survey forms, and the verification of handicapping condition forms were transferred to coding sheets for keypunching. All other forms concerning project-based measures were held until the information they contained was to be analyzed.

The CEEDI, parent survey, and verification data were keypunched and a computer-based analysis file was created containing these data. A record was maintained in this file for each child who received the CEEDI pretest. This record contained all CEEDI scores (the basal, ceiling, and total raw scores), all data on handicapping conditions and services needed and to be provided, responses to all the parent survey items, and various identifying and bookkeeping information for each child (code number of child, sex, age, test administration dates, etc.). Further editing of these data were accomplished by generating and examining frequency distributions of each variable in this file and by comparing certain variables with known relationships for inconsistencies. This file was later used for all analyses of child growth, verification of handicapping condition, parent survey responses, and certain components of the technical evaluation of the CEEDI.

The analyses of all other project-based measures was done by hand due to the large number of variables, small number of projects, and the need to perform various content analyses and to create appropriate measures or indices. Certain characteristics of the projects were later added to the child-based measures analysis file described above for selected analyses of child growth.

Finally, the item response data from the pretest and posttest administrations of the CEEDI were placed on computer-based analysis files. These data were edited and then used to provide item analysis and reliability information for the technical evaluation of the CEEDI.

Methods of Analysis

Appropriate methods of analysis were selected for the different types of data collected from each of the data collection forms. The types of data analysis employed fall into two major categories: (a) analyses of child growth using the child-based measures, i.e., the five CEEDI domain scales; and (b) analyses of HCEEP project effectiveness using the various project-based measures.

Analyses Involving Child-Based Measures of Growth

The overall objective of the analysis of child-based measures of growth was to assess the impact of the HCEEP projects on the growth of handicapped children in terms of progress on the five CEEDI domain scales. The most important impact to be assessed was the overall impact, i.e., the impact for the total sample of children across all HCEEP projects. Also of importance, however, was the assessment of impact for different types of children, parents, and projects.

There are two crucial features of the objective stated above that deserve clarification. First, the meaning of "to assess" is represented by one research question to be answered for all children and projects and for different types of children, parents, and projects: Did the HCEEP projects have a positive impact upon the developmental progress of handicapped children as measured by the CEEDI domain scales? Second, the dependent variable to be assessed should be as good an indicator of the "impact" of the HCEEP projects as possible. In other words, the impact measure should be that part of children's growth on the CEEDI scales which could be reasonably attributed to the role of the projects and not to alternative sources of growth. Consequently, the analysis of child progress depended heavily upon the selection of a measure of impact which would isolate that portion of changes in CEEDI scores which could be reasonably attributed to the presence of the projects.

Constraints and Consequences. Two significant constraints on this evaluation study made the measurement and analysis of impact, as defined above, difficult to accomplish. First, there was no control group. All children in the evaluation study were to be recent enrollees in HCEEP projects. Thus, there was no direct way to determine the progress of an equivalent group of children in the absence of a HCEEP project in order to compare such progress with the progress of children enrolled in an HCEEP project.

The second major constraint was that only approximately 125 children could be sampled and these 125 children had to be spread across approximately 30 different projects.* Obviously, the number of variables

* The actual number of children and projects sampled was 160 and 35, respectively. (Over-sampling of children at the beginning of the year was recommended to take into account attrition of children from the program during the year.) The number actually participating during the pretest of the CEEDI was 155 and 32. The number of projects (32) was maintained throughout the study; however, the number of children who received both pretest and posttest of the CEEDI was 130, five more than the target number of 125.

(i.e., child characteristics, parent characterisitics, and project types) which could be systematically related to any impact measure developed was very large. The required small sample size, thus, precluded the assessment of impact for groups of children homogeneous with respect to these variables. Instead it was necessary to plan separate assessments of impact for different types of children defined by each of these variables one at a time. For example, instead of assessing impact within different combinations of handicapping condition and sex, assessments were made within handicapping condition alone and, then, within sex alone. Again, for example, instead of assessing impact for each of the 32 projects sampled, it was necessary to group projects into project "types", and assess impact within project types.

Assessing Impact within the Constraints. The assessment of program impact without a control group of comparable children not enrolled in HCEEP projects precluded the use of traditional methods of analysis such as gain scores, analysis of variance or covariance, or more complex regression procedures. A variety of other methods, however, were investigated. The two most promising of these were (a) matching on age, i.e., for each child of a given age at posttesting, selecting another child of the same age at pretesting, and then comparing the posttest scores (on the CEEDI) of the one group with the pretest scores of the other "matched" group; and (b) using the linear regression of CEEDI pretest raw scores on age at pretesting as a model of expected scores for children of any particular age at posttesting.

The rationale behind the selection of these two methods is that the principal reason for posttest scores being higher than pretest scores--other than program impact--was the expected increase due to maturation. The CEEDI was constructed to be a set of developmental scales and, as such, the raw scores should increase with an increase in age. This expectation was, of course, looked into carefully. Indeed, for all five domains the linear relationship between scores and age was quite high. Correlations ranged between 0.68 and 0.81. Table 4-1

TABLE 4-1. CORRELATIONS BETWEEN CEEDI DOMAIN RAW SCORES AND AGE IN MONTHS FOR PRETEST AND POSTTEST

Domain	Test Period	r	Sample Size
Personal-Social	Pretest	0.700	130
	Posttest	0.720	129
Adaptive	Pretest	0.748	130
	Posttest	0.693	128
Cognitive	Pretest	0.732	130
	Posttest	0.705	130
Communication	Pretest	0.710	129
	Posttest	0.677	129
Motor	Pretest	0.809	130
	Posttest	0.750	130

presents the score-age correlations for each domain on the pre- and posttest. In addition, the bivariate frequency distributions of domain scores and age were examined for the presence of any non-linear relationships between scores and age. None were discovered.

Whether or not any increase in scores from pretest to posttest, over and above that attributable to age, could be solely attributed to program impact could not be firmly established in the absence of a proper control group. However, no other reasonable competing explanations for gains not due to maturation could be established. Consequently, the decision was made to perform analyses with both matching and regression and compare the results of these two methods.

The Matching Method. The analysis method of matching on age consists of observing the age (in months) at posttesting of each child in the sample and finding (where possible) another child from the same sample who was of the same age at pretesting. As many matched pairs of children as possible are thus obtained, the first member of each pair being of some given age at posttesting, the second member of each pair being of the same age at the time of pretesting. The mean posttest scores of all first members of each pair represents CEEDI test performance for children having had HCEEP project experiences. The mean pretest scores of all second members of each pair is taken as an estimate of CEEDI test performance for handicapped children of a comparable age in the absence of project experiences, since the pretest scores are obtained prior to project experiences. Any difference between the mean of these two groups, then, is indicative of a program impact. If the mean posttest scores for the first group are higher than the mean pretest scores for the second

group, and this difference is "statistically significant",* then one may conclude that there was a positive program impact.

The impact for different types of children, parents, and projects could be investigated in the same way except that the children would have to be matched on age within levels of any other variable of interest. For example, children could be matched on age within each handicapping condition, enabling the assessment of program impact for each handicapping condition. Also, and more importantly for this evaluation analysis, such age matching within handicapping condition permits a more accurate assessment of overall program impact across all handicapping conditions, by examining mean posttest versus mean pretest performance for children matched on both age and handicapping condition.

The Regression Model. The regression method of analysis involves fitting a regression line that expresses the relationship between pretest scores and age at pretest. Thus, in the linear equation

$$Y' = bX + a,$$

values for the regression coefficients a and b are calculated to best predict (in a least squares sense) a child's pretest score (Y') given the child's age at pretest (X). This linear equation (for any given CEEDI domain) is assumed to represent the expected relationship between CEEDI test scores and age in the absence of HCEEP project

* The difference between these two means was tested for statistical significance by using a difference score for each matched pair [posttest score (for first member of pair) minus pretest score (for second member of pair)]. A t test was applied to these difference scores to see if the mean difference was significantly greater than zero (one-tailed test, at the .05 level of significance).

experiences, since the pretest scores represent performance prior to project experiences. To use the equation for each child posttested, the child's age at posttest is entered into the equation, yielding an expected value (Y') for a child of that age in the absence of project experience. This particular expected value for any given child has little meaning in and of itself. However, the average of these expected values for all children can reasonably be taken as an estimate of average CEEDI test performances for handicapped children of comparable age in the absence of project experiences. Any difference, then, between this average value and the average value of the actual posttest scores can be taken as an estimate of program impact. As with the matching method, if the actual mean posttest scores are higher than the mean posttest scores expected in the absence of "treatment", and this difference is statistically significant,* then one may conclude that there was a positive program impact. Also, as with matching, the impact for different types of children, parents, and projects could be investigated in the same way except that the regression line model would have to be estimated using the scores and ages of children within each level of any other variable of interest, resulting in separate regression lines for each level of that variable.

* The difference between these means was tested for statistical significance by applying a t test to the difference scores (Y-Y'), where Y is the actual posttest score for a given child and Y' is the expected score for the same child as obtained from the regression equation. As with the matching method, a one-tailed test was used to see if the mean difference was significantly greater than zero (one-tailed test at the 0.05 level of significance).

Use of the Matching and Regression Approaches. The matching approach has the advantage of not requiring any assumption concerning the form of relationship between CEEDI test scores and age in the population from which the sample of children was drawn. In contrast, the regression approach requires such an assumption--in this analysis, the relation between test scores and age was assumed to be linear (or "essentially" so) in the population. Examination of the sample data indicated that this assumption was plausible.

However, the matching approach generally yields less stable results, statistically, than a regression approach, in the calculation of "expected" performance in the absence of project experiences. In this evaluation, this problem is compounded by attrition of cases from an already small sample, due to not being able to obtain age matches in all cases.

For that aspect of the evaluation analysis concerned with overall program impact, it was decided to use both methods of analysis, since the sample size was sufficiently large to apply both methods. Results from both analyses are then compared.

For various sub-analyses directed toward assessing program impact for various types of children, parents, and projects, it was decided to use only the regression approach. As explained more fully in Chapter V (Evaluation Results) this decision was based on two main considerations: (1) the quite small sample size of children for many of the various sub-analyses, severely limiting the applicability of a matching approach, especially in view of additional loss due to not being able to obtain matches in all cases, and (2) the finding that, for the overall program impact analysis, both methods yielded quite similar results and therefore might reasonably be expected to yield similar results in various sub-analyses had the sample size been large enough to apply both methods.

In addition to the comparison of results using the matching and regression methods based entirely upon age, the possibility of employing variables in addition to age was examined. Whether one employs matching or regression analysis, there always exists the question of whether one has matched the two samples on the proper number or the correct combination of variables or whether the proper number or the correct combination of variables has been specified in the regression equation. In this study, the estimation of overall program impact using matching and regression analysis was extended to include the handicapping condition of the children along with their age. The results are discussed in Chapter V. The inclusion of additional variables was not possible due to the extremely small sample sizes that would have been obtained.

Analyses Involving Project-Based Measures

There were four areas in which project-based data were collected: (a) parent survey, (b) graduate follow-up, (c) project costs, and (d) project replication and dissemination. Due to basic differences in the type of data collected, how it was collected, and from what samples the data were obtained, the strategies of analysis and reporting of results varied considerably. The particular analysis techniques, however, were very similar among these four areas. In general, straightforward descriptive distributional statistics, e.g., frequencies, percents, means, etc., were employed, but the manner in which they were used varied.

Parent Survey. The analysis of the parent survey data consisted of identifying several areas of parental characteristics relevant to the impact and operation of the HCEEP projects. These areas were

- Parent-family involvement in program operation
- Parent perception of program effect
- Parental satisfaction.

Within each of these areas, the responses to relevant clusters of items are tabulated and described, as subsequently presented in Chapter V.

Graduate Follow-Up. Data were analyzed for all graduates of each HCEEP project in the sample and for a sample of these graduates for whom additional follow-up information was obtained. The analyses centered around seven research questions, two of which concerned all graduates and the other five concerned the follow-up sample. Descriptive analyses of the appropriate items from different forms are presented subsequently in order to answer these research questions.

Project Costs. Battelle designed a special purpose cost form to collect project costs for the 1974-75 year. The cost form was designed to obtain information on (1) the source of funds for the HCEEP programs, and (2) the proportion of the personnel budget that is utilized for each of the major functions that are performed routinely in the operation of the program. In addition, the form contained a format for determining the dollar value of services provided by outside agencies on personnel without cost to the HCEEP program.

The total cost form is made up of three tables as follows:

TABLE A. Project Expenditures and Source of Funds for 1974-1975

TABLE B. Allocation of Staff Time to Major Functions

TABLE C. Services Provided Without Charge to Project Children by Other Agencies.

Refer to Appendix A for a complete explanation and view of the Cost Form.

Cost Survey Returns. The cost form was presented to all 32 projects. Twenty-nine projects returned the forms, however, the degree of completeness varied across projects. Some projects were able to complete all parts of the cost form, whereas others could not. Of the twenty-nine returns, only one is not useable. For the majority of the cost analyses, the number of project forms used is 28.

For the most part, the projects reported completely the project expenditures by cost element. This is the expenditure portion of Table A. The source of funds portion of Table A is not complete, nor readily usable

for the majority of projects. This may be due to the fact that the projects are in varying stages of development. Perhaps there are not accurate records on the source of revenue by cost element. We found that it was not possible to perform a consistent analysis of the source of funds across the programs. It is essential that BEH understand that the analysis of expenditures does not include an analysis of the source of funds. In other words, the expenditures are expenditures of funds that could have obtained from four possible sources--federal government, state government, local government, and private sources.

Cost Measures. The cost analysis includes the calculation of three measures:

- Direct Cost for Professionals in Contact with Children
- Child-Staff Ratio (Contact Staff)
- Direct Cost Per Child for Professionals in Contact With Children.

The number of professionals in contact with children were calculated in terms of full-time equivalents. The generic titles of the professionals in contact with children are shown in Table 4-2.

TABLE 4-2 GENERIC TITLES OF PROFESSIONALS IN CONTACT WITH CHILDREN

Teacher	Psychometrist
Teacher-Aid	Psychoeducational Specialist
Aide	Pathologist
Speech Therapist	Speech Pathologist
Occupational Therapist	Interns
Physical Therapist	Social Worker
Teacher-Therapist	Language Specialist
Child Study Team	Child Development Technician
Therapist	High School Students
Psychologist	Home Trainers
Psychiatrist	Family Living Specialist

The direct cost includes only the salaries and/or wages paid for the full time equivalent persons in direct contact with children, i.e., those types of personnel shown in Table 4-2. Fringe Benefits, indirect costs or other project costs are not included in the calculation of the three cost measures.

We think that the direct cost for the professional contact persons is the most meaningful cost to use in this analysis. The other costs vary widely across the projects and are confounded by such things as the type of program, e.g., center-based versus home-based; the efficiency of operation of the projects; the cost of utilities and services in the various geographical regions; and many other factors.

It must be pointed out that the direct cost per child is a direct function of the child-teacher ratio. This fact has been verified in numerous cost analyses in educational settings. In fact, within certain bounds, the direct cost per child and the child teacher ratio are interchangeable surrogate measures.

The direct cost per child is the most unconfounded cost measure to use for a relative cost comparison across the projects. The only possible factor that may influence this measure is the differential cost of living in the various geographical regions of the projects. We have not made an adjustment for this factor because we believe that an adjustment based on cost-of-living would not materially increase the precision of the analysis, nor would it seriously affect the conclusions and recommendations based on the cost analyses.

Expenditures by Major Function. Table B of the Cost Form was designed to collect information on the allocation of effort to each of ten major functions, with an allowance for an "other" functional category. Table 4-3 shows the functions that were included as possibilities in Table B of the Cost Form. For the most part the projects were able to complete this part of the form. By weighting the percentage of effort reported for each function by the number of personnel (FTE), it is possible to obtain a percentage breakdown for the functions. This aggregate analysis is discussed under the section on Cost Analysis.

TABLE 4-3. MAJOR FUNCTIONS

Management and Administration
Instructional Services to Children
Therapeutic Services to Children
Services to Parents
Supplementary Services to Children and Parents
Screening Services for Admission
Evaluation of Children
Curriculum Development
In-Service Training of Staff
Dissemination and Replication
Other

Volunteer Services. The final part of the cost analysis deals with volunteer services. Table C of the Cost Form included a brief indication of the services received from other agencies, the estimated person-years and the estimated cost per person year for volunteer services. This information is reported as a part of the cost analysis.

Project Replication and Dissemination. The approach to analyzing the project replication and dissemination data is a generalized case study technique. This technique is used to describe three aspects of replication.

- The extent of replication
- The nature of contacts between projects and their claimed replications
- The correspondence between projects and their claimed replications.

This method is also used to describe three aspects of dissemination:

- Dissemination methods
- Persons responsible for dissemination
- Focus of dissemination activities.

Verification of Handicapping Condition Analysis

Additional data were collected on the sample of children who were randomly selected for testing using the CEEDI. For each of these children, one of a group of psychologists employed by Battelle examined the child and the project records for the child. From this examination, the psychologists completed the Verification of Handicapping Condition Form for each child. This form contained data on the primary and additional handicaps of the children as judged by the psychologists and as contained in the children's records. The form also contained data on the services needed and being provided for each child as judged by the psychologists.

The analysis of the data obtained from the verifying psychologists includes descriptions of the primary handicapping conditions as judged by the psychologists and as presented by the projects' records. Discrepancies between the two methods of classification are described. Also discussed are the additional handicaps of children who were judged multiply-handicapped by the psychologists. Finally, the need for and provision of services to these children is described.

CHAPTER V. EVALUATION RESULTS

This chapter contains the results of all analyses performed in order to provide a basis for the evaluation of HCEEP projects, based upon a random sample of 32 projects. The results are organized into the following six sections: (a) program impact on child growth, (b) verification of handicapping conditions and assessing service needs, (c) parent survey, (d) cost analysis, (e) follow-up of graduates, and (f) replication and dissemination strategies.

Program Impact on Child Growth

The results of the analysis of child growth are directed at determining whether there was a positive impact - attributable to the HCEEP projects and not maturation - on the growth of handicapped children on the five CEEDI domain scales. The question of program impact is first addressed in an overall sense for the entire sample of 130 children, randomly selected from the 32 sample projects, who were both pre- and posttested on the CEEDI. The same question is then similarly addressed for children of different types, for children whose families differed on selected variables thought to be relevant to child growth, and for children in different types of programs.

Characteristics of the Sample

Before presenting the various analyses of program impact, it is important to characterize the sample of children involved in these analyses. Generalizations of analysis results should be restricted to similar children.

The distribution of males and females in the sample was typical of most other random samples of handicapped children. There were almost twice as many males as females. Of the 130 children, 83 (63.8 percent) were male and 47 (36.2 percent) were female. The age at pretesting and posttesting of these children is shown in Table 5-1. At pretesting, most children

(86.8 percent) were between 2 and 5 years old. Only 9.2 percent were less than 2 years old and only 3.8 percent were 6 years old. At posttesting, most children (87.0 percent) were between 3 and 6 years old. Only 11.5 percent were less than 3 years old and only 1.5 percent were 7 years old.

The primary handicapping conditions of the children in the sample, as judged by the verifying psychologists, are summarized in Table 5-2. Most of the children (87.6 percent) fell into six categories: Educable Mentally Retarded, Trainable Mentally Retarded, Learning Disabled, Emotionally Disturbed, Speech Impaired, and Deaf. Note that the relative incidence of Hard of Hearing, Visually Impaired, Crippled, and Other Health Impaired handicapping conditions was very low. Generalizations of the results of the analysis of program impact on child growth should be done with extreme restraint for these categories. Eight (6.6 percent) of the children (labeled "Other Special Needs") were judged not handicapped according to BEH categories. These children were given a heterogeneous mixture of labels, such as "culturally" or "educationally deprived" and even "this child is not handicapped", by the Verifying Psychologists. However, results for this group of children are included in the overall impact analyses of child growth.

TABLE 5-1. DISTRIBUTION OF CHILDREN'S AGE AT PRETESTING AND POSTTESTING IN YEARS

Age in Years	Pretesting Frequency	Pretesting Percent	Posttesting Frequency	Posttesting Percent
Less than 1	3	2.3	1	0.8
1	9	6.9	9	6.9
2	12	9.2	5	3.8
3	32	24.6	24	18.5
4	41	31.5	43	33.1
5	28	21.5	35	26.9
6	5	3.9	11	8.5
7			2	1.5
Totals	130	99.9	130	100.0

TABLE 5-2. DISTRIBUTION OF CHILDREN'S PRIMARY HANDICAPPING CONDITION

Primary Handicap	Frequency	Percent
Educable Mentally Retarded	17	14.0
Trainable Mentally Retarded	15	12.4
Learning Disabled	22	18.2
Emotionally Disturbed	16	13.2
Speech Impaired	26	21.5
Deaf	10	8.3
Hard of Hearing	2	1.7
Visually Impaired	1	0.8
Crippled	1	0.8
Other Health Impaired	3	2.5
Other Special Needs*	8	6.6
Totals	121	100.0

* Children with "other special needs" were those identified as handicapped by the verifying psychologist; however, the conditions or labels applied did not fit any of the BEH handicapping categories.

The verification data were not obtained for 9 of the 130 children in the sample who were both pre- and posttested on the CEEDI. Of the 121 children for whom handicap data was available, 83 (68.6 percent) were judged by the psychologists to have additional handicaps and 38 (31.5 percent) were not.

Overall Program Impact

Table 5-3 presents the raw score pre-post mean gains for each of the five CEEDI domains. Also shown in the table are the pretest and post-test means, standard deviations, and sample sizes, for each domain.

As previously discussed in Chapter IV, the actual pre-post gains themselves cannot be taken as evidence of a positive program impact, since these gains not only reflect a possible HCEEP program effect but also an effect due to maturation in the absence of HCEEP project experiences. The two methods of analysis employed (regression analysis and matching), as previously outlined, are directed toward assessing what part of this total gain (if any) is due to project experience, or what part might be accounted for on the basis of maturation alone.

TABLE 5-3. GAIN SCORES AND ASSOCIATED STATISTICS FOR EACH CEEDI DOMAIN

Domain	Score	Mean[(a)]	Std. Dev.	Sample Size
Personal-Social	Pretest	39.923	19.320	130
	Posttest	51.581	20.000	129
	Gain	11.674	12.862	129
Adaptive	Pretest	38.969	13.596	130
	Posttest	44.898	13.273	128
	Gain	6.000	7.036	128
Cognitive	Pretest	22.431	11.396	130
	Posttest	27.400	13.005	130
	Gain	4.969	6.311	130
Communication	Pretest	24.783	12.966	129
	Posttest	30.380	13.803	129
	Gain	5.477	6.318	128
Motor	Pretest	46.408	15.854	130
	Posttest	52.131	16.380	130
	Gain	5.723	6.159	130

(a) Mean gain does not always equal the difference between mean posttest and mean pretest due to different sample sizes.

Analyses With Age. Table 5-4 shows the results of regression and matching analyses, using age only as the basis for matching, and using the pretest-age regression results to determine expected performance in the absence of project experiences, as previously outlined in Chapter IV.

For each domain, the first row of the table contains the mean impact score, sample size, and t-statistic* using the regression model. The second row contains analogous data for the sample of children for which an exact age match (in months) could be obtained. Since the sample size was noticeably smaller than for the regression results, matching was done again allowing a one-month difference in order to obtain an age match. The results of the inexact age matching are presented in the third row.

By way of example, the entry 6.702 (mean impact for the Personal-Social domain, using the regression method) means that the average of the actual posttest scores was 6.702 raw score units higher than would be expected in the absence of HCEEP project experiences, thus indicating a positive HCEEP impact for the Personal-Social domain. The value of 6.702 also means that the actual mean gain from pretest to posttest (i.e., the gain of 11.674 raw score units, as shown in Table 5-3), was 6.702 units higher than would be expected by maturation alone in the absence of HCEEP experiences, or that 6.702 units of the actual average gain might reasonably be attributed to HCEEP project experiences, with the balance of the gain (11.674-6.702 = 4.972) being attributable to maturation.

Other mean impact entries in the table are interpreted similarly, including the mean impacts for the matching method.

Examining the various mean impact measures in Table 5-4, one can see that the exact age matching method yielded slightly higher mean impact scores than did the regression method. However, the results are remarkably alike, especially with regard to the statistical significance of these means. In both cases all domains except the Motor domain had a significant mean impact. In the case of the inexact age match, the means for each domain are even more similar to the regression method means, probably due to the increase

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* The t-statistic is used to test the hypothesis that the mean impact score is less than or equal to zero. If the value of t is large enough to reject this hypothesis at the 0.05 level of significance, it is displayed. Otherwise it is not.

TABLE 5-4. OVERALL MEAN IMPACT BY DOMAIN EMPLOYING THE REGRESSION METHOD VERSUS THE MATCHING METHOD - MATCHING AND REGRESSION ON AGE ONLY.

Domain	Method	Mean Impact	Sample Size	t(a)
Personal-Social	Regression	6.702	129	5.475
	Matching-Exact	8.506	89	4.833
	Matching-Inexact(b)	6.816	103	3.550
Adaptive	Regression	2.234	128	2.647
	Matching-Exact	3.784	88	2.722
	Matching-Inexact	2.500	102	--
Cognitive	Regression	1.908	130	2.350
	Matching-Exact	3.124	87	2.598
	Matching-Inexact	1.481	104	--
Communication	Regression	2.187	129	2.446
	Matching-Exact	3.115	87	2.257
	Matching-Inexact	1.854	103	--
Motor	Regression	1.005	130	--
	Matching-Exact	2.506	89	--
	Matching-Inexact	1.413	104	--

(a) The t-statistic is presented whenever the test is significant at the 0.05 level.

(b) Inexact matching on age considers ages to be matched if they are within one month of each other.

in sample size. However the inexact matching means were not significant except in the Personal-Social domain.

From these results, it was concluded that the two methods produced quite similar results. However, the regression method appeared more powerful, in a statistical sense, probably due to a combination of larger sample sizes and smaller variances around the means.

Analyses With Age and Handicapping Condition. The second way utilized to estimate overall program impact was by first estimating impact for children with the same handicapping condition. This was done because it was believed that a child's handicap could significantly alter the relationship between pretest scores and age.

In the regression method, separate regression lines were used to calculate the expected posttest scores (based on the pretest-age regression) within each handicapping condition before the overall mean was calculated. In the matching method, children were matched on age within handicapping condition (thus yielding children matched on both age and handicapping condition) before calculating the overall mean.

In Table 5-5, the first row for each domain contains the mean impact, sample size, and t-statistic (whenever significant) for the results of the regression method. The mean impacts (for both the matching and regression analysis) are interpreted in the same way as those previously given for the analyses dealing with age only. For the regression method, the mean impact for each of the five domains was significant. The second row shows the results using an exact age match. Again the means tend to be larger than for the regression method, but fewer are significant, probably due to the very small sample size. When the age match was relaxed to within one month, the Personal-Social mean impact increased noticeably, the Adaptive mean impact decreased, and the other three domain mean impacts remained about the same. However, all five mean impacts were significant.

From these results, it was again concluded that the two methods of regression and matching produced quite similar results.

TABLE 5-5. OVERALL MEAN IMPACT BY DOMAIN EMPLOYING THE REGRESSION METHOD VERSUS THE MATCHING METHOD - MATCHING AND REGRESSION ON AGE AND HANDICAPPING CONDITION.

Domain	Method	Mean Impact	Sample Size	t[a]
Personal-Social	Regression	6.541	120	5.473
	Matching-Exact	8.741	27	2.519
	Matching-Inexact[b]	10.078	51	3.451
Adaptive	Regression	2.896	119	3.892
	Matching-Exact	7.577	26	3.946
	Matching-Inexact	4.560	50	2.841
Cognitive	Regression	1.766	121	2.664
	Matching-Exact	3.593	27	--
	Matching-Inexact	2.769	52	1.688
Communications	Regression	2.594	120	3.326
	Matching-Exact	3.926	27	--
	Matching-Inexact	3.365	52	1.708
Motor	Regression	1.884	121	2.444
	Matching-Exact	3.260	27	--
	Matching-Inexact	3.712	52	2.133

(a) The t-statistic is presented whenever the test is significant at the 0.05 level.

(b) Inexact matching on age considers ages to be matched if they are within one month of each other.

Rate Measures. Although the mean impacts shown in the previous analyses, which are in raw score units, do not appear very large in several cases, a simple, but informative measure can be calculated to lend meaning to these impacts. Considering only the two regression analyses, which provide probably more stable estimates than the matching analyses, subtracting the mean impacts from the actual raw score gain means (presented earlier in Table 5-3) yields the expected gain due to maturation. The ratio of the mean raw score gain to the expected gain due to maturation indicates the relative growth rate of these children in the presence of the HCEEP projects to that expected in their absence. For example, in the Personal-Social domain for the age only regression analyses, the mean raw gain (from Table 5-3) was 11.674. The mean program impact was 6.702. The difference, 4.972, is then the expected growth due to maturation. Thus, the ratio, 11.674/4.972=2.348, can be interpreted to mean that the Personal-Social growth of the total sample was over 2.3 times as great in the presence of the projects as would have been expected in their absence. Similar calculations for the other four domains show that this ratio is about 1.6 for each domain except Motor, where it is about 1.2.

The ratio of actual to expected gains is shown for each domain in Table 5-6, for both the regression analysis with age only and the regression analysis taking into account age and handicapping condition. Inspection of table entries shows that when both age and handicapping condition are taken into account in estimating expected gain due to maturation in the absence of project experiences, that the ratio of actual to expected gains is somewhat higher for the Adaptive, Communication, and Motor areas. For example, in the Motor area, the age only regression analysis indicates that children gain 1.2 times more with project experiences than without project experiences, whereas the age plus handicapping condition analysis shows a ratio of about 1.5. In general, however, the two regression analyses show quite similar ratios.

TABLE 5-6. RATIO OF ACTUAL TO EXPECTED GAINS FOR EACH REGRESSION ANALYSIS

Analysis Method	CEEDI Domain				
	PS	AD	CG	CM	MO
Age Only Regression	2.348	1.593	1.623	1.665	1.213
Age and Handicapping Condition Regression	2.268	1.904	1.593	1.889	1.467

PS = Personal-Social
AD = Adaptive
CG = Cognitive
CM = Communication
MO = Motor

Summary of Over-All Impact Analyses. For the "age only" analyses, i.e., where only children's age at posttest was taken into account in estimating expected CEEDI test performance of handicapped children in the absence of project experiences, both the regression and matching methods (when exact age matches were used) show a statistically significant positive program impact for all CEEDI domain scales except the Motor domain.

For the age and handicapping condition analyses, i.e., where both children's age and handicapping condition were taken into account in estimating expected CEEDI test performance in the absence of project experiences, both the regression and matching methods show a statistically significant positive impact in both the Personal-Social and Adaptive domains. In the Cognitive and Communication domains, the regression analysis shows a statistically significant positive program impact, but exact age matches (within handicapping condition) do not, although the impacts are still positive. However, this lack of statistical significance is probably due to the much

reduced sample size when exact age matching was done, since inexact age matching yielded a statistically significant positive impact, where the sample size was about twice as large and also where the observed sample impact was less. Finally, for the Motor domain, the age and handicapping condition regression analysis showed a positive statistically significant impact; the exact age matches (within handicapping condition) did not show a statistically significant impact, although the observed impact was still positive; and the inexact age matches showed a statistically significant positive impact, again where the sample size was larger than for exact matching.

In summary, the various regression and matching analyses point toward one conclusion: a positive HCEEP program impact in the Personal-Social, Adaptive, Cognitive, and Communication domains. In the Motor domain, there may be a positive program impact, although results are too mixed to say with any assurance.

The largest program impact appears to be in the Personal-Social domain, with actual average pre-post gains being about 2.3 times the average gain expected on the basis of maturation alone in the absence of project experience. Average pre-post gains for the Adaptive, Cognitive, and Communications domains are about 1.6 times greater than would be expected in the absence of project experience, and average gains in the Motor domain are about 1.3 times greater than expected in the absence of project experience.

Impact for Selected Groupings on Child Variables

In addition to assessing program impact for the total sample of children, a reasonable question to investigate is whether or not there is a significant positive program impact for different types of children. Four characteristics of children and one variable, which is an indicator of the length of treatment received by the children, were studied in this manner. The four child characteristics are:

- Primary handicapping condition
- The need for certain key services
- Sex
- Age at pretesting.

The indicator of length of treatment was the number of months between pretesting and posttesting on the CEEDI.

Primary Handicap. Certainly one of the variables most potentially relevant to program impact is the primary handicap of the children as judged by the verifying psychologists. Therefore, an analysis of program impact for each of the handicapping conditions adequately represented in the sample was conducted. The three handicap categories of Visually Impaired, Crippled, and Other Health Impaired were not adequately represented (with one, one, and three children so classified, respectively); therefore, they were not included in this analysis. The category of Hard of Hearing contained only two children. However, this condition was judged similar enough to the Deaf category that the two were merged for analysis. The eight children with a variety of handicaps not belonging to the BEH categories or with no evidences of a handicap were labeled "Other Special Needs" for this analysis.

Table 5-7 provides the mean program impact and associated statistics (based on the age-pretest regression analysis) for the seven handicapping categories examined for each CEEDI domain. With two exceptions, involving the Other Special Needs children, all impact estimates were positive. EMR children demonstrated a significant impact for all domains except Motor. Emotionally Disturbed children showed a significant impact in three domains: Personal-Social, Communication, and Motor, as did the Speech Impaired: Personal-Social, Adaptive, and Motor. The Learning Disabled and Other Special Needs groups had two significant impacts--the former in Personal-Social and Adaptive and the latter in Personal-Social and Communication. The Hard of Hearing/Deaf group had only one significant impact, in Communication. There were no significant impacts for the TMR children despite three noticeable large impacts in the first three domains.

Across all handicap groups and domains, 15 of the 35 estimated impacts were significant. The most frequently impacted group were the EMR children and the least frequently impacted were the TMR children. Looking at each domain, the Personal-Social domain contained the largest number of significant impacts (5) and the Cognitive domain the least number

TABLE 5-7. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND PRIMARY HANDICAPPING CONDITION

Domain	Primary Handicap[b]	Mean Impact	Sample Size	Standard Deviation[c]	t[a]
Personal-Social	EMR	10.512	17	13.276	3.265
	TMR	5.889	15	13.977	--
	LD	5.220	22	8.409	2.911
	ED	9.906	15	14.053	2.730
	SI	5.423	26	12.914	2.141
	HH	2.997	12	15.409	--
	OSN	14.943	8	12.380	3.414
Adaptive	EMR	5.148	17	9.250	2.295
	TMR	3.593	15	8.934	--
	LD	2.409	22	6.296	1.795
	ED	3.926	14	10.375	--
	SI	3.020	26	6.363	2.420
	HH	3.365	12	8.696	--
	OSN	-2.319	8	6.607	--
Cognitive	EMR	3.531	17	6.097	2.387
	TMR	5.889	15	5.662	--
	LD	1.281	22	6.194	--
	ED	1.661	16	9.498	--
	SI	2.741	26	9.676	--
	HH	0.603	12	4.885	--
	OSN	1.577	8	4.743	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

(b) EMR=Educable Mentally Retarded; TMR=Trainable Mentally Retarded; LD=Learning Disabled; ED=Emotionally Disturbed; SI=Speech Impaired; HH=Hard of Hearing and Deaf; and OSN=Other Special Needs.

(c) The standard deviation of the difference scores, (Y-Y'), where Y' is the estimated posttest score for an individual in the absence of treatment, based on the pretest-age regression analysis. The standard deviation column in all subsequent tables is interpreted similarly.

TABLE 5-7. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND PRIMARY HANDICAPPING CONDITION (Continued)

Domain	Primary Handicap[b]	Mean Impact	Sample Size	Standard Deviation	t[a]
Communication	EMR	5.815	17	9.234	2.596
	TMR	1.722	15	8.156	--
	LD	0.428	22	6.622	--
	ED	5.477	16	9.406	2.330
	SI	0.034	26	10.259	--
	HH	2.999	11	5.043	2.060
	OSN	6.786	8	5.489	3.496
Motor	EMR	2.688	17	10.275	--
	TMR	0.850	15	11.279	--
	LD	0.261	22	5.373	--
	ED	6.474	16	11.372	2.277
	SI	2.320	26	6.341	1.865
	HH	0.164	12	5.705	--
	OSN	-0.411	8	4.617	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

(b) EMR=Educable Mentally Retarded; TMR=Trainable Mentally Retarded; LD=Learning Disabled; ED=Emotionally Disturbed; SI=Speech Impaired; HH=Hard of Hearing and Deaf; and OSN=Other Special Needs.

of significant impacts (1). In summary, it appears that the HCEEP projects are doing the best job in the Personal-Social area and with EMR children, according to the tests of significance.

After the mean impact for any domain within each level of handicapping condition was tested for significance, it was noted whether two or more mean impacts in the same domain were statistically significant. If only one mean impact was significantly greater than zero, (as in the Cognitive domain) that mean was said to be different from the other means based upon a statistical conclusion. However, if two or more mean impacts were significantly greater than zero, the question still remained as to whether they were also different from each other. In such cases, the null hypothesis that they were equal was tested. In all cases where this was done, no significant differences were found. This procedure was followed in all other analyses employed to assess impact for selected groupings of children on child, family, and program variables. In every instance, no statistically significant differences between means were found.

Table 5-8 provides a summary of program impact for each handicapping condition, and also shows the ratio of actual to expected gains for each CEEDI domain within each handicapping condition. For a given handicapping condition, the first row (labeled "effect") shows the mean impact for each domain, i.e., the actual pre-post gain expected on the basis of maturation in the absence of project experiences. All statistically significant program impacts are indicated with an asterisk. The second row (labeled "gain") shows the actual pre-post mean gain. The third row (labeled "ex. gain") shows the gain expected in the absence of project experiences. The underlined entries in each cell of the table show the ratio of actual mean gains to expected mean gains. The "Other Special Needs" group is omitted, due to the uncertain type (if any) of handicapping condition represented by these children.

Inspection of the table shows that the ratio of actual to expected gains is appreciable in several instances, this ratio often being on the order to 1.5 to 2.0. That is, viewing all handicapping conditions and domains, it is not uncommon for children to have gained 1-1/2 to 2 times more (from pre- to posttest) than would have been expected in the

TABLE 5-8. SUMMARY OF PROGRAM IMPACT FOR EACH HANDICAPPING CONDITION

Handicapping Condition	Measure	CEEDI DOMAIN PS		AD		CG		CM		MO	
EMR	Impact	10.5*		5.1*		3.5*		5.8*		2.7	
	Gain	14.0	4.0	8.5	2.5	5.7	2.6	7.9	3.7	7.4	1.6
	Ex. Gain	3.5		3.4		2.2		2.1		4.7	
TMR	Impact	5.9		3.6		0.2		1.7		0.9	
	Gain	9.0	2.9	6.0	2.5	1.4	1.1	2.7	2.7	4.2	1.3
	Ex. Gain	3.1		2.4		1.2		1.0		3.4	
LD	Impact	5.2*		2.4*		1.3		0.4		0.3	
	Gain	10.4	2.0	5.6	1.8	4.9	1.4	4.7	1.1	5.0	1.0
	Ex. Gain	5.2		3.2		3.6		4.3		4.7	
ED	Impact	9.9*		3.9		1.7		5.5*		6.5*	
	Gain	16.0	2.6	6.8	2.4	5.2	1.5	8.6	2.7	9.8	3.0
	Ex. Gain	6.1		2.9		3.6		3.1		3.3	
SI	Impact	5.4*		3.0*		2.7		0.0		2.3*	
	Gain	12.2	1.8	6.1	2.0	6.9	1.7	4.7	1.0	6.5	1.6
	Ex. Gain	6.8		3.1		4.2		4.6		4.2	
HH	Impact	3.0		3.4		0.6		3.0*		0.2	
	Gain	9.3	1.5	6.9	1.9	2.8	1.3	3.8	4.7	3.9	1.0
	Ex. Gain	6.3		3.6		2.1		0.8		3.8	

* Program impact statistically significant at the .05 level

(a) All measures were calculated to three decimal places and, then, rounded for this table.

absence of project experiences. In several cases (for example, EMR children in the Personal-Social domain), the ratio of actual to expected gains is even larger.

Need for Certain Services. A study of the data on services needed and being provided to children as judged by the verifying psychologists (see later section on Verifying Handicapping Conditions and Assessing Service Needs), revealed that, overall, there was a high degree of correspondence between service needs and provision. Therefore, it was decided to consider children different depending upon only whether they needed a service. Of the fifteen different services examined,* four were analyzed, since it appeared that only four would be likely to make a direct difference in whether or not the children would or would not show a significant program impact on the CEEDI scales. These four services were: (a) speech therapy, (b) physical therapy, (c) vision therapy, and (d) speech and hearing therapy. Thus, for each of these services, the children were divided into two groups: those who needed the service and those who did not. Program impact was then estimated for the two groups.

Need for Speech Therapy. Table 5-9 shows that the estimated program impact was positive for three of the five domains whether or not the service was needed. Significant impacts occurred in all domains except Motor. Overall, there appears to be no evidence that needing or not needing speech therapy made any difference in terms of finding a significant program impact or not--except in the Communication domain which favored those not needing this service.

Need for Physical Therapy. All estimated program impacts were again positive. Table 5-10 shows significant impacts, almost exclusively for those not needing this service, in all domains except Motor. Except in the Communication and Motor domains, the program appears to have had an impact only for those children not needing physical therapy, although the

* For a listing of all services, see Appendix B.

TABLE 5-9. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER CHILDREN NEEDED SPEECH THERAPY

Domain	Speech Therapy Needed	Mean Impact	Sample Size	Standard Deviation	t (a)
Personal-Social	No	8.502	53	13.181	4.696
	Yes	5.387	76	14.352	3.272
Adaptive	No	2.144	53	9.036	1.727
	Yes	2.434	75	9.950	2.118
Cognitive	No	2.028	53	8.774	1.683
	Yes	2.050	77	9.518	1.890
Communication	No	3.295	52	10.115	2.349
	Yes	1.718	77	9.613	--
Motor	No	1.417	53	10.490	--
	Yes	1.168	77	10.844	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-10. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER CHILDREN NEEDED PHYSICAL THERAPY

Domain	Physical Therapy Needed	Mean Impact	Sample Size	Standard Deviation	t(a)
Personal-Socal	No	7.490	105	13.682	5.610
	Yes	3.473	24	13.043	--
Adaptive	No	2.608	104	8.864	3.000
	Yes	2.470	24	9.838	--
Cognitive	No	2.004	106	9.028	2.249
	Yes	1.787	24	7.029	--
Communication	No	2.016	105	10.070	2.051
	Yes	3.121	24	8.471	1.805
Motor	No	1.364	106	8.888	--
	Yes	0.974	24	11.846	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

lack of statistical significance for children needing physical therapy could very well be due to the small sample sizes.

Need for Vision Therapy. Table 5-11 shows only two significant impacts, one in the Personal-Social domain for those children not needing the service and one in the Communication domain for those needing it. All but one of the estimated impacts were positive. Apparently, program impact is not related to needing this service.

Need for Speech and Hearing Therapy. As in speech therapy, there were significant program impacts in all domains except Motor (see Table 5-12). Again, all estimates of impact were positive. Also, for the Personal-Social, Cognitive, and Communications domains, significant impacts occured whether the service was judged needed or not. For the Adaptive domain, a significant impact occured only when the service was judged to be needed.

Sex of Children. Table 5-13 illustrates the estimated program impact for males and females separately for each domain. Again, all estimates of impact are positive. There is an indication that there is more of a program impact for males than females. Four of the five domains (not Motor) show a significant impact for males and only one domain (Personal-Social) does so for females. However, a closer study of the actual means suggests that this difference is only clearly manifested in the Cognitive domain.

Age at Pretesting. Although the method of analysis (regression of scores on age) employed here estimates the effect of program impact over and above the effect of age, it is still possible that the presence of program impact might vary for children who were older versus younger at the time of pretesting. Therefore, the children were divided into two groups - those older than and those younger than the median age (49 months) at pretesting.

The results shown in Table 5-14 indicate that the presence of program impact differs for older versus younger children for only two domains.

TABLE 5-11. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER CHILDREN NEEDED VISION THERAPY

Domain	Vision Therapy Needed	Mean Impact	Sample Size	Standard Deviation	t (a)
Personal-Social	No	7.339	108	14.252	5.391
	Yes	2.603	21	12.570	--
Adaptive	No	2.228	107	9.610	--
	Yes	2.803	21	10.241	--
Cognitive	No	2.076	109	9.532	--
	Yes	1.403	21	7.807	--
Communication	No	1.355	108	10.146	--
	Yes	4.064	21	9.903	1.881
Motor	No	1.300	109	10.888	--
	Yes	-0.086	21	11.307	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-12. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER CHILDREN NEEDED SPEECH AND HEARING THERAPY

Domain	Speech and Hearing Therapy Needed	Mean Impact	Sample Size	Standard Deviation	t (a)
Personal-Social	No	7.204	90	13.793	4.954
	Yes	6.170	39	13.572	2.839
Adaptive	No	1.604	89	9.557	--
	Yes	4.267	39	9.542	2.793
Cognitive	No	1.803	91	9.268	1.856
	Yes	2.936	39	8.455	2.169
Communication	No	2.059	90	10.037	1.946
	Yes	3.917	39	9.283	2.635
Motor	No	0.682	91	10.827	--
	Yes	2.493	39	10.683	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-13. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND SEX

Domain	Sex	Mean Impact	Sample Size	Standard Deviation	t[(a)]
Personal-Social	Male	6.123	82	14.233	3.898
	Female	7.513	47	13.223	3.897
Adaptive	Male	2.362	81	9.165	2.320
	Female	2.221	47	10.230	--
Cognitive	Male	2.538	83	9.666	2.392
	Female	0.945	47	8.701	--
Communication	Male	2.069	83	10.142	1.859
	Female	2.458	46	10.250	--
Motor	Male	1.620	83	10.337	--
	Female	0.240	47	11.847	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-14. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND AGE AT PRETESTING

Domain	Age at Pretesting	Mean Impact	Sample Size	Std. Dev.	t (a)
Personal-Social	Less than Median	5.594	62	12.222	3.604
	Greater than Median	6.997	67	15.337	3.734
Adaptive	Less than Median	0.732	62	9.279	--
	Greater than Median	3.134	66	9.736	2.616
Cognitive	Less than Median	1.056	63	7.082	--
	Greater than Median	1.522	67	10.737	--
Communication	Less than Median	2.346	63	8.597	2.166
	Greater than Median	1.239	66	11.295	--
Motor	Less than Median	0.014	63	9.308	--
	Greater than Median	1.366	67	11.894	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

While older children appear to benefit more in the Adaptive domain, younger children do better in the Communication domain. Both groups had a significant program impact in the Personal-Social Domain.

Treatment Length. The difference in time between pre- and post-testing was taken as a measure of treatment length. Although this time difference is more a function of the testing schedules at the various projects rather than the projects themselves, it does still provide a measure so as to investigate the influence of length of treatment on program impact, an obviously important variable to be studied.

Children in the sample were divided into two groups: 4-5 months, between pre- and posttesting, and 6-7 months between pre- and posttesting. Results are presented in Table 5-15. In examining entries in this table, one can see that both the shorter and longer treatment length groups of children showed a significant program impact in the Personal-Social and Adaptive domains, but that only the longer treatment length had a significant impact in the Cognitive and Communication domains. Thus, there appears to be an expected edge, over domains, for longer treatment lengths.

Impact for Selected Groupings on Parent Variables

Another way of treating the question of program impact is to conduct impact analyses for different groups of children as defined by differences between their parents on selected variables that could be related to the presence or absence of a significant program impact. Two sets of parent variables were studied. First, two variables indicating in a crude fashion the socioeconomic status of the child's family were created and employed:

- Educational level of parents
- Occupational level of parents

Responses to items from the parent survey concerning the levels of educational and occupational attainment for both parents (if there were two) were grouped into high and low categories. For education, "completion of high school" or less was designated as low and "some college or post-secondary training" or

TABLE 5-15. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND TREATMENT LENGTH

Domain	Treatment Length	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	4-5 months	7.179	38	13.162	3.363
	6-7 months	6.568	91	14.258	4.393
Adaptive	4-5 months	3.371	38	9.711	2.140
	6-7 months	1.802	90	9.502	1.798
Cognitive	4-5 months	1.824	39	10.020	--
	6-7 months	2.114	91	8.704	2.318
Communication	4-5 months	1.878	39	10.816	--
	6-7 months	2.402	90	9.624	2.366
Motor	4-5 months	2.403	39	11.070	--
	6-7 months	0.552	91	10.777	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

more was designated as high. For occupational level, unskilled and semi-skilled labor, clerical/sales, and housewife were classified as low and skilled labor, business manager or owner, and professional were classified as high. Thus, each parent was classified as either high or low on educational and occupational level. If there were two parents for a child, the higher level of the two was selected as the value for each of these two variables as the indication of maximum educational and occupational level. The children were then divided into two groups, high and low, on these two variables.

The second set of parent variables were based upon responses to items on the parent survey indicating parental involvement in various aspects of project planning, conduct, and prescribed home teaching activities. These were:

- Expression of feelings and suggestions in settings conducive to planning
- Participation in project planning activities
- Participation in the conduct of the project
- Whether the project prescribed home teaching activities to parents (in four domains, communication, adaptive, cognitive, and motor), and
- Frequency with which the home teaching activities were carried out.

Maximum Educational Level. Table5-16 shows a significant impact for both high and low levels of maximum educational level in the Personal-Social domain, for the high level in the Adaptive domain, and for the low level in the Communication domain. Thus, there appears to be no overall relationship between educational level and program impact.

Maximum Occupational Level. As with educational level, Table 5-17 shows a significant program impact for both high and low levels in the Personal-Social domain and for the high level in the Adaptive domain. No other estimated impacts were significant, indicating no overall relationship between occupational level and program impact.

TABLE 5-16. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND EDUCATION LEVEL OF PARENTS

Domain	Education Level	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	Low	5.503	39	11.911	2.887
	High	8.296	50	14.358	4.085
Adaptive	Low	2 008	39	8.412	--
	High	2.496	50	10.162	1.737
Cognitive	Low	0.750	40	7.537	--
	High	2.495	50	10.710	--
Communication	Low	2.231	40	7.835	1.799
	High	1.523	49	10.657	--
Motor	Low	1.602	40	8.809	--
	High	0.256	50	11.019	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-17. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND OCCUPATION LEVEL OF PARENTS

Domain	Occupation Level	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	Low	7.549	33	12.594	3.444
	High	5.047	39	13.592	2.319
Adaptive	Low	0.611	33	8.907	--
	High	2.801	39	9.411	1.859
Cognitive	Low	0.934	33	9.153	--
	High	2.101	40	9.289	--
Communication	Low	1.148	32	8.455	--
	High	1.697	40	9.305	--
Motor	Low	0.526	33	8.342	--
	High	0.947	40	9.815	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

Expressed Feelings and Suggestions in Planning Settings. Table 5-18 suggests that the expression of feelings and suggestions in settings conducive to planning will lead to a significant program impact in all domains except Motor, whereas the failure to do so will lead to program impact only in the Personal-Social and Adaptive domains.

Participation in Project Planning. In comparision with the previous results on expressed feelings and suggestions regarding planning, Table 5-19 indicates that participating in planning leads to a significant program impact less often than lack of such participation does. The children of non-participating parents showed a program impact in all domains except in Motor, while the children of participating parents showed an impact in only the Personal-Social and Cognitive domains.

Participation in Project Conduct. A comparison of program impact for children whose parents did and did not participate in the conduct of the projects yields unexpected results. Table 5-20 shows that non-participation leads to a significant program impact in all domains except Motor and that participation leads to a program impact in only the Personal-Social domain. In addition, this grouping of children's impact scores yields one of the few clusters of negative estimated impacts - all for children whose parents participated in the conduct of the projects. These results are very likely an example of the danger in looking at one variable at a time. It would be unwise to conclude from these results that parent participation in projects will decrease the chances of a project having an impact on a child. More than likely, some other variable (e.g., the child's handicapping condition) is highly related to parent participation and the values or levels of this unknown variable for participating parents would help explain this unusual outcome. Unfortunately, due to the small sample size, the study of parent participation in conjunction with any other variable(s) would be tenuous, if not impossible.

TABLE 5-18. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS EXPRESSED FEELINGS AND SUGGESTIONS IN SETTINGS CONDUCIVE TO PLANNING

Domain	Expressed Feelings and Suggestions	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	No	6.661	49	14.893	3.130
	Yes	6.737	80	13.102	4.599
Adaptive	No	2.539	48	8.817	1.994
	Yes	2.182	80	9.876	1.976
Cognitive	No	1.648	49	8.605	--
	Yes	2.127	81	9.376	2.041
Communication	No	0.878	49	11.067	--
	Yes	3.128	80	9.686	2.888
Motor	No	1.095	49	9.963	--
	Yes	1.094	81	10.916	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-19. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS PARTICIPATED IN THE PLANNING OF PROJECTS

Domain	Participated	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	No	7.253	64	13.320	4.356
	Yes	6.158	65	14.491	3.427
Adaptive	No	3.196	63	9.135	2.777
	Yes	1.939	65	9.720	--
Cognitive	No	1.978	65	9.277	1.718
	Yes	1.928	65	9.296	1.672
Communication	No	2.612	64	10.918	1.914
	Yes	1.842	65	9.416	--
Motor	No	2.054	65	10.365	--
	Yes	0.070	65	10.770	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-20. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS PARTICIPATED IN THE CONDUCT OF PROJECTS

Domain	Participated	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	No	6.785	106	14.043	4.974
	Yes	6.571	23	13.163	2.394
Adaptive	No	2.924	105	9.276	3.231
	Yes	-0.441	23	9.265	--
Cognitive	No	2.403	107	9.333	2.664
	Yes	-0.299	23	8.384	--
Communication	No	2.464	107	10.253	2.486
	Yes	1.018	22	9.467	--
Motor	No	1.523	107	10.579	--
	Yes	-1.144	23	11.136	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

Prescription of Home Teaching Activities. Tables 5-21 through 5-24 indicate the same type of results as discussed above. Of the four domain-related areas studied in which parents were or were not prescribed home teaching activities for their children, only in the area of Communication (Table 5-21) do the results appear to favor prescribing such activities. In the other three areas (Tables 5-22 through 5-24), the results suggest that program impact is more likely when parents are not prescribed such activities. Of course, there is always the question as to whether or not these activities were carried out appropriately. However, a more likely explanation is that the prescription of home teaching activities to parents is strongly associated with some other variable whose values or levels for parents with prescribed activities would "make sense" with the obtained results.

Frequency of Carrying Out Home Teaching Activities. In contrast with the results for children whose parents were prescribed home teaching activities, Table 5-25 indicates that daily implementation of such activities is more likely to lead to a significant program impact than less than daily implementation. Children whose parents carried out these activities daily showed a significant program impact in the Personal-Social, Adaptive and Cognitive domains. However, the less than daily group did show an impact in the Communication domain.

Impact for Selected Groupings on Project Variables

The last manner in which children were grouped to study the possible presence of a significant program impact was on the basis of certain characteristics of the HCEEP projects in which they were enrolled. The pretest scores of children enrolled in similar projects on each of these variables were analyzed separately to generate separate regression models of expected posttest scores. Then program impact was estimated for each separate group of children. The variables which were selected to study different types of projects were:

- Cost per child (based upon costs for staff contact with the children)
- Child-staff ratio (based upon numbers of staff in contact with the children)

TABLE 5-21. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS WERE PRESCRIBED HOME TEACHING COMMUNICATION ACTIVITIES

Domain	Prescribed	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	No	6.757	60	12.801	4.088
	Yes	6.747	69	14.773	3.795
Adaptive	No	1.444	59	8.989	--
	Yes	3.154	69	10.035	2.611
Cognitive	No	0.769	60	8.345	--
	Yes	3.079	70	9.801	2.629
Communication	No	2.272	60	10.404	1.692
	Yes	2.247	69	9.843	1.896
Motor	No	0.847	60	9.743	--
	Yes	1.370	70	11.035	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-22. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS WERE PRESCRIBED HOME TEACHING ADAPTIVE ACTIVITIES

Domain	Prescribed	Mean	Sample Size	Std. Dev.	t (a)
Personal-Social	No	7.387	100	13.390	5.517
	Yes	4.601	29	14.593	--
Adaptive	No	2.191	99	9.144	2.384
	Yes	2.962	29	10.297	--
Cognitive	No	2.336	101	8.585	2.735
	Yes	0.691	29	10.487	--
Communication	No	2.390	101	9.710	2.474
	Yes	1.685	28	11.134	--
Motor	No	1.366	101	9.938	--
	Yes	0.176	29	12.636	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-23. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS WERE PRESCRIBED HOME TEACHING COGNITIVE ACTIVITIES

Domain	Prescribed	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	No	6.641	109	13.897	5.012
	Yes	7.118	20	14.671	2.169
Adaptive	No	1.672	108	9.661	1.798
	Yes	5.656	20	9.560	2.645
Cognitive	No	1.826	109	8.999	2.115
	Yes	1.746	21	10.754	--
Communication	No	2.436	109	10.026	2.538
	Yes	0.954	20	11.054	--
Motor	No	0.950	109	11.263	--
	Yes	1.569	21	8.533	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-24. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PARENTS WERE PRESCRIBED HOME TEACHING MOTOR ACTIVITIES

Domain	Prescribed	Mean	Sample Size	Std. Dev.	t[(a)]
Personal-Social	No	8.426	81	14.857	5.104
	Yes	4.042	48	11.897	2.354
Adaptive	No	2.847	80	9.077	2.805
	Yes	2.222	48	9.178	--
Cognitive	No	2.311	82	9.195	2.277
	Yes	1.283	48	9.385	--
Communication	No	2.192	82	10.686	1.858
	Yes	1.870	47	9.501	--
Motor	No	1.990	82	9.022	1.998
	Yes	0.399	48	11.793	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-25. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND HOW OFTEN PARENTS CARRIED OUT ALL PRESCRIBED HOME TEACHING ACTIVITIES

Domain	Activities Carried Out	Mean	Sample Size	Std. Dev.	t(a)
Personal-Social	Daily	8.024	59	13.337	4.622
	Less than Daily	4.180	30	15.973	--
Adaptive	Daily	2.571	59	9.744	2.026
	Less than Daily	1.012	30	10.037	--
Cognitive	Daily	2.670	60	9.657	2.141
	Less than Daily	2.494	30	9.853	--
Communication	Daily	1.874	59	9.713	--
	Less than Daily	4.524	30	9.634	2.572
Motor	Daily	0.450	60	11.251	--
	Less than Daily	2.201	30	11.912	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

- Whether a project was center- or home-based
- Whether a project used an underlying developmental model, and
- Whether a project developed and used its own curriculum materials.

Cost Per Child. There was great variation in the cost per child across the 28 of the 32 sampled projects for which cost data were available. These costs ranged from $353 per child to $4,113 per child. Based upon the distribution of these costs, three groups of projects were identified: High - $4,113 to $1,542; Medium - $1,344 to $942; and Low - $821 to $353. The program impact for the children in these three groups were analyzed separately. Table 5-26. shows that the children in high cost projects had a significant program impact in two domains: Personal-Social and Adaptive. The medium cost projects had significant program impacts in all domains except Motor, and the low-cost programs yielded only one program impact - in the Personal-Social domain. Thus, it would seem that there is no evidence from this analysis that high cost projects are most likely to produce program impacts. On the other hand, medium cost projects appear most likely to lead to program impacts.

The distributions of handicapping conditions for high, medium, and low cost programs were compared to see if certain handicaps judged more severe than others were more prevalent in high cost programs. The percentages of TMR children in high, medium, and low cost programs were 9.3, 11.1, and 19.4, respectively. For EMR children, these percentages were 4.7, 8.3, and 25.8. For Deaf/Hard of Hearing, these percentages were 16.3, 11.1, and 3.2. In general, these results do not support the contention that children in high cost programs would be least likely to show the greatest impact because these programs contain the most severely handicapped children.

Child-Staff Ratio. There was also great variation in the child to staff ratio of the 29 projects from whom these data were available. The range was from 2.1:1 to 15.5:1. The projects were divided into three groups: Low - 2.1 to 4.6; Medium - 4.8 to 6.8; and High - 8.7 to 15.5.

TABLE 5-26. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND LEVEL OF PROJECT COST PER CHILD

Domain	Cost/Child Level	Mean	Sample Size	Standard Deviation	t[(a)]
Personal-Social	High	3.891	43	12.167	2.098
	Medium	8.483	40	15.490	3.464
	Low	8.165	35	12.466	3.875
Adaptive	High	2.711	42	8.950	1.963
	Medium	2.870	40	11.159	--
	Low	0.430	35	8.897	--
Cognitive	High	1.408	44	9.486	--
	Medium	4.116	40	8.829	2.948
	Low	0.991	35	8.235	--
Communication	High	0.582	44	9.912	--
	Medium	3.351	40	9.378	2.260
	Low	2.351	34	10.082	--
Motor	High	0.664	44	10.876	--
	Medium	1.913	40	12.041	--
	Low	0.887	35	9.716	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

The program impact for children in each of these project groups was analyzed separately Table 5-27 shows results similar to those obtained for project costs per child. There is no evidence that a low child-staff ratio leads to the most frequent number of significant program impacts; only one domain (Personal-Social) had such an impact for the Low group. On the other hand, it would appear that Medium child-staff ratios will yield the most frequent program impacts; only one domain (Motor) did not have such an impact. The High child-staff ratio projects only led to two significant program impacts (in the Personal-Social and Communication domains).

Center and Home Based Projects. The projects were divided into two groups: those that were exclusively center-based (23 projects) and those that were home-based or had a significant home-based component (9 projects). Table 5-28 indicates that a significant program impact is more likely for the home-based projects. All domains except Motor had a program impact for the home-based projects. The center-based projects had only one such impact in the Personal-Social domain.

The distributions of handicapping conditions for center- and home-based programs were compared to see if certain handicaps judged more severe than others were more prevalent in center-based programs. The percentage of TMR children in center- and home-based programs were 14.7 and 9.5, respectively. For EMR children, these percentages were 10.7 and 14.3. And, for Deaf/Hard of Hearing, these percentages were 9.4 and 11.9. Thus, in general, these results do not support the contention that children in center-based programs would be less likely to show the greatest impact because these programs contain the more severely handicapped children.

Use of an Underlying Developmental Model. The projects were next divided on the basis of whether or not they claimed to operate on the basis of an underlying developmental model. Table 5-29 suggests that this variable is probably unrelated to the likelihood of obtaining a significant program impact. Projects without a model yielded three such impacts in the Personal-Social, Adaptive, and Cognitive domains. Projects with a model had program impacts in the Personal-Social and Communication domains.

TABLE 5-27. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND CHILD TO STAFF RATIO OF PROJECT

Domain	Child/Staff Ratio	Mean	Sample Size	Standard Deviation	t (a)
Personal-Social	Low	6.360	38	11.362	3.451
	Medium	4.867	42	14.836	2.126
	High	9.714	42	15.265	4.125
Adaptive	Low	2.233	37	8.258	--
	Medium	3.506	42	11.374	1.998
	High	1.490	42	9.009	--
Cognitive	Low	0.036	38	7.759	--
	Medium	4.342	43	10.120	2.814
	High	2.115	42	8.813	--
Communication	Low	0.306	38	8.237	--
	Medium	3.266	43	10.507	2.039
	High	3.241	41	10.296	2.016
Motor	Low	1.177	38	8.921	--
	Medium	1.472	43	13.462	--
	High	1.115	42	9.431	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-28. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PROJECT IS CENTER- OR HOME-BASED

Domain	Base	Mean	Sample Size	Standard Deviation	t[(a)]
Personal-Social	Center	5.875	85	14.672	3.693
	Home	8.193	44	12.140	4.477
Adaptive	Center	1.270	84	9.509	--
	Home	4.040	44	9.067	2.955
Cognitive	Center	1.022	86	9.519	--
	Home	3.726	44	8.736	2.829
Communication	Center	1.772	85	10.175	--
	Home	3.030	44	9.860	2.039
Motor	Center	0.691	86	10.539	--
	Home	1.596	44	11.277	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

TABLE 5-29. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PROJECT USES UNDERLYING DEVELOPMENTAL MODEL

Domain	Model	Mean	Sample Size	Standard Deviation	t (a)
Personal-Social	No	5.379	60	13.202	3.157
	Yes	7.810	69	14.606	4.443
Adaptive	No	3.521	60	9.025	3.022
	Yes	1.218	68	9.938	--
Cognitive	No	2.899	61	9.276	2.440
	Yes	1.123	69	9.319	--
Communication	No	2.109	61	9.989	--
	Yes	2.318	68	10.396	1.838
Motor	No	1.271	61	10.674	--
	Yes	0.789	69	11.061	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p < 0.05$).

Development and Use of Own Curriculum Materials. Finally, the projects were divided on the basis of whether or not they said they had developed and used their own curriculum materials. Projects saying they did so had a significant impact in all domains except Motor (see Table 5-30). On the other hand, projects that said they did not had a program impact in only two domains (Personal-Social and Communication). Thus, projects that developed and used their own curriculum materials appear to be more likely to have significant program impacts.

Summary and Discussion of Impact on Child Growth

This section attempts to summarize the variety of results concerning the presence or absence of a significant program impact over the five domains for the various ways in which the child data could be grouped, i.e., by child characteristics, parent-family variables, and project types. Before proceeding, however, the problem of looking at only one variable at a time should be restated. As discussed earlier, the examination of more than one variable at a time was not possible due to the extremely small sample sizes that would result from dividing the children into groups based upon the combinations of levels of two or more variables, e.g., handicapping condition and sex. However, it is quite possible that the presence or absence of program impacts for different levels of any one variable may have been influenced by the high degree of relationship between that variable and some other, known or unknown. Thus, conclusions based upon each separate analysis should be stated and used with great care.

Overall Impact. The one analysis which answers the most important question was that concerned with program impact for the total sample. A significant impact was found for each domain except Motor. Even though the estimates of impact appear small in terms of CEEDI raw score units, the mean raw gain was shown to be between 1.6 and 2.3 times as great as the expected gain (gain in the absence of the program impact). Thus, overall, the HCEEP projects appear to have had a positive impact on child growth except in the Motor domain.

TABLE 5-30. MEAN PROGRAM IMPACT AND ASSOCIATED STATISTICS BY DOMAIN AND WHETHER PROJECT DEVELOPED AND USED THEIR OWN CURRICULUM MATERIALS

Domain	Curriculum Materials	Mean	Sample Size	Standard Deviation	t (a)
Personal-Social	No	7.194	58	14.195	3.859
	Yes	6.597	71	13.759	4.040
Adaptive	No	1.549	57	9.510	--
	Yes	2.757	71	9.592	2.423
Cognitive	No	1.746	58	8.196	--
	Yes	2.322	72	10.027	1.964
Communication	No	2.170	57	9.619	1.703
	Yes	2.375	72	10.648	1.892
Motor	No	0.097	58	8.979	--
	Yes	1.493	72	11.972	--

(a) The t-statistic is reported whenever the mean is statistically significantly greater than zero ($p \leq 0.05$).

Child Characteristics. Analyses of program impact by different types of children showed that the HCEEP projects appear to have had the most impact on EMR children, and children with a longer treatment period between pre- and posttesting. In each case, these groups of children had a significant program impact on all domains except Motor.

Parent Variables. Analyses of program impact by different ways of grouping children on the basis of selected parent-family variables showed little of interest, except that certain parent particpation activities appeared tied to the absence of program impacts, while non-participation was tied to the presence of such impacts. Similarly, in three out of four domain-type areas, the prescription of home teaching activities appeared related to the absence of program impact while the lack of such prescription was related to the presence of program impact. Finally, there was some evidence that more frequent implementation of home teaching activities was related to more program impact.

Project Variables. The analyses of child data grouped by the type of project in which they were enrolled lead to certain noteworthy results. Projects that have medium child-staff ratios (and, to a lesser extent, medium costs per child), that are home-based (or have a home-based component), and that have developed and used their own curriculum materials appear to have the most program impact.

Summary by CEEDI Domains. Almost without exception, every estimate of program impact was significant in the Personal-Social domain. Forty-eight out of the 54 ways in which program impact was estimated were significant in this domain. Apparently, no matter how the children are grouped, the HCEEP projects had a significant impact on Personal-Social development. Over half of the estimates of program impact in both the Adaptive and Communication domains were significant (29 and 31, respectively), indicating that, no matter how children are grouped, the HCEEP projects have had a significant impact on these two areas of development also. To a slightly lesser extent (23 significant impacts out of 54), the impact within the Cognitive domain seems to be fairly consistent across different child groupings.

And, consistent with the overall impact results, only 4 of the estimates of program impact in the Motor domain were significant. This might indicate that motor development cannot be or is not being taught to the children in the HCEEP projects or, possibly, that the children in these projects are not sufficiently behind in motor development to expect a program impact to be observed.

Finally, the almost total absence of negative estimates of program impact cannot be over-emphasized. Only 6 out of 270 estimated impacts were negative.

Verifying Handicapping Condition and Assessing Service Needs

The results reported in this section are based on data obtained from the Verification of Handicapping Condition Report Form. Verifying Psychologists sent the completed forms to Battelle. The forms were reviewed by a consultant (School Psychologist) and, where appropriate, follow-up contacts were obtained for 155 children from 31 HCEEP model projects.* However the sample number, 141, reported in this section represents only those children who were both pretested with the CEEDI and whose handicap was assessed by Verifying Psychologists.

The results in this section are presented in two parts. The first part describes data related to handicapping condition as determined by the Verifying Psychologists and the HCEEP projects. The second part describes services needed and provided to the sample of children.

Handicapping Condition

Primary handicap. As a result of the verification task, the sample of children was assigned a primary handicapping condition category, or were judged as not handicapped by the Verifying Psychologists. The primary handicapping condition assigned to each child by the psychologists, rather than the handicapping condition category assigned by the HCEEP project, was used for all subsequent analyses related to child growth.

The distribution of the primary handicapping conditions of the sample of children assigned by the psychologists and as reported by HCEEP projects

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* The psychologist with whom Battelle contracted to assess five children at the 32nd site failed to either perform the assessments or to submit the results. Repeated contacts were made by Battelle staff in an attempt to obtain the assessment results; however, nothing was received from this psychologist. In addition, some Verifying Psychologists were unable to carry out their task until after the Battelle data collector had assessed the sample of children. In the intervening period, some of the originally selected children stopped attending the program due to such factors as parental choice, moving from the community, etc. In a few of these cases, the Verifying Psychologist selected an alternate to assess. Thus, Verification of Handicapped Condition Report Forms were completed on 155 children, only 141 of which were used in this data analysis.

is shown in Table 5-31. The categories most frequently represented in the sample were speech impairment and learning disability. Vision impaired and crippled were least frequently represented.

The underlined entries in the diagonal cells reflect agreement in assignment of primary handicapping condition by the psychologists and the HCEEP projects. Agreement was obtained for 109 of the 141 children (77.3 percent). A discrepancy in assignment is indicated in 32 cases across all categories of handicapping condition. Agreement between psychologists and projects ranged from 0.0 percent (involving one vision impaired child) to 93.3 percent (for 14 of 15 trainable mentally retarded children). One similar group of discrepancies involves the three categories of learning disability, emotionally disturbed, and speech impaired. The first two categories are considered by many to be two aspects of the same problem concerned with learning difficulties. Speech impairment, on the other hand, may be manifested as a result of the other handicaps or be one area of deficit associated with another handicap. Thus, differences in assignment within this group of categories may be a matter of emphasis by the diagnostician.

A second group of discrepancies concerns the hearing impaired. There is generally high correspondence between psychologists and projects, although three children judged as hard-of-hearing by projects were judged to be deaf by the psychologists. A third group, involving only a small number of children, was concerned with the categories of "crippled" and "other health impaired". Here again, the similarity of symptoms could account for the discrepancy in judgments.

It should be noted that there were no discrepancies relating to whether or not a mentally retarded child was at the educable or trainable level. However, nine children categorized as speech impaired, learning disabled, or other health impaired by projects were judged as mentally retarded by psychologists. The frequency of speech and learning problems among mentally retarded children may account for differences in the diagnosis between psychologists and projects.

TABLE 5-31. DISTRIBUTION OF PRIMARY HANDICAPPING CONDITIONS AS JUDGED BY VERIFYING PSYCHOLOGISTS AND HCEEP PROJECTS (N=141)

CATEGORY OF HANDICAPPING CONDITION ASSIGNED BY VERIFYING PSYCHOLOGIST	CATEGORY OF HANDICAPPING CONDITION ASSIGNED BY HCEEP PROJECTS											TOTAL
	N.H.	EMR	TMR	LD	ED	SI	DEAF	HOH	VI	CRIP.	OHI	
NOT HANDICAPPED	5			1	1	3						10
EDUCABLE MENTALLY RETARDED		12		2		5					1	20
TRAINABLE MENTALLY RETARDED			14			1						15
LEARNING DISABLED	2			24						1		27
EMOTIONALLY DISTURBED		1		3	12	2						18
SPEECH IMPAIRED				1	2	25						28
DEAF							9	3				12
HARD-OF-HEARING								3				3
VISUALLY IMPAIRED						1						1
CRIPPLED				1						2		3
OTHER HEALTH IMPAIRED										1	3	4
TOTAL	7	13	14	32	15	37	9	6	0	4	4	141

N=141

In Agreement = 109

Discrepancy = 32

Some discrepancies cannot readily be accounted for by similarity or close relationship of symptoms or handicaps. For example, one child considered speech impaired by a project is judged as visually impaired by the psychologist. This difference can probably be accounted for on the basis of which condition was judged to be primary and which was secondary. In this case, the child evidenced both handicaps. However, the psychologist and project did not agree as to which was primary, i.e., the most debilitating or disabling to the child in terms of functioning in an educational setting.

It should be noted that 10 children (7.1 percent) were judged by psychologists as not handicapped. In 5 cases, the project assignment agreed with this judgment. This does not mean that the children involved did not have special needs. Rather they were described by the HCEEP projects as "economically disadvantaged", "culturally deprived", etc., -- categories not included as handicaps by BEH. In the remaining 5 cases, projects judged the children to be speech impaired, learning disabled, or emotionally disturbed. The Verifying Psychologists did not judge these 5 children to be sufficiently impaired to justify assignment of a handicapping condition.

Multiple handicaps. To more adequately describe the characteristics of the sample of 141 children, it is necessary to determine the severity of disability. Not only the type of handicap, but the number of handicapping conditions will influence the resources needed for a child as well as the growth or progress that can be reasonably expected. Verifying Psychologists reported handicaps which they considered to be secondary, in addition to the primary or most debilitating condition. Results show that 33 of the 131 children judged as handicapped by psychologists (25.2 percent) were judged to have only one, the primary, handicap. Sixty-three children (48.1 percent) had one additional, secondary handicap; 27 children (20.6 percent) had two additional handicaps; 5 (3.8 percent) had three; 2 (1.5 percent) had four; and 1 child (.8 percent) was reported to have five handicaps in addition to the primary one.

Table 5-32 summarizes the nature of the secondary handicaps associated with each primary handicap as judged by the Verifying Psychologists. Overall,

TABLE 5-32. NATURE OF SECONDARY HANDICAPPING CONDITIONS ASSOCIATED WITH PRIMARY HANDICAPS, FOR SAMPLE OF HCEEP PROJECT CHILDREN, AS JUDGED BY VERIFYING PSYCHOLOGISTS (N=131)

PRIMARY HANDICAP	NO SECONDARY HANDICAPS	NO. OF CASES WITH SECONDARY HANDICAPS OF									
		EMR	TMR	LD	ED	SI	DEAF	HOH	VI	CR.	OHI
EDUCABLE MENTALLY RETARDED (EMR)	2			1*	1	10		2	4		2
TRAINABLE MENTALLY RETARDED (TMR)	2					7		1	1		2
LEARNING DISABLED (LD)	12	2*			4	5	1		1	1	
EMOTIONALLY DISTURBED (ED)	7	2		3		5					
SPEECH IMPAIRED (SI)	8	2		5	4			3			2
DEAF	1	2			1	7					
HARD-OF-HEARING (HOH)		2				3					
VISUALLY IMPAIRED (VI)					1						
CRIPPLED (CR.)	1		1	1	1			1	1		
OTHER HEALTH IMPAIRED (OHI)			2	2	1	1					
TOTAL	33	10	3	12	13	38	1	7	7	1	6

* In some states the definitions of learning disability and educable mentally retardation are not mutually exclusive. It is expected that this is the situation for these three cases.

speech impairment was the most common secondary handicap. It was reported in 38 cases. The information from Table 5-32 supports the belief that discrepancies between psychologists and projects regarding primary handicaps (Table 5-31) reflect a difference in emphasis as to which condition was primary or most debilitating, and which was less debilitating. Again, groups of handicaps appear that might be expected to occur together commonly. The first such group involves learning disability, emotional disturbance, and speech impairment. The two categories in this group are often closely related, leading to some difficulty in determining which is the cause or the symptom. The second group involves mental retardation and speech impairment. Speech impairment alone may be mistakenly considered as an indication of mental retardation. Or, the speech problem may be considered as one of several characteristics often found among mentally retarded children.

Assessing Service Needs

The Verifying Psychologists, in addition to diagnosing the handicapping conditions of the sample of children, determined the needs for services of each child and the services being provided by the HCEEP projects to each child to meet these needs. Table 5-33 summarizes the frequencies and percentages of services judged by the Verifying Psychologists to be needed, and the services being provided. The percentages of the children receiving specific services ranged from approximately 12 percent for vision therapy and dental services to 75 percent for educational services. Table 5-33 also indicates the number of children judged by the psychologists in need of each of the services. The services judged as needed by the majority of the 141 children are: diagnostic/evaluative (102 children), speech therapy (85 children), social (93 children), and educational services (109 children). With the exception of speech therapy, these services are provided to 90 percent or more of the children needing the services by the HCEEP projects. Although lower in percentage service provision, speech therapy is provided to 80 percent of the needy children.

TABLE 5-33. NATURE AND EXTENT OF SERVICES PROVIDED TO CHILDREN OF HCEEP PROJECTS, AS JUDGED BY VERIFYING PSYCHOLOGISTS (N=141)

	FOOD	DENTAL	DIAGNOSTIC AND/OR EVALUATIVE	MEDICAL	SPEECH THERAPY	OCCUPATIONAL THERAPY	PHYSICAL THERAPY	VISION THERAPY	SPEECH AND HEARING THERAPY	SOCIAL	COUNSELING/ GUIDANCE	RECREATIONAL	EDUCATIONAL	TRANSPORTATION	OTHER
Number of Children Receiving Services	45	18	96	60	68	20	21	17	41	89	46	40	107	46	21
Percentage	(31.9)	(12.7)	(68.0)	(42.5)	(48.2)	(14.1)	(14.8)	(12.0)	(29.0)	(63.1)	(32.6)	(28.3)	(75.8)	(32.6)	(14.8)
Number of Children Needing Services	44	21	102	70	85	26	28	21	44	93	56	44	109	49	30
Percentage	(31.2)	(14.9)	(72.3)	(49.7)	(60.3)	(18.4)	(19.9)	(14.9)	(31.2)	(66.0)	(39.7)	(31.2)	(77.3)	(34.8)	(21.3)
Number of Children Receiving Needed Services	41	15	95	58	68	18	21	16	38	88	46	38	106	45	21
Percentage	(93.2)	(71.4)	(93.1)	(82.9)	(80.0)	(69.2)	(75.0)	(76.2)	(86.4)	(94.6)	(82.1)	(86.4)	(97.3)	(91.8)	(70.0)
Number of Children Not Needing Services	97	120	39	71	56	115	113	120	97	48	85	97	32	92	111
Percentage	(68.8)	(85.1)	(27.7)	(50.4)	(39.7)	(81.6)	(80.2)	(85.1)	(68.8)	(34.1)	(60.0)	(68.8)	(22.7)	(65.3)	(78.7)
Number of Children Not Needing Services	4	3	1	2	0	2	0	1	3	1	0	2	1	1	0
Percentage	(4.1)	(2.5)	(2.6)	(2.8)	(0.0)	(1.7)	(0.0)	(0.8)	(3.1)	(2.1)	(0.0)	(2.1)	(3.1)	(1.1)	(0.0)

An interesting finding is that not all of the children in the sample were judged by the psychologists to need educational services (77.3 percent were judged to need this service). It might be reasoned that regular, rather than special, educational services would fulfill the needs of 22.7 percent of the children.

Four services--dental, occupational, physical, and vision therapies--were judged to be needed in only 20 percent or fewer cases. The low incidence of these service needs is consistent with the low incidence of handicaps in the sample with which these services are generally associated. For example, children who were categorized as visually impaired or as crippled, i.e., those most likely to receive vision and physical therapy respectively, comprise only 16.0 percent of the sample. A breakdown of needed services per child is displayed in Table 5-34. The table shows that 58.2 percent of the children were judged to need from two to six services each, with another 20.6 percent needing nine or ten different services. Two children were judged to need no services.

The extent to which services were provided to needy children is also presented in Tables 5-33 and 5-34. Table 5-33 shows the percentage of cases receiving needed services ranging from 69.2 percent for occupational therapy to 97.3 percent for educational services. Ten services of 15 service categories were being provided to 80.0 percent or more of the needed cases. A breakdown of services being received per child shown in Table 5-34 shows that only six children were not being provided any services, and four were being provided only one service. Two to six services were being provided to 59.6 percent of the children.

In addition to summarizing information on services needed and received, information is presented regarding provision of services judged by the psychologist to be not needed. Table 5-33 indicates that few children who do not need a service actually received them. The most frequently provided service that was judged as not needed was food service; only 4.1 percent of the cases received it.

Summary

Diagnostic work-ups were done for children assessed with the TEEDI to obtain a description of their primary and secondary handicaps,

TABLE 5-34. NUMBER AND PERCENTAGE OF CHILDREN NEEDING AND BEING PROVIDED SERVICES (N=141)*

NUMBER OF SERVICES	NUMBER (%) OF CHILDREN NEEDING SERVICES	NUMBER (%) OF CHILDREN BEING PROVIDED SERVICES
0	2 (1.4)	6 (4.3)
1	2 (1.4)	4 (2.8)
2	16 (11.4)	21 (14.9)
3	14 (9.9)	14 (9.9)
4	15 (10.6)	11 (7.8)
5	21 (14.9)	20 (14.2)
6	16 (11.4)	18 (12.8)
7	7 (5.0)	7 (5.0)
8	6 (4.3)	9 (6.4)
9	16 (11.4)	16 (11.4)
10	13 (9.2)	7 (5.0)
11	5 (3.6)	2 (1.4)
12	5 (3.6)	5 (3.5)
13	2 (1.4)	1 (0.7)
14	1 (0.7)	-- ---

* 141 children who were pretested and for whom verification forms were completed by psychologists.

and to determine services needed and being provided. The diagnostic work-ups were done by independent Verifying Psychologists, and reviewed by a school psychologist. Data were reported on 141 children who were both pretested with the CEEDI and whose handicap was assessed by Verifying Psychologists. The results of the verification of handicapping condition task are summarized below.

- As judged by Verifying Psychologists, the most frequent handicapping conditions were speech impairment and learning disability. The least frequent handicaps were vision impairment and crippling conditions.
- In comparing judgments of Verifying Psychologists with HCEEP projects concerning primary handicaps, agreement was obtained in approximately three-fourths of the cases. Discrepancies in assignment generally may be a matter of emphasis as to which of multiple handicaps was most debilitating.
- Seven percent of the children were judged by Verifying Psychologists as not handicapped in categories included as handicaps by BEH.
- Incidence of secondary handicaps was reported as follows: None - 25.2 percent; 1 secondary handicap - 48.1 percent; 2 - 20.6 percent; 3 - 3.8 percent; 4 - 1.5 percent; and 5 secondary handicaps - .8 percent.
- Children were judged as having the following service needs: diagnostic/evaluative (72.3 percent), speech therapy (60.3 percent), social services (66.0 percent), and educational services (77.3 percent). With the exception of speech therapy, the service needs of 90 percent or more of the children were being met.
- The majority of children were judged as needing and were being provided from two to six services each.

Parent Survey

Regulations for HCEEP projects require inclusion of a parent-family participation component. The following types of services are recommended in the regulations: assistance in understanding and coping with the child's handicap; psychological or social work services; information on child growth and development; information on special education techniques; observation of children; carry-over activities to the home; and opportunity to participate in planning and evaluation of the program.

In this section, results of interviews of parents of HCEEP project children relating to these types of involvement are reported. In addition, information on attitudes and indications of satisfaction are presented. The data presented are based on the interview responses of 129 parents whose children had been in one of the 32 model projects for one school year and had been pre- and posttested with the CEEDI.

Characteristics of Parents Interviewed

Ninety-seven of the 129 interviews (75.2 percent) were with the mothers of the children assessed with the CEEDI. For 21 interviews (16.3 percent), both of the parents were present, and 4 interviews (3.1 percent) were with fathers only. In the remaining 7 cases (5.4 percent), respondents were foster parents, a legal guardian, or other relative.

The educational and occupational characteristics of the respondents and the other parent of the child are displayed in Table 5-35. Typically, the respondent was a housewife (60.5 percent) who had a 12th grade education or less (72.0 percent). The educational level of the other parent, as reported by the respondent, was generally higher, with 77.2 percent having more than a 12th grade education. The occupation of the child's other parent was most frequently in skilled labor (20.2 percent), semi-skilled labor (18.1 percent), business ownership/management (17.0), or some other category (16.0 percent).

TABLE 5-35. EDUCATIONAL AND OCCUPATIONAL CHARACTERISTICS OF PARENT SURVEY RESPONDENTS AND CHILD'S OTHER PARENT (N=129)

Characteristic	No. (%) of Respondents	No. (%) of Child's Other Parent
Highest Education Level Completed		
8th grade or less	14 (10.8)	10 (10.4)
Some high school	35 (27.1)	20 (20.8)
High school graduate	44 (34.1)	24 (25.0)
Some college/post-secondary training	19 (14.7)	21 (21.9)
College/post-secondary training	10 (7.6)	11 (11.5)
Graduate school/professional training	5 (3.9)	10 (10.4)
Not reported	2 (1.6)	33
Occupational Level		
Unskilled labor/service	8 (6.2)	7 (7.5)
Semi-skilled labor	9 (7.0)	17 (18.1)
Skilled labor	4 (3.1)	19 (20.2)
Clerical-sales	16 (12.4)	5 (5.3)
Business manager/owner	2 (1.6)	16 (17.0)
Professional	6 (4.7)	10 (10.6)
Housewife	78 (60.5)	--
Unemployed	--	5 (5.3)
Other	6 (4.7)	15 (16.0)
No response	--	35

In 88 cases (68.8 percent), both of the parents lived in the home. In 3 cases (2.3 percent), grandparents were present, and other adults lived in the home in 5 cases (3.9 percent). There were no other adults in addition to the respondent in 32 (25.0 percent) homes, and no response was obtained in one (0.7 percent) case.

Parent-Family Involvement in Program Operation

Of the 129 parents responding, 100 (77.5 percent) reported that the project staff had prescribed activities for them to do with their children at home.* Table 5-36 indicates the extent and nature of these activities. The greatest emphasis was on development of language and communication skills (58.1 percent of parents). This skill area was followed, in decreasing emphasis, by motor skills, self-help skills, problem solving skills, and attention skills. Activities concerned with developing social relationships were prescribed least, with only about 2 to 5 percent of the parents reporting the prescription of these activities.

TABLE 5-36. EXTENT OF AT-HOME LEARNING ACTIVITIES PRESCRIBED BY HCEEP MODEL PROJECTS, AS REPORTED BY PARENTS (N=100)

SKILL AREA	NUMBER (%)* OF PARENTS REPORTING
Language/Communication	75 (58.1)
Motor	54 (41.9)
Self-help	30 (23.3)
Problem-solving, Cognitive	22 (17.1)
Attention	20 (15.5)
Relationships With Other Children	6 (4.7)
Relationships With Family Members	4 (3.1)
Relationships With Other Adults	3 (2.3)

* Multiple responses; percents do not total to 100.

* The distribution of "yes" responses was very similar when home-based and center-based projects were compared.

Of the 100 parents reporting that activities were prescribed, 96 percent reported that they carried out the activities with their children. Of the 96 carrying out activities, the majority, 65 (67.7 percent), did this daily, while 17 (17.7 percent) worked with the child at least once a week. The remaining parents reporting doing such activities less frequently or as needed. Nearly all participating parents (97 percent) indicated that the HCEEP project had provided the support, e.g., instructions, materials, etc., needed to carry out the activities.

In addition to carrying out project-prescribed activities with their own children, 85 percent of the parents were also involved in other ways with the project. Table 5-37 summarizes the extent of parent involvement in the various activities. The most frequent type of participation was found in parent group activities (50.4 percent) and meeting with project staff (37.2 percent). The next most frequent types of participation were those wherein parents and children directly benefit, i.e., learning activities for parents (19.4 percent) and assisting teachers with children (15.5 percent). Four percent or less of the parents sampled were involved in program planning or operation activities.

TABLE 5-37. NATURE AND EXTENT OF PARENTAL INVOLVEMENT WITH HCEEP MODEL PROJECTS (N=129)

INVOLVEMENT OR ACTIVITY	NUMBER (%)* OF PARENTS REPORTING
Parent groups	65 (50.4)
Meetings with project staff	48 (37.2)
Learning activities for parents	25 (19.4)
Assisting teachers with children	20 (15.5)
Planning policy-making	5 (3.9)
Disseminating information	5 (3.9)
Assisting in administration	2 (1.6)
Evaluating program	1 (0.8)
Did not participate	19 (14.7)

* Multiple responses; percents do not total to 100.

Fifty-seven interviewed parents (most of whom were the mothers) indicated that other family members or care-givers had also participated in the HCEEP model projects' programs. Of these other family members participating, 15 were siblings, 9 were grandparents, and 5 were some other relative.

Across all 129 parents, 89.6 percent felt that there was enough opportunity for them to participate in the program. Only four percent stated there was not enough opportunity; 6.4 percent did not know.

Overall, most of the parents sampled (95.3 percent) felt that there was generally good communication between themselves and the project staff concerning the needs and problems of the children involved. Similarly, most parents (91.9 percent) indicated that they had been given the opportunity to express their feelings and suggestions about the program and their children's activities. Most frequently, the exchange occurred during informal discussions with project staff. Formally scheduled meetings and home visits also provided opportunities for interaction, but to a lesser extent than did informal meetings. Of 99 parents who had given suggestions to project staff, 65 (65.7 percent) reported that their suggestions had been used, 3 (3.0 percent) reported no use of suggestions, and 31 (31.3 percent) did not know if staff had acted on the suggestions.

Parent Perception of Program Effect

The 129 parents of children assessed with the CEEDI were asked if they thought their children had made any improvements or shown any positive change since entering the program. Approximately 96 percent said that they had perceived such changes. Table 5-38 describes the nature of the parent-perceived changes. All categories of skill areas were mentioned by at least 18.6 percent of the parents. Improvements in language and communication were the most noticed, with 79.8 percent of the parents naming that skill category. Cognitive and problem-solving skills as well as social relationships with other adults were less frequently mentioned. It is of interest that while relatively few parents reported prescribed activities in the areas of social skills (see Table 5-36),

a significantly greater proportion perceived positive changes in these skill areas, particularly in relationships of their children with other children.

TABLE 5-38. POSITIVE CHANGES IN CHILD BEHAVIOR AS PERCEIVED BY PARENTS (N=124)

SKILL AREA	NUMBER (%)* OF PARENTS REPORTING
Language, Communication	99 (79.8)
Motor	62 (50.0)
Attention	52 (41.9)
Self-help	48 (38.7)
Relationship With Other Children	46 (37.1)
Relationship With Family Members	27 (21.8)
Relationship With Other Adults	23 (18.6)
Problem-solving, Cognition	23 (18.6)

* Multiple responses, percents do not equal to 100.

Parents were asked if they felt that the reported changes could be attributed to their children's participation in the HCEEP programs. An overwhelming proportion (97.6 percent) said yes, and 2.4 percent did not know.

In addition to asking parents about effects the program had on children, parents were also asked if they, the parents, had personally gained anything from participation in this program. Approximately 80 percent (103) replied that they had in one or more ways. The most frequently mentioned benefit was knowledge of how to work with their children (83.4 percent). The next most frequently cited were knowledge of children's problems and needs (57.2 percent) and of children's abilities (42.7 percent).

Interview items specifically inquired about parental expectations regarding their children, and the role the HCEEP projects played in influencing the child's future. First, parents were asked if the

programs helped them in forming realistic expectations for their children's future. Of 129 parents, approximately 66 percent replied that it had, 26 percent said it had not, and 8 percent did not know or couldn't say. Parents were also asked if they thought their children's participation in the programs would improve their opportunities for schooling, employment, and a full social life. Approximately 84 percent answered yes, 4 percent no, and 12 percent did not know or could not say.

Parental Satisfaction

Parents were asked about their satisfaction/dissatisfaction with program services, staff, and facilities. The overwhelming majority expressed satisfaction with these aspects. Approximately 96 percent were satisfied with services their children received and 87 percent with facilities and equipment. Ninety-seven percent felt that all or most of the project staff were well-qualified to work with their children.

When asked if there were any ways in which the projects might change to serve children better, 46 parents (36 percent) replied that there were. Analysis of the suggestions offered, however, indicates that most had to do with the amount of present services, rather than what the services were or how the project operated. That is, suggestions frequently included more contact hours, more speech therapists to deliver services, expanded service to other handicapping conditions, addition of a summer program, etc. In addition to the above suggestions, the following comments were made by one or two parents each: need for more homogenous grouping and more individualized attention; need for an underlying philosophy rather than trying to be everything to every child; more openness of staff to provide child progress information that was previously refused to parent; and need for transportation.

The parental perceptions of program effectiveness are summarized by responses to interview items on program success. Overall, 83.0 percent (107) of the parents felt that the project was very successful in meeting their children's needs, 11.0 percent felt they were somewhat successful, and 6.3 percent were not sure. No parents felt projects were unsuccessful in that regard.

Summary

An interview was conducted at the end of the school year with the parent(s) of 129 children who had been assessed (pre- and posttested) with the CEEDI. Data were collected on types of parental involvement in HCEEP programs, perception of program effect, and satisfaction with program services, staff, and facilities. The following points summarize information obtained through the interview of parents.

- Of the 129 parents, 100 (77.5 percent) reported that HCEEP project staff had prescribed activities for them to do with their children at home. Ninety-six carried out the activities, the majority (65) of whom did this daily. The extent to which these activities were carried out did not differ between parents of children served in center-based projects and parents of children served in home-based projects. HCEEP staff provided needed support to carry out activities for 97 percent of participating parents.
- In addition to prescribed learning activities, 85 percent of the parents were involved in HCEEP projects in some other way, primarily in parent groups, meetings, or assisting with children. Less than 4 percent were involved in program planning or operation activities.
- Parents reported ample opportunity to participate in the program, and generally good communication between themselves and project staff.
- Ninety-seven percent of the parents perceived improvements or positive changes in their child since program entry. All categories of skill areas were mentioned by at least 18.6 percent of the parents, with language and communication skill improvement most frequently noticed (79.8 percent). Ninety-six percent of the parents attributed reported changes to their children's participation in the HCEEP programs.
- Eighty percent of the parents reported that they had personally benefitted from participation in the HCEEP program. These

benefits included knowledge of how to work with their children, their children's problems, needs, and abilities. Sixty-six percent of the parents reported HCEEP assistance in helping them form realistic expectations for their children's future, and 84 percent thought their children's participation in the programs improved opportunities for schooling, employment, and full social life.

- An overwhelming majority of parents were satisfied with the HCEEP projects in terms of services (97 percent), facilities and equipment (87 percent), and staff (97 percent). Changes, which were suggested by 36 percent of the parents, were concerned with obtaining more of the same kind of service, rather than changing existing operation.
- Overall, 82.7 percent of the parents perceived the project as being very successful, with 11.0 percent perceiving it as somewhat successful in meeting their children's needs. No parents felt projects were unsuccessful in that regard.

Cost Analysis

Project Expenditures

Table 5-39 is a summary of the direct cost analysis by project. Each row in the table is identified by the appropriate measure and each column presents the value for each of 28 projects reporting. The projects have been arranged in descending order based on the Direct Cost Per Child. The Direct Cost Per Child values range from a high of $4,112 to a low of $353. It is apparent that there is a relationship between the child-contact staff ratio and the cost per child.

The median direct cost per child is about $1,000 (columns 14 and 15). The median child-contact staff* ratio is about 6 to 1. Seven projects have direct cost per child in excess of $1,780. The child-contact staff ratio for these projects is 4.9 to 1 or lower. The ratios for these seven projects appear to be low, and, of course, the costs are quite high. These low child-staff ratios and high costs are understandable in hospital settings where handicaps of the children are severe or the children are very young. This is not the case with these HCEEP projects. These HCEEP projects do not appear to be dealing with children who have severe handicaps or with very young children. The children do not require the types of treatment that would be offered in a hospital-type setting. When viewed in this light the low child-staff ratios and high direct cost per child appear to be excessive.

On the other hand, the table shows six projects with direct cost per child less than $700. And the child-contact staff ratio is 11 to 1 or higher. These higher child-contact staff ratios are probably reasonable for projects with older, preschool children with less severe handicaps, e.g., projects in public school settings dealing with EMR children, or home-based projects in which the professional visits the home on a once-a-week basis. It may be that the circumstances surrounding these projects allow for a higher child-staff ratio and thus lower direct cost per child.

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* The number of staff used in these measures includes only paid project staff in direct contact with children.

TABLE 5-39. SUMMARY OF DIRECT COST BY PROJECT

COST MEASURES	HCEEP PROJECTS													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Number of Professionals in Contact With Children (FTE)	6.0	10.0	7.5	5.6	7.7	5.0	11.0	13.25	8.6	9.0	4.0	8.0	5.0	13.0
Direct Cost for Professionals in Contact	$65,800	$83,119	$51,471	$47,160	$83,040	$42,611	$80,177	$149,943	$73,537	$90,958	$32,250	$29,556	$36,380	$60,300
Number of Children	16	21	17	18	38	20	45	88	47	59	24	22	30	58
Child-Staff Ratio (Professionals in Contact)	2.7/1	2.1/1	2.3/1	3.2/1	4.9/1	4.0/1	4.1/1	6.6/1	5.5/1	6.6/1	6.0.1	2.8/1	6.0/1	4.5/1
Direct Cost Per Child (Professionals in Contact)	$ 4,113	$ 3,958	$ 3,028	$ 2,620	$ 2,185	$ 2,131	$ 1,782	$ 1,704	$ 1,565	$ 1,542	$ 1,344	$ 1,343	$ 1,213	$ 1,040

HCEEP PROJECTS														
15	16	17	18	19	20	21	22	23	24	25	26	27	28
16.0	8.75	6.0	11.75	17.0	6.0	3.7	12.5	5.0	10.0	9.0	2.0	4.0	9.8
$109,800	$41,743	$54,500	$62,025	$74,466	$42,685	$30,550	$128,900	$42,566	$75,610	$49,500	$10,500	$22,818	$53,585
109	42	56	64	79	52	42	179	62	137	101	24	62	152
6.8/1	4.8/1	9.3/1	5.4/1	4.6/1	8.7/1	11.4/1	14.3/1	12.4/1	13.7/1	11.2/1	12.0/1	15.5/1	15.5/1
$ 1,007	$ 994	$ 973	$ 969	$ 943	$ 821	$ 727	$ 720	$ 687	$ 552	$ 490	$ 438	$ 368	$ 353

The BEH should be aware that there is a considerable variation in the child-staff ratio from a high of 15.5 to 1 to a low of 2.1 to 1.

The direct cost per child and the child-contact staff ratios fall into roughly three categories as follows:

High Cost--$1,542 to $4,113--less than 7 to 1 child-staff ratio

Median Cost--$943 to $1,344--between 2.8 and 9.3 to 1 child-staff ratio

Low Cost--$353 to $821--greater than 8.7 to 1 child-staff ratio

There is a general consistency across the projects when considered on the basis of direct cost per child and child-teacher ratio. It appears that projects with expenditures in excess of about $2,000 per child are not gaining proportionately in effectiveness in terms of child growth (see Cost Per Child, page V-40). On the other hand, those projects with direct cost per child less than about $1,000 appear to be able to operate in a fairly effective fashion. This is due, of course, to the fact that these projects are such that the child-staff ratio can be as high as 15 to 1 without materially affecting the child growth.

It is important to point out that the expenditures do not indicate BEH's share of the expense. The revenues for the projects can come from at least four different sources--Federal government, state government, local government, or private sources. In most cases, the revenues are obtained from at least two of these sources, including the Federal government.

Allocation of Staff by Function

For 28 of the HCEEP projects it was possible to determine the approximate allocation of staff* effort to the major functions performed on the projects. The 28 projects completed Table B of the cost form. That is, they were able to estimate the allocation of time, on a percentage basis, to the major functions.

* The staff considered here is the paid project staff in direct contact with children.

The analysis of this allocation of person effort is aggregated across the 28 projects. The number of personnel was distributed to each function in accordance with the indicated percentage of time allocated to the function. This was accomplished by multiplying the number of personnel (FTE) for the function by the indicated percentage of time allocated to the function. This resulted in a weighted average of person-effort for the given function. This weighted average for each function was then averaged across the 28 projects. This resulted in a distribution of person-effort by function. Finally, the effort by function was normalized as a percentage for each function.

Table 5-40 shows the distribution of efforts by major function. It will be noted that the largest defined percent of effort is in Instructional Service to Children, i.e., 16.1 percent. Next is Management and Adminsitration with 5.5 percent, followed by Dissemination and Replication with 5.1 percent.

There were 23 different categories of "other". They included such things as: Headstart workshop, training student teachers, parent counselling, pre-service training, research, food service records, and so forth. The two "otner" categoreis that were reported most frequently were secretarial dutues and instructional support, as indicated at the bottom of Table 5-40.

For the defined functions, it appears that the effort is fairly evenly distributed across the major functions except for those pointed out above. It is somewhat surprising that the combined effort associated with direct time with children is 26.4 percent, only a little over one-fourth the effort. This is the combination of effort for Instructional Services to Children, Therapeutic Services to Children, Supplementary Services to Children and Parents, Screening Services for Admission, and Evaluation of Children. It could be argued that the remainder of the major functions contribute indirectly to the benefit of children, e.g., services to parents, curriculum development, etc. Including the share of effort for these functions, however, does not materially affect the effort allocated to the children. The ten defined functions account for a little under half the effort, i.e., 46.3 percent; whereas the total "other" functions account for over half the effort, i.e., 53.7 percent.

TABLE 5-40. AVERAGE PERCENTAGE OF EFFORT BY MAJOR FUNCTION (ACROSS 28 PROJECTS)

Major Function	Percentage Effort Allocated	
Management and Administration	5.5%	
Instructional Services to Children	16.1	
Therapeutic Services to Children	3.4	
Services to Parents	4.5	
Supplementary Services to Children and Parents	2.1	
Screening Services for Admission	2.1	
Evaluation of Children	2.7	
Curriculum Development	2.4	
In-Service Training of Staff	2.4	
Dissemination and Replication	5.1	
Subtotal		46.3%
Other		
Secretarial Duties	3.1	
Instructional Support	6.8	
All Others	43.8	
Subtotal		53.7%
TOTAL		100.0%

The results of this aggregated analysis indicate that the projects do not devote a significant percentage of the person-effort to the direct services to children. The primary purpose of the HCEEP projects is to demonstrate a replicable service program for children. Although the projects have as one goal to help in the growth of the preschool children, this is not their main mission. In this regard the projects do devote a large percentage of effort in the direct service to children but also devote effort to developing the programs for replication by other projects that are providing services to handicapped, preschool children.

Services Provided Without Charge

The last part of the cost form, Table C, was used to collect information on services and cost of services provided to the projects without charge by other agencies. One part of the Replications, Form A was used to collect similar information on volunteer services. The data from these two forms were combined in this analysis.

Table 5-41 is a summary of the effort and estimated cost of the effort, as reported by 28 projects. The total hours per year and total cost are the sum of the services and cost provided other agencies and/or volunteers, for the 28 projects.

It will be noted that the total dollar value of these free services is almost a quarter million dollars. If all projects received an equal amount this would represent about $9,000 per project. The fact is that some projects received substantially more than others. Three projects received more than $35,000 in free services. Another six projects received over $15,000 in free services. These are very significant contributions of assistance.

The "Other" category in Table 5-41 includes psycholinguists, nutritionists, deaf educators, community materials, supervision, classroom teachers, dissemination, etc. The combined effort in this category is 12,000 hours with an estimated cost of over $65,000.

This analysis of donated services reveals that the HCEEP projects are receiving significant assistance from the local communities. Some project seems to be more able to acquire these donated services than others. However, the overall effect has to be of benefit to the HCEEP projects and, of course, the participating children.

TABLE 5-41. SUMMARY OF SERVICES PROVIDED WITHOUT CHARGE BY OTHER AGENCIES AND/OR VOLUNTEERS

SERVICES	TOTAL HOURS/YEAR	TOTAL COST
Social Services	2,401	$ 12,660
Recreation	960	3,720
Medical	1,710	22,128
Dental	84	1,870
Counseling/Guidance	3,207	30,945
Transportation	3,185	11,050
In-Service Training	992	9,710
Food Service	1,943	15,110
Occupational Therapy	2,267	4,790
Physical Therapy	1,224	8,118
Speech or Speech/ Hearing Therapy	4,438	29,469
Parent Education/ Training	2,769	33,444
Other	12,189	65,638
Total	37,369	$248,652

Follow-Up of Graduates

This task was concerned with the outcome of HCEEP placement and intervention. Efforts were directed toward answering the questions (1) "What happens to children when they leave an early childhood program?" and (2) "What effect does HCEEP experience have on participants in comparison with peers not sharing this experience?"

More specifically, the following seven research questions were studied.

(1) To what extent is the placement of HCEEP graduates known?

(2) Into what types of placement settings are graduates placed?

(3) What is the extent of coordination between HCEEPs projects and placement settings?

(4) What is the extent of follow-up assistance given by the HCEEP projects to placement settings?

(5) How appropriate was the placement of graduates followed-up?

(6) What is the present status of followed-up graduates in terms of handicap, cognitive skills, and social skills?

(7) What degree of interest have parents of HCEEP graduates shown in their child's progress and school activities compared with parents of other handicapped or non-handicapped children?

Two types of data were gathered from 32 HCEEP projects.* The first type summarized placement of all "graduates" of the 32 projects between May and August 1974. These data address research questions 1 and 2. The second type provided more in-depth information on a sample of the total number of those graduates. These data are directed toward answering questions 3 through 7.

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* Data collection forms used for child follow-up are found in Appendix A, pages A-15 through A-44.

Placement of All Graduates

Research Questions 1 and 2: "To what extent is the placement of HCEEP graduates known", and "Into what types of placement settings are graduates placed?" Data obtained from the HCEEP Student Follow-Up Data Form - Part I (see Appendix A, page A-15) revealed that 755 children left or were graduated from the 32 HCEEP projects. Of these 755, placement was known for 688 children, or 91.1 percent. Table 5-42 presents a summary of number and percentage of children in each type of placement setting. The graduates were fairly evenly distributed among the three main types of settings: special education classes or programs (34.7 percent), regular classes or programs with ancillary services (32.7 percent), and regular classes or programs without ancillary services (31.3). Overall, approximately 74 percent of the placements were in the public school settings.

Placement of Graduates Followed-Up

Characteristics of sample. From the total of 688 children for which placement was known, a sample of 95 was selected for more in-depth follow-up. Table 5-43 summarizes the age, handicapping condition reported by the HCEEP project, and the length of time spent in the HCEEP project. The ages of the majority of the 95 "graduates" sampled were between 5 and 8 years old: 15.8 percent were 5-6, 29.5 percent were 6-7, and 27.4 percent were 7-8 years of age.

The handicaps of graduates placed most frequently reported were: learning disability (13.7 percent), trainable mental retardation, and deaf (12.6 percent each). A non-specified "other" handicapping condition category represented 21.0 percent of the graduates followed up. Analysis

TABLE 5-42. PLACEMENT SETTINGS OF HCEEP "GRADUATES" PLACED FROM MAY THROUGH AUGUST 1974 (N=688)

N(%) TYPE OF SETTING	239(34.7) SPECIAL EDUCATION CLASSES OR PROGRAMS				225(32.7) REGULAR CLASSES OR PROGRAMS WITH ANCILLARY SERVICES				215 (31.3) REGULAR CLASSES OR PROGRAMS WITHOUT ANCILLARY SERVICES				9(1.3) OTHER	688 TOTAL KNOWN
	public	state	private	other	public	private	pre-sch daycare	other	public	private	pre sch daycare	other	N=9	
Frequency of Graduates	149	38	43	9	201	1	13	10	161	19	24	11	9	688
Percentage for Setting Type	62.3	15.9	18.0	3.8	89.3	.4	5.8	4.4	74.9	8.8	11.2	5.1	100.0	-
Percentage of Total Sample	21.7	5.5	6.3	1.3	29.2	0.2	1.9	1.5	23.4	2.8	3.5	1.6	1.3	

TABLE 5-43. CHARACTERISTICS OF "GRADUATES" FOLLOWED-UP (N=95)

CHARACTERISTICS	AGE RANGE							HANDICAPPING CONDITION REPORTED BY HCEEP												LENGTH OF TIME IN HCEEP						
	3-4 Years	4-5 Years	5-6 Years	6-7 Years	7-8 Years	Older than 8 Years	Age Not Reported	Non-Handicapped	Trainable Mentally Retarded	Educable Mentally Retarded	Learning Disabled	Hard of Hearing	Deaf	Speech Impaired	Visually Impaired	Emotionally Disturbed	Crippled	Other Health Impaired	Multiply Handicapped	Other	0-3 Months	4-6 Months	7-12 Months	13-18 Months	19-24 Months	More than 2 Years	Not Reported
FREQUENCY	7	9	15	28	26	3	7	1	12	3	13	4	12	8	2	6	5	0	9	20	7	12	32	14	10	15	5
PERCENTAGE	7.4	9.5	15.8	29.5	27.4	3.2	7.4	1.1	12.6	3.2	13.7	4.2	12.6	8.4	2.1	6.3	5.3	0	9.5	21.1	7.4	12.6	33.7	14.7	10.5	15.8	5.3

of this category indicates that the following conditions were included: language/communication delay, developmental delay, exceptional emotional needs, personal-social maladjustment, high risk/low birth weight, and neurologically impaired.

Table 5-43 also presents the length of time the 95 graduates spent in the HCEEP programs. Approximately seventy-five percent of the graduates had spent at least seven months in HCEEP programs, with most (33.7 percent) being enrolled for 7 to 12 months. A little over 40 percent of the graduates had attended for more than one year, and 15.8 percent attended for more than two years.

Characteristics of Teachers/Therapists of Graduates. The 95 present placement setting teachers/therapists of the HCEEP graduates were interviewed to obtain more in-depth information related to Research Questions 3-7. The following describes the distribution of teacher/therapist characteristics: 46.3 percent were regular classroom teachers, 46.3 percent were special education classroom teachers, and 6.3 percent were resource teachers or supportive staff. There was one (1.1 percent) "no response" to this item.

Research Question 3: What is the extent of coordination between HCEEP projects and the placement settings? HCEEP projects,* reported the number of pre-placement contacts their staff had had for the sample of 95 graduates. Similarly, administrators and teachers/therapists at the present placement setting were asked during on-site interviews** to report the number of pre-placement contacts they had with HCEEP staff. A total of 188 contacts, or an average of approximately two per child, were reported by HCEEP projects. By comparison, 86 contacts, or an average of slightly less than one per graduate were reported by receiving placement settings. This difference

* Using the HCEEP Student Follow-Up: Verification of Placement-Part I, page A-19

** Using the Verification of Placement Form - Part II, and the Teacher/Therapist Interview Form, page A-21.

could mean that more and/or different placement setting staff were contacted regarding the child than were interviewed by project data collectors. This appears to be a reasonable assumption because evidence indicates that in some cases, contacts initiated by HCEEP staff were made with higher administrative offices (e.g., central office administrators in LEAs, or coordinating Head Start offices) rather than with teachers/therapists. Following these contacts, the staffs of the two programs were then put in contact with each other.

For 36 of the 95 graduates followed, the placement settings reported that child referral was made by an individual or agency other than the HCEEP projects. Of the 36, a parent or family member referred eight children, local education agencies referred nine, fourteen children were referred by physicians and various unspecified community agencies, and the referral source was unknown for five children. The remaining 59 children were referred by the HCEEP projects.

Research Question 4: What is the extent of follow-up assistance given by the HCEEP projects to placement settings? Teachers/therapists of graduates were asked about the need for and satisfaction with services from the HCEEP projects. Forty-eight of the 95 teachers/therapists at placement settings (50.5 percent) indicated that follow-up assistance was available from the HCEEPs, 40 (42.1 percent) stated it was not available, and 7 (7.4 percent) were not able to respond to this item. Of the 40 teachers/therapists stating that assistance was not available, 17 indicated that assistance was needed.

Responses from the 55 teachers/therapists receiving assistance are summarized in Table 5-44. In the majority of cases (60.0 percent), the HCEEP staff initiated contacts, while for 18.2 percent the request came from the placement setting. In 20.0 percent of the cases the staff from the two programs already had a mutual working relationship, or a third party initiated a request.

TABLE 5-44. SUMMARY OF FOLLOW-UP ASSISTANCE PROVIDED TO PLACEMENT SETTINGS BY HCEEP PROJECTS (N=55)

		FREQUENCY	PERCENTAGE
INITIATION OF ASSISTANCE	HCEEP Staff	33	60.0
	Teacher/Therapist	10	18.2
	Other	11	20.0
	No Response	1	1.8
FORMS OF ASSISTANCE PROVIDED	Inservice Training	2	1.8
	Demonstration Teaching	2	1.8
	Suggested Teaching Activities or Materials	17	15.0
	Suggested Classroom or Behavior Management Techniques	19	16.8
	General Information About Child and/or Family Background	33	29.2
	Other	40	35.4
SATISFACTION WITH ASSISTANCE	Very Satisfied	33	60.0
	Somewhat Satisfied	14	25.5
	Somewhat Dissatisfied	3	5.4
	Very Dissatisfied	0	0
	No Response	5	9.1

The teachers/therapists provided 113 responses to the item reflecting the form of assistance provided to them by the HCEEP projects. Table 5-44 shows that the most frequent type of assistance was simply general information about the children and/or family background--information routinely found in most children's record folder. Suggested classroom or behavior management techniques and suggested teaching activities or materials were less frequently mentioned (16.8 and 15.0 percent, respectively). Demonstration teaching and inservice training were infrequently provided forms of assistance (1.7 percent each). An "other" category was mentioned by 35.1 percent of the respondents. This category included: observation of child and discussion of his/her progress, discussion of staffing, provision of special services (e.g., physical therapy, tutoring) or materials, and assistance with parental involvement.

As further indicated in Table 5-43, teachers/therapists were generally satisfied with assistance provided to them: 60.0 percent stated they were "very satisfied", and 25.5 percent were somewhat satisfied.

In addition to asking about assistance needed directly by teachers/therapists, survey items addressed the extent of assistance that HCEEP projects provided in obtaining needed support services for their graduates. Twenty-two teachers/therapists (23.2 percent) stated that additional services were needed, 61 (64.2 percent) said none were needed, and 12.6 percent did not know or gave no response. For the 22 cases needing additional supportive services, HCEEP projects did provide assistance for 12 cases. For 3 of the 10 cases where services were not provided, the service was not available in the community.

Research Question 5: How appropriate was the placement of graduates followed-up? Teachers/therapists were asked to judge the appropriateness of the graduates' educational placement. Eighty-five of the 95

respondents (89.5 percent) judged the placements to be appropriate. The primary basis upon which this judgment was made was the appropriateness of the developmental level of the "graduate" in relation to other children in the placement class or setting. Chronological age and grouping with children with similar handicaps and/or special needs were factors less often mentioned in considering placement appropriateness. Two factors mentioned in judging placement settings to be inappropriate were the difference between the developmental age of the graduate and other children in the setting, and lack of supportive services.

Research Question 6: What is the present status of followed-up graduates in terms of handicap, cognitive skills and social skills?

Handicapping Condition. Table 5-45 presents a comparison of the distribution of HCEEP judgments and placement settings judgments of graduate handicapping conditions. The greatest difference in handicapping condition occurs in the "non-handicapped", speech impaired, and "other" categories. While the HCEEP projects judged 1.1 percent of the graduates to be not handicapped, the placement setting judged 10.5 percent to be not handicapped. HCEEP projects judged 8.4 percent to be speech impaired, while the placement settings placed 16.8 percent in that category. HCEEP projects placed 21.0 percent of the graduates in the non-specified "other" handicap category while the placement settings considered 7.4 percent as non-specified "other" handicapped. The discrepancies between the HCEEP projects and the placement settings are of particular interest for the "not handicapped" and "other" categories. The lack of a standardized method of assessing handicapping conditions and the variety of placement settings into which graduates are placed may account for some of these discrepancies. Also, it could be that HCEEP projects judged that nearly all the graduates had special needs, not all of which were related to a specific handicap. For example, socially

TABLE 5-45. DISTRIBUTION OF HANDICAPPING CONDITION OF GRADUATES AS JUDGED BY HCEEP PROJECTS AND PLACEMENT SETTINGS (N=95)

HANDICAPPING CONDITION	HCEEP		PLACEMENT SETTING	
	Number	%	Number	%
Not Handicapped	1	1.1	10	10.5
Trainable Mentally Retarded	12	12.6	10	10.5
Educable Mentally Retarded	3	3.2	5	5.3
Learning Disabled	13	13.7	12	12.6
Speech Impaired	8	8.4	16	16.8
Emotionally Disturbed	6	6.3	7	7.4
Hard of Hearing	4	4.2	3	3.2
Deaf	12	12.6	12	12.6
Visually Impaired	2	2.1	4	4.2
Crippled	5	5.3	2	2.1
Other Health Impaired	0	0	1	1.1
Multiply Handicapped	9	9.5	6	6.3
Other	20	21.0	7	7.4

disadvantaged would be considered as an "other" handicap, rather than as not handicapped. On the other hand, placement settings may think of the term "handicap" in the strictest terms, thereby considering such children as those socially disadvantaged to be "not handicapped".

Another possible factor accounting for discrepancies may be the developmental level achieved by the graduate between the time of initial enrollment in the HCEEP project, and placement in another setting. For example, a child labeled as developmentally delayed ("other") or "learning disabled" by the HCEEP project may have achieved a more advanced developmental level by the time he/she entered the placement setting and therefore have been judged "not handicapped" by the placement setting.

Social Skills. Teachers/therapists were asked to report the status of the graduates' social skills relative to: (1) non-handicapped children, and (2) peers with a similar handicap who did not have an HCEEP experience.* Table 5-46 summarizes the results of the above items. Compared with non-handicapped children, responding teachers/therapists judged a total of 47.4 percent of the graduates to be more advanced (6.6 percent) or at about the same level socially (40.8 percent), and 52.6 percent less advanced. Examination of responses by handicapping condition indicates that the graduates who were trainable mentally retarded, multiply handicapped, or learning disabled made up about one-half of the cases judged as less advanced socially.

Table 5-46 shows a noticeable difference, however, when the graduates were compared with peers who had a similar handicap. A total of 70.7 percent were more advanced or at the same level socially, with 41.5 percent in the "more advanced" category. Only 29.2 percent were judged as less advanced. Examination of responses associated with specific handicaps shows a marked shift from judgments of "less advanced" to "about the same level" for trainable mentally retarded, and a general shift toward "more advanced" for learning disabled, speech impaired, and multiply handicapped.

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* This information was obtained on the HCEEP Student Follow-Up Form, Part II, Section B. See page A-23.

TABLE 5-46. SOCIAL DEVELOPMENT OF HANDICAPPED FOLLOWED-UP GRADUATES* COMPARED WITH NON-HANDICAPPED CHILDREN, AND WITH PEERS WITH A SIMILAR HANDICAP

Compared With	** N	No. (Percentage) Judged More Advanced	About the Same Level	Less Advanced
Non-handicapped	76	5(6.6)	31(40.8)	40(52.6)
Peers with a Similar Handicap	65	27(41.5)	19(29.2)	19(29.2)

* This includes only the children whom both the HCEEP projects and the placement settings considered to be handicapped.

** N varies, since for each of the two groups, different numbers of teachers/therapists were unable to respond because they had no basis for comparison.

In addition to obtaining teacher/therapists' judgment of the level of graduates' social skills in relation to other children, a 15-point checklist* was completed by the teacher/therapists. Table 5-47 summarizes the results of the checklist, by age. For most graduates, judgments were made on about 14 of the 15 checklist items. In some cases, teachers indicated a "can't say" response. The results presented in the table can best be discussed in terms of two groups of graduates: the 3 and 4 year old graduates, and the 5 through 8 year old graduates. Approximately one-third (67.7 and 60.7 percent) of the items were passed by the younger 3 and 4 year olds. After 4 years of age, the percentage increases and levels; that is, for the 5 through 8 year old graduates, approximately 80 percent (74.7 to 89.4 percent) of the items were passed.

* A social skills (15 items) and cognitive skills (15 items) checklist was devised using items from the Personal-Social and Cognitive Scales of the CEEDI, respectively. The checklists provide a "short form" of the CEEDI to be used in assessing the HCEEP graduate performance within these two domains. A copy of the checklist is provided on page A-31.

TABLE 5-47. MEAN PERCENTAGE OF SOCIAL SKILLS CHECKLIST ITEMS REPORTED AS DEMONSTRATED/NOT DEMONSTRATED BY FOLLOWED-UP GRADUATES BY AGE (N=85)

Age	No.	Items Rated	Percentage Yes	Percentage No
3	7	14.1	67.7	32.3
4	7	14.4	60.7	39.3
5	16	14.4	84.8	15.2
6	28	14.3	79.7	20.3
7	26	13.3	83.0	17.0
8	4	14.5	74.7	25.3
Age Not Reported	7	14.1	89.4	10.6

Cognitive Skills. In addition to making judgments regarding social skills of graduates compared with non-handicapped and with similarly handicapped peers, teachers/therapists were similarly asked about cognitive skills. Table 5-48 summarizes the results of these comparisons. Comparable with social skills, responding teachers/therapists judged a total of 42.5 percent of the graduates to be more advanced (5.4 percent) or at about the same level (36.9 percent) as non-handicapped children. Over one-half (57.5 percent) were judged less advanced. Examination of specific handicapping conditions indicates that, as with social skills, about half of the graduates judged as less advanced were trainable mentally retarded, learning disabled or multiply handicapped.

TABLE 5-48. COGNITIVE DEVELOPMENT OF HANDICAPPED FOLLOWED-UP GRADUATES* COMPARED WITH NON-HANDICAPPED CHILDREN, AND WITH PEERS WITH A SIMILAR HANDICAP

Compared With	N**	Percentage Judged More Advanced	About the Same Level	Less Advanced
Non-handicapped	73	4 (5.5)	27 (37.0)	42 (57.5)
Peers With a Similar Handicap	64	37 (57.8)	12 (18.8)	15 (23.4)

* This includes only the children whom both the HCEEP projects and the placement settings considered to be handicapped.

** N varies, since for each of the two groups, different numbers of teachers/therapists were unable to respond because they had no basis for comparison.

When compared with similarly handicapped peers who had no HCEEP experience, judgment of graduates' cognitive skills shifted toward the "more advanced" category. In such a comparison, a total of 76.6 percent were judged as more advanced (57.8 percent) or at the same level (18.8 percent) as similarly handicapped peers. Noticeable percentage increases in the "more advanced" category were observed for the handicaps of trainable mentally retarded, deafness, and "other" handicapping conditions.

As with social skills, teacher/therapists completed a 15 point checklist of cognitive skills. Table 5-49 reports the results. On average, fewer items were rated for the cognitive checklist, with more teachers giving a "can't say" response. The table shows the results for items answered as "yes" or "no". A progressive increase was noted in the percentage of items passed with increasing age for ages 3 through 6. At age 6, however, the number of items passed plateaued at approximately the 86 percent level. This plateau effect is similar to that reported for social skills, however, the age level of the occurrence was different.

TABLE 5-49. MEAN PERCENTAGE OF COGNITIVE SKILLS CHECKLIST ITEMS REPORTED AS DEMONSTRATED/NOT DEMONSTRATED BY FOLLOWED-UP GRADUATES BY AGE (N=85)

Age	No.	Items Rated	Percentage Yes	Percentage No
3	7	12.4	36.9	63.1
4	7	13.9	57.7	42.3
5	16	13.1	77.8	22.2
6	28	13.6	87.2	12.8
7	26	14.2	85.1	14.9
8	4	14.8	77.3	22.7
Age Not Reported	7	12.4	86.4	13.6

Research Question 7: What degree of interest have parents of HCEEP graduates shown in their child's progress and school activities compared with parents of other handicapped or non-handicapped children? To obtain some relative measure of parental interest, teachers/therapists were asked to compare graduates' parents with parents of other handicapped children and of non-handicapped children. Table 5-50 displays the results. For the 10 graduates judged non-handicapped by the placement setting, 50.0 percent of the parents were rated as having about the same interest level as parents of other children while 40.0 percent showed more interest. Only 10.0 percent showed less interest.

When the parents of 85 graduates were compared with parents of other handicapped children, 37.7 percent were judged as having more interest, 25.9 percent as having about the same interest, and 15.3 percent as less interested. The remaining responses, 21.2 percent, were not applicable, e.g. there was no basis for comparison or the children had no parents. When compared with parents of non-handicapped children, a slightly higher proportion of graduates' parents tended to show more interest. However, because of the relatively high percentage of responses which were not applicable, (approximately 30 percent of the total number of responses), conclusions drawn from this comparison are tenuous.

TABLE 5-50. PARENTAL INTEREST IN HCEEP GRADUATES' PROGRESS AND SCHOOL ACTIVITIES (N=95)

	FOR CHILDREN JUDGED NON-HANDICAPPED BY PLACEMENT SETTING (N=10)			FOR CHILDREN JUDGED HANDICAPPED BY PLACEMENT SETTING (N=85)							
	PARENT INTEREST COMPARED WITH PARENTS OF OTHER CHILDREN			PARENT INTEREST COMPARED WITH PARENTS OF OTHER HANCICAPPED CHILDREN				PARENT INTEREST COMPARED WITH PARENTS OF NON-HANDICAPPED CHILDREN			
	More Interest	Same Interest	Less Interest	More Interest	Same Interest	Less Interest	Not Applicable*	More Interest	Same Interest	Less Interest	Not Applicable
	1	2	3	1	2	3		1	2	3	
FREQUENCY	4	5	1	32	22	13	18	37	14	11	23
PERCENTAGE	40.0	50.0	10.0	37.7	25.9	15.3	21.2	43.5	16.5	12.9	27.1

* The "Not Applicable" category includes cases where there was no basis for comparison, children had no parents, or no response was given.

Summary

A follow-up effort was done to determine where graduates of HCEEP projects are placed and how they compared with other children not having an HCEEP experience.

Data were collected from the 32 model projects for 755 children who graduated between May and August, 1974. Of these, placement was known for 688, or 91.1 percent. The graduates were fairly evenly distributed in three types of settings: special education classes or programs, and regular classes or programs with and without ancillary services. Approximately 75 percent of the placements were in public school settings.

Of the 688 children whose placements were known, a random sample of 95 were selected for more in-depth follow-up. Approximately 73 percent of these children were in the 5-8 years age range. Using information reported by the HCEEP projects, all handicapping conditions except "other health impaired" were represented. Approximately seventy-five percent of the graduates had spent at least seven months in the HCEEP programs.

The results of interviews with teachers/therapists are summarized below.

- HCEEP projects reported making more pre-placement contacts than placement settings reported. The difference possibly may be accounted for by HCEEP contacts with personnel other than those interviewed.
- Approximately one-third of the graduates were referred to the placement setting by individuals or agencies other than the HCEEP projects (i.e., parents, physicians, community agencies).
- Assistance to teachers/therapists was available from HCEEP projects for 50 percent of the graduates. Of the teachers/therapists who stated assistance was not made available, about 43 percent said they needed it.

- Contacts with placement settings were generally HCEEP initiated or as a result of an already existing working relationship.
- The most frequent form of assistance was in providing general information about the child/family background, although classroom techniques and materials were made available in some cases. Eighty-five percent of the teachers/therapists were satisfied with HCEEP assistance.
- Placement of graduates was judged by teachers/therapists as appropriate in 89.5 percent of the cases.
- Discrepancies in the type of handicapping condition a child was considered to have were noted. The "not handicapped" and "other handicap" categories showed the greatest inconsistencies. Differences may be accounted for by application of varying definitions or by actual improvement in children with mild handicaps, developmental lag, or cultural differences.
- Compared with non-handicapped children, graduates were generally judged at the same or a lower level, in social and cognitive behavior. However, compared to similarly handicapped children who had no HCEEP experience, the teachers/therapists judged graduates as more advanced. This was particularly noted for graduates who were trainable mentally retarded, multiply handicapped, learning disabled (primarily in social skills), or deaf (primarily in cognitive skills).

Replication and Dissemination Strategies

Replication

One of the desired outcomes of the HCEEP effort is the stimulation of new early childhood programs for handicapped children based on the model projects as well as utilization of various components of the model in new or already existing programs. The term BEH has associated with this activity is "replication". While the term literally means duplication or reproduction, it seems unlikely that all components of a unique educational program could be transferred from one setting to another. Model HCEEP projects have been required to report annually "whole" and "partial" "replications", however, little has been known either about the programs named as replications or the methods used by model project directors and staff in disseminating information about their projects. Based on the wide variation in numbers of replications reported by model projects it appeared that no criteria or standard existed regarding when a program was considered as a replication. Thus, the present study sought to provide information that would describe what a replication was, as interpreted by the model projects.

Three closely related research questions were asked concerning replication. They are:

(1) What is the extent of replication?

(2) What is the nature of contacts between the model projects and the replications they claim?

(3) What is the correspondence (in terms of program characteristics) between the model projects and their claimed replications?

Because of the nature of the data collected, a generalized case study rather than a normative study approach has been utilized.*

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* As recommended in the Request for Proposals 73-14.

What is the Extent of Replication? Each of the 32 model projects was asked to list the whole and partial replications it claimed. This request is similar to that made of model projects for their year-end final report. Table 5-51 shows the numbers for both operational and outreach projects. In total, 196 replications were claimed. It should be noted that while 15 model projects were in the operational phase (i.e., funded for the third year to provide direct services to children and develop a valid model, but not obligated to stimulate replications), all but 3 claimed from 1 to 15 replications. The 17 model projects in the outreach phase (i.e., in the fourth, fifth, or sixth year of funding, and whose objective was information dissemination and stimulation of replications) accounted for approximately 70 percent of the claimed replications. The numbers claimed range from 2 to 33, with one 4th year model claiming no replications.

TABLE 5-51. NUMBER OF REPLICATIONS CLAIMED BY MODEL HCEEP PROJECTS

Number	Model's Year of Funding (1974-75)				Total
	3rd*	4th**	5th**	6th**	
Model Projects	15	7	4	6	32***
Replications	59	37	23	77	196

* Operational projects providing direct services to children

** Outreach projects aimed at dissemination of information and stimulation of replications

*** Four of the 32 models did not claim replications

A review of the listing of 196 replications suggested that at least some of the programs could not be considered as duplications or reproductions of the model projects. For example, two models listed 2 and 3 other HCEEP models, respectively, as replications. In two cases, directors of HCEEP model projects listed other programs of which they were also the director. One model listed three similar projects funded in the same school district as the model as well as programs in several different school buildings in the same school district. Several model projects were unable to provide full addresses or contact persons at claimed replications, indicating that the relationship between the two programs was not a close, continuing one as should be expected.

In contrast to the apparent over-eagerness of some models to list replications, a few models, with readily usable components, appeared to be doing little to stimulate replications. However, it was learned during the course of the numerous evaluation contacts that at least some of these models were disseminating certain components or materials. For example, one model had distributed (nationally) approximately 13,000 copies of a nonstandardized instrument used as a basis for program planning, yet the project disseminating the instrument claimed only two replications. Other models noted at the end of a relatively short list of replications that curriculum and other educational materials were used by numerous other programs.

An examination of the mail and interview responses from a sample of 78 claimed replications* indicates that programs claimed as replications by models do not necessarily consider themselves as such. Fifty-six of the 78 (71.8 percent) acknowledged contact with the models and indicated at least receipt and use of information, training, and/or materials. Fourteen (18.0 percent), however, responded that their program had not replicated

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* Replication, Form B, was mailed to 121 claimed replications, and on-site interviews were conducted at 15 sites. Eighty-seven (72 mail and 15 interview) responses to Replication, Form B, were returned. Of these, 8 mail forms were uncompleted because of the lack of sufficient addresses or name of a contact person at the claimed replication. One more mail form was not sufficiently completed to determine if the program was a replication. Thus N=78 unless otherwise reported.

the model. Responses of one more respondent indicated that the program was not in any way a replication of the model that claimed it. In these 15 cases, contact between models and claimed replications was minimal and the relationship appeared to be one wherein brief technical assistance or a talk was provided, a third party evaluation was done by staff from the model project, or materials were received.

In addition to the 15 who were determined not be replications, two replications claimed by one model named other HCEEP models exclusively as the source of components used. Three more replications were state departments of education which had utilized model project staff in developing a state plan for early childhood education, and two replications were programs in the planning stage which were not yet operational. Overall, a total of 22, or 28.2 percent of the claimed replications which were sampled did not appear to utilize model projects as a basis for providing direct services to children.

Information gained from on-site interviews at 15 claimed replication programs tended to validate the mail responses. One planned on-site visit could not be made because a contact person could not be located within a relatively large organization named by the model project. Therefore, an alternate program was visited. Compared to the 1 of 16 (6.25 percent) that could not be contacted personally for on-site visit, 8 of 72 (11.1 percent) of the mail questionnaires were returned due to lack of sufficient mailing information provided by the model projects. Of the 15 programs visited on-site, 3 (20 percent) stated they were not replications, compared with 30.1 percent for mail respondents. The nature of the relationship between the claimed, but not confirmed, replications and the model projects were: attendance of three day inservice training, but no implementation of any components; use of model for observation by student nurses; and paid evaluation of the program by the director of the model projects.

Characteristics of Claimed Replication. Information regarding the 56 programs acknowledging some type of replication of a model project was reviewed to determine type of agency and funding. Table 5-52 presents the types of agency represented in the sample of replications. As expected, the type of agency most frequently implementing features of the model projects is a state or local education agency. Also, several Head Start programs

TABLE 5-52. TYPE OF AGENCY REPRESENTED BY SAMPLE OF ACKNOWLEDGED REPLICATIONS (N=56)

Type of Agency	Frequency
Head Start	9
SEA/LEA	25
Private Education	3
Mental Health	3
Mental Retardation	2
Health	6
Welfare	2
University	3
Other	2
No Answer	1

utilized expertise of HCEEP models. This was perhaps spurred by the mandate that handicapped children will represent 10 percent of Head Start child populations, as well as federal encouragement for collaboration of HCEEP and Head Start.

Table 5-53 presents a summary of the funding sources of the 56 replications. Thirty-two of the 56 replications (57.1 percent) received federal funds. Of these 32, 27 received over 60 percent of their funding from this source. This percentage is not surprising in view of the various types of agencies represented in the sample and the variety of federal programs from which funding can be secured. Of the 22 replications receiving local funds, it appears that either a small proportion, 0-30 percent, or else nearly all, 91-100 percent, monies were made available locally. A similar situation appears regarding state funds. When private monies were utilized, they represented less than half the budgets of the five programs involved. "Other" sources, such as foundations contributed less than half of the support to 5 of the 6 programs that had secured them.

Additionally, a considerable number of replications reported more than one funding source. Of the 56 replicating programs, 20 reported only one source of funding; 24 programs were receiving funding from two sources; 7 reported three sources of funding; and two indicated four funding sources. Three of the replication projects were not aware of the program's sources of funding.

TABLE 5-53. SOURCES AND PERCENTAGE OF FUNDING OF REPLICATING PROGRAMS (N=53)*

Percentage of Funding	Funding Source				
	Federal	Local	State	Private	Other
1-10	1	4	3	0	2
11-20	1	7	1	0	0
21-30	2	5	1	3	1
31-40	0	2	1	1	0
41-50	1	0	1	1	2
51-60	0	0	1	0	0
61-70	4	0	1	0	0
71-80	10	0	0	0	0
81-90	5	0	0	0	0
91-100	8	4	9	0	1
Total	32 (57.1%)	22 (39.3%)	18 (32.1%)	5 (8.9%)	6 (10.7%)

*Three of the 56 Replications did not know source of funding.

In summary, it is hazardous to determine on the basis of numbers reported, the extent to which model HCEEP projects have been replicated by other programs. It appears that some models do not use materials, technical assistance provided, or visits to the model project site as a basis for including names of other programs in their list of replications. However, many other projects do include such contacts without clarifying this in their reports. It is apparent, too, that most model projects do not follow-up contacts with claimed replication sites to determine what, if anything, is being utilized, how, and how well the procedures or materials are being implemented.

The sample of programs that were considered as replications were most frequently an SEA or LEA, although several Head Start programs were also included. Over one-half the sample received federal funding which represented a substantial portion of their budgets. Nearly one-half utilized local funds which represented 40 percent or less of their budgets.

What is the Nature of the Contacts Between Model Projects and the Replication They Claimed? The data associated with the preceding research question clearly indicated that the nature of the relationships between model HCEEP projects and their claimed replications is quite diverse. To more completely describe the contacts, questions were asked of claimed replications regarding the types of contact(s) made or assistance provided by the model project. Response categories included: "No assistance", "training", "general orientation", "general literature", "special materials", or "other". The data from 76* responding programs associated with 28 models that claimed replications are summarized in Tables 5-54 and 5-55.

Table 5-54 reports the number of categories in which claimed replications had contact with models. Ten reported no contact or assistance that they considered significant had been made with the models. Most of the replications, however, reported 3 or 4 different categories of contacts with the respective models.

TABLE 5-54. NUMBER OF CATEGORIES OF ASSISTANCE RECEIVED BY A SAMPLE OF CLAIMED REPLICATIONS (N=76)

Number of Categories of Assistance Received*	Number (%)** of Replications Reporting
0	10 (13.1)
1	8 (10.5)
2	5 (6.5)
3	19 (25.0)
4	31 (40.7)
5	3 (3.9)

* Categories of assistance include: (1) orientation, (2) in-service training, (3) general literature, (4) special materials, and (5) other.

** Total does not equal 100%.

* Two of the 78 respondents did not provide information concerning types of contact between HCEEP model and replications.

Table 5-55 indicates the nature of contact that claimed replications reported having with the model projects. Multiple categories could be checked by respondents. The most frequent type of contact concerned exchange of materials. Fifty-five programs (72.4 percent) received general literature regarding model projects. This literature included general project description, specifications of curriculum requirements, descriptions of material or equipment used, descriptions of staff requirements, and descriptions of facilities or space. Fifty-six replications received special materials from model projects, primarily curriculum materials and diagnostic and/or the evaluation instruments or procedures.

TABLE 5-55. NATURE OF CONTACT PROVIDED BY MODEL HCEEP PROJECTS TO A SAMPLE OF CLAIMED REPLICATIONS (N=76)

Categories of Contacts*	Number (%) of Replications Reporting
Orientation	48 (63.2)
In-service training	48 (63.2)
General Literature	55 (72.4)
Special Materials	56 (73.7)
Other	12 (15.8)

* Respondents checked multiple categories as applicable.

Table 5-55 indicates that general orientation to the model projects was provided 48 of 76 (63.2 percent) replications. Twenty of the contacts were made at the replication site, 25 at the model site, and 10 at some other location. Eight respondents did not indicate location.*

* Multiple contacts were reported by some replications, thus the sum is greater than 48.

In-service training was reported by 48 (63.2 percent) replications. This may have been the only type of assistance or may have been one of multiple categories of contact received. Over half (53.6 percent) of the at least 356 persons* trained by the 28 model projects involved were teachers. Program directors and teacher aides from replications were the next most frequently mentioned, 31 and 30, respectively. Other staff positions involved were psychologists and psychometrists, 21, and coordinators or supervisors, 17. A variety of other positions comprised the remaining numbers.

Other types of contact reported by 12 replications included consultation, presentations to parent-teacher organizations, assistance in developing a toy lending library, and visits to the model site for observation purposes.

In summary, the nature of the contacts between model and replication programs consisted of dissemination of descriptive information through literature, dissemination of special materials, provision of general orientation sessions, and conduct of in-service training sessions. More than three-fourths of the responding replications reported receiving literature and/or materials. Two-thirds had been involved in some direct contact with the model project staff, ranging from brief visits for observation purposes to one of more extensive workshops covering up to 1-1/2 weeks.

What is the Correspondence Between the Model Projects and Their Claimed Replications? The extent of replication and the nature of interaction between a model HCEEP project and claimed replications can be further described and qualified by comparing selected components of model projects and replications to determine their correspondence. The components compared related to: educational program, child population served, and staff characteristics.

* Some respondents did not report how many staff members received training.

It should be stressed that a high correspondence between a model and its claimed replications does not necessarily indicate a causal relationship, i.e., that the model was responsible for claimed replications characteristics. Rather, it indicates that techniques and procedures used by each were similar for whatever reason. The popularity and wide acceptance of various curricula, e.g., Peabody Language Kit, etc., and tests, e.g., Wechsler Intelligence Scale for Children, Illinois Test of Psycholingustic Abilities, etc., as well as the common or standard types of equipment, e.g., hearing aids for hearing impaired, etc., and location of service delivery, e.g., center, as in a school building, dictates that many models and claimed replications will be similar because of circumstances. Only a minority of model projects had developed one or more program components so unique that they were readily identified with only one project. Unique features or components of the model programs are noted, where appropriate, in the following discussion.

Educational Program. Six elements of educational programs of 31 HCEEP models projects* and 56 respective replications are presented and discussed below to describe the correspondence. The elements are: curriculum, diagnosis, evaluation, theoretical model, service delivery, and equipment facilities.

Curriculum. An immediate difficulty in making direct comparisons was encountered regarding definition of model project curricula. Fifteen models reported developing and using their own curriculum guides and materials. Of these, materials from six models could be readily identified with their sources. However, 7 of the 31 models reported that they used curriculum guides and materials developed by other model projects, primarily three of the six previously mentioned. Thus, in the strictest sense, some of

* One model failed to return the data form despite numerous requests. The 56 programs included as replications were those identified as a result of the analysis described under the first research question.

the models were replications of other model projects. Two models used their own identifiable curriculum plus that of other models. The remaining models had no curriculum guides or materials that were unique to their projects; that is, they utilized one or more types of off-the-shelf materials readily available through publishers, and/or teacher-made materials as appropriate for the population served. In comparing models with their claimed replications, however, each model's listing of curriculum was considered as unique to that project whether the materials originated with the project or were developed or purchased from another source.

Each of the replicating programs was asked to indicate the curriculum used and its source. Fifty-two replications were compared with the appropriate models.* Table 5-56 summarizes this information. Seven of the 52 respondents who completed this item (13.5 percent) used basically the same curriculum specified by its respective model, 20 (38.5 percent) used curriculum of the model project plus off-the-shelf or teacher-made materials), three (5.8 percent) used part of their model's curriculum only. Overall, the curricula associated with model projects were utilized in whole or in part by 30 of 52 programs acknowledging replication of the model. Twenty-two replications (42.3 percent) used only curricula from sources other than the HCEEP model that named it. "Other" was determined to include model HCEEP projects, but not the ones that claimed them as replications. Finally, the 22 programs that stated or were judged as not being replications obviously did not correspond with the models on curriculum.

* Fifty-three replicating programs provided information. However, since one model program (HCEEP) failed to return the required date, comparisons between the model and its corresponding replication could not be made.

TABLE 5-56. CORRESPONDENCE OF CURRICULA OF CLAIMED REPLICATIONS AND RESPECTIVE MODEL HCEEP PROJECTS

Curriculum Used	Number of Claimed Replications (N=77)*
Basically same as model	7
Used model with other curriculum	20
Used part of model curriculum	3
Used other sources only	22
	52
Projects not considered replications	22
No response to item by replication	3

* Curriculum information was not provided by one HCEEP model, therefore, no comparison of curricula used could be made between model and replication.

Diagnosis. At least 8 model HCEEP projects had developed unique diagnostic instruments. Four others reported using instruments or techniques borrowed from other model projects. Interestingly, the models from which the instruments were borrowed generally used those instruments as a basis for curriculum planning, and employed standardized off-the-shelf tests in their diagnosis. The remaining 19 models reported using various batteries of tests and/or procedures, generally standardized, in accomplishing diagnosis.

Diagnostic procedures reported by replicating programs were compared with respective model projects. For purposes of this comparison each HCEEP model project's procedures were considered as unique, even though the model may have borrowed its procedures from another HCEEP project. The results of the analysis are displayed in Table 5-57.

TABLE 5-57. CORRESPONDENCE OF DIAGNOSTIC PROCEDURES OF CLAIMED REPLICATIONS AND RESPECTIVE MODEL HCEEP PROJECTS

Diagnostic Procedures Used	Number of Claimed Replications (N=78)
Basically same as model	10
Used model with other procedures	16
Used part of model procedures	3
Used other procedures only	23
Diagnosis not done	2
	54
Projects not considered replications	22
No response to item	2

A total of 29 of the 54 claimed replications (53.7 percent) responding to the item utilized some or all of the diagnostic procedures outlined by 16 models. Ten replications used HCEEP procedures, as is, exclusively. One model alone was responsible for implementation of its procedures exclusively in four of ten replications.

Of those replications reporting procedures other than those used by their respective models, six named procedures associated with some other model project. Finally, the 22 programs determined not to be replications are assumed to use diagnostic procedures that do not correspond to the model projects.

Evaluation. As with curriculum and diagnosis, some of the model HCEEP projects were using evaluation instruments and procedures that were readily identified with each model, while others had borrowed from other models. Six models used project-developed instruments alone, or as part of a battery of techniques, to evaluate child progress. Three models used their instruments plus those of other models for evaluation purposes. The remaining models generally reported using some combination of published tests a-propriate for their child population.

Evaluation procedures reported by 56 replications were compared with those of their respective models. Each model's procedures were considered as unique, even though they may have borrowed from another HCEEP project. The results of the comparison are presented in Table 5-58.

TABLE 5-58. CORRESPONDENCE OF EVALUATION PROCEDURES OF CLAIMED REPLICATIONS AND RESPECTIVE MODEL HCEEP PROJECTS

Evaluation Procedures Used	Number of Claimed Replications (N=78)
Basically same as model	6
Used model with other procedures	15
Used part of model procedures	14
Used other procedures only	18
Evaluation not done	3
	56
Programs not considered replications	22

Of the 56 respondents acknowledging replication of a model, a total of 35 used some or all the evaluation procedures defined by model projects. Only 6 of the 35 appeared to employ the evaluation procedures of their respective models only. The remaining 21 replications used other procedures or did not do evaluation. This 21 includes 5 programs that named procedures associated with non-respective models.* Finally, the 22 programs not considered to be replications are assumed to use procedures that do not correspond with model projects.

It should be noted at this point that the model project-developed instruments mentioned under curriculum, diagnosis, and evaluation may have been used for any one or a combination of these elements. That is, the instruments typically take the form of a sequencing of developmental skills in various areas, e.g., motor, communication, etc. The developmental levels of children new to the program can be determined, considered as diagnosis, an educational program can be planned and implemented using the instrument as a guideline, curriculum planning, and attainment of skills can be determined and reported in terms of gains on the instrument, evaluation. It is not known that any of these instruments are standardized. Therefore, models that have developed the instruments use additional tests that are standardized in diagnosis and evaluation. The use of multiple techniques is generally true of replication programs as well, although it appeared that some of those programs gave little or no attention to consistently evaluating child progress.

Basic Educational Model. It seems reasonable to assume that educational practioners would use some fundamental theories or concepts regarding how children develop and learn as foundations to guide their intervention strategies, materials, space arrangement, etc. Further, if a program were to replicate components of another completely, the existence of a central theme would seem to facilitate that effort. Adherence to a basic educational model probably would not be as critical, however, if only certain components were to be utilized--"partial replication."

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* Models that did not name the responding replication as a replication. That is, Model A claimed Replication X, which named Model B as its source of information or assistance.

The HCEEP projects studied, as well as the claimed replications, were asked about the theoretical or conceptual educational basis of their intervention activities. Sixteen of 31 HCEEP projects replied that they used no basic theoretical or conceptual educational model, or they followed an eclectic approach. Fifteen models replied that the project did have such a basis for its program. Upon analysis, however, it appears that only 1 of the 15 had developed its own unique theoretical basis and built upon it with corresponding curriculum and evaluation techniques. Responses provided by the other 14 HCEEP projects sponsoring a model could be categorized as approaches or strategies that grew out of existing theoretical or conceptual educational models.

Information reported by the 56 programs that were acknowledged replications describes a similar mixing of theories, approaches, and strategies. Responses from 7 replications indicate that those programs had the same basic orientations as their respective HCEEP projects. Eight more replications gave responses that indicated adoption of educational orientation as a result of contact with HCEEP projects. The responses of the remaining 41 replications could not be interpreted to indicate correspondence with their respective HCEEP models.

Service Delivery. Educational intervention by model HCEEP projects generally occurs at a center and/or in the child's home. In only a very few cases were the models sampled only home-based. That is, generally, full or part-day classes were held at a center, such as a school building or community agency. Home-based instruction of the parent and/or child may or may not have been provided additionally. This varied among projects, within a project, and among children based on perceived needs.

The data indicate that 49 of the 56 replications used the same delivery system or one of the two means of delivering services used by the model. Only 3 used some other or additional means than reported by the model project. The correspondence probably is not due to the influence of the models on the replications. With few exceptions, programs claimed as replications were operational prior to contact with respective HCEEP projects. Therefore, in

most cases, the means of service delivery was already established for the replications. Few of these could or would, because of financial, theoretical or other constraints seek to change the delivery method because of the established procedures.

Equipment and Facilities. A review of information provided by both the HCEEP model projects and the claimed replications indicates that few reported using any unique equipment or facilities. Further analysis of responses revealed that although some items were reported as being unique, they were "special" because of the population they served, e.g., time-out rooms for children with behavior disorders or hearing aids for deaf children, not because they were developed or used differently by any one project or program.

Child Population Served. This section briefly describes and compares HCEEP model projects and claimed replications regarding three characteristics of the child populations served: Types of handicaps, ethnicity, and male-female ratio.

Types of Handicaps. Information provided by the model projects indicated that 24 of the 32* provide services to children with a variety of handicapping conditions. Typically, five to ten categories of handicaps were involved. Twelve replications served essentially the same variety of handicapped populations. Twenty-seven limited their service to fewer handicap categories; 6 of these served children who were not handicapped as well as those who were. Two replication programs served non-handicapped children only. Populations of other replications were not reported or not applicable.

Eight model projects provided programs for children with one handicap or handicaps that were closely related, e.g., deaf, or hearing impaired which emcompasses deaf and hard of hearing. Five replications reported serving basically the same populations, while 8 included other handicaps in addition to or rather than those served by the model.

* The types of handicap of the children of the one non-responding model project were known as a result of the data collection visits. Therefore, that model was included under the discussion of types of handicap.

Ethnicity. Data regarding the ethnic composition of child populations served were collected and compared for HCEEP projects and replications. Completed data from 26 models and 48 claimed replications are summarized in Tables 5-59 and 5-60. Table 5-59 describes the number and percentage of five ethnic groups in the programs. Over 90 percent of the HCEEP model projects included white children; approximately three-fourths served Blacks; one half included Spanish Surnamed American children; and about one-fourth enrolled American Indian and Oriental children, each, among their child populations. Similar percentages of model and replication projects included white and American Indian children in the population served. However, a higher percentage of the models than replications served Blacks, Spanish Surnamed American, and Oriental children.

With the exception of 2 models, none had child populations of only 1 ethnic group. The 2 exceptions had enrollment of Spanish Surnamed American or American Indian children exclusively. In contrast, enrollment at 8 replication programs were all white children, all Black children at 1 program, and all Indian at 2 programs. No replication program was reported to have exclusively Spanish Surnamed American or Oriental enrollees.

TABLE 5-59. NUMBER AND PERCENTAGE OF HCEEP PROJECTS AND CLAIMED REPLICATIONS SERVING FIVE ETHNIC GROUPS

Ethnicity	No. (%)* of HCEEP Projects Serving (N=26)	No. (%)* of Claimed Replication Serving (N=48)
White	24 (92.3)	44 (91.7)
Black	20 (76.9)	28 (58.3)
Spanish Surnamed American	13 (50.0)	17 (35.4)
American Indian	7 (26.9)	11 (22.9)
Oriental	6 (23.1)	5 (10.4)

* Does not equal 100 percent because of multiple response categories.

TABLE 5-60. DISTRIBUTION OF ETHNIC GROUPS ACROSS HCEEP PROJECTS (N=26) AND CLAIMED REPLICATIONS (N=48)

	Number (%)* of Programs									
	White		Black		Spanish-Speaking		American Indian		Oriental	
Percentage of Ethnic Child Population	Model	Replication	Model	Replication	Model	Replication	Model	Replication	Model	Replication
0	2 (7.7)	4 (8.3)	6 (23.1)	21 (43.8)	12 (46.2)	31 (64.6)	20 (76.9)	38 (79.2)	20 (76.9)	43 (89.6)
1-10	1 (3.9)	2 (4.2)	13 (50.0)	10 (20.8)	8 (30.8)	5 (10.4)	5 (19.2)	6 (12.5)	6 (23.1)	5 (10.4)
11-20	2 (7.7)	3 (6.3)	0 (0.0)	2 (4.2)	1 (3.9)	0 (0.0)	0 (0.0)	1 (2.1)	0 (0.0)	0 (0.0)
21-30	1 (3.9)	4 (8.3)	1 (3.9)	4 (8.3)	0 (0.0)	4 (8.3)	0 (0.0)	1 (2.1)	0 (0.0)	0 (0.0)
31-40	1 (3.9)	3 (6.3)	1 (3.9)	3 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
41-50	2 (7.7)	3 (6.3)	1 (3.9)	1 (2.1)	1 (3.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
51-60	2 (7.7)	1 (2.1)	2 (7.7)	3 (6.3)	1 (3.9)	3 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
61-70	2 (7.7)	5 (10.4)	0 (0.0)	0 (0.0)	1 (3.9)	2 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
71-80	1 (3.9)	6 (12.5)	0 (0.0)	2 (4.2)	0 (0.0)	3 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
81-90	4 (15.4)	2 (4.2)	2 (7.7)	1 (2.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.1)	0 (0.0)	0 (0.0)
91-100	8 (30.8)	15 (31.3)	0 (0.0)	1 (2.1)	2 (7.7)	0 (0.0)	1 (3.9)	2 (4.2)	0 (0.0)	0 (0.0)

* Does not total to 100 due to rounding.

A more detailed picture of the distribution of ethnicity across programs is illustrated in Table 5-60. In general, the bulk of the programs serve mostly white children. As anticipated, most minorities represent less than 10 percent of the child populations served. While this observation holds for models as well as claimed replications, it appears that the models are more likely to have minority representation among the children in their programs.

White/non-white ratio data for 21 model projects* and their 42 respective replications were plotted on a scatter plot. Analysis of that data indicates that the ratio for 23 replications (54.8 percent) was within ± 10 percent of their respective models. That is, if the model reported 50 percent of its child population as being white, replications reported ratios between 40 and 60 percent. The remaining 19 replications reported ratios beyond ± 10 percentage points from respective models.

Male-Female Ratio. A third child characteristic that was examined for HCEEP projects and their claimed replications was the ratio of males to females. Table 5-61 shows the proportion of males in model projects and claimed replications. Twenty of 23 model projects (87.0 percent) indicated that from 51 to 80 percent of the children in their programs were male. Similarly, the bulk (63.7 percent) of the replication programs reported that males represented 51 to 80 percent of the children they served. However, these replications indicated a greater range in the proportion of males. Seventeen percent of the replications reported a population of 41 to 50 percent male, while 14.8 percent had populations of which 81 to 100 percent were male.

A scatter plot comparison of the proportion of males enrolled in model projects and replication programs indicated that 24 of the 47 replications (51.1 percent) have proportions within ± 10 percentage points of their respective models. That is, if the model reported 60 percent males, reports from replications ranged from 50 to 70 percent. Of the remaining 23

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* Data from 11 models could not be used because they had no replications or because information was missing. Similarly, some reporting replications did not provide complete data.

TABLE 5-61. PROPORTION OF MALES IN CHILD POPULATIONS OF HCEEP PROJECTS AND CLAIMED REPLICATIONS

Proportion of Males	Number (%) of Models (N=23)	Number (%) of Replications (N=47)
0-10	0 (0.0)	0 (0.0)
11-20	0 (0.0)	0 (0.0)
21-30	0 (0.0)	1 (2.1)
31-40	1 (4.4)	1 (2.1)
41-50	1 (4.4)	8 (17.0)
51-60	7 (30.4)	14 (29.8)
61-70	6 (26.1)	8 (17.0)
71-80	7 (30.4)	8 (17.0)
81-90	1 (4.4)	3 (6.4)
91-100	0 (0.0)	4 (8.5)

replications, 15 reported having proportions of males greater than 10 percentage points below that of respective models while 8 indicated proportions of males greater than 10 percentage points above respective models.

Staff Characteristics. Information regarding the numbers of various types of staff were requested from HCEEP model projects and used to determine and compare staff-child ratios. "Staff" was defined to include only those persons who deliver direct services to children in the program. Specifically excluded were administrators, outside consultants, and technicians who do not regularly and directly interact with or deliver an educationally related service to children. Using this guideline the staff/child ratio for the 26 model projects providing information was determined to range from 1:1 to 1:9+, as indicated in Table 5-62. Thirteen models (49.8 percent) had ratios of 1:3 or less, and 19 models (72.6 percent) had ratios of 1:6 or less.

TABLE 5-62. CHILD-STAFF RATIOS FOR HCEEP MODEL PROJECTS (N=26) AND CLAIMED REPLICATIONS (N=48)

	Frequency	
Ratio	Model	Claimed Replication
1:1	7	7
2:1	4	5
3:1	2	6
4:1	2	6
5:1	2	2
6:1	2	1
7:1	3	4
8:1	3	5
9:1	1	3
10:1		4
11:1		1
12:1		
13:1		1
14:1		
15:1		2
>15:1		1

For the 48 claimed replications providing complete data, the staff-child ratio ranged from 1:1 to 1:28. However, for the majority of replications the ratio did not exceed 1:10. A comparison of replications with model projects, as a whole, revealed similar ratios. One-half of the replication programs had staff-child ratios of 1:4 or less, and 74.7 percent indicated ratios of 1:8 or less.

While model projects and claimed replications compared favorably when viewed as two groups, a comparison of replications with respective models via a scatter plot indicated little relationship of their staff child ratios. This variance could be accounted for by several factors, such as: financial constraints may limit size in replication program staff; no change in the existing service delivery system is desired or advisable; and the component(s) replicated, e.g., curriculum, evaluation, etc., does not require any changes in number of staff but rather in how the staff operates.

Dissemination Strategies

Related to the activity of stimulating replication is the dissemination of information about model projects. Little has been known about the methods used by models to reach other programs. Therefore, some items addressed that subject in the questionnaires completed by model projects and by programs named as replications by models. The following section provides information about the dissemination process as reported by 31 models and 63 programs claimed as replications.

Dissemination Methods. Model projects were asked to indicate (1) the methods by which they made known to target populations information about their purpose and operation, and (2) the order in which the methods were used. The data are summarized in Table 5-63. With the exception of video tape and other audio-visual modes, all the methods were used by at least 70 percent of the projects. The decreased emphasis on these audio-visual techniques could be explained by such factors as: the need to employ more specialized staff, capital outlay for equipment, inconvenience

TABLE 5-63. FREQUENCY OF USE OF DISSEMINATION METHODS BY HCEEP MODEL PROJECTS

Dissemination Method	No. (%) of Projects Using Method					Order* of Utilization
	Year of Funding					
	3rd (N=15)	4th (N=6)	5th (N=4)	6th (N=6)	Total (N=31)	
Brochure	15 (100)	5 (83)	4 (100)	6 (100)	30 (97)	2
Publications	11 (73)	3 (50)	3 (75)	6 (100)	23 (74)	6
Newspaper	15 (100)	4 (67)	4 (100)	5 (83)	28 (90)	1
Speeches	15 (100)	5 (83)	4 (100)	6 (100)	30 (97)	3
Radio, Media	11 (73)	3 (50)	4 (100)	4 (67)	22 (71)	4
Video Tape	6 (40)	4 (67)	1 (25)	4 (67)	15 (48)	8
Slide/Audio-Slide	14 (93)	6 (100)	4 (100)	6 (100)	30 (97)	5
Workshop/ Conference	15 (100)	4 (67)	4 (100)	6 (100)	29 (94)	7
Other Audio-Visual	7 (47)	2 (33)	2 (50)	3 (50)	14 (45)	9
Other	9 (60)	0 (0)	2 (50)	5 (83)	16 (52)	10

* The frequency with which each method was mentioned as first, second, etc., was averaged across projects, with 31 models reporting data. The method mentioned most frequently was assigned "1"; the next most frequent, "2"; and so on.

of transporting equipment to presentations, or satisfaction with the present means of distributing information.

The table indicates that the percentage of projects using any one method of dissemination was fairly stable over four funding years. A frequency count of the number of methods checked per project reveals that, on average, six, seven, or eight methods were checked for each of the four groupings of projects. Thus, it appears that the range of dissemination methods that a project will use has already been defined by the third year of funding.

It may be observed that while the year of funding supposedly dictates the primary goals of project, i.e., operational or outreach activities, the operational projects had, in fact, "jumped the gun" on activities they performed. That is, these projects entered the outreach phase, in fact, while still being funded for direct services only. Several factors, independently or in combination with others, appeared to relate to this phenomena. They include: (1) the provision of direct services during the first funding year, which is designated as the planning phase; (2) the development and subsequent wide distribution of some instruments for diagnosis or evaluation, and/or developmentally sequenced curriculum, all of which are greatly needed by preschool programs; (3) the provision of a feasible approach to serving special populations (e.g., rural and developmentally delayed populations that could be served via home-based instruction); (4) the leadership of an aggressive and/or already nationally recognized educator of handicapped children; and (5) the availability of supplemental funding from other sources (e.g., state departments of education, universities, or social agencies).

Table 5-63 also indicates the order in which various methods typically were utilized. The use of newspapers and production and distribution of brochures were overwhelmingly the first two dissemination activities which projects used. As the existence of projects became known, the next methods used placed information before the public through more personal delivery by project staff, e.g., speeches to interest groups, audio-visual presentations* and radio and television spots. A third grouping of methods--

* While slide and audio slide presentations were ranked fifth, the point at which individual projects developed them varied widely.

publications and workshops/conferences--involves presentations of more detailed, in-depth information which are typically aimed at specific target audiences (i.e., teachers, administrators, etc.). The development of less commonly used audio-visual methods (including video tape) was typically among the last means used.

In addition to determining dissemination strategies of model projects, information was obtained from claimed replications regarding how these programs came to know of the HCEEP model projects. Many respondents indicated multiple methods, probably because some methods can be used jointly (e.g., speeches and audio-visual presentations). The order of the methods named by respondents was (1) personal communication with individuals other than HCEEP model project staff; (2) through workshops and conferences; (3) brochures, (4) other, including contact by HCEEP staff, legislative meetings, physical proximity of the program to the model, previous position of the HCEEP staff, etc.; (5) publications; (6) speeches, (7) newspapers, (8) slide/audio-slide presentation; (9) radio; (10) other audio-visual means; and (11) video tape. Clustering of methods occurred, with similar frequency in each of three clusters--1-4, 5-7, and 8-11. On balance, it appeared that respondents were more likely to become knowledgble of model projects as a result of some personal interaction with HCEEP staff or others, rather than through printed or less personal means.

Persons Responsible for Dissemination. Model projects were asked to indicate the person(s) responsible for dissemination activities. The first column of Table 5-64 summarizes the frequency with which various positions were reported. The most frequent arrangement was for one or a combination of the following to conduct dissemination activities: staff members taking turns, all staff being responsible, use of a team approach, and/or employment of a person from outside the project. In 12 other model projects, the director or a coordinator was responsible. Eight projects reported that no one led this activity.

A description of dissemination was sought also in terms of replication programs' perceptions of who was responsible for stimulating their involvement with a model project. A total of 54 indicated that someone at

TABLE 5-64. HCEEP MODEL PROJECT POSITION RESPONSIBLE FOR DISSEMINATION ACTIVITIES, AND POSITIONS REPORTED BY CLAIMED REPLICATIONS

POSITION	NUMBER (%) OF MODEL PROJECTS NAMING POSITION (N=31)	NUMBER (%) OF CLAIMED REPLICATIONS NAMING POSITION (N=54)*
Director	5 (16.1)	31 (57.4)
Assistant Director	0 (0.0)	3 (5.5)
Coordinator	2 (6.4)	4 (7.4)
Disseminator, Outreach or Replications Coordinator	5 (16.1)	7 (12.4)
One or More Staff and/or Outside Consultant	11 (35.4)	14 (25.9)
No One Responsible	8 (25.8)	----

* Percent does not total to 100 because of multiple responses.

the respective model project was responsible.* Over one-half (57.4 percent) named the director, even though the director position led that activity for only 5 models. Approximately one-fourth (25.9 percent) named some position that falls within the model project category which includes one or more unspecified staff members. It is interesting to note the relative infrequent mention, seven programs, of positions specifically devoted to dissemination activities. Of further note is that five of the seven programs were associated with one specific disseminator.

Focus of Dissemination Activities. HCEEP model projects were asked to indicate the type of agency and the geographic area which their dissemination activities primarily involved. With few exceptions, models reported multiple categories. It appeared that models seemed eager to report contacts (generally from the past) with as many categories as possible, and failed to report having any primary focus.

* Four respondents named multiple positions.

Table 5-65 summarizes the data related to type of agency and geographic area. As expected, SEA's and/or LEA's received attention from most model projects. Also, probably because of the mandate for Head Start to serve handicapped children, model projects are or seek to become involved with such programs. Private education, mental health, and health organizations and universities received slightly less emphasis. Organizations serving the mentally retarded and welfare agencies are the least likely to be the focus of HCEEP projects on the whole.

Similar to responses regarding type of agency, the responses reporting geographic focus were multiple. That is, dissemination activities did not involve any one geographic area primarily. Table 5-65 shows that most model projects aim to become involved with other programs that are located relatively close to the model, i.e., within the same state. The geographic location of the majority of claimed replications was also within the same state as respective models.

Summary

The following points summarize information related to replications of HCEEP model projects selected for evaluation.

- All but 4 of 32 model projects claimed to have at least one replication, even though 15 were still in the funding stage that charges them primarily to develop a valid model suitable for replication.
- Examination of the mail and interview responses of 78 programs claimed as replications strongly suggests that approximately 28 percent (22 programs) could not be considered as even a partial replications, based on the amount or nature of contact between the programs and their respective models.
- Programs judged as replications by the programs themselves were most often operated by SEA's or LEA's. Over one-half

TABLE 5-65. TYPE OF AGENCY AND GEOGRAPHIC AREAS REPORTED BY HCEEP MODEL PROJECTS AS THE FOCUS OF DISSEMINATION ACTIVITIES, AND AS FOUND IN A SAMPLE OF CLAIMED REPLICATIONS

	No. (%) of Model Projects Reporting Focus On (N=31)	No. (%) of Claimed Replications Identified as (N=63)
Type of Agency		
Head Start	20 (64.5)	9 (14.3)
SEA, LEA	26 (83.9)	25 (39.7)
Private Education Organization	19 (61.3)	3 (4.8)
Mental Health Organization	19 (61.3)	3 (4.8)
Mental Retardation Organization	14 (45.2)	2 (3.2)
Health Organization	18 (58.1)	6 (9.5)
Welfare Agency	11 (35.5)	2 (3.2)
University	18 (58.1)	3 (4.8)
Other	11 (35.5)	2 (3.2)
Geographic Area		
City or County of Model Project	25 (80.7)	19 (30.2)
Other Counties in State	24 (77.4)	23 (36.5)
Other States	17 (54.8)	21 (33.3)
Other (International)	4 (12.9)	0 (0.0)

received substantial portions of their funding from federal sources.

- The number of contacts between model projects and programs named as replications was generally three to four for periods ranging from one or two hours to 1-1/2 weeks.
- The nature of the contacts reported by programs named as replications included: (1) in-service training (69.2 percent); (2) orientation (63.2 percent); (3) receipt of general literature (72.7 percent); (4) receipt of special materials (73.7 percent); and (5) other (15.7 percent).
- An examination of the curricula, diagnostic, and evaluation techniques and procedures revealed that many model projects are not unique with regard to these items. In fact, several models in the sample have borrowed such techniques and procedures from other HCEEP model projects.
- Of the 78 programs named as replications by model projects and the 56 determined to be replications:
  - -- 30 used all or part of the curricula associated with respective model projects,
  - -- 29 used all or part of the diagnostic procedures associated with respective models,
  - -- 35 used all or part of the evaluation procedures used by respective models.
- Only one model reported developing a unique theoretical orientation which it used as a basis for program operation. Approximately one-half of the models identified no central orientation or approach. The remaining models had adopted or adapted existing orientations or approaches.
- Twenty-four models served a variety of handicaps, while 8 were concerned mainly with one type only. With the exception of programs with a definite basic model for the educational approach, e.g., for deaf or behavior disordered children, replications appeared to utilize any elements from model projects that were applicable to the replications' program or handicaps served.

- Most model projects and replication programs serve mostly white children, although models are more likely than replications to have some minority representation. Two models were specifically for minority children.
- Model projects and replication programs both generally report a higher proportion of males than females in their child population served.
- As a whole, staff-child ratios of model projects and program replications are comparable. Comparison of individual replications with respective models, however, reveals little correspondence.

The following summary is based on information reported by 31 HCEEP model projects and 63 programs claimed as replications.

- Nearly all model projects reported using a wide range of dissemination methods (e.g., media, speeches, audio-visual presentation, etc.). These methods apparently are already in use by the third year of funding. The order in which the methods were typically utilized appeared to flow from inexpensive methods which reached the general public and education community, to more in-depth methods which accompany transmittal of detailed information to specialized target populations.
- Programs that had contact with model projects reported that they had become aware of the models most frequently through personal communication with persons other than the HCEEP staff, workshops and conferences, or brochures.
- Of the 31 models, 23 reported that dissemination activities were handled by one or a combination of project staff. While the director position was designated by only five models as responsible for dissemination, 57.4 percent of the programs having contact with models named that position as responsible for their interest in the model.

- Model projects did not appear to focus their attention activities on a select number of agency types or geographic areas. This may indicate the lack of such a plan, and/or be a result of having to be reactive to an apparently large number of programs who request information and/or assistance. Agency types on which models most frequently "focused" were SEA's and LEA's, with an encouraging proportion aiming for involvement with Head Start. Geographically, most projects focused on other in-state programs. A sample of programs having contact with models indicated that a majority of these were in the same state as respective models.

CHAPTER VI. PRELIMINARY DESIGN
PROJECT MONITORING AND REPORTING SYSTEM

Objectives

The overall objective of this task is to develop a preliminary plan for a project Monitoring and Reporting System (MRS) which would enable the Bureau of Education for the Handicapped to assess on a continuing basis the status and progress of specified groups of handicapped children in early education projects. In addition, the design of this system is to facilitate the continuing evaluation of projects' effectiveness, to encourage project directors to maintain follow-up information on children who leave a program, and to increase the efficiency of the project reporting procedures so as not to add to the present reporting burden of the projects' staff.

The preliminary design of the Monitoring and Reporting System includes recommended data collection forms, reports, and processing procedures. Rationale of the design and alternative processes are supplied where appropriate. Although the final design of the system may significantly change its scope, implementation and operating requirements are also discussed.

As a preliminary design, this report describes a proposed system. It is believed that this system can be implemented successfully in whole or in part. In addition, the design of the system should provide a foundation that will readily permit modifications to proposed components and the building of new components as new requirements and needs are identified. The general design of the system, however, is believed to provide the early childhood program with a productive system that, under existing constraints, can be practically implemented.

It is assumed that the inputs, outputs, and other features of the proposed system will be reviewed and evaluated by BEH staff, and that resulting recommendations and suggested modifications will be documented prior to the initiation of any further development activities and subsequent implementation processes.

System Objectives

The objectives of the Monitoring and Reporting System are threefold:

(1) To provide the BEH with information which will facilitate management decision-making, long-range planning, and evaluation of educational programs

(2) To supply the BEH with information necessary to effectively monitor individual projects through evaluation of project utilization of BEH funds, assessment of program impact, and identification of potential problems in project management prior to development of serious problems

(3) To enhance project reporting of information to the BEH in terms of the content of information reported, the quality of information reported, and the timely reporting of data.

Background

The development of the preliminary system design presented in this report is based on several considerations. First, the current BEH reporting procedures were closely examined. These formed the initial basis for the specification of data requirements and collection procedures for the MRS. Further, a number of key constraints posed for the collection of information were identified and were addressed in the development of the preliminary design. After consideration of the current reporting procedures and these several constraints, final recommendations for data requirements and procedures for the MRS were developed.

In the following paragraphs, the background considerations are discussed in greater detail. A general overview of the resulting conclusions and recommendations for the data required for the MRS is then presented.

Current Reporting Procedures

Projects currently are required to report to BEH three times per funding year. The initial reporting phase is represented by applications for funding. This phase occurs during the period between December and February for the funding period subsequently beginning on July 1 and extending through 12 months. Midway through the funding or grant award period projects submit a report of project progress. This report is followed by a final report of project progress which is submitted within 90 days after the close of the grant period (if less than 12 months) or no later than August 15.

This cycle applies to all projects regardless of their phase of operation. Consequently, projects requesting continuation grants for the coming funding period submit applications when they are about six months into the existing grant period.

Project Applications. The project application presently used is composed of two interrelated forms. The first and principal data collection form is HEW Form 608T. This form collects basic identification data such as applicant address, grant type, etc., and budget data including funding requirements and projections. In addition, the project narrative is provided as Part IV of HEW 608T. The second form is OE Form 9037. This form primarily provides the instructions for completion of HEW 608T. The form does collect, however, under the heading of "Supplementary Questionnaire", a limited amount of quantitative data including descriptions of children to be served, staff to be trained, and project staff.

The project narrative is utilized to obtain the bulk of information describing project activities. New grant applicants (applications for funds to initiate a project) are to describe the objectives of the project, supporting activities, projected outcomes, populations to be served, project staff, and other related information. Continuation grant applicants are to describe accomplishments in previous grant periods and any significant changes in the scope of the project in terms of previous objectives and activities.

Project Progress Report. Reports of project progress are divided into two sections. The first section consists of the Financial Status Report. Gross financial status information is obtained using HEW Form 601T. The second section is used to report project progress. This is done by providing a project narrative and completing form tables.

The project narrative is used to report accomplishments. Accomplishments and milestones met are discussed along with justifications for slippages in achievement of objectives presented in the project applications.

General guidelines are also presented for including the following items in the narrative, where applicable:

(1) Spin-off developments not a part of original objectives

(2) Quantifiable output/cost data comparisons

(3) Other matters of interest to OE.

The four tables included in the second section of the reports of project progress also provide a limited description of the numbers of children served and the numbers and types of placements made.

Considerations and Constraints

Phase of Project Activities. The current project application and progress reporting forms refer to projects as either demonstration or outreach. Although these terms are not defined on either of the forms, there are some implicit and explicit distinguishing characteristics associated with projects described as demonstration or outreach. Implicitly, demonstration projects "demonstrate" a type of educational program utilizing model settings and procedures. At some point in time demonstration projects may evolve into outreach projects. Outreach projects attempt to replicate the model or parts thereof in other projects, settings, and/or areas. Explicitly, a demonstration project receives funding for the purpose of development and demonstration of a model. An outreach project receives BEH funding for the purpose of disseminating its model; the outreach project must also obtain local or other funding to continue demonstration activities.

Thus, demonstration and outreach operations may be conceptualized in terms of phases along a continuum. As projects move along this continuum, through continuing years of funding, there is a shifting emphasis of project activities from the development and evaluation of an educational model and provision of services to children within this model, to an increasing emphasis on dissemination of the developed model and stimulation of replication of parts or all of model components. In that the outreach project evolves through the various demonstration phases of operation, and in that the outreach project maintains its responsibilities for provision of direct services to children and demonstration of its developed model, many activities carried out by demonstration projects would still be carried out by the outreach project. Overall, all projects, regardless of year of operation, are responsible for several major categories of activities, e.g., provision of services to children, involvement of parents in project operations, coordination and interaction with the community, etc. However, as previously mentioned, for the more advanced projects, such as outreach, there is an increasing emphasis placed on serving the needs of the community, and an expansion of the scope and nature of activities required therein.

Thus, for purposes of reporting information required for monitoring and evaluating project activities there seems to be no real need for separation of data requirements and forms for demonstration and outreach project. Rather, data requirements could be delineated which cover the broad range of activities carried out by all projects and these data can be obtained through use of one procedure and form. Demonstration and outreach projects, then, would respond to these requirements with varying degrees of detail and emphasis which would appropriately reflect their level of operation.

Child Progress Data. In the current reporting system, projects are asked to include, as an appendix to the project narrative, evidence of child progress. There are no guidelines for reporting this information, nor are there any requirements for use of any particular assessment instruments. Consequently, no two projects report evidence of child progress

in the same manner. Not only is there considerable variation in the manner with which child progress is reported, but also, individual projects often assess child progress using several instruments or measurement techniques that may have been either developed by the project or carefully selected for use with particular children in the project.

Since assessment of child progress among programs is a basic objective of the Monitoring and Reporting System, a uniform system of measuring child development is required. Ideally, this can be accomplished using a single test instrument that can be administered requiring a minimum amount of testing time per child. Upon recommendation of the BEH staff, the CEEDI (The Children's Early Education Developmental Inventory) could fulfill these requirements for this system.

In addition to the child's performance on the major milestones of the CEEDI, there is also a need for information depicting the type and extent of treatment received by a child in the HCEEP in order to evaluate child progress and overall impact of the project on the child.

Rights of Children. All data collection and reporting procedures for the Monitoring and Reporting System must be developed so that the rights of privacy of the children served by the HCEEPs are considered. The rights of children currently served in the HCEEP, as well as those who have graduated or left the program, must be respected consistent with legal guidelines. The need for maintaining the anonymity of children served by the project deserves particular attention in the development of a procedure for follow-up evaluation of children once served by the HCEEP. The child whose problems have been remediated and who is functioning within a regular classroom should be free from stigma attached to having been enrolled in a program for the "handicapped". Moreover, the prior history of the child may be unknown to the child's teacher in the post-HCEEP setting. Thus, a potential exists for the child's earlier experiences to become known to the teacher through efforts to obtain follow-up information regarding the child's current status. Even a limited amount of information concerning the child's past experience could lead to teacher bias in the treatment of the child.

For the child who enters a special program and his/her handicapping condition is obvious, this does not present as serious a problem. However, for those children who enter the mainstream of educational activity, any effort to evaluate their progress must be particularly sensitive to this issue. The procedure for the follow-up of HCEEP graduates, then, must be one which minimizes, to the extent possible, the risk of such a violation of human rights.

Project Report Burden. Ideally, the reporting system developed should not pose a significant burden on the HCEEP project staff. However, a monitoring and reporting system that will meet the needs of BEH will add to the existing reporting burden on projects. For example, introducing compulsory testing of children with a uniform instrument, while there are presently no specific testing requirements, must be considered an added burden.

Additionally, providing required intake, progress, placement, and follow-up data on each individual child served in the project periodically during the year places additional requirements on HCEEP staff time.

In addition to the burden on HCEEP project staff, procedures developed which require the involvement of non-HCEEP projects must not pose a burden on these outside projects or persons. The proposed follow-up of graduates would utilize a procedure which requires cooperation of outside projects or persons. Therefore, in this procedure, the burden placed on the follow-up staff must be considered. Thus, in order to minimize the added burden to staff of HCEEPs and follow-up sites, procedures were developed which seek to obtain needed information in as efficient and as effective manner possible, without compromising the needs of the system.

Of course, one way to counter-balance the increased requirements of the system is to decrease the existing requirements. Within the scope of this study, the HEW 608T and OE Form 9037 (application) and the Project Progress Report are assumed to be maintained in their present form. However, it is also assumed that the supplemental questionnaire of OE Form 9037 and the corresponding section of the Project Progress Report may be

replaced or modified, as needed. Thus, modifications of these forms could reduce existing requirements.

BEH Burden. The BEH staff which monitors projects makes use of the project application and report narratives as the source of descriptive information on projects. Staff must search through individual narratives to satisfy general inquiries or to extract basic pieces of information desirable for summary statistics. Consequently, the Monitoring and Reporting System should, in addition to reporting child information, provide a means by which general project information may be readily accessed. However, the burden of system operation and associated costs must be minimized in order to justify initial implementation.

Reporting Schedule. The reporting schedule selected for the Monitoring and Reporting System must be developed to conform to constraints imposed by both the current reporting cycle and specific needs expressed by the BEH.

The project year, i.e., the normal operating schedule of projects, begins July 1 and ends on June 30 although project activities vary in schedules within this period. For the most part, project services to children begin in September and end in June, the public schools' cycle. However, projects may operate year-round, or only in a specific period such as summer programs, so that many exceptions to the general activity schedule can be expected. As discussed in a previous section, the BEH funding periods run from July 1 to June 30. Applications for funding are received and reviewed between December and February for operations commencing the following July 1.

In addition to conforming to the constraints posed by the present funding and reporting cycle, the proposed MRS reporting schedule will address specific recommendations of the BEH. Specifically, BEH has indicated that the following reporting schedule features would be desirable:

(1) Currently financial status data is reported at mid-year and end-of-year. However, project financial data are considered to be needed on a quarterly

basis. Quarterly reporting of financial data would greatly assist monitoring of financial status without imposing an undue burden on projects.

(2) Collection and review of child progress data is considered to be necessary at mid-year and end-of-year. To measure progress only two testings are necessary: the first possible at enrollment and the last possible at the conclusion of services. However, an additional testing at mid-year is recommended. This additional testing is considered not only desirable from the standpoint of collecting more accurate measures of extent of services provided by shortening the reporting intervals but also the mid-year testing would provide child progress data available for use prior to completion of the application review process for the following year. Thus, these data could be analyzed in the evaluation of continuation applications. Reporting of child test results is, therefore, considered to be necessary upon enrollment, at mid-year, and at end-of-year.

Design Recommendations

The original requirements of the Monitoring and Reporting System, cited in RFP No. 73-14, identified child progress, placement, and follow-up reporting as the principal requirements of the MRS. Interviews with BEH staff, experiences encountered in other segments of this project, and involvement in other related EEH projects have led to the identification of other areas in which a monitoring and reporting system would provide needed services to BEH management. With the direction of BEH staff, the original requirements and other identified needs have been combined into the design of a monitoring and reporting

system with broader objectives than those originally called for. This resulting system design represents a compromise between an idealized system and what can be realized practically.

The scope of the Monitoring and Reporting System presented in the remainder of this report includes providing information which can be utilized in formulating policies, monitoring project activities, and evaluating program impact. This approach represents a change in direction from a system based primarily on data analysis to a more comprehensive information system.

This system design will provide BEH with an overview of project activities on a continuing basis. Outputs of the system will supply BEH with summaries of project activities including limited amounts of information describing the overall operation of project components and information include aggregations across projects, analytical reports, and query reports. Although these outputs may not replace the project narrative which describes project activities in detail, they should provide BEH staff with sufficient information to allow the BEH staff to detect major problems, identify potential problem areas, and, in general, to keep in continuous contact with activities of individual projects.

In the sections which follow, the recommended data requirements, the reports to BEH, the overall operating cycle, data processing requirements, and implementation considerations for the proposed Monitoring and Reporting System are presented.

Data Requirements. Overall, the collection of project data is required at two levels. First, group data are required at the project level. These are aggregate data which depict overall project impacts on major target groups to which services are provided (e.g., children, parents, HCEEP staff, and the community). At a second level, individual child data are required for the MRS. Individual child-based data are intended to describe activities which impact on each child served by the project.

Aggregate project descriptive data are necessary in conjunction with the project application where data on the individual child is not pertinent. Projects describe the anticipated child populations to be served, the type and extent of the services to be offered, and the resources allocated for the provision of services. Pertaining to children, the number of children expected per age range and handicapping conditions, the number of children to receive particular types of services, and the extent and staff requirements of the services are obtained. This form of collection is then followed during the project year by the collection of data for individual children. The former data, then, act as a form of reference for the individual child data obtained during the year and thus assist in evaluating project progress. Although data collected on individual children can satisfy the requirements for some of the group data, data such as the resource allocations made for provision of particular services is only practically obtained as group data. Post-application updating (progress reporting) of some data, therefore, is continued using group data throughout the project year.

Individual child data are only collected for the children receiving direct and supplementary services from the project. Although collection of individual-based data is possible for the parent, staff, and other impact groups, it is believed that collecting individual data for these additional groups can not be justified within the existing constraints of the system. Instead, group-based data is collected at the project level for each of these groups.

More specific detail concerning the recommended data requirements of the MRS at the project level, and the individual child level is provided below.

Project Descriptive Data. Project narratives provide considerable information describing project activities, but this information cannot be used directly by an automated system. Also, the project narratives are of limited use to the BEH staff in day to day activities in that information is not accessible. Consequently, a form and procedure complementary to the project narrative is necessary for obtaining quantifiable data, in aggregate form, that are normally directly or indirectly specified in the narrative but that are, for the most part, inaccessible at present.

Overall, the information required at the project level includes descriptions of the impact groups served, i.e., children, parents, HCEEP staff and community, the type and extent of services provided the impact groups, the resources allocated to provide the services, and finally, relative measures of the impact of services provided.

For each impact group the following types of information are required:

(1) Descriptive data. These data describe the characteristics of the groups served. For children, handicapping condition, age, and other characteristics are collected. Other groups served are described in terms of type of agency served, geographic area served, etc.

(2) Type and extent of services. These data are collected according to established categories of services which are common to most projects. The extent of service data may range from numbers of individuals or groups served, to breakdowns of amounts of time a service was provided, to the amount of project staff time allocated, to the provision of a particular service to the group.

(3) Resource allocations. These data are closely related to extent of service data, i.e., by describing the resources spent in providing services to an impact group an indication of the extent of service provided the group is obtained. Resource allocation data describe the relative amounts of staff and dollar costs required for providing services to each impact group.

(4) Impact indicators. In describing extent of services, a number of indicators are provided which will be useful in assessing project impact upon various target groups. For instance, data describing the extent of involvement by parents in project activities, the extent of coordination with the community, the number of replications, etc., provide a basis upon which the impact of project activities on these groups can be determined. Although these indicators are necessary for judging the overall impact of project activities, impact on children is often the ultimate criterion for evaluating the effectiveness of project activities, particularly for demonstration projects. Data required for evaluation of project impact on children will be reported on an individual child basis, which are discussed below.

Individual Child Data. Individual child data are required for assessment of three measures of project impact--child progress, child placement, and child follow-up. Child progress evaluation requires the use of child performance measures over time of exposure to project services or treatment. These measures are test results on the Children's Early Education Developmental Inventory (CEEDI). Project impact on child progress cannot be assessed without consideration of other variables besides child performance. Data concerning child characteristics and the type and extent of services provided are required to characterize the type of children served and the treatment received. These data are needed to distinguish project effects from normal maturation in evaluating child progress.

Child placement data, combined with other data, is also a measure of project effectiveness and impact. When a child leaves a project, indicators of the circumstances of departure and a description of the new placement setting are required. These data can be used in assessment of types of programs that the child enters as a result of the specialized treatment received in the HCEEP. This assessment serves

as an indirect measure of project success in preparing children for continuing educational treatment. In addition, child placement data are required for the follow-up evaluation of the child in the post-HCEEP setting.

Presently, follow-up information which projects are required to report consists primarily of group statistics on children placed in various categories of post-HCEEP settings. No other follow-up data collection procedures are required or recommended in the existing data collection forms.

When a child leaves an HCEEP project, a number of subsequent placements are possible, depending upon such factors as the child's age, level of development, and the nature and severity of handicapping condition. The child may be cared for in the home, be institutionalized, or enter a subsequent special or regular educational program. Therefore, for the follow-up evaluation of the children served by HCEEP, certain data are required. Data requirements for follow-up must consider constraints posed by child privacy rights and burden imposed on both the HCEEP and the follow-up site staff. Data required include descriptive data concerning characteristics of the post-HCEEP setting, the nature of services provided to the child in this setting, and, an indication of the level of child functioning. Additionally, since projects are required to establish contact with and provide child information to the follow-up site, indicators of project effectiveness in this area would be obtained. These data would include the extent to which data from the HCEEP staff were made available to and utilized by the follow-up site personnel. Follow-up data obtained would be used to assess the overall effectiveness of child follow-up activities of the HCEEP.

Financial Status Data. Descriptive group and child-based data, such as that described above, can be used to monitor project progress in reference to the objectives of a project. This data, however, does not monitor the overall management of project funds. The need to monitor the financial status of projects has been repeatedly expressed by the BEH staff. Therefore, the collection of financial data has been recommended in the MRS design to be accomplished at the end of each quarter of the

project year. The data required conform to those currently collected on HEW form 601T and include the current financial status of projects in terms of gross dollar figures. The resulting information may then be used by BEH and the projects to identify potential financial problems.

Other non-impact group data required for the MRS include the same type of information currently collected on the project application, HEW 608T/OE Form 9037. These data provide basic project identification and funding information necessary for the system.

Reports to the BEH. Reporting needs of BEH have been identified in the following four areas:

(1) Project Reports. Reports on individual projects are needed to assist BEH in monitoring and evaluating project effectiveness and impact.

(2) Summary Reports. Aggregate reports across projects are needed to assist BEH staff in assessing program impact, formulating policies, evaluating funding patterns, and making other related management decisions.

(3) Analytical Reports. Detailed studies of project and child data are necessary to periodically establish or reevaluate norms and criteria used in the evaluation of projects.

(4) Query Reports. Query access to the system data base is needed by BEH staff for day to day inquiries which are not directly satisfied in the fixed format reports identified above.

This selection of reports provides BEH with a broad range of information that enables staff to view project data from a variety of viewpoints for use in many aspects of program management.

Project Reports and Summary Reports follow the yearly schedule of project activities. Summary Reports of project application data, mid-year update data, and year-end update data provide periodic review of the overall activities of projects. Project Reports of projects' activities at mid-year and end-of-year provide a detailed review of project impact. Quarterly Reports of project financial status provide ongoing analysis of the financial standing of individual projects.

Analytical and Query Reports are not designed to follow a rigid schedule paralleling project operating cycles. Analytical Reports are presented in the design as being required at the end of each project year. However, there are no constraints in the system that would preclude these reports from being scheduled on a more frequent basis. Query Reports are produced when a need is identified for information not included in the content of the other reports. This reporting capability would permit BEH staff to retrieve a variety of different types of information from the system on an as-needed basis. Query Reports are not intended to be used to retrieve information that is required on a regular basis. Information required on a regular basis should be incorporated into scheduled reporting processes.

The information presented in Project Reports parallels that of Summary Reports. This information varies in context as information is accumulated during the progression of the project year. The information required is summarized below:

(1) Budget Summaries. Summarizations of gross budget data including funding available, projected quarterly outlays, actual quarterly expenditures, project income projected and received, etc., provide a basis for evaluating the financial status of individual projects and indicate further funding requirements.

(2) Budget Distributions. This information portrays how resources (e.g. staff time and dollars associated with staff salaries) are allocated to the provision of services to different impact groups (e.g. children, or parents). Presentation of these data in terms of original allocations and remaining unobligated

funds will assist BEH staff in assessment of project utilization and administration of BEH funds.

(3) Children Served. This information covers of the characteristics of children served by projects. This information includes breakdowns of the number of children according to age range and handicapping condition, race, sex, area of home, period of treatment, etc.

(4) Child Performance. Included are child test results, pretest, posttest, and difference means for children in each age range and handicapping condition.

(5) Child Services. This information includes the number of children served and average frequency of the service, and the relative investments by projects for each type of service established.

(6) Child Placement. Included are tabulations of the number of children placed into different types and levels of placement settings.

(7) Parent Involvement. Information covers the extent of parent participation in projects, the type of services provided parents, and the relative amounts of resources allocated by projects to parent-oriented activities.

(8) Staff. Project staff are described in terms of function and educational background. Descriptions of the type and extent of training provided by projects to staff and the relative amounts of resources allocated to these activities are also included.

(9) Other Group Involvement. Indicators of community involvement, advisory board functions, dissemination activities, services provided other groups, and relative resources allocations are presented.

Analytical Reports are not confined to a particular format. These reports are likely to be the output of a statistical analysis. The content of these reports focuses upon program impact on children, although other types of project and/or child data would be analyzed. Project and child factors are analyzed using statistical techniques to determine relative effects on child development so that norms may be established for use in the evaluation project effectiveness.

Query Reports could have virtually unrestricted content and format. For example, a query report could consist of a list of those HCEEP projects located in a particular state. The type of information displayed can vary, but, in general, reports would not be complex and would be produced directly by BEH staff on an as needed basis.

Operating Cycle. The operating cycle of the Monitoring and Reporting System spans a two-and-one-half year period for each year of project operation. This cycle may be characterized as three reporting phases. The first phase begins when applications for funding are submitted. Applications are submitted and reviewed during the period beginning in December and extending through February, about 8 months prior to project-year operation. Grants are subsequently awarded for the 12-month period beginning on July 1. Phase two, the first project year, consists of the 12-month period in which funding is provided for operation of projects. The following June 30 then marks the end of phase two and the beginning of phase three. Phase three consists of analysis and follow-up, and extends from July 1 through the late spring of the succeeding year. A summary of the events in the MRS cycle are portrayed in Figure 6-1. Of course, the portrayal of this cycle as three separate phases would, in practice, be applicable only to first year applicants. For continuing projects, the events occurring in the three phases would overlap in any one funding year. That is, reports on applications for continuing operation, reports of child and project progress data, and reports on follow-up of the previous year's graduates would all occur during a one-year period.

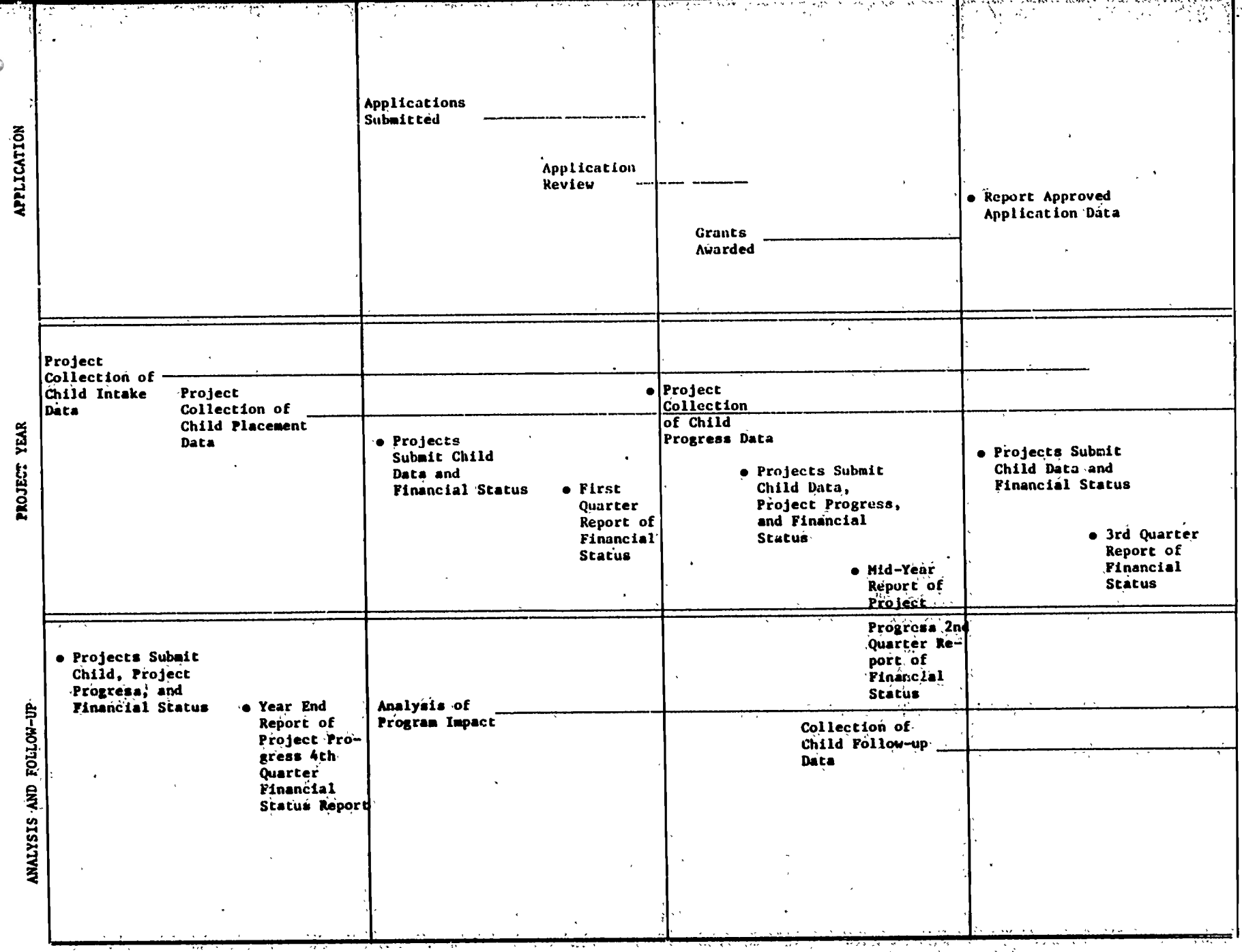

FIGURE 6-1. OPERATING CYCLE

A gene description of the operating cycle of the MRS is presented below. More detailed description of completion and submittal schedules for individual data collection forms is presented later as part of the description of the system specifications for data collection.

Phase I--Application. Submittal of applications begins in December. Applications are reviewed by BEH staff and BEH consultants. Following the review and approval of applications a Summary Report of approved projects is prepared.

Phase II--Project Year. Projects collect child intake data throughout the project year. Child placement data is also collected anytime during the year when children leave the project. However, projects submit child and all other data to BEH on a quarterly basis. At the end of the first three months of operation, projects submit all child intake and placement data collected during the quarter, as well as financial status data describing first quarter expenditures. Processing of these data results in the production of quarterly Project Reports.

The collection of child intake and placement data continues through the second quarter. At the end of the second quarter, child progress data are collected and submitted with intake and placement data to BEH. In addition, projects submit other mid-year project progress data which describe activities carried out during the first two quarters, and quarterly financial data describing second quarter expenditures. Project and Summary Reports are then prepared for BEH describing project progress, including child progress during the first half of the funding year, and project financial status at the end of the second quarter.

Third quarter processes parallel those of the first quarter. Child intake and placement data collection is continued with submittal of data at the end of the quarter. Third quarter financial data is also submitted and financial status reports prepared.

During the fourth quarter, the collection of child intake data is suspended. Child placement data collection continues to the conclusion of direct or supplemental service to children. Year-end child progress data are collected at or near the conclusion of child service

provision. All child data are submitted at the end of the fourth quarter. In addition, projects submit other year-end project progress and financial data. Analysis of the data results in year-end Project and Summary Reports describing project progress over the year and the final financial status of projects.

Phase III--Analysis and Follow-Up. Following the production of end-of-year reports, Analytical Reports using all the data collected during the year can be prepared. Production of Analytical Reports should be timed so that the results are available for use in the review of Project and Summary reports.

The collection of child follow-up data is performed during the spring following the child's exit, about 8-10 months earlier, from the HCEEP project. This schedule, then, anticipates that most children who are tracked have spent the bulk of a regular school year in the post-HCEEP setting.

Collection of follow-up data is expected to span a four to six-week period. Processing of these data, in conjunction with project year data, permits a variety of analyses to be performed. Follow-up data may also be used in analyses of those children for whom data are available over several project years.

Processing Requirements. Although the system proposed is not large by some standards, the requirements placed on processing components are demanding, particularly in the area of data base management and data entry and verification.

Data Base Requirements. The data base of the Monitoring and Reporting System must be designed to facilitate multiple data additions and updates throughout the reporting cycle while also providing data accessibility.

Data from project applications provide the core of the system data base to which different types of data, e.g., child data, financial data, and impact group progress data, are added as the operating cycle progresses. This accumulation of data requires that the data base design be flexible.

Data base flexibility is also required for data updates. Initial data entry error rates are expected to be significant and, therefore, will require a full range of error detection and correction capabilities. Hence, batch and on-line error detection and correction capabilities are desired (described below).

An Indexed Sequential file organization is recommended for the system. This type of data organization permits the sequential or random access of data and also provides for file expansion. Major key access on data of individual projects with minor key access on types of data or individual child data within a project is possible with this type of file organization. These capabilities coincide with those desirable for on-line updating and on-line query reporting. This type of organization simplifies many types of batch processing steps and minimizes the data manipulation required.

Two different file structures seem feasible for the system. A single filing system would contain all data on one file. Child data, for example, could be organized in substructures within project data. Alternatively, a dual file structure could be created with project group data in one file and all individual child data in a second file. The two files, linked by joint coding systems, could then be used in the same manner as the single file. Each method has advantages and disadvantages. The selection of file structure should be determined in the final development of system specifications. For the preliminary design, a dual file system is presented in order to simplify illustrations.

Data Editing and Verification. The editing and verification of data processes must produce low error rates. These processes must provide for accurate input, if the outputs of the system are to have a high degree of validity. Verification processes must provide for achievement of accuracy internally because the projects (origin of data) cannot be expected to verify data after submittal.

For these reasons, effective methods of data editing and data verification must be utilized. The entry of valid data can be facilitated by the design of data collection forms and procedures which are easy to interpret and complete. Well designed data collection forms and procedures will result in a minimum amount of error at the point of origin. The conversion of data from data collection forms to machine readable form can also be enhanced by means of formatting and conversion documentation. Conversion errors can also be reduced by utilizing key to tape or disk methods rather than key to punched card since formatting can be simplified through the use of varying lengths of data strings conforming to the data characteristics.

Although verification of raw data by keying processes will greatly reduce errors made at conversion, other verification processes are required. These processes are needed not only to further reduce data conversion errors, but also to identify errors made at the point of origin. Errors in the original data will be entered into the data base. Therefore, edit checks will be required to detect, and correct, original errors. The processes used can vary according to the sensitivity of individual types of data. Elementary edit checks can be used to detect errors in the bulk of the data. More sophisticated checking should be performed on the sensitive data.

Although projects would not be expected to verify all data after submittal, project personnel would be contacted to resolve errors and deviations. This process should have reasonably quick response time and should minimize additional project burden. Telephone contact for error resolution is, therefore, recommended. This method, although somewhat more costly, will insure resolution with minimum effort on the part of projects. Telephone contacts also result in quick response rates and minimize the need for additional contacts.

The capability to make corrections to the data base is desirable in both batch and on-line modes of processing. Batch updating is desirable for use in the correction or addition of large amounts of data. On-line processing is desirable for making limited numbers and types of corrections and updates.

Hardware Requirements. With the processing requirements described, there are no hardware requirements that cannot be fulfilled by the hardware normally available in any medium to large computer facility.

Software Requirements. For flexibility of formatting, the use of the COBOL meeting those standards set by the American National Standards Institute (ANSI COBOL) is recommended as the programming language for software modules developed for the system. Programming and general system documentation must be developed during implementation with provisions made for the continuing maintenance of documentation during operation. This is necessary for efficient operation of the system.

It may not be necessary for all software required by the system to be developed. Specialty software packages may be used for certain processing modules. For instance, a query update software package may be used for some batch and on-line data error corrections and may also be used for batch and on-line query reporting. A statistical package such as SPSS (Statistical Package for the Social Sciences) may be acceptable for use in the generation of analytic reports. The ability to use such packages would greatly reduce implementation costs and reduce operating maintenance costs.

Implementation Conclusions. Implementation of the Monitoring and Reporting System must be effective in terms of the system costs and benefits. Thus far, project burdens have been identified in several instances. Projects will be required to administer child performance tests, collect child description data, provide accounts of service provided children, and supply quantitative description of project activites and finances. These burdens, however, do not represent completely new reporting requirements. Although the approaches are somewhat different from existing methods, these requirements are presently included in the existing project reporting requirements in some form.

The new reporting requirements should provide benefits to projects. Projects may benefit from these reporting burdens in several ways. First, by better identifying the type of information needed by BEH, projects should spend less time in data collection and reporting while improving the applicability of data reported. Projects will also benefit from improved visibility to BEH. BEH staff will be better able to monitor individual projects and, thus, identify project management and operation problems. Well designed data collection forms and procedures may also help projects in administrative tasks including project planning and evaluation.

The added burden to BEH lies mainly in the expense of implementing and operating the system. This added burden must be weighed against the anticipated benefits. Since a need to improve project reporting has been specified and BEH appears committed to invest in such an improvement, the implementation decision must be based on the consideration of whether the system design proposed will indeed satisfy this need. Assuming that the system design is responsive to the needs of BEH, the decision on whether the system can be implemented successfully will depend upon budget considerations.

Thus, feasibility of the system rests on the appropriateness of the design presented, the budget of BEH, and obtaining the technical assistance required to implement and operate the system. The preliminary design presented is believed to be responsive to the needs of BEH. The cost of implementation is estimated to be significant, but reasonable for the effort that will be required and the resulting benefits to BEH. Finally, although good design and development will provide a basis for successful implementation, technical capabilities and commitment are required of BEH personnel selected to operate the system if the application of the system is to be successful.

System Specifications

This portion of the report describes the preliminary design specifications for the Monitoring and Reporting System. Specifications include description of the system inputs, outputs, and processing procedures. Discussion of inputs and outputs, depicted in Figure 6-2, is supported by draft data collection forms and report outlines found in Exhibits 6-1 through 6-8 at the end of this chapter.

Data Collection

The forms developed for the collection of required data from the HCEEPs for entry into the Monitoring and Reporting System are described in the following sections. These forms include the Child Intake Form, the Child Progress/Placement Form, the Child Follow-Up Form and the Project Description Form. A copy of each of these forms is provided in Exhibits 6-1 through 6-4 at the end of this chapter.

The first three forms are designed to report information on individual children, whereas the latter form is designed to collect project descriptive data in aggregate form. Moreover, individual child intake, progress, placement and follow-up data are not currently obtained by the BEH. Furthermore, these data are specifically required for the MRS in the RFP. The Project Description Form, however, obtains data from projects which are, for the most part, currently reported by projects in project applications and periodic reports. This form is proposed to replace the currently used supplement to the application and a portion of the project progress report forms. Thus, the development and use of the Project Description Form is recommended in that the form is designed to collect currently required data in a more efficient manner. Its use should reduce the burden on both the HCEEP and BEH staff.

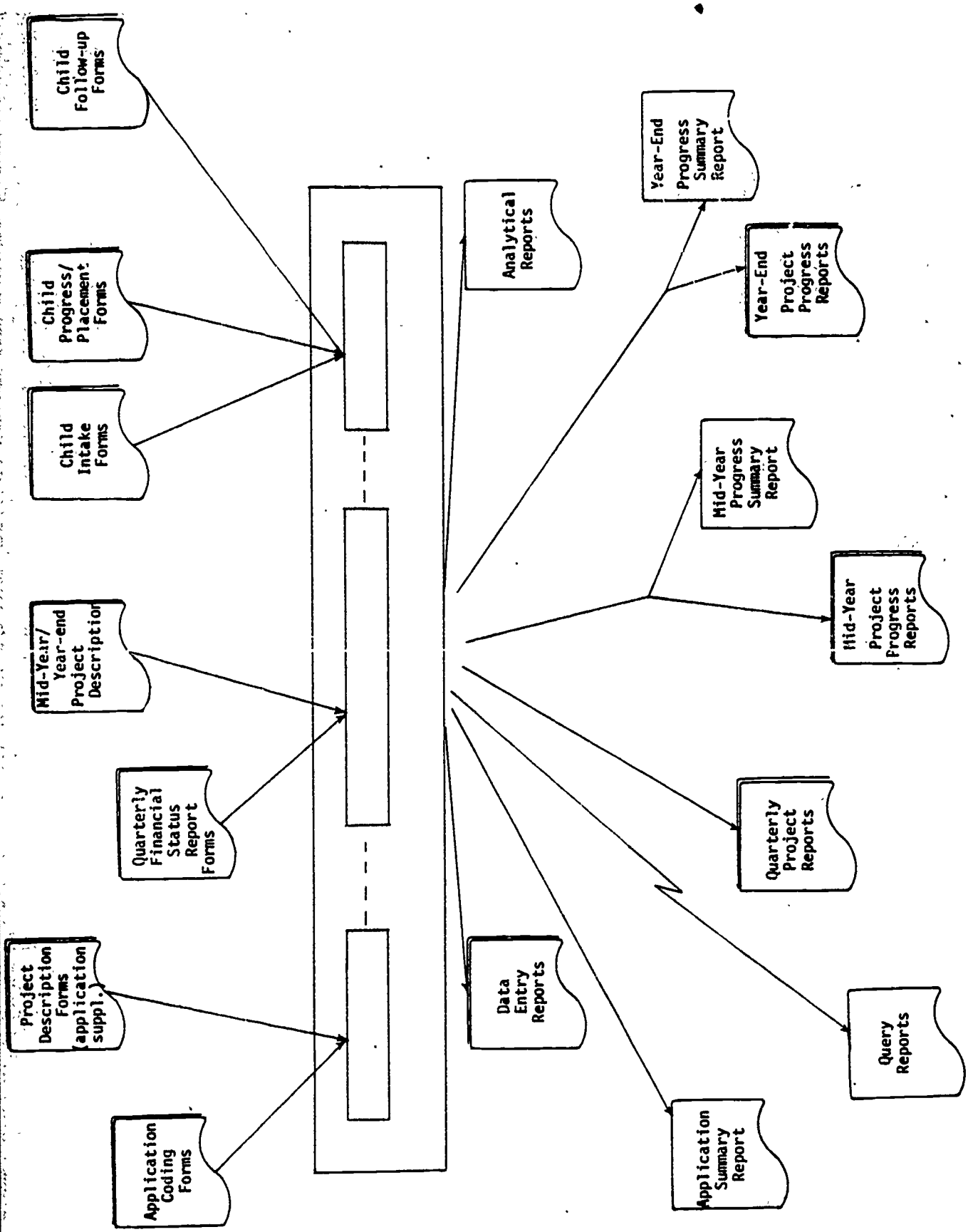

FIGURE 6-2. PROJECT REPORTING AND MONITORING SYSTEM

Child Intake Form. The Child Intake Form (see Exhibit 6-1) is designed to establish the acceptance and placement of each child to be served in an HCEEP project at any time throughout the funding year. Additionally, the form provides descriptive data on the child and details of the nature of the educational and/or therapeutic program to be provided during involvement in the project.

In order to preserve the rights of privacy of the child, projects would be provided a list of sequential numbers (four or five digit numbers) to assign an identification number to each child. Project identification and the identification of each child for whom a form is completed would be indicated on the intake form through use of a code number system.

Once a code number is assigned to a child, the child would retain the number permanently; no other child would be assigned that number even during subsequent years of program operation. Projects would maintain the list of identification numbers with the corresponding children's names in their records for future reference (i.e., for follow-up, progress/placement reports, and future intake forms if the child returns to the project after any one funding year). Accompanying the list of identification numbers, corresponding identification tags on which would be printed both the project identification number (which is assigned by BEH at the time of application), the current funding year, and the child code number would be provided to the projects. These adhesive tags would be affixed to the Child Intake Form by the project upon completion. In order to minimize the risk of the projects attaching the wrong code number for a child on the form, each label would consist of two parts. One-half of the label would carry the child and project identification numbers only. This portion would be affixed to the Intake Form. The other portion of the two-part label would carry the child identification number and a blank space where the child's name would be written by the project. The names of the children would be entered on the two-part labels at the time that identification codes are assigned (at entry into the program). At the time of completion of the Intake Form, one portion of the label would be detached and affixed (next to the child's name and assigned code number) in the record kept by the project. This procedure will not only minimize

errors of affixing improper ID numbers to the Intake Forms, but will also provide a record that an Intake Form was completed for that child.

After the child's identification number is affixed to the Intake Form, the project would provide the information requested for that child. The date of completion of the form and the person completing the form would be indicated. Child descriptive data requested at intake includes the date the child enrolled in the project, the child's birthdate, year or years of any previous enrollment in the project, background, the child's age (in years), a description of the area of the child's home (i.e., suburban, rural, etc.), and the nature and severity of the child's handicapping condition. Both primary and secondary handicapping conditions of the child will be specified.

In order to maintain consistency with the present BEH reporting guidelines, only one primary handicapping condition would be reported for a given child. However, projects would be permitted to indicate all secondary handicaps, thus allowing projects the flexibility to describe multiply handicapped children who are to be served. A "not handicapped" category is provided for projects who enroll non-handicapped children as developmental "models".

In addition to type of handicapping condition, the severity of the child's primary handicap will be described. It is believed that this information will be useful in characterizing the population of children served within and across projects and can serve as an important variable for consideration in evaluating child progress and the overall impact of project services.

In addition to the personal data obtained on the child, a measure of the child's level of functioning upon entry into the project is requested on the intake form. It is planned that this performance data will be obtained through use of the Children's Early Education Developmental Inventory (CEEDI). Administration of the CEEDI will provide performance scores for the child in five areas of development. Using one uniform measure of child performance has obvious advantages. It will provide a common base upon which child performance and progress within and across projects can be compared and overall project

effectiveness can be evaluated. Child performance data will be obtained on the CEEDI within the first month of the child's enrollment in the project. The instruments would be administered by project staff as prescribed in the Administration Manual.

Following the completion of child-based data, descriptive information would be obtained on the project services to be provided to the child during enrollment in the project. The data taken from the Intake Form of each child enrolled in the project will, in aggregate form, serve as a verification of service descriptive data provided by the project on the Project Description Form (discussed later).

The program delivery model by which the given child is to be served will be specified. Based on Battelle's evaluation of HCEEP projects and on the evaluation of projects for OE validation,* major modes of delivery were identified as center-based, home-based, resource-setting and parent training program. In many cases, projects operated within more than one of these models. However, on the Child Intake Form, the primary mode of delivery through which the given child is to receive services will be indicated.

Finally, the project will indicate the types of services needed by the child and project plans to fulfill these service needs. It is assumed that at the time of completion of this form, the project will be aware of the needs of the child, based on their screening of the child for acceptance in the program and on the initial assessment and diagnosis that has taken place. Both therapeutic or educational services and supplemental services needed by the child will be indicated, regardless of current plans of the project to provide such services. For each service need identified for the child, the project would indicate current plans for provision of these services, whether by the project or by outside sources. If at the time of enrollment (upon completion of the form) no plans for provision of the service(s) needed are made this would be indicated by the projects.

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* Selection and Validation of Model Early Childhood Education Projects, Battelle-Columbus Laboratories for Bureau of Education for the Handicapped, U.S. Office of Education, 1975.

Completion and Submittal. The Child Intake Form will be completed by the project upon enrollment of the child in the project, regardless of time of entry during the year. Completion of the form should occur shortly after enrollment (within two weeks) in that it is important to: (1) collect and record necessary information concerning the child in the case that the child may leave the project either temporarily or permanently shortly after enrollment, and (2) to obtain performance information on the CEEDI before any treatment is given. Although completion of the form should follow shortly after enrollment of the child, the form would be submitted to the BEH, along with forms for other children, at the end of the quarter during which the child is enrolled. Thus, all Child Intake Forms completed for children entering the project during a particular quarter would be submitted together at the end of the quarter. Submittal dates for forms completed during each quarter are provided on the Intake Form for project reference.

Child Progress/Placement Form. The Child Progress/Placement Form (see Exhibit 6-2) serves a two-fold purpose: (1) as a report of child progress and service provision, and/or (2) as a report on the future status of each child who leaves the project. The child's identification number assigned at the time of intake and used on the Child Intake Form would be affixed to the front page of the Child Progress/Placement Form. Also, information concerning the person(s) completing the form would be obtained for future reference.

Child Progress and Service Provision. Using the first part of the Child Progress/Placement Form, the project would report on child performance and service provision. This information will be obtained for each child enrolled in the project periodically during the funding year. Thus, the form will serve as a periodic report of progress for each child in the project.

Used as a progress form, the child's performance on the CEEDI will be reported. Additionally, the extent of services that have been provided the child by the project from the time of intake, or from the last report of progress, would be reported. For each of the therapeutic/educational services and supplemental services specified on the form, the project would report, for that child, the information as follows. First, in order to identify the range of services that have been provided to the child during his/her enrollment in the project, the project will indicate (a) those services that have been provided by the project and (b) those services which the child has received from outside sources. Second, for all therapeutic or educational services received by the child, both through the project and through external sources, the project will specify the average number of hours that the child is involved in the service per week. This will provide information which will be useful in determining the extent of educational or therapeutic treatment that the child is receiving and will be an important variable for consideration in the evaluation of child progress. Certainly, in the assessment of the effects of treatment it is necessary to know the length or intensity of such treatment, in addition to other factors such as handicapping conditions, age, etc. Thus, the burden imposed on project staff in requiring them to specify the extent of treatment received by each child seems to be justified. Third, the project will indicate those services which are, at the time of completion of the form, still needed by the child. This will provide information on the current status of the child's needs and can be used as a basis for comparison with future services that are provided to the child.

The preceding information requirements are relevant only to projects who provide services directly to children. For those projects who provide services indirectly to children through the parents, the project will be requested to indicate (a) the number of training sessions conducted with parents from the time of intake, or from the time of the last report, (b) the average number of staff-parent contact hours per month, and (c) the estimated number of parent-child contact hours spent in educational activities per month.

Child Placement. When a child leaves the project, a Child Progress/Placement Form would be completed for that child. At this time, placement information would be obtained, in addition to child performance and service provision information. The project will specify the conditions under which the child is leaving the program. These are of two types. First, a child may leave the project at the end of the project year, but be expected to continue in the project during the subsequent year of operation. For these children, the project would simply indicate the date of exit from the program and specify the temporary nature of departure. Also, the reason for the child's retention in the projects would be specified.

Under other conditions, a child may leave the project permanently and future status may or may not be known to the project. In any case, reasons for the child's departure would be delineated. In the case where the child leaves the project permanently and the future status of the child is unknown, this is so indicated on the form, along with the child's date of departure.

For those children who leave the project permanently and placement is known, the project would be asked to supply more detailed information regarding the placement setting. Identifying information for the placement will be reported, e.g., name, address, etc. The project would specify the project director or principal of the placement and the name of the most appropriate person to whom future contacts could be made concerning the child (i.e., the person who would be most knowledgeable of the child's experiences in the HCEEP). This information will be useful in any effort made to follow-up this child. The necessity of the contact person's awareness of the child's earlier experiences is to assure the confidentiality of identity of those children who enter regular educational programs.

Additionally, the type of program or project in which the child is being placed would be indicated within categories of integrated placement, partial integration, self-contained special education programs or institutional placement. The level of entry in this new setting would likewise be specified.

Completion and Submittal. A Child Progress/Placement Form is completed by a project for each child at mid-year and at the end of the project year. For the mid-year report, only child progress data would be reported. The mid-year report would reflect child and service delivery progress from the time of intake of the child up to January 1. Mid-year forms would be submitted no later than January 31st.

For the end-of-year report, the project would provide both child progress data and placement information appropriate to the child's departure from the project. The end-of-year report encompasses child and project information from January 1 to the end of project services. Since most projects end services in April and May, it would be expected that all forms would be completed during the quarter beginning April 1 and ending July 1. These forms would be submitted no later than July 10. This schedule would hold for the majority of children who remain in the project throughout the duration of project services. In those instances where a child leaves the project at any time during the course of the project year, a Child Progress/Placement Form is completed for the child on which child progress and service provision information,* and placement information would be provided. Progress/Placement forms completed during the year would be submitted at the end of the quarter in which the child left the project.

Child Follow-Up Form. A Child Follow-Up Form (see Exhibit 6-3) will be completed for each child who has been served by HCEEP and for whom placement is known. The form will be completed by the child's teacher/therapist in the post-HCEEP setting in which the child is enrolled. In responding to the follow-up form, the teacher will describe the program in which the child is enrolled. The type of program would be indicated as either a regular program, a regular program with provision of ancilliary

* Child progress information would not be required if the time between the date of completion of the previous child form, whether it be Child Intake or Child Progress/Placement, and the date of the child's departure from the project is less than two months. However, other information on the Child Progress/Placement Form, e.g., services provided, placement information, etc., would be obtained at departure, regardless of length of stay in the project.

services, a self-contained special education program, or "other" type of placement setting (e.g., institutional). In addition to type of program, the teacher would indicate the level of the program (e.g., pre-kindergarten, kindergarten, first grade, etc.).

Based on the teacher's knowledge of and experience with the child, the teacher would specify services which the child needs, and those services that are provided to the child in the follow-up setting, either by the follow-up program or by external sources. The services described on the Child Follow-Up Form correspond to the educational/therapeutic services which appear on the Child Intake Form and the Child Progress/Placement Form. Thus, the child's service needs and services received can be traced from the time of enrollment in HCEEP through follow-up. Also, comparisions can be made with those services which the HCEEP staff indicated were still needed by the child at the time of the child's departure from HCEEP and those service provided to the child in the follow-up setting.

The assessment of the child's functioning in the post-HCEEP setting is of key importance in the follow-up evaluation. The child's level of performance in each of six major areas of development will be evaluated by the teacher and reported on the follow-up form. The child will be rated on level of gross motor, fine motor, cognitive, language, adaptive, and personal-social functioning on a five-point rating scale from "severely delayed" to "superior". When more than one teacher works closely with the child in the follow-up setting, the ratings made will reflect the pooled judgments of these teachers.

Regardless of the type of post-HCEEP program, the child's performance will be evaluated relative to normal peers. This type of evaluation is recommended in that "normal" development is the standard against which children are judged. For the most part, the developmental areas in which the child is rated correspond to the domains of the Children's Early Education Developmental Inventory (CEEDI). The only difference appears in the motor area, in which follow-up ratings would be made of both gross and fine motor skills. It is believed that such a distinction between fine and gross motor functioning will make it easier for teachers to rate

the performance of those children who manifest primary deficits in either one or the other of these areas. Thus, the ratings can be considered an extension of the CEEDI evaluation performed during the child's enrollment in the HCEEP. Follow-up ratings can be compared to CEEDI domain scores obtained at the time of the child's departure from the HCEEP (reported on the Child Progress/Placement Form).

In addition to the information obtained concerning the child, the follow-up form would also obtain information regarding the extent and nature of follow-up contact made by HCEEP with the placement setting. On the form, the teacher would specify whether contact has been made with staff of the HCEEP project in which either the child, the child's parents, or both child and his parents, have participated. If any information was received by the teacher from the HCEEP project, the teacher would indicate the nature of the information and its overall usefulness.

The Child Follow-Up Form is designed to minimize the information made known to the follow-up teacher concerning the child's previous experiences in the HCEEP project. The child is identified as having been involved in a program sponsored by the U.S. Office of Education. No mention of the BEH or the HCEEP is made. As presented on the form, the purpose for requesting the information is to study the impact of federally funded education programs.

The child's name is printed on a tag which is attached to the form when given to the teacher. This will insure that the proper form is provided to the follow-up teacher. Once the form is completed, the teacher is instructed to remove and discard the tag so that the information concerning the child can be kept confidential. Both the child's code number and the HCEEP project code number would be printed on the form for identification by the BEH for entry of the information into the MRS.

Follow-Up Procedure. In the follow-up evaluation of HCEEP graduates, the HCEEP project will function as the liaison between the BEH, the parents, and the post-HCEEP placement setting. Of course, parental permission would be required in order to continue assessment of the child's performance beyond involvement in the HCEEP project. The HCEEP project staff should assume responsibility for securing this consent. A number of procedural alternatives for obtaining parental permission exist. One which would impose a minimum burden on the HCEEP project would be to secure parental permission for an extended evaluation of the child at the time of enrollment of the child into the HCEEP project. At this time, the HCEEP project staff could explain the need for long-term assessment of the child and communicate the details involved in carrying out the follow-up evaluation. Prior to departure of the child from the HCEEP project, the HCEEP staff would again describe the nature and purpose of the follow-up evaluation and request cooperation in this effort.

If the person at the placement with whom the HCEEP project coordinates is not the child's teacher, the name of the teacher would be obtained. A record of both the name of the coordinator, and the child's teacher, as well as a description of the post-HCEEP setting would be maintained by the HCEEP project. These placement data, along with information concerning the child's performance and service needs at the time of departure from the HCEEP project, would be obtained on the Child/Progress/Placement Form completed for the child just prior to departure from the HCEEP project.

At the end of the subsequent school year, i.e., after the child has been in the follow-up setting for a year, the HCEEP project would provide the placement setting with a Follow-Up Form for each child being followed. These would be given to the person with whom placement arrangements for the child were coordinated, e.g., a director of special programs in a school system, the school principal, director of a special early childhood program, etc. This person would be requested to provide the child's follow-up teacher with the form and request that it be completed.

After completion, the form would be sealed and returned directly to the BEH. If follow-up is to continue for more than one year following the child's departure from HCEEP, the HCEEP procedure becomes more complicated and difficult to carry out. A procedure might be developed in which the HCEEP project would secure from the contact person at the follow-up site information regarding the future plans for the child being followed. If the child is not returning to the setting, information concerning the subsequent setting would be obtained by the HCEEP project. Parents might also be contacted to confirm these plans, or to provide the necessary details if they were not available from the follow-up setting. In those instances where the child leaves the follow-up setting during the year, the contact at the placement could be requested to inform the HCEEP project of this circumstance. A follow-up form could be provided to the coordinator at the follow-up setting for the purpose of documenting the child's future plans and subsequent placement at the end of the year, or whenever the child leaves that setting. Once the following year's placement of the child is known to the HCEEP project, coordination with the new placement would be initiated for the purpose of implementing the follow-up procedure.

Child follow-up data could be collected at regular intervals over a period of years to assess the long-range impact of the HCEEP program on a child. It is believed, however, that successful collection of follow-up data for a significant number of children, can only be carried out for one-year periods after children leave HCEEP projects. Follow-up in this system design is recommended for a one-year period after HCEEP project services end.

At the HCEEP project level, an ongoing involvement would be required for the follow-up of children to post-HCEEP settings. However, activities would be limited to those of maintaining contact with the follow-up sites and the child's parents. The effective participation of the HCEEP projects will be vital success of the follow-up effort.

The burden imposed on the follow-up sites has been a serious concern in the development of the follow-up procedure. Unlike the HCEEP staff, the staff of the follow-up settings do not have the "built in" incentives to participate in this effort. Therefore, the HCEEP staff will have to secure the cooperation of the staff at the follow-up setting to facilitate the activities necessary for follow-up. In terms of actual time required of teachers in the follow-up setting, the form is designed to require a minimum of time for completion. Based on past experience in acquiring similar data from teachers, it would be expected that completing the form should require no more than one-half hour of the teacher's time.

Completion and Submittal. The follow-up form would be completed by the follow-up teacher at the end of the program or school year. This would normally occur during the fourth quarter of the BEH funding cycle, i.e., between April 1 and July 1. These follow-up forms would be submitted by follow-up teachers no later than July 10, which corresponds to the submittal deadline for all child and project forms from the HCEEP. For those children who leave the follow-up site before the end of the program or school year, forms would be completed and submitted just prior to the child's departure.

At the HCEEP level, Child Follow-Up Forms along with instructions for carrying out the follow-up evaluation would be provided to the follow-up site coordinator at the time of placement of the child in the new setting. Coordination with the follow-up site would be expected to continue throughout the year, however, there may be increased interaction between HCEEP and the follow-up site during the time of collection of the follow-up data, i.e., at the end of the year following placement.

Project Description Form. The Project Description Form (see Exhibit 6-4) will serve as (1) a supplement to the Project Application (HEW608T) and (2) a periodic report form for those projects which have been funded for operation. In both instances, the data obtained on this form will complement the project narrative, which provides a narrative description of the same or similiar data.

The Project Description Form has the potential to replace the present supplement to the project application and the current periodic report form. It also expands upon the data obtained on these forms. Furthermore, the Project Description Form is designed to provide more objective and focused requirements for information concerning specific aspects of project activities. Thus, use of the form will lend uniformity to reported description of project activities, and in so doing permit comparisons to be made across projects along specific dimensions of program operations upon which evaluation of the HCEEP network can be based.

As a supplement to the project application, the form will provide information regarding planned project activities for the funding year. The items cover the overall scope of planned project activities to be supported by funds expected across all funding sources.

As a periodic report of progress, the form obtains information concerning actual project activities that have been carried out during a specific report period. For those projects funded, the data reported on the supplement to the project application will serve as baseline information to which data reported on the periodic reports can be compared. The Project Description Form could be modified easily for use as a periodic report form; minor modifications would be required. A number of measures requested on the form would be specified differently on the progress reports. For the most part, modification of the form for use as a periodic report form would involve the adaptation of instructions accompanying each of the major sections of the form.

Moreover, the form would provide a comprehensive overview of planned (application) or actual (progress report) activities across all major components of project operations. The data obtained on the form focus on four major groups upon which project activities and services may impact. These are: children, parents, project staff, and the community. Organization of the form in terms of impact groups was selected over other structures since both demonstration and outreach project activities can be readily identified within these categories. The organization of the progress report currently used may have fit the general objectives of HCEEP projects better, however, it frequently had overlapping components.

Furthermore, description of project activities in terms of the impact groups served results in an organization that applies to all projects regardless of their phase of operation, e.g., projects in their demonstration phase as well as projects in an outreach phase. Finally, the proposed organization presents a simple structure that focuses on key concerns of the BEH--what groups are being served, how are they being served, and what benefits result from such service.

The Project Description Form is designed to obtain data which reflect project activities across a wide range of project models in various years of operation. Thus, projects ranging from the first year planning projects to projects in their outreach phase would respond to the same sections, although with varying degrees of detail. Emphasis would reflect the appropriate level and type of operation. For example, outreach projects would be expected to respond to all sections in that they are required to maintain a demonstration model as well as performing replication and dissemination activities. On the other hand, "operational" projects would respond only to those sections concerned with providing services to children.

Within each of the four target group sections, three types of information are requested: (1) data which describe the characteristics of the target group, (2) data which describe the type and extent of the services which are provided the target group, and (3) information regarding the allocation of resources for provision of these services.

Section I--Children. Within this section of the form, the number of children served by age and primary handicapping condition would be specified by the project. Children served would also be described in terms of their ethnic origin and the type of area in which they live, e.g., rural, urban.

In order to characterize the mode of delivery of services to children, the project would specify the number of children who are served by each type of delivery model: home-based, center-based, resource class, parent training, and other. The models specified on the form are those found to exist at present. Any project may employ one or more of these models in serving children. In describing a delivery model, the project ɔuld specify the extent to which service is provided by a model. The

average number of hours that a child spends in a model per week would be specified.

In addition to specification of model, the project would provide an account of the nature of services provided. For both therapeutic/educational and supplemental services, the project would specify the number of children who receive services directly from the project, and external sources, the average number of hours per week that the services are provided, and the HCEEP staff time (in Full Time Equivalents) required for provision of these services.

The data obtained in the children section of the Project Description Form parallel those obtained on the Child Intake Form on an individual child basis. Thus, these data reported in aggregate on the Project Description Form can be compared with that reported on a per child basis.

Section II-Parents. The information obtained in this section of the form focuses on parents of children served by the HCEEP projects. For outreach projects the parent/families, type of services, and participation described would apply only to parents of children receiving direct services.

A description of parents is obtained in terms of the number of families in which mothers, fathers, or both mothers and fathers participate in project activities or receive services provided by the project. A description of the nature and extent of the services covers both parent/family participation in project activities and services which are provided to parents by the project. The type of parent participation would be reported by the project in terms of parental involvement in the educational services provided to children and/or involvement in project planning, evaluation and dissemination activities. For each type of participation which applies, the project would indicate the number of families (mother, father or both) which are involved.

Concerning services to parents, projects would specify the type of training/education services offered to parents and/or other services offered. Measures specified to describe the extent of these services include: number of families to which the service is provided, average number of times the service is provided, and the FTE project staff required for the provision of these services.

Section III-Project Staff. This section of the form obtains data on type and number of staff which will be involved in the project during the funding year. Project staff are characterized by type, e.g., administrative, teaching, clerical, etc., and academic level, e.g., high school, college degree level, etc. In this section, the total project staff, in terms of FTE, is presented. These data can be used to obtain child-staff ratios and to determine the allocation of staff to services for each of the four impact groups.

The nature and extent of services provided to the staff of the HCEEP project is described. Any formal or informal training offered to staff is specified. For each type of formal training provided, the project would indicate the number of sessions conducted by the HCEEP project (with project money), the number of sessions conducted by other sources (not with project money), the total number of HCEEP staff trainess, the total number of HCEEP staff hours in training, and the FTE project staff involved in the provision of the training. For informal training, only the latter three measures would be required.

Section IV-Community. This section of the form covers those project activities which have impact on the outside educational community and/or the public. All HCEEP projects are expected to carry out activites which have impact on the community. However, the nature and extent of these activities will depend on the year of operation of the project. Those projects in an outreach phase would place more emphasis on activities described in this section of the form--those geared toward the outside community, i.e., "outreach". The activities described in this section of the Project Description Form will focus on: (a) community interaction/ coordination, (b) dissemination of project information, (c) stimulation of project replication, and (d) provision of services to outside groups.

Unlike the first three sections of this form, the description of the groups served outside the HCEEP project is not a separate category within the form. Rather, the community groups are described in conjunction with the description of services which are provided to these groups.

Community Interaction/Coordination. Community interaction and coordination would be described in terms of the type and number of outside agencies or groups involved and the nature of the coordination with these groups. Also, the project would describe the composition of the project advisory board and its functions. Further, since parents are to be represented on the advisory board, the data obtained here should be useful in evaluating parental involvement in project operations.

Dissemination. Project dissemination activities would be described within several categories. Workshops or conferences in which the HCEEP staff have participated or have provided for the purpose of disseminating information would be specified. The scope of these dissemination activities would be reported in terms of the number of workshops/conferences provided on a national, regional, statewide, and local level.

General descriptive materials developed by the project and used to disseminate information about the project would be described. For each type of material developed, the project would specify the number of different items developed to date and/or to be developed. Also, packaged materials developed by the project would be reported. In that numerous types of educational materials might be produced by projects, general categories of materials are provided on the form within which most products could be reported. These include: guides, diagnostic or screening instruments or procedures, assessment procedures, and curriculum materials. For each project developed product, several measures would be reported. First, the number of different items developed to date, and/or to be developed would be reported. Second, the number of items which have been disseminated to date and/or which will be disseminated would be specified by the project. These measures would provide an index of the extent to which these products are available to the outside ed-

ucational community. Finally, the range of dissemination of these project developed products would be specified in terms of the number of different states to which these project materials have been sent.

Interest in an HCEEP project would be reflected in the number of visits made to a project by personnel from other programs. HCEEP projects would report the number of in-state and out-of-state visitors attending during the preceding year of operation (if applicable), and the expected number during the year for which funding is being requested.

Replication. The number of both complete (total model is adopted) and partial (one or more components are adopted) replications completed to date and/or expected during the project year would be indicated by projects, if appropriate. The number of replications would be specified for in-state and out-of-state projects.

Services to Other Groups. The Project Description Form obtains data on the nature and extent of services provided to other groups. For the most part, the activities for which data are obtained would be considered "outreach" activities. Data would be provided on the types of services provided to groups outside the project, on the target groups served, and on the geographic areas in which the target groups are located.

Three types of services provided to the outside community are identified on the form: formal training, technical assistance, and consulting services. Within these types of services, projects would indicate the number of sessions conducted, the number of groups served, the number of services provided on site, and the FTE project staff allocated to the provision of these services.

The number of programs provided and persons involved within each type of service category would be specified for various categories of target groups, e.g., replications, other preschool programs for the handicapped, etc. Finally, for each type of service provided, the geographic areas served will be reported, i.e., local, in-state, etc.

Resources. For project activities and services described within each of the four target groups described above, resources allocated for the provision of these services would be reported. Resources would be specified in terms of project dollars and/or FTE staff. Project dollars and/or FTE staff would be specified for various types of staff (administrative, teachers, etc.) and other resources necessary for the provision of the services described (e.g., expendible supplies, equipment, etc.). Thus, for the children section, FTE staff and associated project dollars spent toward providing direct educational and supplemental services to children would be indicated. In the parent section, the staff and other resources required to operate the project's parental program would be reported. Overall, it is expected that the sum of FTE staff reported across the four impact group sections will correspond to the total staff FTE reported in the aggregate in the description of staff (Part A). Similarly, the sum of project funds budgeted for services provided to each impact group should correspond to the total project budget for the funding year. Thus, the allocation/expenditure of project funds reported on the Project Description Form can be monitored by BEH within and across each major component of project operations.

Completion and Submittal. The Project Description Form, used as the supplement to the project application, would be completed and submitted by project applicants during the period December to February for the funding period beginning the subsequent July 1. For those project funded, a periodic progress report, using an adapted Project Description Form, would be completed at mid-year and at the end of the funding year. Data reported on the mid-year report would cover activities carried out during the first two quarters of the funding year, July 1 to January 1. The mid-year report would be submitted to the BEH no later than January 31.

An end-of-the-year report would be completed covering activities implemented during the last two quarters of the funding year, January 1 to June 30. For those projects operating on a regular school schedule, final reports could be completed when services end. All final reports, regardless of the date of completion, would be submitted to the BEH no later than July 10. Thus, the schedule for completion and submittal of the Project Description Form, and as an application supplement, two reports of progress, does not deviate significantly from the current HCEEP project reporting schedule.

Application Coding Form. The Application Coding Form (see Exhibit 6-5) is used for coding data reported on Form HEW608T of the project application. The transfer of data from HEW608T to the coding form will facilitate the processing of data by the keypunch operators. The format of the data on HEW 608T is judged not suitable for use by the keypunch operators.

The Application Coding Form would be completed for the project applications of only those projects approved for funding in the subsequent funding year. The coding form would be completed by BEH staff during the period when approved projects are determined.

Reports

The reports produced by the MRS will provide BEH management with information describing individual project activities, summaries of across-project activities, and evaluative statistics. In addition to the above, the system must also provide the MRS operating staff with administrative reports necessary for editing and verification processes and the general management of the system.

Summary Reports. These reports summarize the activities of programs by presenting aggregated data of projects. Across-project aggregations are made separately for projects in different phases of operation. That is, separate summaries of all planning projects, operational projects, and outreach projects are anticipated.

Data Sources. Summary Reports draw on all data sources available at the time of production. An Application Summary Report is produced immediately following the approval of applications for funding. Data available from applications (i.e., Project Description Form and Application Coding Form) are the sources of this report. At the end of the second and fourth quarters of the project year a Mid-Year Progress Summary Report and an End-of-Year Progress Summary Report, respectively, are produced. The general format of these later reports follow the format of the Application Summary Report. However, the data sources used in the production of mid-year and end-of-year summaries also include individual child data obtained from Child Intake and Child Progress/Placement Forms, updated financial data obtained from quarterly submission of Financial Status Reports, and general description of project progress obtained from mid-year and end-of-year submission of Project Description Forms.

Report Content. Summary Reports are produced in three parts. Each part is produced independently covering projects in the same phase of operation. The first part describes planning projects, the second part

describes operational projects, and the third part describes outreach projects. The format of each of the three parts of the Summary Report will be identical. Only the content will vary since each part will be based upon data taken only from projects in the appropriate phase. In other words, the content of each part of the report is produced using the same process allowing the data sources to reflect the differences in the nature of project activities in different phases of operation.

Each part of the report is divided into two sections. The first section provides a brief description of each project used in the production of that part. The second section summarizes the data of those projects identified in the first section. A detailed content outline of the Mid-Year Progress Summary Report is presented in Exhibit 6-6. The content of the Application Summary Report and the End-of-Year Progress Summary Report parallels that of the Mid-Year Progress Summary Report.

Project Reports. Reports describing individual projects are provided to BEH periodically by the MRS. During the project year brief descriptions of individual projects are produced at the end of each quarter of operation. Detailed reports of project progress are produced at mid-year and end-of-year.

Quarterly Project Report. The Quarterly Project Report provides a brief up-to-date description of the project financial status and a summary of the child data submitted by the project during that quarter. This quarterly report is produced in duplicate. One copy is distributed to BEH staff, the other copy is mailed to the respective project. Projects may then review their financial status as compared with previously supplied budget information, while BEH may use this information to monitor the fiscal management of the project. Child data provided in the report permits projects to review and compare the MRS records of child data submission with their own submission records. This information will also enable BEH/MRS staff to identify the source of potential reporting and/or logistics problems. A detailed report content outline of the Quarterly Project Report is presented in Exhibit 6-7.

Mid-Year and End-of-Year Project Program Reports. Detailed, individual project reports of progress are produced following the end of the second and fourth quarters of the project year. The production schedule and report content of these reports parallels that of summary reports.

The two project progress reports have the same basic format. However, the individual items reflect the data sources available at the time of production. Exhibit 6-8 provides a detailed outline of the Mid-Year Project Progress Report. The content of the End-of-Year Project Progress Report would be appropriately adjusted to reflect data during the last half of the project year.

Other Reports. In addition to the principal reports discussed above, the system will also generate three other types of reports: data entry reports, query reports, and analytical reports. Each of these reports is briefly described below.

Data Entry Reports. At all stages of the system process where data are entered into the Project and Child file for the first time, where corrections to data are added, and whenever updates are made, reports will be generated which document all data entries. Examples of this type of report are the Application Entry Reports, Re-Edit Supplement to Entry Report, Quarterly Entry Reports, and Project-Update Entry Reports.

Query Reports. It is anticipated that the BEH staff, as well as the MRS operating staff, will make unscheduled inquiries into the Project and Child file to extract various types of data selected or aggregated in ways relevant to existing information requirements. The Query Reporting Module will be implemented to produce these reports on an as-needed basis. These reports will, of course, be limited to a few basic analytical manipulations of the data, such as frequencies and listings.

Analytical Reports. It is also anticipated that the BEH staff and others will want to perform various statistical analyses employing the

Project and Child File data. This can be accomplished by utilizing the Query Reporting Module to generate the data of interest in the format required by a particular Analysis Module (e.g., OSIRIS; SPSS, etc.). Once this is accomplished, a wide variety of analysis procedures can be applied to the selected data--ranging from simple frequency distributions to multivariate analyses--to produce analytical reports which will meet the needs of the BEH staff or others.

Processing Specifications

Included in this section of the report are descriptions of the manual and automated procedures necessary to operate the system. Also included are general specifications for software components of the system data base. This information is discussed under the headings of Data Management, Data Editing and Verification, and Reports Processing. This discussion is followed by System Flow, which presents the general flow charts with associated narrative. The final portion of this section discusses other considerations of the processing procedures.

Data Management. The Monitoring and Reporting System will be required to manage a significant amount of incoming data collection forms, associated administrative documents, and large mass storage files. During each system operating cycle the MRS can be expected to handle the data requirements for 150-200 projects. For each of these projects, three versions of the Project Description Form must be processed. In addition, each project is expected to supply child data for approximately 40* children on three data collection forms: Child Intake, Mid-Year Child Progress/Placement, and end-of-year Child Progress/Placement. Finally, it is expected, for each project, that data from the Child Follow-Up Form will be collected for 50-60 percent of the children. Consequently, the creation of a well-designed data management process is required to ensure good administrative practices, bookkeeping functions, and overall data accessibility.

* 40 is an inflated estimate of the average number of children expected to be served per project.

Disposition of Data. The data collection forms discussed previously, related data entry and correction reports, and resulting production reports are all needed for data verification processes and general reference. These documents should be filed and maintained at one control location. An active document file should be maintained independently for each operating cycle. An active file can be de-activated when all data for the cycle has been entered and verified. At this point, this de-activated file should be kept on hand for a period of three to five years as an inactive file before being placed in permanent storage.

Data maintained on mass storage devices (magnetic tape or disk) have similar requirements. Raw data files result from the key conversion of data collection forms to a machine-readable medium. Although key to tape conversion is recommended, the system could use key to punch card conversion methods. If key to punch card methods are employed, card files should immediately be converted to tape. Cards can then be kept for back-up until the tape data is entered into the main data base (i.e., the Project/Child File). Cards should then be disposed of to recycling agencies since storage of card files is not only cumbersome but also expensive. Raw data tape files resulting from periodic data conversion should be consolidated into a single, master, raw data tape file. The individual raw data tape files should then be disposed of, releasing the tapes for other use. The master raw data tape can then be maintained as "last resort" back-up to the Project/Child File.

The Project/Child File is proposed to be an indexed sequential file and, as such, must reside on disk mass storage <u>when in use</u>. However, when not in use the file should be maintained on tape since tape storage charges are considerably less than disk charges. Tapes should also be used for all back-up files. A duplicate of the current version of the Project/Child File (referenced as master file below) should be maintained as the primary back-up for this file should the master tape copy be physically damaged. In addition, secondary back-up to the Project/Child File may be accomplished by saving a tape copy of the previous version of this file. Thus, three tapes are required:

(1) Master tape--the most current version of the Project/ Child File

(2) Primary back-up--a copy of the master tape

(3) Secondary back-up tape--a copy of the previous version of the Project/Child File.

In summary, this process will consist of four stages.

(1) When major updating of the Proj . ./Child File is required, the file is loaded from master tape to disk.

(2) Updates are made to the disk file.

(3) The updated disk file is then verified. If updating failed and/or caused irreversible damage to the file, the disk file is recreated from tape and updating is attempted again.

(4) On verification of successful updating, two tape copies of the disk file are made. One copy is placed on the former secondary back-up tape, the other on the primary back-up tape. The original master tape containing the pre-update version of the file then becomes the secondary back-up tape for the updated file.

This process should provide adequate back-up should a tape be ruined or should failure of the update not be detected immediately.

Rotation of tapes in this manner would be required following major updates to the Project/Child File. Minor revisions to the file, however, would not necessarily require this extensive back-up process. For instance, during periods covering several days when error corrections are being made continually, the master file could reside on disk without repeated copying of the file to tape. For this and other similar revision processes, the corrected disk file should be rotated onto the tapes on a schedule appropriate to the volume of corrections being made so that if needed, the file could be recreated without extreme effort.

In addition to the above-mentioned files, special analytical files will be created as needed. Depending upon the complexity of these files, they should also have sufficient tape back-up. A two-tape rotation system should prove adequate for these files, although files which can be readily recreated may require no back-up at all. Long term disposition of these files must be determined on creation based on intended use and importance. Files developed that are planned for subsequent use in trend studies should be committed to archives in the same manner as the master Project/Child File.

In all cases, the use of labeled tapes with passwords (if possible) is recommended to reduce the chance of inadvertent destruction of files and to increase file security.

File Structures. The structure of raw data files and analytical files should be more apparent upon implementation. Further discussion regarding the structure of these files is unnecessary at this time. However, due to the importance of the document files and the master data base (Project/Child File), a general discussion of their structure in support of the preliminary design is warranted.

The document files, as mentioned above, contain data collection forms, related data entry and correction reports, and production reports for individual projects. This information is necessarily on hand for use in verification processes and general reference.

If possible, all documents dealing with a single project should be filed together, making the file a simple sequencing of project sub-files. This would permit quick access to the collection forms and associated reports of a project during verification and generally permit joint visibility and access to all documents of a project. Including production reports with the other project documents is recommended since inquiries may often refer to the content of these reports. Within each project's sub-file, documents should be logically organized to facilitate access. A sample sub-file structure is illustrated in Figure 6-3.

Sub-files of project documents should be sequenced according to the project identification code since this code is universally used on all data collection forms and reports.

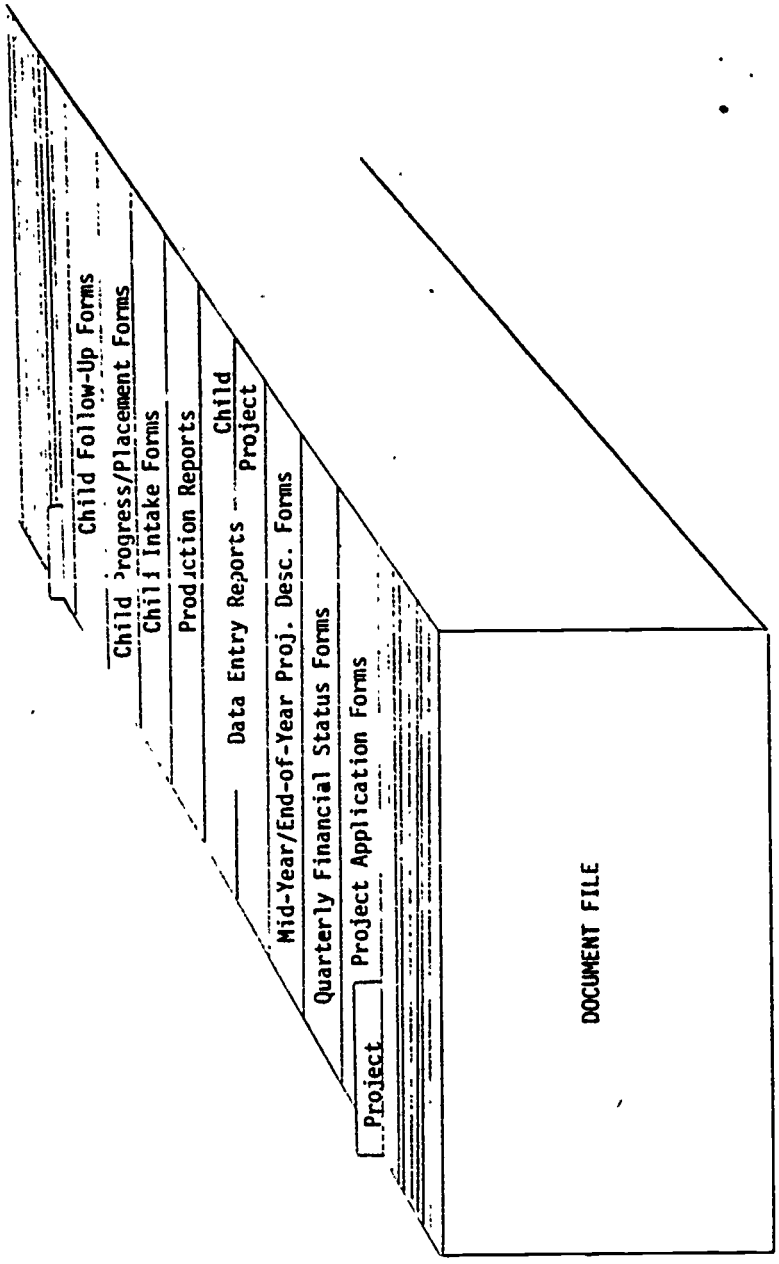

FIGURE 6-3. SAMPLE STRUCTURE OF DOCUMENT FILE

The Project/Child File as previously discussed is assumed to be in an indexed sequential organization. The major access key (the means by which data will be most frequently accessed) is assumed to be the project identification code. Minor access keys may be data record type-codes and in the case of children, individual child identification codes.

The conceived structure of data within each project's "sub-file" of data can be generally described as follows:

(1) Identification data--project address, year of operation, etc.

(2) Budget data--grant amount, BEH grant line item budget, quarterly projections, long range budget projections, etc., from project application.

(3) Financial Status--data from quarterly Financial Status Report forms.

(4) Impact Group Data--created from project description forms at application, mid-year, and end-of-year including the following:

  (a) group population descriptions
  (b) services provided
  (c) resource utilizations.

(5) Child Summary Statistics--created from individual child data at mid-year and end-of-year by the Summary Module (see Summary Module below):

  (a) child descriptive statistics
  (b) child performance statistics
  (c) child services summary
  (d) child placement summary.

(6) Individual Child Data--accumulates over the operating cycle to include a maximum of the following for each child:

(a) child intake data (Child Intake Form)

(b) mid-year progress data (Child Progress/Placement Form)

(c) Year-end-progress or placement data (Child Progress/Placement Form)

(d) child follow-up data (Child Follow-up Form).

Project-oriented data identified above in items (1) thru (5) may be physically separate from the child data. This would require the use of two files, a project file and a child file, with the two files linked by joint coding schemes. The linkage would be assumed to be project identification codes. Utilizing the dual filing system would reduce the time required for accessing data. With the inclusion of Child Summary Statistics (item 5 above) into the project file, the child file would not be required in the production of all summary reports. The dual file system would, however, make some tasks more difficult or at least cumbersome. Many data manipulation operations would have to be performed twice, such as opening and closing files, copying files, reading and writing source logic, etc. Nevertheless, the choice of single or dual files can be left to the final design when data and reporting requirements are defined in more detail.

In the remainder of the report the use of "Project/Child File" is to indicate both project and child data. "Child/file" is used to indicate only the data in the child file of a dual filing system, and "Project File" indicates all other data discussed above.

Maintenance and Updating. The initial creation of the project data file is performed using data obtained from project applications. The application data then serves as the core of the data base to which data is added during the remainder of the operating cycle. The following indicates the schedule of major updates to the data base:

(1) Quarterly Update--project Financial Status Report data and Child Intake and/or Child Progress/Placement data are added to the data base at the end of each quarter of the project year.

(2) Mid-year Update--in addition to scheduled end-of-second-quarter updating, data from Project Description Forms submitted at mid-year are added to the project file. Child Summary Statistics are created from individual child data and also added to the project file.

(3) Year-End Update--in addition to scheduled end-of-fourth-quarter updating, data from Project Description Forms submitted at the end of the project year are added to the project file. Child Summary Statistics are created from individual child data and added to the project file.

(4) Follow-up Update--data from Child Follow-up Forms are added to the Child File.

In addition, minor updating of the data base will be required in conjunction with the above. Scheduled periods of data error correction processing can be planned immediately following each of the above major updates. The bulk of error correcting can be expected to be performed during a 2-3 week period immediately after major updates.

The software necessary to perform updates, major and minor, is described as follows:

(1) Data Entry Modules: A series of software modules are necessary to enter newly acquired raw data into the Project/Child File. The data entry modules are all similar in design with each specialized to handle the unique requirements of the data being added to the file. Each data entry module is designed not only to enter data but also edit the data and prepare data entry reports. Editing and data entry reports are discussed further in subsequent positions of this section. Modules are identified as follows:

(a) Application Entry Module: This software module is designed to create the new Project/Child File using application data.

(b) Quarterly Data Entry Module: This module is used at the end of each quarter of the project year to add child and financial status data to the Project/Child File.

(c) Project-Update Data Entry Module--This software module is to be used to add project descriptive data from mid-year and end-of-year progress reporting to the Project File.

(d) Follow-up Module: Child follow-up data is added to the individual child data in the Project/Child File with this software module.

(2) Summary Module: A summary module is needed to add Child Summary Statistics to the Project File. The individual child data from the Child File are utilized to create the summary statistics. Creation of the summary statistics is performed following mid-year and end-of-year updates (after all associated major and minor updates). Summary statistics of a project produced at mid-year are to reflect all child data processed during the first six months of the project year. Summary statistics at end-of-year are to reflect all child data in the project during the last six months of the project, the entire year, or both, whichever is desired by the BEH. The Summary Module may additionally be used to create other project summary statistics, such as budget summaries. Although not previously mentioned, the inclusion of these statistics in the Project File may be desirable in order to reduce the burden on reporting generating software (particularly if the same statistics would have to be repeatedly produced by individual programs) and to make the statistics available for use in query reporting.

(3) Error Correction Module: This module would be used to make corrections to individual data elements and to perform other limited file maintenance related functions. Batch and on-line use of this module is proposed. The module would be used in batch mode when making large numbers of corrections at one time and in the on-line mode to make limited numbers of corrections. This module should have limited data retrieval and display capabilities so that operators may preview data elements prior to making updates. In addition, it is desirable to have Error Correction Lists produced describing corrections made. The error correction capabilities described above are available in the form of several known commercial query update packages. Since most computer facilities have access to such packages, the use of such a package can be assumed for most error correction tasks.

The modules described may be composed on one or more computer programs, the construction of which must be defined during final design.

Data Editing and Verification. Editing and verification processes are responsible for minimizing errors in the data base and for preserving the overall integrity of system outputs. The design of this system requires that the involvement of project personnel in these processes be minimized. This constraint, developed to reduce additional burden on the projects, places an emphasis on the design of these processes not required by most information systems.

Software Editing Responsibiltiies. The bulk of the editing functions of the system software is placed on the data entry modules previously described. When data are entered into the Project/Child File a variety of editing procedures can be performed.

Several methods of data editing are recommended for this system. Elementary editing processes involving known constraints on individual data elements reveal data which cannot possibly be correct. For example,

examining a numeric data element for a numeric value is an elementary data check. If an alphabetic character is encountered the data element is obviously in error. Another data element taking on a specific set of values can be checked for conformity to the possible values or ranges of values. While these elementary checks identify obvious errors, two more extensive methods can be employed to identify less obvious errors or potential errors, respectively. The first of these two methods uses the values of one or more related data elements to determine the validity of the data element in question. For example, line item budget information can be summed and compared to the total provided. If the two values do not agree one or more of the data elements is erroneous. With data elements such as check-off responses on a questionnaire where only one response is valid, the encounter of more than one response reveals an error. The second of these two methods assumes that the data element in question has passed all other available editing checks. This method is used only to edit data elements to reveal potential errors. The utilization of this method is limited to sensitive data elements since a significant amount of additional staff time will be required to confirm the accuracy of the data. The editing process, per se, involves comparing the value of the data element against its expected values. Expectancies can be based upon ranges of values, relationships between other data elements values, or both. To illustrate, child performance results can be tested against historical norms for children of similar age and handicapping condition; results falling above or below the historical values of the top or bottom 5-10 percent of the normal distribution can be identified as deviations from the norm and examined. In addition, quarterly financial status data can be edited in terms of quarterly expenditure projections made on the project application. Differences over, say, 20-30 percent may be identified as deviations.

During the remainder of the report the term "exceptions" will be applied to all errors or potential errors. The term "deviation" will be used only in reference to potential errors of the type last discussed above.

Since the extent to which editing processes are employed will significantly affect the amount of staff-time required, editing benefits should be carefully weighed against anticipated operating costs. The editing guidelines presented in Table 6-1 are proposed as those necessary to identify a reasonable percentage of errors.

Each data entry module will have a data editing component. The use of these components should identify most errors. However, if a large number of errors are present in any given set of data, the editing procedures may not be able to detect all errors. For this reason, and assuming that some errors may actually be caused by the error correction process itself, a separate Edit Module is recommended. The Edit Module could be abstracted from the edit components of the application/mid-year/end-of-year data entry modules. This module would be employed to edit data from the projects which required a significant amount of corrections following data entry. The report produced would parallel the error displays of data entry modules.

Verification Processes. The data verification process begins with the receipt of data collection forms. Forms would be briefly checked for proper identification data and then submitted for keypunching. Keypunching should be followed by key verification to reduce data conversion errors. Most conversion errors not identified by key verification and other errors caused at origination would then be identified by the editing components of the data entry modules. Exceptions displayed in Data Entry Reports would be manually reviewed to determine the cause.

The cause of some exceptions will be readily obvious and, therefore, appropriate error correction steps can immediately be taken. Other exceptions will require referring to the source data collection forms. Comparing the exceptions to data collection forms will identify data conversion errors and trivial data origination errors which may also be immediately corrected. Other data origination exceptions must be verified by projects. Project personnel would then be contacted to confirm or correct exception data. These contacts should then resolve all remaining exceptions.

TABLE 6-1. RECOMMENDED EDITING PROCEDURES FOR DIFFERENT TYPES OF DATA

	Elementary Checks on Individual Data Elements	Checks for Conflicting Values of Data Elements	Deviation Checks
Individual Child Data			
Descriptive Data	X		
Type and Extent of Service	X		
Performance Data	X		X
Placement Data	X		
Impact Group Data			
Descriptive Data	X		
Type and Extent of Services	X		
Resource Utilizations	X	X	
Financial Data			
Application-grant Budget	X	X	
Financial Status Reports	X	X	X

If telephone contact of project personnel is employed, no permanent records of project inputs to this process will be available unless the contacts are well-documented, including the posting of corrections to data collection forms and/or data entry reports. Good bookkeeping procedures would be particularly necessary for documenting changes made to financial data.

Reports Processing. Reports are produced by report generators, data entry modules, the Query Reporting Module, and the Analytic Reporting Module.

Report Generators. Report generators are not used for purposes other than producing fixed-format reports. The report generators are described as follows:

(1) Application Summary Report Generator--This component produces Application Summary Reports following application data entry and correction processes.

(2) Mid-Year/End-of-Year Summary Report Generator--This component is similar to the above. The primary difference is the added requirements imposed for reporting of child data.

(3) Mid-Year/End-of-Year Project Report Generator--This report component produces reports on individual projects. The format of reports produced is similar to above summary reports.

(4) Quarterly Project Report Generator--Quarterly reports are produced for each project. Reports differ from the above reports in that they are less complex and contain less information than other reports.

All report generators are to be COBOL programs for use in the batch processing mode. Because of the similar report formats, these programs can likely share several sub-routines.

Data Entry Modules. As previously mentioned, data entry modules are responsible for reporting exceptions. These modules will perform the data entry reporting by providing a record of all data entered into the data base. COBOL component(s) in each data entry module will be used to produce these reports. As in the case of report generators, these programs will be able to share several sub-routines.

Query Reporting Module. The Query Reporting Module is a multi-purpose program. This module would be used to produce a variety of special purpose reports on an as-needed basis. In general, the formats of these reports are not expected to be complex in nature. Also, repeated generation of any one of these reports is not anticipated. This module would be used most frequently to display specified data elements for one or more projects. The module should have the capability of batch and on-line production of such reports.

In addition to the production of printed reports, it is desired that this module have the capability to extract data elements onto a mass storage file. This capability could then be utilized in the preparation of analysis files for input to statistical software packages.

The requirements of the module can likely be fulfilled by one of several commercial software packages which are available in most computer facilities. Since these packages employ "high-level languages", they are normally readily usable by staff of different technical backgrounds, and, thus, can be utilized for a variety of tasks. Selected BEH staff, for example, could be trained in the use of the module so that reporting could be initiated and performed by this staff independent of system operating staff. Consequently, the use of such a module would eliminate the need to develop several special purpose programs and would allow the use of capabilities that otherwise could not possibly be afforded upon implementation.

Analytic Reporting Module. As stated above, the Query Reporting Module can be used to prepare data files appropriate for input to a variety of statistical software packages. These packages, e.g., SPSS, BMD,

OSIRIS, etc., provide persons with a variety of technical backgrounds with the capability to prepare a wide range of statistical or analytical reports. Because of the versatility and efficiency of these packages, the development of separate software for this module is not recommended. In addition, the flexibility of this approach will allow statistical or analytical reports to be tailored to the reporting needs of BEH.

System Flow. The flow of documents, data files, and reports is illustrated by Figures 6-4 through 6-13. The first five charts describe application processing. Several sequences described in these charts serve as general models for other phases of processing and will be accordingly referenced in the descriptions of quarterly, mid-year, end-of-year, and follow-up processing.

Application Processing. Figure 6-4 depicts the review and approval of applications for funding. The first action taken by the MRS is the coding of data from the HEW 608T portion of each approved application. The resulting Application Coding Form and the Project Description Form are then sent to keypunching (Figure 6-5). Keypunching produces a card or tape raw data file from which the Project File is created. Application Entry Reports for individual project application display the data entered and any exceptions encountered by edit components. Application Entry Reports with exceptions are then entered into verification and error correction processes (see Figure 6-6). Exceptions are investigated manually. Exceptions are checked against the original data from the data collection forms. Exceptions caused during the entry of data are corrected on the associated Application Entry Reports. Exceptions which were not caused by data entry processes must be resolved with project personnel. When an exception is determined to be a valid deviation, the Application Entry Report is appropriately annotated. The annotation will then prevent recontact of the project by other MRS operating staff.

Deviations determined to be errors and other exceptions resolved by project staff are manually corrected on the entry report and

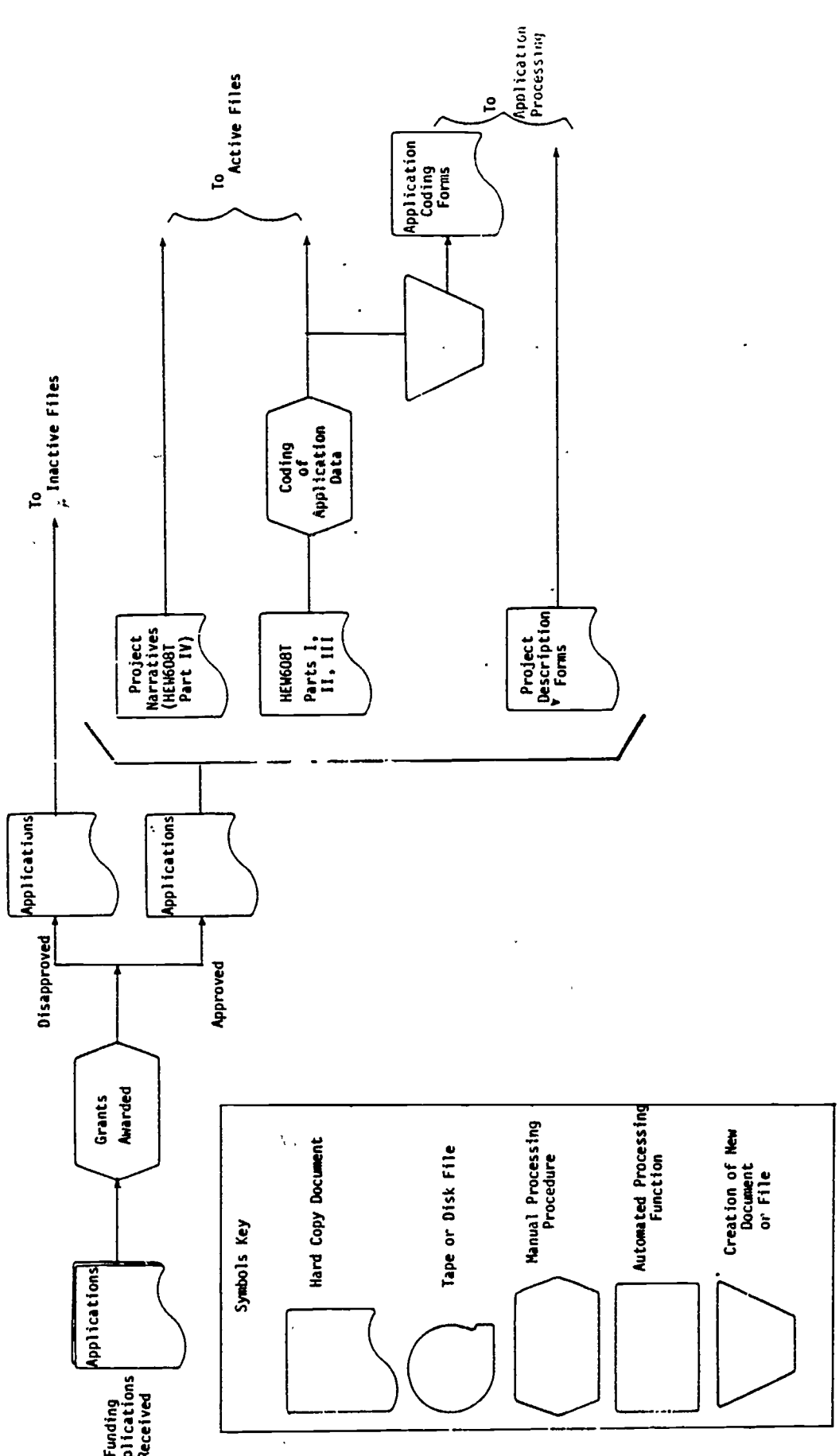

FIGURE 6-4. APPLICATION REVIEW

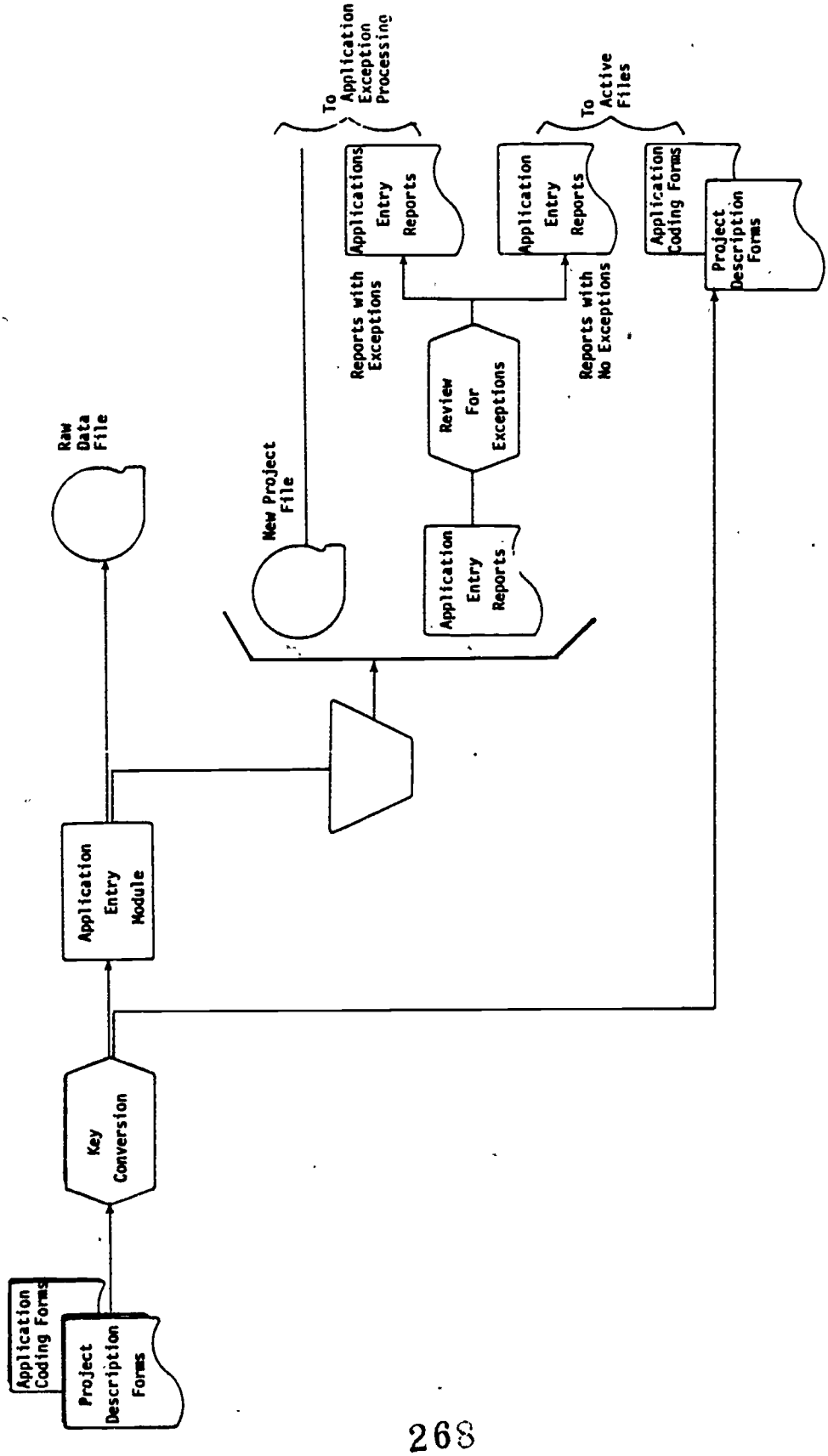

FIGURE 6-5. APPLICATION ENTRY

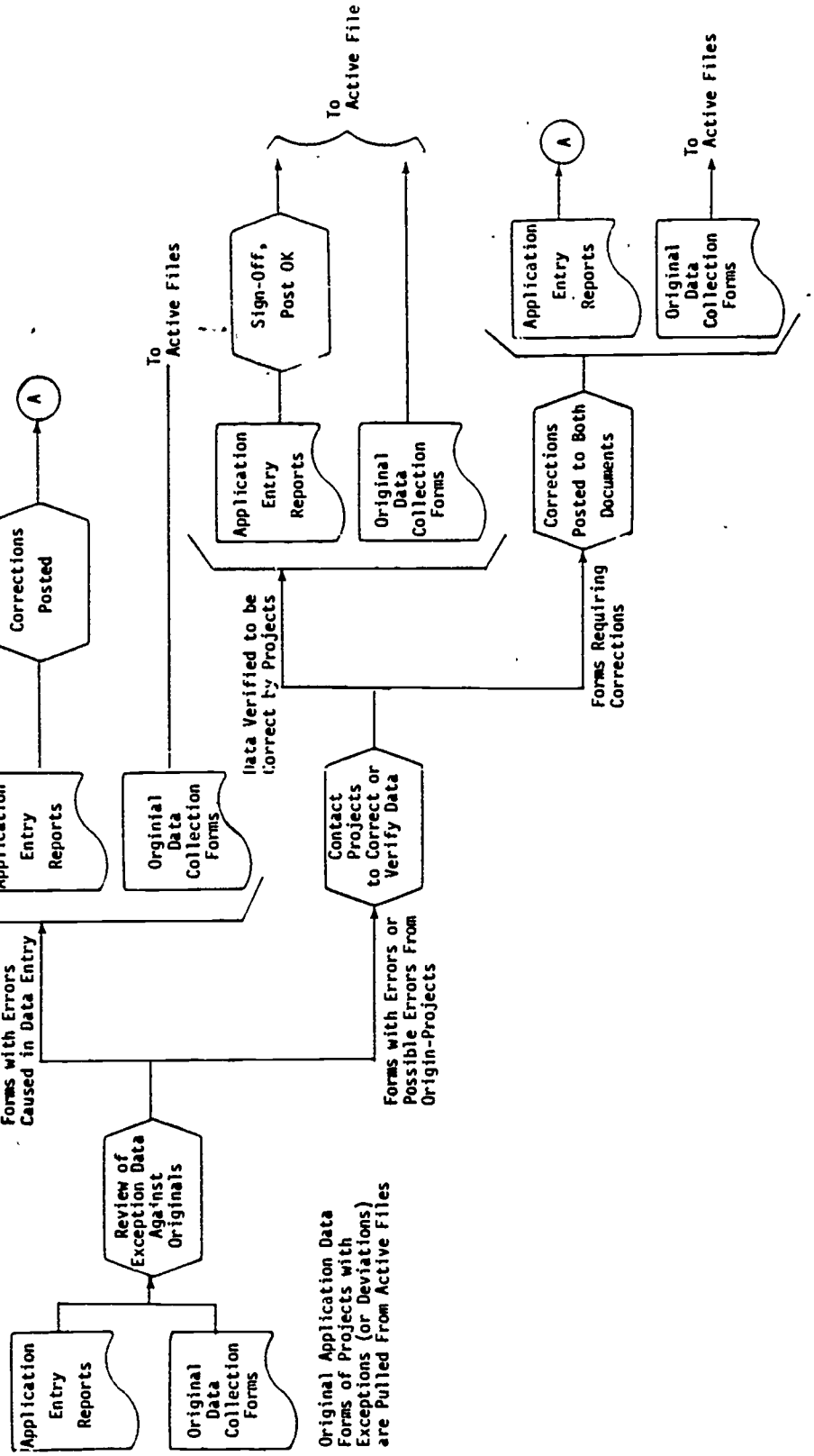

FIGURE 6-6. APPLICATION EXCEPTION PROCESSING PART I

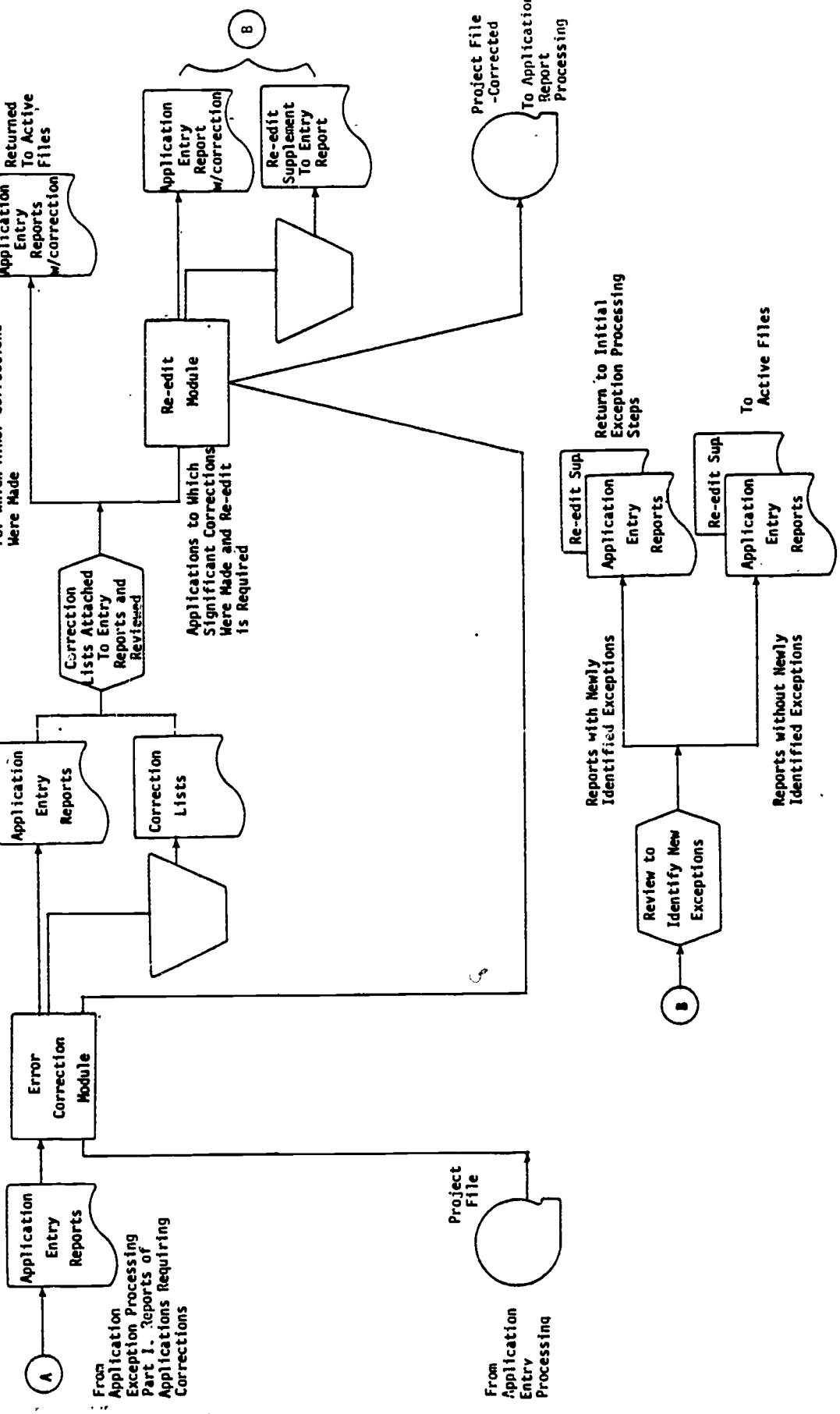

FIGURE 6-7. APPLICATION EXCEPTION PROCESSING PART II

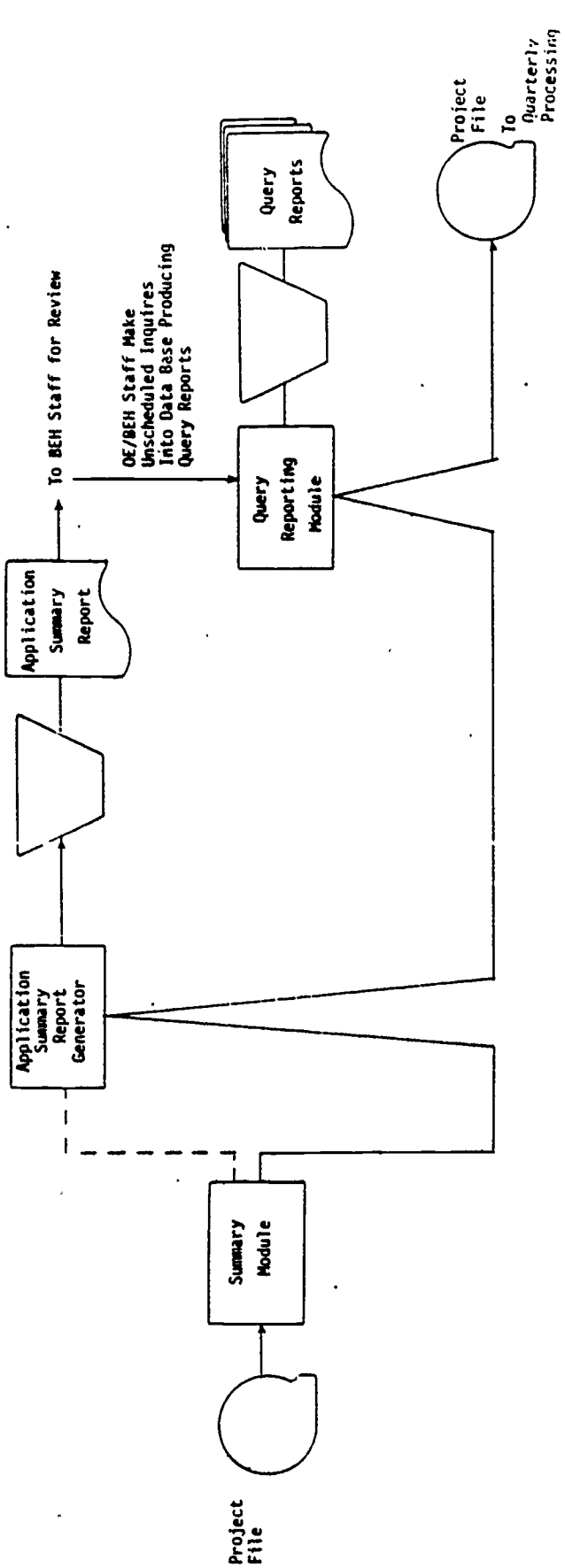

FIGURE 6-8. APPLICATION REPORTING

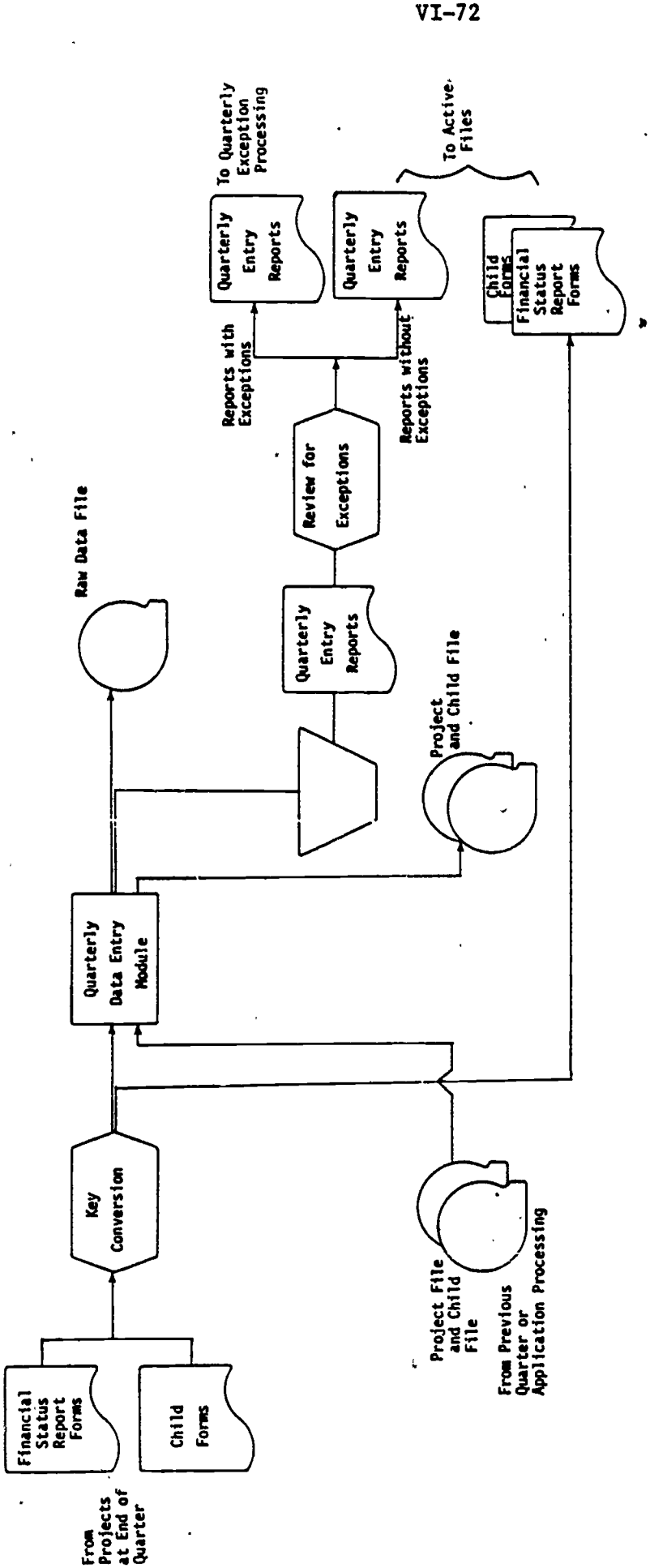

FIGURE 6-9. QUARTERLY ENTRY

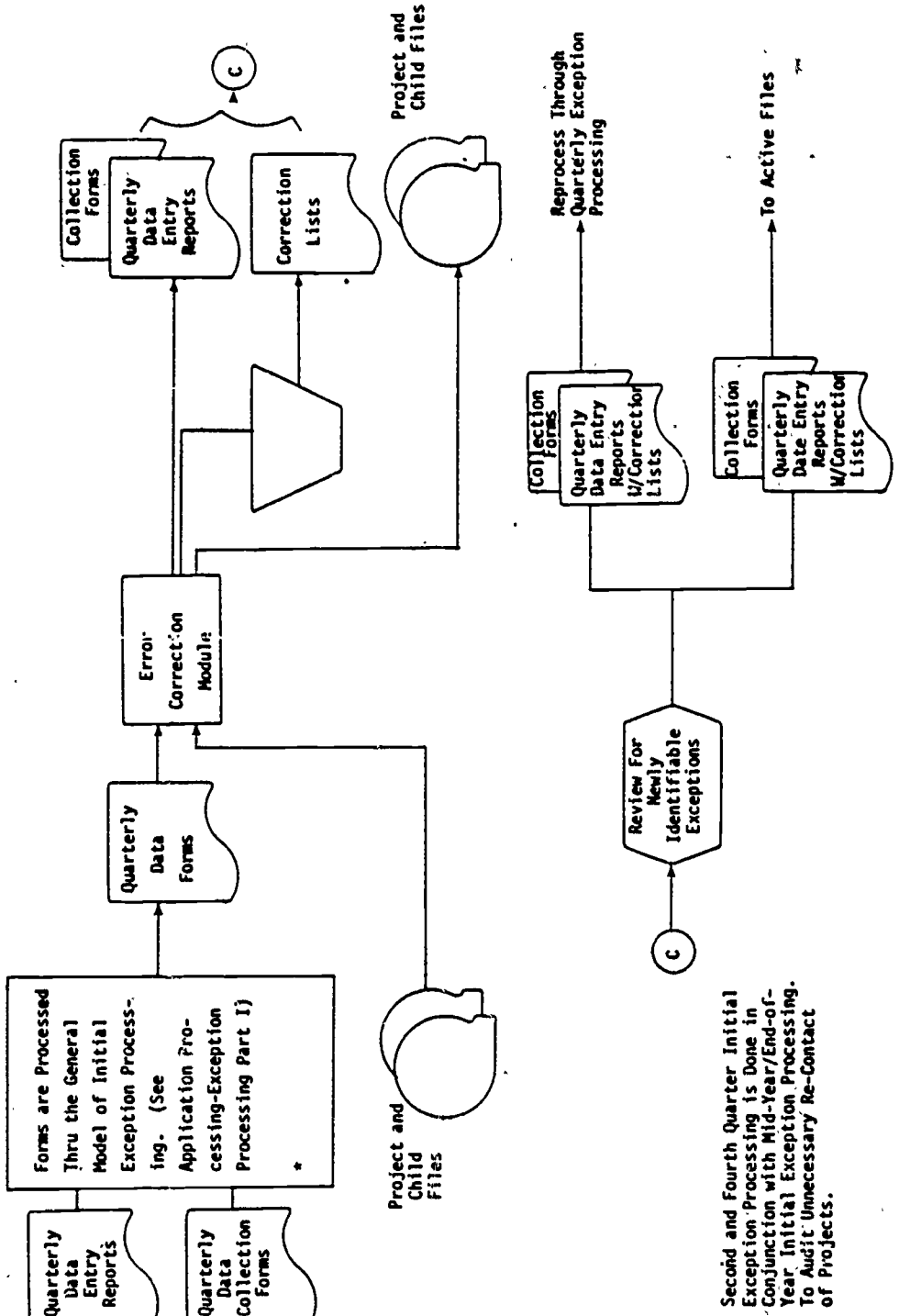

FIGURE 6-10. QUARTERLY EXCEPTION PROCESSING

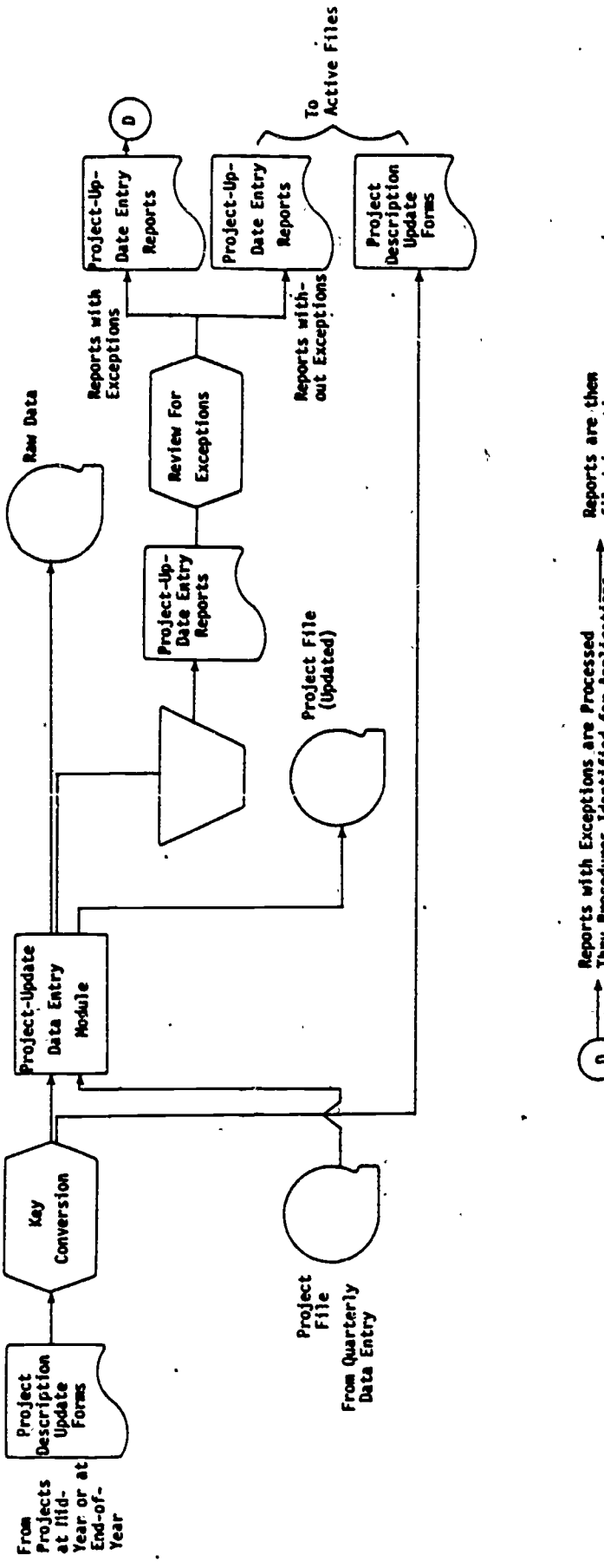

FIGURE 6-11. MID-YEAR/END-OF-YEAR DATA ENTRY

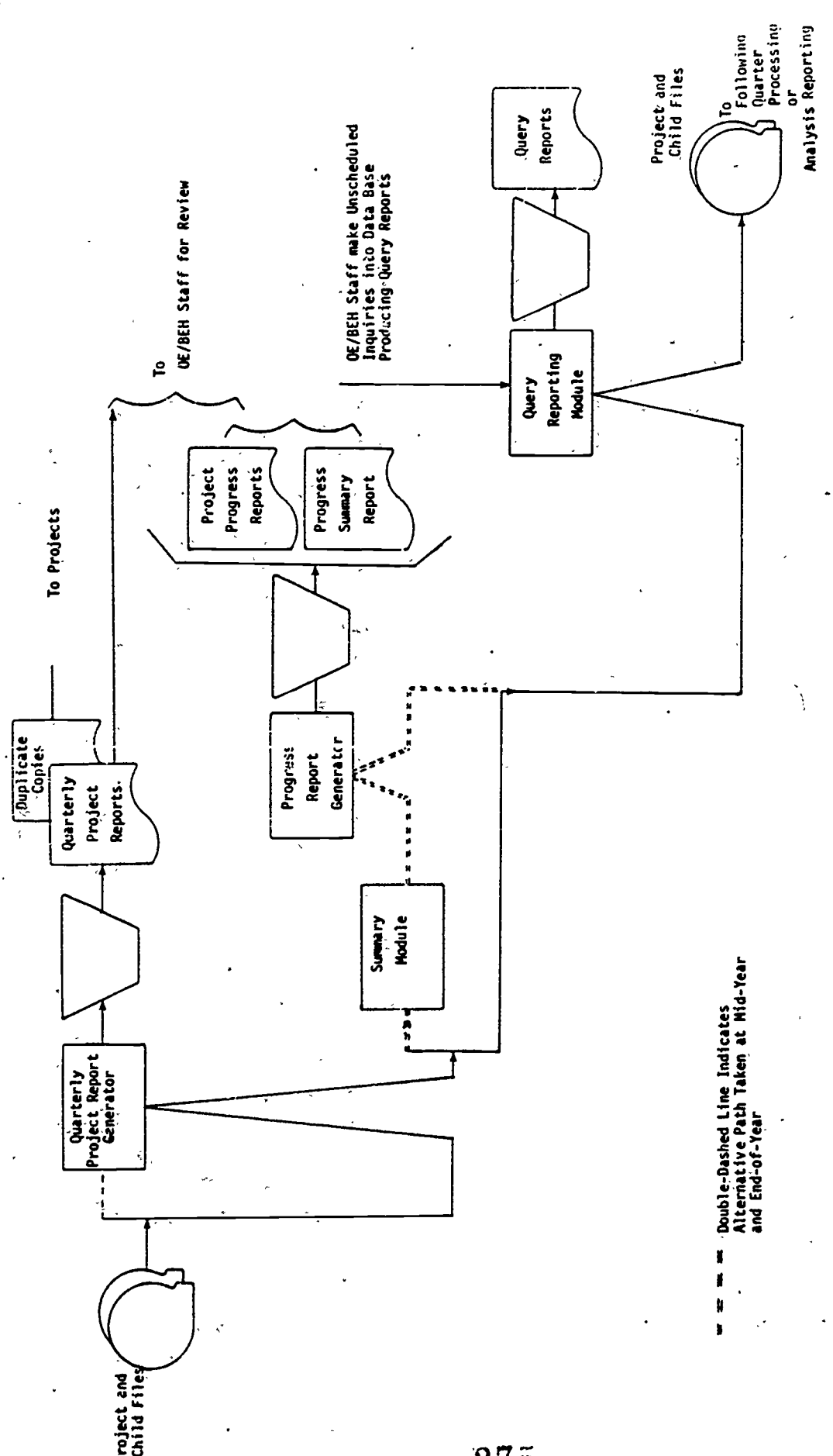

FIGURE 6-12. QUARTERLY, MID-YEAR, AND END-OF-YEAR REPORTING

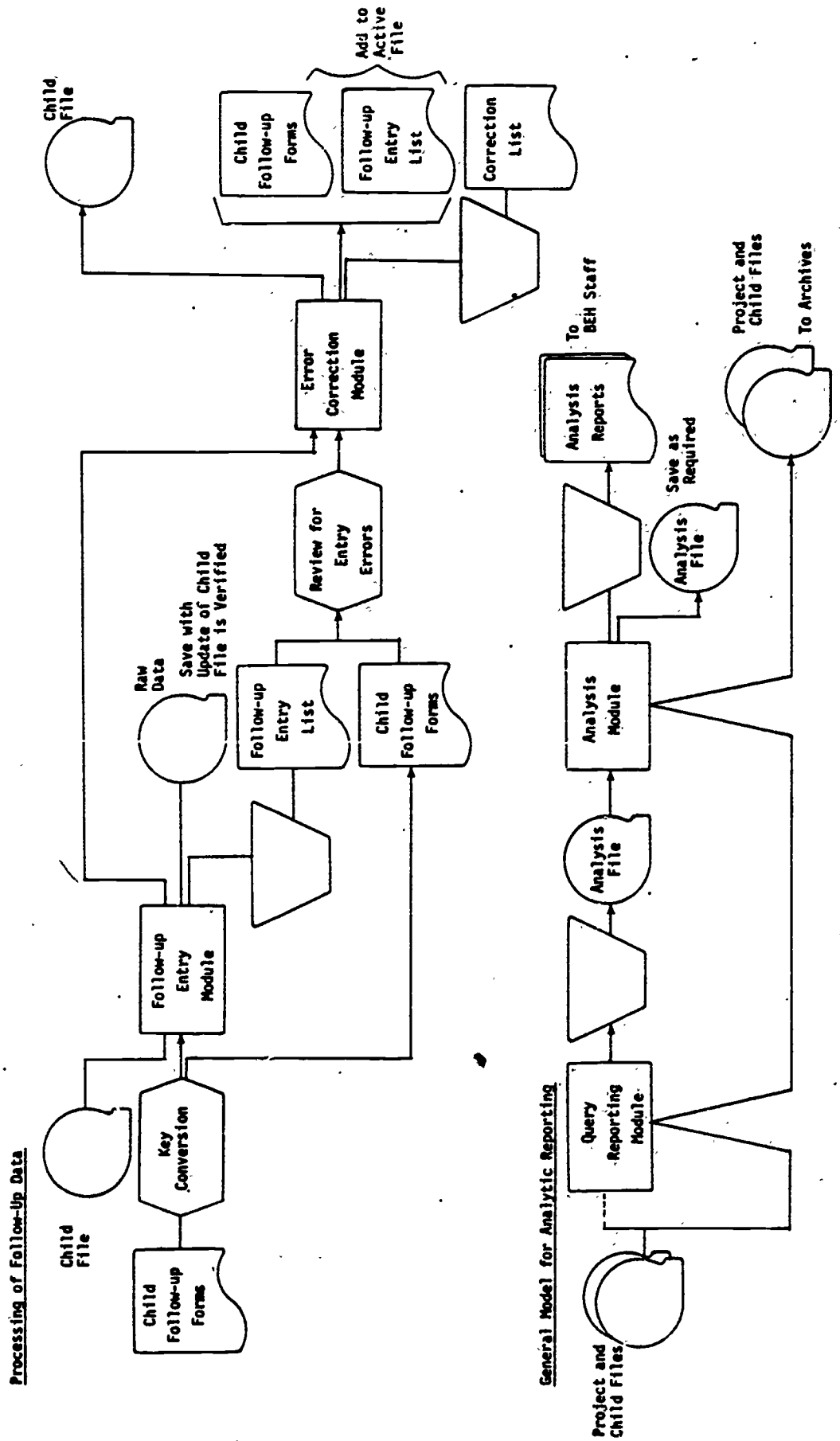

FIGURE 6-13. FOLLOW-UP PROCESSING AND ANALYTIC REPORTING

(at least in the case of financial data and other critical data elements) on the original collection form. Corrections are then made to the Project File. (In all subsequent editing sequences, corrections are made to both the project and child files.)

Corrections are made using the Error Correction Module in batch or on-line processing modes (see Figure 6-7). Error Correction Lists are then attached to associated entry reports. Corrections are reviewed and, in cases where many or important corrections were made, individual applications are re-edited. The re-editing processes may then reveal errors that were previously disguised by the original data errors. The newly identified exceptions would then be passed through similar steps as discussed above.

When all exceptions identified by the editing and verification processes have been resolved reporting processes are initiated (see Figure 6-8). The Project File is first processed by the Summary Module which adds summary statistics to the data base. The Project File can then be used to generate the Application Summary Report. The data base is then available for query access by BEH staff.

Quarterly Processing. Child Intake and Progress/Placement Forms and project Financial Status Report forms must be processed at the end of each quarter of the project year (see Figure 6-9). Entry of these data into the data base (Project and Child File) is documented by Quarterly Entry Reports.

Exceptions noted on Quarterly Entry Reports undergo a similar review previously portrayed in Figure 6-6. Corrections are then made and appropriately documented (see Figure 6-10). Note that re-editing of these data is not presented. Re-editing of these data will likely not be required because of the limited amount of interrelated data found on individual data collection forms. Quarterly reporting will be discussed below.

Mid-Year/End-of-Year Processing. At the end of the second and fourth quarter of the project year, Project Description Update Forms must

also be processed. Data from these forms are entered and exceptions processed in a similar manner to corresponding application data (see Figure 6-11).

Quarterly, mid-year, and end-of-year reporting processes are presented in Figure 6-12. Quarterly Project Reports are produced in the same manner each quarter. At mid-year and end-of-year the Project and Child File is processed by the summary module to include summary statistics in the file for use in production of semi-annual reports. Mid-year or end-of-year Project Progress Reports and Summary Progress Reports are subsequently produced and distributed.

Follow-up Processing and Analytic Reporting. Approximately 9 months following the end of the project year Child Follow-up Forms are obtained and entered into the data base. The follow-up data may then be analyzed in conjunction with other project/child data (see Figure 6-13).

The general model for analytic reporting is presented at the bottom of the chart. This process would be used for follow-up analysis. However, the model may be used for production of other analytic reports at any time during the operating cycle of the system.

Other Considerations. In addition to the above-mentioned system components, other specialty software should be developed. Label generating programs would be needed to assist in mailing and general administrative tasks. Mailing labels could be used in all project correspondence. Pre-printing of data collection form labels for project use would also be of great value, particularly for child forms. Such software would require a small amount of effort and would save tremendous amounts of staff time during operation of the system.

In addition, the development of other specialty software should be planned after one or more years of operation. For example, historical, longitudinal studies might be initiated. The specialty software would be necessary to combine data from multiple-year data bases into a file suitable for use by the Analytic Module.

Operating Requirements

The operating requirements of the MRS are discussed in terms of those resources necessary to operate the system through one complete cycle. Estimations of these requirements are described under the general headings of Forms and Keying Requirements, Operating Staff Requirements, and Other Requirements. Estimates do not include any implementation requirements and, therefore, assume that all system components are fully operational at the beginning of the operating cycle.

Forms and Keying Requirements. Table 6-2 describes the estimated forms production and keypunching requirements of the system. These estimates are based on the expected distribution and receipt of data collection forms.

For each project funded an estimate of 40 children is used as the total number of children enrolled during the entire project year. Eight thousand Child Intake Forms would, thus, be required. Of this enrollment, 85-100 percent are expected to be enrolled during the first half of the year. In addition, an estimated 15 percent of those enrolled during the first half will leave the project prior to the end of the first half. By the end of the year an estimated 75 percent of the children will have been placed outside the project. The remaining 25 percent are assumed to stay in the projects through the beginning of the succeeding year. Follow-up will then be attempted for all children placed outside the project.

The above-mentioned estimates are based on experiences obtained by Battelle staff in other components of this research project. When estimates were obtained in terms of ranges, the range end-point which required the most MRS resources was selected as the estimate presented in Table 6-2. Estimates for form materials and keying requirements are based upon prior experiences with systems of similar needs.

TABLE 6-2. FORMS AND KEYING REQUIREMENTS

	Frequency	Form Material		Keying	
		Sheets Required per Form	Total Sheets	Card Images per Form	Total Card Images
CHILD FORMS					
Child Intake Forms	8,000	1.0	8,000	1.5	12,000
Child Progress/Placement Forms					
- Mid-year progress	6,800	1.5	9,400	2	13,600
- End-of-year progress	2,000	1.5	3,000	2	4,000
- Placement	6,000	1.5	9,000	4	24,000
Child Follow-up	6,000	1.0	6,000	2	12,000
Sub-total (rounded)	29,000		36,000		66,000
PROJECT FORMS					
Application Coding Form	200	1.0	200	5	1,000
Project Description Forms					
- Application version	400/200	2.5	1,000 @ 400	30	6,000 @ 200
- Mid-year update version	200	2.0	400	25	5,000
- End-of-year version	200	2.0	400	25	5,000
Financial Status Forms per Quarter (x4)	800	0.5	400	2	2,000
Sub-total	1,800		2,800		19,000
MISCELLANEOUS TASKS			500		5,000
Total (rounded)			40,000*		90,000**

* Forms Production:
15x20" sheets printed both sides $100-200/1,000 sheets X 40,000 = $8,000 with 4 page layouts per sheet.

** Keypunching with key verification: $60-80/1,000 card images X 90,000 card images = $7,200

Operating Staff Requirements

Estimates of staff required to operate the system include only "hands-on" time. Additional staff-time such as staff orientation, staff training, general supervision, etc., are not included. Table 6-3 describe the staff estimates according to general task requirements.

The personnel required to operate the system are described as follows:

(1) Systems Manager: This person has the overall responsibility for the operation of the system. He/she would be expected to coordinate with BEH staff, to manage the general administration of the MRS, and to participate in the performance of any system task when necessary.

(2) Systems Analyst: This person has task responsibility for the conduct of all automated processes. He/she would be expected to participate in any development plans and/or evaluation of all MRS tasks, to assist the systems manager in the overall supervision of MRS operation, to supervise the maintenance of all system software and documentation, and design and implement processes necessary for production of statistical analyses identified by BEH.

(3) Programmer/Analyst: This person has responsibility of maintaining and operating all system software.

(4) Administrative Secretary: This person would be required to maintain hard-copy document files, to be responsible for and participate in all editing and processes, and to carry out all other office administration tasks.

(5) Technicians: Technicians would be assumed to be knowledgeable in carrying out all MRS tasks and responsibilities and to have extensive background with similar systems. Technicians would be responsible for carrying out data editing and verification processes

TABLE 6-3. OPERATING STAFF TASK REQUIREMENTS

System Tasks	Professional FTE	Secretary/ Technician FTE
Data Editing and Verification		
Systems Manager	0.05	--
Systems Analyst	0.10	--
Programmer/Analyst	0.05	--
Administrative Secretary	--	0.30
Technicians	--	0.40
Sub-Totals	0.20	0.70
General Operation of Automated Systems		
Systems Analyst	0.25	--
Programmer/Analyst	0.25	--
Sub-Totals	0.50	--
General Administrative and Miscellaneous Tasks		
Systems Manager	0.20	--
Administrative Secretary	--	0.40
Technicians	--	0.20
Sub-Totals	0.20	0.60
Summary		
Systems Manager	0.25	--
Systems Analyst	0.35	--
Programmer/Analyst	0.30	--
Administrative Secretary	--	0.70
Technicians	--	0.60
Totals	0.90	1.30

and would be used for general administrative tasks as required.

As previously mentioned, the staff time estimates in Table 6-3 include only hands-on MRS requirements. These estimates are based on prior experiences with systems having similar task requirements.

Other Operating Costs

Other operating costs are described in Table 6-4. These are gross estimates based on prior experiences. In addition to the costs included in Table 6-4, other costs should also be considered.

(1) If the system is operated by a contractor, travel costs may be required.

(2) BEH may also desire a statistician to act as a consultant to design and analyze statistical products of the MRS.

(3) A systems evaluator independent of BEH and the MRS may be desired to periodically or regularly review the overall operation of the MRS.

Implementation Requirements

The process of "bringing-up" the preliminary MRS design presented in this report to be an operational information system is assumed to include the following activities:

(1) BEH and outside consultant review preliminary MRS design and document recommendations and conclusions.

(2) Consultant makes formal presentation of recommendations.

(3) BEH decides whether or not to continue MRS development. (Assume go decision is made.)

(4) Final design (or intermediate design if needed) activities are initiated. Specifications, input forms, report formats, processing procedures, and software are expanded and refined.

TABLE 6-4. OTHER OPERATING COSTS*

Telephone Contacts**	
5 per project @ 3.50 with 200 projects	$ 3,500
Mailing Expenses	
4 Quarterly mailings of reports	
Forms mailing	
Miscellaneous mailings	
Estimate $20.00 per project	$ 4,000
Computer Costs	
Direct process costs	
Other related costs (tape/disk charges, etc.)	
Interactive terminal use	
	$15,000
Miscellaneous Costs	
Copying services	
Telephone in addition to contacts**	
Other (no travel included)	
	$ 3,000

* All costs were estimated assuming operation by an independent contractor.

** These charges are to reflect cost estimates for a private contractor utilizing standard, commercial, telephone communications. A private firm or government agency could reduce such charges if leased telephone lines are available, the use of which can be obtained at bulk rate discounts.

(5) Final design is approved or disapproved by BEH. Decision made by BEH to continue implementation, assuming approval to go ahead.

(6) Implementation activities: Input forms are put into final print format, report formats are finalized, design of individual software components is developed and programmed, all system processes and components are fully documented, and finally all software is tested.

(7) Implementation presentation made to BEH staff and selected BEH staff trained in the use of Query Reporting Module.

Manpower and other costs estimates for implementation are displayed in Table 6-5. Estimates included in the table are for processes identified in items (4), (6), and (7) above. These estimates are for staff time directly involved in research and development activities. Time required for system orientation, supervision, support activities, etc., are not included.

TABLE 6-5. IMPLEMENTATION REQUIREMENTS

Staff Requirements	Person-Months
Final Design	
Forms Development	1.0
Reports Development	1.0
Processing Specifications Development	1.0
Implementation of Final Design	
Complete Forms Layout	0.5
Complete Reports Layout	1.0
Software Component Development	1.5
System Documentation	2.0
Programming	5.0
Software Testing and Revision	1.5
BEH Staff Presentation and Orientation	0.5
Other Costs	
Costs for Production of Final-Print Copy of Forms	$2,000
Computer-Related Costs for Testing Software	$2,500

EXHIBIT 6-1

CHILD INTAKE FORM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Project Monitoring and Reporting System

CHILD INTAKE FORM

Instructions

A Child Intake Form is to be completed for each child enrolled in the project. The form should be completed within two weeks following enrollment of the child in the project and submitted to the Office of Education, Early Childhood Program. The completed form should be submitted only at the end of the quarter during which the child was enrolled according to the following schedule:

Enrolled during quarter ending September 30 - submit no later than October 10
Enrolled during quarter ending December 31 - submit no later than January 31
Enrolled during quarter ending March 31 - submit no later than April 10
Enrolled during quarter ending June 31 - submit no later than July 10

I Project and Child Identification.

Affix Child Identification Label here

(If label is not available, enter the information indicated.)

NOTE: In order to preserve the privacy rights of the child DO NOT ENTER the child's name or any other information that might identify the child on this or any other document.

II Form Completion Data.

1. In the space provided, enter the date on which this form is completed.

   Date: __ / __ / __
   mon / day / year

2. Person Completing Form.

   a. Enter your name.

   b. Your title.

   c. Your position.

   Indicate below your position in the project. (Check one only)

   ☐ Project Director ☐ Secretary

   ☐ Teacher ☐ Other

   ☐ Evaluator

continue next page--

CHILD INTAKE FORM (continued)

III

Child Descriptive Data.

1. Date of enrollment. __ __ / __ __ / __ __
   mon day year

2. Child's birthdate. __ __ / __ __ / __ __
   mon day year

3. Child's sex.
   - ☐ male
   - ☐ female

4. Child's ethnic origins.
   - ☐ Asian American/Oriental
   - ☐ Native American/American Indian
   - ☐ Black
   - ☐ Spanish Surnamed American
   - ☐ All Other
   - ☐ Unknown

5. Child's age in years.
   (round to nearest year) ☐☐ years

6. Area of child's home.
   - ☐ large city (over 100,000)
   - ☐ small city (under 100,000)
   - ☐ suburban
   - ☐ rural

7. Child's handicapping condition.

   a. Primary Handicap

   Of the conditions below, check the condition that most accurately describes the child's handicap (check one only)

   - ☐ not handicapped*
   - ☐ educable mentally retarded
   - ☐ trainable mentally retarded
   - ☐ specific learning disabilities
   - ☐ emotionally disturbed
   - ☐ speech impaired
   - ☐ deaf-blind
   - ☐ deaf/hard of hearing
   - ☐ visually impaired
   - ☐ crippled
   - ☐ other health impaired

   b. Secondary Handicap(s)

   If the child is handicapped and has secondary or additional handicaps from that indicated in (a), check those conditions below.

   - ☐ educable mentally retarded
   - ☐ trainable mentally retarded
   - ☐ specific learning disabilities
   - ☐ emotionally disturbed
   - ☐ speech impaired
   - ☐ deaf-blind
   - ☐ deaf/hard of hearing
   - ☐ visually impaired
   - ☐ crippled
   - ☐ other health impaired

8. Severity of Handicap.

   Indicate below the severity of the child's handicapping condition (primary handicap only)
   - ☐ mild involvement
   - ☐ moderate involvement
   - ☐ severe involvement

* A "not handicapped" category has been provided since projects may enroll children who are not handicapped as developmental "models".

IV

Child Performance Data.

1. Date of CEEDI administration.

Enter the date on which the CEEDI (The Children's Early Education Developmental Inventory) was administered to the child.

testing date: __ __ / __ __ / __ __
mon day year

2. CEEDI sub-test scores.

Enter the CEEDI sub-test domain scores in the spaces provided below.

Personal - Social	☐☐
Adaptive	☐☐
Communication	☐☐
Cognitive	☐☐
Motor	☐☐

V

Program Delivery Model

Indicate below which of the major delivery models best characterizes the program in which this child will be involved. If the program combines more than one of these models, check those only which together typify your program.

☐ Center-based - direct educational and/or therapeutic services are provided to the child in a center usually with other children.

☐ Home-based - services to the child are delivered in the home by project staff or by parent and project staff.

☐ Resource-setting - child receives specialized educational therapeutic services on an as needed basis by project staff and is not enrolled in the project's regular program (as in center-based)

☐ Parent training program* - services are provided to the child only on an indirect basis through the child's parents who have been trained by project staff either in the center or at home. (i.e., project staff work directly with child's parents rather than with the child per se.)

☐ Other (specify)

[ ]

* Do not check this category unless it is the primary mode of providing services to this child. It should not be checked if parent training is only one component of project activities.

VI

Services To Be Provided To The Child.

The following information is intended to provide a description of the type and source of services that you anticipate the child will receive during the project year.

Based on your initial assessment and diagnosis of the child, complete the following:

a. In Column A, indicate those services which are needed by this child.
b. In Column B, indicate those services which will be provided by the project, either directly by the project staff, or, indirectly by outside persons/ agencies with project monies.
c. In Column C, indicate those services which will be provided by other sources, such as the public school system, welfare, etc. Check both B and C if the service will be provided jointly by both the project and external sources.
d. In Column D, specify if no current plans have been made by the project or other sources to meet the service need of the child (check only if the need in Column A was indicated.)

	A Needed By Child	B To Be Provided By Project	C To Be Provided By Outside Source	D No Current Plans For Provision
1. Therapeutic/Educational Services				
Speech therapy	☐	☐	☐	☐
Hearing therapy	☐	☐	☐	☐
Vision therapy	☐	☐	☐	☐
Physical therapy	☐	☐	☐	☐
Occupational therapy	☐	☐	☐	☐
Educational therapy	☐	☐	☐	☐
Social/psychological services	☐	☐	☐	☐
Medical (if therapeutic)	☐	☐	☐	☐
2. Supplemental Services (Non-therapeutic/Educational)				
Food service	☐	☐	☐	☐
Dental	☐	☐	☐	☐
Diagnostic and/or evaluative services	☐	☐	☐	☐
Recreational services	☐	☐	☐	☐
Medical (general health)	☐	☐	☐	☐
Transportation	☐	☐	☐	☐
Referral services	☐	☐	☐	☐

EXHIBIT 6-2

CHILD PROGRESS/PLACEMENT

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Project Monitoring and Reporting System

CHILD PROGRESS/PLACEMENT FORM

Instructions

The Child Progress/Placement Form is used to obtain measures of child progress during the project year and of services provided to the child by the project, as well as child placement information. Much of the information requested on this form parallels that which was obtained for the child on the Child Intake Form at the time of the child's enrollment.

The Child Progress Placement Form should be completed for each child when the child leaves the project or at the end of the project year.* A completed form should be submitted at the end of the quarter during which the child leaves the project according to the following guidelines:

Leaving project during quarter ending September 30 - submit no later than October 10
Leaving project during quarter ending December 31 - submit no later than January 31
Leaving project during quarter ending March 31 - submit no later than April 10
Leaving project during quarter ending June 31 - submit no later than July 10

* For the purpose of reporting child data, end of project year is defined as the conclusion of those services to the child which are provided within the funding period of the BEH grant.

I Project and Child Identification

Affix Child Identification Label here

(If label is not available, enter the information indicated.)

NOTE: In order to preserve the rights of privacy of the child DO NOT ENTER the child's name or any other information that might identify the child on this or any other document

II Form Completion Data.

1. In the space provided, enter the date on which the form is completed.

   Date: __ / __ / __
   mon / day / year

2. Person Completing Form.

   a. Enter your name, [ ]

   b. your title, [ ]

   c. your position.

   Indicate below, the position that most accurately describes your job in the project. Check only one of the boxes.

   ☐ Project Director ☐ Secretary

   ☐ Teacher ☐ Other

   ☐ Evaluator

Continue to next page

III

Child Progress Data.

Using the spaces below, describe the post-test administration of the CEEDI (Children's Early Education Developmental Inventory) to the child. It is not necessary to obtain and report CEEDI results for a child who has been in the project less than 2 months.

1. Date of Administration: __ / __ / __
   mon day year

2. CEEDI Subtest Domain Scores:

Personal - Social	☐☐
Adaptive	☐☐
Communication	☐☐
Cognitive	☐☐
Motor	☐☐

IV

Services Provided the Child.

The following information is intended to provide a description of the type and extent of services that have been provided to the child to date.

Describe direct educational and therapeutic services which have been provided to the child as well as those services which are considered supplemental to direct educational services as follows:

a. In Column A, indicate those services which have been provided by the project either directly by project staff or indirectly with project funds.

b. In Column B, indicate those services which have been provided by other agencies (check both Column A and B if the service was/is provided jointly).

c. (Used for educational and therapeutic services only) Enter in Column C the average number of hours per week that the child received each service provided by the project and/or other sources. In those instances where both Column A and Column B are checked, reflect the combined service.

d. In Column D, indicate those services which are still needed by this child (that is those services that will be needed by the child in a subsequent placement, or, during the next project year.)

	A Provided By Project	B Provided By Other Source	C Average No. Hours Of Service Per Week	D Presently Needed By Child
1. Therapeutic/Educational Services				
Speech therapy	☐	☐	☐☐☐ *	☐
Hearing therapy	☐	☐	☐☐☐	☐
Vision therapy	☐	☐	☐☐☐	☐
Physical therapy	☐	☐	☐☐☐	☐
Occupational therapy	☐	☐	☐☐☐	☐
Educational therapy	☐	☐	☐☐☐	☐
Social/psychological services	☐	☐	☐☐☐	☐
Medical (if therapeutic)	☐	☐	☐☐☐	☐
2. Supplemental Services (Non-therapeutic/Educational)				
Food service	☐	☐		☐
Dental	☐	☐		☐
Diagnostic and/or evaluative services	☐	☐		☐
Recreational services	☐	☐		☐
Medical (general health)	☐	☐		☐
Transportation	☐	☐		☐
Referral services	☐	☐		☐

If the mode of delivery of services to the child was through a parent training program such that services were provided to the child indirectly through his or her parents, provide the following information:

a. the number of training sessions conducted with parent(s) during the project year. ☐☐

b. average number of staff-parent contact hours per month. ☐☐

c. the approximate number of parent-child contact hours spent in educational activities each month. ☐☐☐☐

* Λ indicates a decimal point.

V

Placement Information.

A. Check the appropriate box/boxes below.

- ☐ Child is not leaving (graduating from) the project and will continue in project in the next year.
- ☐ Child is leaving (or graduating from) the project and -
  - ☐ will be placed in a setting recommended by the project.
  - ☐ will be placed in a setting other than that recommended by the project.
  - ☐ the future placement of the child is unknown to the project.

B. If the child is leaving the project specify the reason(s) for his departure:

- ☐ Goals and objectives for the child have been achieved and skill level is such that HCEEP services are no longer needed.
- ☐ Due to the child's age, a more suitable placement is recommended
- ☐ The child's parent's are moving
- ☐ Other, specify _____

C. If the child is not leaving the project, specify the reason(s) for his continuation in the project.

- ☐ Child has failed to achieve stated goals
- ☐ No other appropriate placement is available for the child
- ☐ Other, specify _____

D. If the child is leaving the project, enter below the date on which the child is, or will be, leaving the project.

Date of Exit: __ __ / __ __ / __ __
mon day year

E. If the child is being placed in another setting, provide the following information:

1. Date on which child will enter new placement setting: __ __ / __ __ / __ __
   mon day year

2. Address of new placement setting:

   Title of new placement setting: _____

   Street address: _____

   City: _____

   State: _____ ZIP: _____

3. Program director or principal of new placement setting: _____

4. Below provide the name and title of the most appropriate person to which future contact may be made concerning the child. This person should either be the individual who coordinated with HCEEP project personnel in the placement of the child or the person at the new placement setting who would be most knowledgable of the child's experiences in the HCEEP project.

   Contact person's name: _____

   Contact person's title: _____

5. Specify the name of the child's teacher in the new placement setting, if known.

   _____

6. Describe the type of setting in which the child is being placed by checking the appropriate box (boxes) below.

   ☐ Integrated placement - in regular program with children who are not handicapped.

   ☐ Partial integration - in regular programs with children who are not handicapped but with the provision of the following supplemental services (check all that apply):

   - ☐ Speech and/or language therapy.
   - ☐ Specific learning disability resource assistance.
   - ☐ Behavioral/emotional development assistance.
   - ☐ Physical therapy.
   - ☐ EMR resource assistance.
   - ☐ Unknown to project.
   - ☐ Other, specify: _____

   ☐ Self-contained Special Education program.

   ☐ Institutional placement, specify: _____

7. Indicate the level of entry in the new setting.

   ☐ Pre-kindergarten (pre-school)
   ☐ Kindergarten
   ☐ First primary grade
   ☐ Second primary grade
   ☐ Other, specify: _____

EXHIBIT 6-3

CHILD FOLLOW-UP FORM

EXHIBIT 6-3. CHILD FOLLOW-UP FORM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

In an effort to study the impact of federally funded education programs, the Office of Education is attempting to follow-up children who have participated in these programs.

The child identified on the Tag to the left or the child's parents has participated in a program funded by the Office of Education.

As the child's teacher, you represent a valuable source of information describing the child's current educational setting and level of development.

The Office of Education requests that you complete the information presented on this form. Feel free to contact or consult with others who share in your observation of the child. You are, however, requested to complete the form on your own utilizing others only to assist in you decisions on individual items.

Once you have completed the form -

- detach the Tag to the left.
- discard the Tag.
- seal the form using the mailer incorporated in the form.
- and, mail the form (no postage is necessary).

Note, it is important that the Tag be removed from the form and not included with the form when mailed.

In addition, it is important that you not enter the name of the child (or any other identifying information over and above that requested) on the form.

Thank you for your time and cooperation.

A. Today's date: __ __ / __ __ / __ __
mon day year

B. Teacher completing form:

name: _____

C. If you are not the child's teacher, enter your title on the space below.

title: _____

D. Describe the program in which this child is currently enrolled -

1) Type of program. (check one)

☐ regular program (classroom)

☐ regular program (classroom) with provision of special services, i.e., speech therapy remedial reading

☐ self-contained special education program

☐ other,

specify - _____

2) Level of program. (check one)

☐ pre-kindergarten
☐ kindergarten
☐ grade 1
☐ grade 2
☐ grade 3
☐ other, specify -

_____

E. Provide the following information about the child:

1) Date enrolled in current program:

__ / __ / __
mon day year

2) Child's birthdate:

__ / __ / __
mon day year

3) Area of child's home:

- ☐ rural
- ☐ suburban
- ☐ small city (under 100,000)
- ☐ large city (over 100,000)

F. Based on your knowledge of the child, describe the services needed by and provided to the child. Indicate in Column A those services which you feel are needed by the child. In Column B, check those services currently provided to the child (include all services whether provided through this program or through an outside agency).

	A Services needed	B Services provided
remedial services (reading)	☐	☐
speech therapy	☐	☐
hearing therapy	☐	☐
vision therapy	☐	☐
occupational therapy	☐	☐
social/psychological services	☐	☐
medical services	☐	☐
other services,	☐	☐

specify - _____

G. Rate the child's performance in each of the major areas of development listed below. Using the rating scale illustrated, enter the selected rating in the box provided for each development area.

If more than one teacher works closely with this child, the ratings should reflect the pooled judgements of all of these teachers.

Ratings should be made in terms of normal development. That is, judge the child's development in each area as compared to average expectancies of children the same age as the child being rated.

Rating Scale

Severely delayed	Moderately delayed	Normal (average)	Above average	Superi
1	2	3	4	5

☐ Gross motor skills.

☐ Fine motor skills.

☐ Cognitive/intellectual skills.

☐ Language/communication Skills.

☐ Adaptive skills.

☐ Personal/social skills.

H. Were you aware that this child and/or the child's parent(s) had participated in a program sponsored by the Office of Education?

☐ Yes ☐ No

If you answered yes, complete the following information:

1) In the space below enter the name of the OE program. If you do not know the name of the program, enter the type or nature of the program.

_____

_____

2) Have you ever had any contact with the staff of the program?

☐ Yes ☐ No

Have you ever received any written information from the program concerning the child?

☐ Yes ☐ No

If you answered yes to either of the above, check the type of information you obtained -

☐ Specific information concerning the child's level of performance, special needs, etc.

☐ General information concerning the educational experiences of the child while in the program.

and, indicate how useful this information was to you.

☐ very useful

☐ somewhat useful

☐ not at all useful

POSTAGE PAID

Office of Education

VI-106

395

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
U.S. OFFICE OF EDUCATION
POST OFFICE BOX 1976
WASHINGTON D.C.
00001

Attention: Dept 226

EXHIBIT 6-4

PROJECT DESCRIPTION FORM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Project Monitoring and Reporting System

PROJECT DESCRIPTION FORM

(Supplement to Project Application)

Instructions

All programs applying for new or continuation grants from the Handicapped Children's Early Education Program are required to complete this form.

Programs meeting the above criterion may involve demonstration/service activities and/or training/inservice training activities. This form, designed to complement the project narrative, collects selected descriptions of the nature of these activities.

Data presented on this form should reflect planned program activities for the year for which funding is requested.

Part A
IDENTIFYING INFORMATION

I

Project Identification

A. Project Application Number.

Enter below the application number from item 2 of the application form (HEW608T).

B. Project Name.

Enter below the project name from item 5 of the application form (HEW608T).

*

C. Phase of Operation.

Indicate the phase of operation for which funding is being requested. Check only one.

- ☐ Planning
- ☐ Operational
- ☐ Outreach

D. Year of Operation.

Specify the year of program operation for which funding is being requested (indicate 01 for 1st year, 02 for 2nd year, etc.)

* Spacing per line permits up to 70 characters at 12 characters per inch.

II Project Objective

In the spaces provided, briefly describe the objective(s) of the project for the funding year.

Part B
IMPACT GROUPS

The purpose of the following sections is to obtain a description of the target groups to receive services from your project, the types of services to be provided to these groups, and the relative amounts of project resources allocated to these services. This information will assist the Office of Education in projecting realistic funding requirements to the Congress and the Office of Management and Budget. In addition, the information will provide a basis for determining the impact of programs and for formulating strategies for the allocation of available funds.

The data to be obtained is organized according to the four population groups upon which project activities and services may impact. These impact groups, then, define the four major sections of this application, which are as follows:

I Children
II Parents
III Project Staff
IV Other Groups.

The data within each of these areas, designed to complement information provided in the project narrative, consist of selected quantities that are meaningful to most early childhood programs. The following guidelines should be used in completing the remainder of the form:

1. Complete individual items in terms of events planned for the coming funding year. Items in each section are intended to represent activities which would apply to a wide range of project models in various years of funding (ranging from first year projects in a planning stage to outreach projects). Therefore, it is not expected that each project applicant necessarily respond to all items.
2. Items are to be completed in terms of the overall scope of the project. Do not describe any activities, services, etc., solely on the basis of funds to be obtained from this application. Instead, make projections based on funds expected from across all funding sources.

3. Within each of the impact group sections, estimates of project resources are requested. These estimates are to be made in terms of project dollars and/or staff FTE. FTE, Full Time Equivalent, is a standardized measure of staff resources. This measure is the proportion of a full-time staff member's time to be devoted to a particular task or time available across all tasks. To illustrate the use of FTE:

   a. A therapist is employed on a part-time basis equivalent to one half that of a full-time staff member. This staff member then represents 0.5 FTE. If the same therapist devotes 1/2 of his time to task X, then the amount of time devoted by the therapist to task X is 0.25 FTE.

   b. If the project employes 4 full-time teachers then the teachers represent 4.0 FTE. If however, one of the teachers devotes 1/2 of time to administrative activities and all other time is devoted to teaching activities, then teaching staff should be represented as 3.5 FTE.

I

Children

Information presented in this section concerns those children to be enrolled in the project during the funding year. Projects in the outreach phase should present data in terms of their continuing demonstration activities.

A. Description of the Children.

1. Using the spaces below, describe the children's handicapping conditions and ages. For each handicapping condition, estimate the number of children expected in each age range. When children are expected to have multiple handicaps select the handicapping condition which best describes the primary handicap. Estimate the number of children per age range based upon the age of children upon enrollment in the project.

Handicapping Condition	Number of children of - Ages 0-2	Ages 3-5	Ages 6-8	Ages 9 & over
Not handicapped*				
Educable mentally retarded				
Trainable mentally retarded				
Specific learning disabilities				
Seriously emotionally disturbed				
Speech impaired				
Deaf - Blind				
Deaf				
Hard of hearing				
Visually handicapped				
Other health impaired				
Crippled				

* A "not handicapped" category has been provided since projects may enroll children who are not handicapped as developmental "models."

2. Estimate the number of children anticipated in each of the ethnic origin categories listed below.

Spanish Surnamed American	☐☐☐	Black	☐☐☐
Asian American/Oriental	☐☐☐	All Other	☐☐☐
Native American/American Indian	☐☐☐		

3. Describe the children to be enrolled in terms of the type of area in which they live. Enter the number of children expected from each of the following categories.

Rural	☐☐☐	Small City (under 100,000)	☐☐☐
Suburban	☐☐☐	Large City (over 100,000)	☐☐☐

B. Services to Children.

1. Delivery Model.

Describe the delivery model to be used by the project to provide services to children. For each of the delivery models listed below, indicate the number of children to be served and the average amount of time a child would spend in that model per week.

Delivery Model	Number of Children to be Served	Average No. of Hours Child Spends Per Week
Home-based	☐☐☐	☐☐☐*
Center-based	☐☐☐	☐☐☐
Resource Class	☐☐☐	☐☐☐
Parent training	☐☐☐	N/A
Other	☐☐☐	☐☐☐
specify_____		

* ^ indicates decimal point.

2. Type and Extent of Services.

Describe the services which you plan to provide to children by completing the table below. Listed in the table are types of direct educational and therapeutic services as well as those services which are considered to be supplemental to direct services. For each type of service listed, complete the associated entries in the following manner:

a. In Column A enter the number of children who will receive the service directly from the project. Children should be included in this number only if the service is provided by project staff or if the service is provided by the use of project funds.

b. In Column B enter the number of children who will receive the service from an agency other than the project. Children should be included in this number only if the service is provided with the use of non-project funds.

c. In Column C estimate (for Therapeutic/Educational Services only), the average number of hours that a child will normally receive the service per week. Use children included in Column A and Column B to obtain this estimate.

d. In Column D estimate the FTE (Full Time Equivalent) of project staff necessary to provide the service. Include in this estimate the relative amount of project staff time that will be devoted to providing the service to those children described in Column A. Do not include personnel such as administrators and other personnel who will not be in direct contact with the children.

Therapeutic/ Educational Services	A To Be Provided by Project	B To Be Provided by Other	C Average Number Hours per Child (per week)	D Staff Time (FTE Project)
Speech therapy				*
Hearing therapy				
Vision therapy				
Physical therapy				
Occupational therapy				
Social/psychological services				
Medical (if therapeutic)				
Educational services				
Non-Therapeutic/Educational or Supplemental Services				
Food service				
Dental care				
Diagnostic and/or evaluative services				
Recreational services				
Medical (general health)				
Transportation				
Referral services				

* Λ indicates decimal point.

C. Resources.

Describe the resources that you are budgeting to provide all direct or supplemental services to children described in this section.

Complete the entries associated with each resource category below in the following manner:

a. For each staff category, enter in Column A the FTE (Full Time Equivalent) of project staff to be devoted to the activities described above.

b. For each resource category (both staff and other), enter in Column B the amount of your total project funds allocated to the above activities. In the case of staff, enter wages and salaries. For other, non-staff resources enter the associated dollar amounts.

Note: personnel fringe benefits and indirect costs as defined and included on HEW608T are not and should not be included in the data below.

Resource Category	Column A (FTE)	Column B (project $)
1. Staff		
Administrative staff	^	
Teachers	^	
Para-professionals	^	
Specialists (therapists, nurses, technicans, etc.)	^	
Support Staff	^	
Volunteers	^	
2. Other Resources		
Expendible supplies, materials		
Equipment		
Services and other direct costs (data processing charges, consulting fees, travel, communications, printing)		

* ^ indicates decimal point.

II. Parents

The information presented in this section focuses on the parents of children in your program who will be participating in project activities, and/or, to whom project services will be provided during the funding year. For outreach projects, the parent/families described and the type of services and participation planned should focus on parents of children receiving direct services in your demonstration project only.

A. Description of Parents.

1. Describe the parents/families which you anticipate will be involved or will participate in project activities during this year. Indicate the approximate number in each of the following categories:

   a. Number of families in which both parents are expected to participate ☐☐☐

   b. Number of families in which only mothers are expected to participate ☐☐☐

   c. Number of families in which only fathers are expected to participate ☐☐☐

   d. Total number of families (mother, father or both) which will be participating in project activities ☐☐☐

2. Describe the parents/families to which project services (e.g., counseling training, etc.) are expected to be provided during this year. Indicate the approximate number in each of the following categories:

   a. Number of families in which both parents are expected to participate ☐☐☐

   b. Number of families in which only mothers are expected to participate ☐☐☐

   c. Number of families in which only fathers are expected to participate ☐☐☐

   d. Total number of families (mother, father or both) which will be participating in project activities ☐☐☐

B. Parent Participation and Services to Parents.

1. Parent/Family Participation in Project Activities

Listed below are various ways in which parents may participate in early education projects for their children. Describe the type of participation that is planned for parents in your project. Indicate the number of families (i.e., mother, father, or both) which you anticipate will be involved in project activities related to (a) the educational services provided to children and/or (b) project planning, evaluation and dissemination. If the type of activities planned for parents in your project is not described below, specify the activity or activities (limit two in each a and b) planned and the number of families to be involved in each.

a. Educational Services to Children	Number of Families Involved
Planning child activities	☐☐☐
Writing prescriptions	☐☐☐
Carrying out prescriptions	☐☐☐
Assisting teachers in carrying out center based activities	☐☐☐
Assessment of child progress	☐☐☐
Parental observation of child in center	☐☐☐
Other _____	☐☐☐
Other _____	☐☐☐

b. Project Planning, Evaluation & Dissemination	Number of Families Involved
Participation in formal project planning sessions	
Participation on project advisory board/counsel	
Dissemination of project information and/or materials	
Other_____	
Other_____	

2. Services to Parents.

Listed below are various types of services which could be provided to parents of children in an early education project. Describe the type and extent of training and/or other services that you plan to provide to families of children to be served in your project. For those services which you plan to provide, complete the associated entries in the following manner:

a. In Column A, enter the number of families (i.e., mother, father or both) who will receive the service.

b. In Column B, indicate the average number of sessions, visits, conferences, etc., which will be provided during the funding year.

c. In Column C, estimate the FTE (Full Time Equivalent) project staff necessary to provide the service indicated.

If the type(s) of services planned for parents by your project is not described below, specify the service or services to be provided after "Other" and complete the corresponding entries as specified above.

a. Training/Education Services to Parents	A Number of Families	B Average Number per Family (per year)	C FTE Project Staff
Formal training, (i.e., workshops, seminars, structured training courses, etc.) Specify type(s)_____			*
_____			
b. Other Services to Parents			
Parent counseling sessions			
Home visits			
Parent-teacher conferences/ meetings			
Coordination of special services			
Other_____			
Other_____			

* Λ indicates decimal point.

C. Resources.

Describe the resources allocated by completing the entries associated with each resource category in the following manner:

a. For each staff category, enter in Column A the FTE (Full Time Equivalent) of project staff to be devoted to the above activities.

b. For each resource category (both staff and other), enter in Column B the amount of your total project funds allocated to the above activities. In the case of staff, enter wages and salaries. For other, non-staff resources enter the associated dollar amounts.

Note: personnel fringe benefits and indirect costs as defined and included on HEW608T are not and should not be included in the data below.

Resource Category	Column A (FTE)	Column B (project $)
1. Staff		
Administrative staff	*	
Teachers		
Para-professionals		
Specialists (therapists, nurses, technicans, etc.)		
Support Staff		
Volunteers		
2. Other Resources		
Expendible supplies, materials		
Equipment		
Services and other direct costs (data processing charges, consulting fees, travel, communications, printing)		

* Λ Indicates decimal point

III

Project Staff

Section II centers on the type and number of staff which will be involved in your project during the funding year. Also in this section, services to be provided to project staff with project funds are described.

A. Description of Staff.

In the table below describe the type of staff to be employed in the project and the academic level of each. Enter the number of staff by type and level in terms of Full Time Equivalents (FTE). For example, if two full-time teachers and one half-time teacher all having BA degrees are planned, then 2.5 would be entered in the table in the appropriate cell.

Type of Staff	FTE Staff of: High School	Associate Degree, Technical Degree, or 2 yr. College	BA/BS	Masters	PHD	Other	Total
Administrative							
Clerical							
Teachers							
Para-professionals							
Therapists (e.g., speech, hearing)							
Other Specialists (e.g., audio-visual)							
Support staff							
Other, specify _____							

B. Services to Staff.

Describe the type of formal and/or informal training which is planned for the staff of your project. In Column A, indicate the number of training workshops, practica, or other sessions which will be provided by the project or with project funds. In Column B, enter the number of these activities to be provided by outside sources, e.g., other early childhood projects, TADS, etc. In Column C, specify the total number of staff to be involved in the training and in Column D, the total number of hours that staff (trainees) will be involved in training during the funding year. Finally, indicate in Column E. the FTE project staff, if any, involved in providing the training (trainers). If training that is planned for the project staff is not described in the categories listed below, specify the type of training planned to be provided after "Other" and complete the appropriate entries as described above for the activity(ies) indicated.

a. Formal Training	A Number Provided by Project	B Number Provided by Other Source	C Total Number of Staff Trainees	D Total Number of Staff Hrs. Training	E FTE Project Staff
Workshops					*
Practica					
Other, specify _____					

b. Informal Training/Education	Total Number of Staff Trainees	Total Number of Staff Hrs. Training	FTE Project Staff
Continuing Education			
Attendance at workshops, seminars, etc., outside project			
Other, specify _____			

* Λ Indicates decimal point.

C. Resources.

Describe the resources allocated by completing the entries associated with each resource category in the following manner:

a. For each staff category, enter in Column A the FTE (Full Time Equivalent) of project staff to be devoted to the above activities.

b. For each resource category (both staff and other), enter in Column B the amount of your total project funds allocated to the above activities. In the case of staff, enter wages and salaries. For other, non-staff, resources enter the associated dollar amounts.

Note: personnel fringe benefits and indirect costs as defined and included on HEW608T are not and should not be included in the data below.

Resource Category	Column A (FTE)	Column B (project $)
1. Staff		
Administrative staff	*	
Teachers		
Para-professionals		
Specialists (therapists, nurses, technicans, etc.)		
Support Staff		
Volunteers		
2. Other Resources		
Expendible supplies, materials		
Equipment		
Services and other direct costs (data processing charges, consulting fees, travel, communications, printing)		

* Λ Indicates decimal point.

IV Community

This section depicts planned project activities which will impact upon the outside educational community and/or the public in general. Depending upon the type of project and the year of operation, these activities may focus to varying degrees on: community interaction/coordination, dissemination of project information, stimulation of project replication and/or the provision of services to outside groups.

A. Community Interaction/Coordination.

Describe planned project coordination and interaction with outside community groups, and, project plans for the formation and utilization of the project advisory board.

1. Community Cooperation/Coordination

a. Type of Agencies

Indicate the number and type of outside agencies/groups with which your project will actively cooperate.

Type	Number
Public School Systems	☐☐☐
Community agencies, e.g., welfare, social and health service agencies, etc.	☐☐☐
Other, specify_____	☐☐☐

b. Nature of Coordination/Cooperation

Indicate below the primary nature of your planned coordination/cooperation activities with the outside community (check the appropriate box, or boxes)

☐ To assist children leaving the project to enter other placements

☐ To obtain needed supplemental services for children and/or their parents (e.g., social services, health services, etc.)

☐ To refer children to other agencies/programs and/or to obtain referrals for enrollment in the project

☐ Other cooperative activity(ies), describe _____

_____

2. Advisory Board Activities

Describe the composition and major function(s) of the planned project advisory board below.

a. Composition.

Specify the number of advisory board members which represent the following groups of people

	Number
Parents (of project children)	☐☐
Community agency representatives	☐☐
Early childhood/special education experts/specialists	☐☐
Other professionals	☐☐
Other, specify_____	☐☐

_____

b. Function

Specify your plans for utilization of the project advisory board by checking the alternative(s) which best characterize the group's expected function, or functions.

- ☐ Input in project planning and evaluation
- ☐ Liaison group between project and education community
- ☐ Participation in project dissemination and/or replication stimulation
- ☐ Input in direct educational services provided to project children
- ☐ Assistance in obtaining and providing supplemental services needed by project children
- ☐ Other, describe_____

_____

B. Dissemination

Describe your plans for dissemination of project information during the next funding year. The following categories describe various means by which project information can be disseminated. Respond to those that appropriately describe dissemination activities of your project.

1. Workshops/Conferences

Indicate the number of workshops/conferences that project staff plan to participate in, or to provide, for the purpose of dissemination of project information. Specify numbers in terms of whether the workshops/conferences are conducted on a national, regional, statewide, or local level.

	Number of			
	national	regional	statewide	local
a. Workshops/conferences/symposia in which your HCEEP project staff will participate	☐☐☐	☐☐☐	☐☐☐	☐☐☐
b. Workshops/conferences/symposia to be provided by your HCEEP project staff	☐☐☐	☐☐☐	☐☐☐	☐☐☐

2. General Descriptive Materials

Describe below the types of written and/or audio-visual materials that will be used for dissemination purposes. For each category listed, indicate the number of different items developed for dissemination to date (if any), and the number of different items to be developed during the funding year.

	Number of Different Items Developed To Date	Number of Different Items to be Developed
a. Pamphlets, newsletters, other written materials	☐☐	☐☐
b. TV, radio, newspaper spots	☐☐	☐☐
c. Journal articles	☐☐	☐☐

3. Project Materials Packaged for Dissemination

Describe any packaged educational materials (products) which have been, or will be, developed by your project for dissemination. For each category of materials that applies specify the following:

a. In Column A, specify the number of different items developed to data. If no materials have been developed in previous years place a "0" in the cell.

b. In Column B, specify the number of different items for dissemination that the project expects to develop during the funding year. If no plans are made for such development, indicate this by placing a "0" in the cell.

c. In Column C, indicate the number of items disseminated to date. This category would not apply to projects who have indicated a "0" in Column A.

d. In Column D, specify the number of products that the project plans to disseminate during the funding year (estimate)

e. In Column E, indicate the number of states in which the project materials have been, or will be disseminated. If the project has previously disseminated materials, base this figure on previous and projected dissemination.

Materials	A # Different Items Developed to Date	B # Different Items to be Developed	C # of Items Disseminated to Date	D # of Items to be Disseminated	E # of States Receiving Materials
Guides, e.g., curriculum guides, administrative, etc.					
Diagnostic or screening instruments/procedure					
Assessment procedures					
Curricular materials					
Other, specify _____					

4. Project Visitation

Indicate the number of visits made to your project during the previous funding year, and/or the number of expected visitors (estimate) during the coming funding year.

	No. in Previous Year	No. Expected During this Funding Year
No. in-state visitors		
No. out-of-state visitors		

5. FTE Staff

Specify the FTE staff which will be devoted to the dissemination activities described in 1, 2, 3, and 4 above during this funding year.

	FTE Project Staff
Workshops/Conferences	☐☐☐☐ *
General Description Materials	☐☐☐☐
Project Materials Packaged for Dissemination	☐☐☐☐
Project Visitation	☐☐☐☐

C. Replication

Indicate the number of projects that have, or will (during the funding year), replicate parts or all of your program model.

	Number of Projects:			
	Replicated to Date		To be Replicated	
	In-State	Out-of-State	In-State	Out-of-State
Complete Replication, i.e., total model is adopted	☐☐☐	☐☐☐	☐☐☐	☐☐☐
Partial Replication, i.e., one or more component is adopted	☐☐☐	☐☐☐	☐☐☐	☐☐☐

D. Services to Other Groups.

In the section below, describe the services that you plan to provide to persons, groups, or programs outside the project during the funding year.

1. Types of Services

Indicate any formal training activities, technical assistance and/or consulting services which you plan to provide to persons outside of the project. For each category of activity or service that you plan to provide, specify the following: A) the total number of activities planned (i.e., number of training sessions, etc.); B) the number of different groups or programs to which services will be provided; C) the number of services/activities that are planned to be conducted at the project site (HCEEP project) of the total number to be provided; and, D) and FTE staff of your project which will be required to provide these services.

Type	A Total No. to be Conducted	B No. of Groups to be Served	C No. to be Conducted On Site	D FTE Project Staff
Formal training sessions, i.e., formal inservice and preservice workshops, seminars, etc.	☐☐☐	☐☐☐	☐☐☐	☐☐☐☐
Technical assistance	☐☐☐	☐☐☐	☐☐☐	☐☐☐☐
Consulting services	☐☐☐	☐☐☐	☐☐☐	☐☐☐☐
Other, specify_____	☐☐☐	☐☐☐	☐☐☐	☐☐☐☐

_____

* ∧ Indicates decimal point.

2. Target Group Served

Describe the types of programs/groups to which project services described above will be provided. For each type of service and target group listed, specify both the number of programs/groups and the total number of persons (e.g., staff) who are expected to receive the services.

	Type of Service					
	Formal Training		Technical Assistance		Consulting	
Target Groups/Programs	# Programs	# Persons	# Programs	# Persons	# Programs	#Persons
Replications						
Other BEH programs						
Other pre-school programs for the handicapped						
Other pre-school programs for the non-handicapped						
Public School programs						
University/college students						

3. Geographic Areas Served

Specify the scope of your planned services to outside groups/programs. Indicate for each type of service planned, the number of different programs or groups to be served which are local, in-state, out-of-state (regional), or out-of-state (national).

	Type of Service		
Area	Formal training	Technical Assistance	Consulting
	# Programs	# Programs	# Programs
Local			
In-state (not local)			
Out-of-state (regional)			
Out-of-state			

C. Resources.

Describe the resources that you are budgeting to provide all services to the community described in this section.

Complete the entries associated with each resource category below in the following manner:

a. For each staff category, enter in Column A the FTE (Full Time Equivalent) of project staff to be devoted to the activities described above.

b. For each resource category (both staff and other), enter in Column B the amount of your total project funds allocated to the above activities. In the case of staff, enter wages and salaries. For other, non-staff resources enter the associated dollar amounts.

Note: personnel fringe benefits and indirect costs as defined and included on HEW608T are not and should not be included in the data below.

Resource Category	Column A (FTE)	Column B (project $)
1. Staff		
Administrative staff	*	
Teachers		
Para-professionals		
Specialists (therapists, nurses, technicans, etc.)		
Support Staff		
Volunteers		
2. Other Resources		
Expendible supplies, materials		
Equipment		
Services and other direct costs (data processing charges, consulting fees, travel, communications, printing)		

* Λ Indicates decimal point.

EXHIBIT 6-5

APPLICATION CODING FORM

APPLICATION CODING FORM*

Date Coded: __/__/__
Coded By: _____
Returned from Keying: __/__/__
Data Entry Job-ID: _____

Application Number

Applicant

Name

Dept./Div.

Street Address

City

County

State

Zip Code

Project

Descriptive Name

Grant

Federal Catalog

Funds Requested

Grantee Type: State ☐ County ☐ City ☐ Other ☐ Other-Specify

Application Type: New Grant ☐ Continuation ☐ Supplement ☐ Other Changes ☐ Other-Specify

Type of Assistance: Grant ☐ Loan ☐ Other ☐ Other-Specify

Congressional District

	State Abbreviation	District Number
a. Applicant Location		
b. Work Location	"City-Wide" ☐	"State-Wide" ☐

"Other Congressional Districts"

	State Abbreviation	District Number
1.		
2.		
3.		

Length of Project: ☐☐ Months

Beginning Date: ☐☐ Mon ☐☐ Day ☐☐ Year

Date of Application: ☐☐ Mon ☐☐ Day ☐☐ Year

* In that the Application Coding Form is used for coding data reported on Form HEW608T of the project application, the coding form would be completed following the instructions detailed on 608T (see page VI-162).

APPLICATION CODING FORM - CONTINUED

Budget Summary
(Section A)

Federal Category
13.444 Funds

Column C (Continuation Grants)
Unobligated Federal Funds at
End of Current Funding Project

Column E
Funds Requested for New Period

Budget Categories
(Section B)

	Federal Category 13.444 Funds
Personnel	
Fringe Benefits	
Travel	
Equipment	
Supplies	
Construction	
Other	
Total Direct Costs	
Indirect Costs	
Grand Total Costs	
Program Income	

Forecasted Cash Needs
(Section D)

	Total First Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Federal Funds					

Budget Estimates
(Section E)

	First Year	Second Year	Third Year	Fourth Year
13.444 Funds				
Total Federal Funds				

Non-Federal Funds
(Section F, Line 23)

Proposed Non-Federal Funds

EXHIBIT 6-6

MID-YEAR PROGRESS SUMMARY REPORTS

EXHIBIT 6-6

Mid-Year Progress Summary Report

Purpose

Summarize the progress of projects during the period from July 1 to January 1.

Scope

The report is produced as a summary of all projects.

Content

The content of the report summarizes the activities and other indicators of progress of projects identified in each phase of operation (planning, operational, and outreach). The report is produced in three independent parts with each part describing projects in a particular phase of operation. The information presented is obtained from the following sources:

- Project Description Forms which describe planned activities of the projects at the time of application.
- Project Description Update Forms which update at mid-year the information obtained upon application.
- Child Intake Forms which provide child descriptive and perform ance data for all children enrolled.
- Child Progress/Placement Forms which provide mid-year or existing performance data and placement information for children who exit from the project prior to mid-year.
- Financial Status Reports, filed at the end of the first and second quarter of project operation (October 1 and January 1), describe the gross financial status of projects.

Each part is divided into two sections. The first section lists a brief amount of information concerning each project. The second section is reproduced for each phase of operation and describes in aggregate terms the activities of projects during the first half of the project year.

Report Outline

Section I

List of Projects

A brief description of each project is provided. Information displayed for each project may include the following items:

- project identification code
- project name
- city and state
- amount of BEH grant
- total operating funds (federal plus non-federal)
- total unobligated funds as of January 1
- share of BEH funds unobligated as of January 1.

Section II

Summary by Phase of Operation

Information presented in this section is to be provided for each phase of project operation, i.e., planning projects, operational projects, and outreach projects separately.

A. Budget Summary

(1) Financial Status

The following information may be used to provide a summary of the gross financial situation of projects. The items described provide a brief picture of expenditures made during the first half of the project year and funds remaining for second half operation.

(a) funds available for year:

(1) total funds (federal plus non-federal)
(2) total federal funds
(3) BEH funds

(b) unobligated funds as of January 1

(1) total unobligated funds
(2) federal share of unobligated funds
(3) BEH share of unobligated funds

(c) percent unobligated funds

(1) of total funds
(2) of federal funds
(3) of BEH funds

To complement the above information, the following may be produced for each item identified above:

- the average amount across project
- the minimum amount encountered for a single project
- the maximum amount encountered for a single project.

(2) Resource Usage

Included in Projection Description and Description Update Forms are budgets for each impact group (children, parents, staff, and other groups). This information describes direct costs (excluding fringe benefits for staff) spent in providing service to the individual impact groups. This information may then be used to describe the purpose for which resources were used.

The following items may be displayed for each impact group and across impact groups:

(a) FTE and funds allocated for staff (from Project Description Form)

(b) FTE and funds expended for staff (from Project Description Update Form)

(c) funds allocated for other resources

(d) funds expended for other resources

(e) total funds allocated

(f) total funds expended.

To complement this information, the following may be produced for each of the items identified above:

- the average amount across projects
- the minimum amount encountered for a single project
- the maximum amount encountered for a single project

(3) Budget Distribution

Information presented below draws upon the following data:

(1) the BEH grant budgets described on HEW608T and recorded on Application Coding Forms

(2) the total impact group budget allocations made on Project Description Forms

(3) the total impact group expenditures made during the first half which are described on Project Description Update Forms and gross expenditure data described on Financial Status Forms.

Although these three data sources are used for different purposes, they may be collectively used to describe the relative use of BEH funds by projects. The following items aggregated across projects may be used for this purpose. Each item is broken down by the three data sources, i.e., (1), (2), and (3).

(a) staff dollars

(1) amount allocated to personnel from BEH grant and percent of allocation from BEH grant

(2) total amount allocated from across impact group budgets and percent of impact group budget allocation for staff

(3) total amount expended for staff across impact groups and percent of total impact group expenditures for staff

(b) other direct costs

(1) amount allocated from BEH grant to travel, equipment, supplies and construction on HEW608T and percent allocated of BEH grant

(2) total amount allocated to "other resources" across impact group budgets and

(3) total amount expended for "other resources" across impact group budgets and percent expended of total impact group expenditures

(c) fringe benefits

(1) amount allocated to fringe benefits from BEH grant and percent allocated for BEH grant; also, fringe benefit/staff ratio (divide amount allocated to fringe benefits by amount allocated to staff on BEH grant)

(2) estimated amount allocated to fringe benefits across impact groups (multiply amount allocated to staff in (a.2) by fringe benefit/staff ratio) and estimated percent allocated to fringe benefits (divide estimated amount by total federal and non-federal funds from Application Coding Forms)

(3) estimated amount of fringe benefits expended (multiply amount expended for staff in (a.3) by fringe benefit/staff ratio) and estimated percent expended for fringe benefits (divide estimated amount expended by total federal and non-federal funds expended from Financial Status Reports)

(d) total direct costs - aggregate (a), (b), and (c)

(e) indirect costs

(1) amount allocated from BEH grant

(2) estimated amount allocated across impact groups (ratio of BEH grant direct costs to indirect costs multiplied by total impact group direct costs)

(3) amount expended (from Financial Status Reports, line 11)

(f) total costs - aggregate (d) and (e)

(g) project income

(1) and (2) anticipated in BEH

(3) credited during first half (from Financial Status Reports)

(h) net budget - total costs minus project income

(i) actual net budget

(1) BEH budget estimates from Application Coding Form

(2) total federal and non-federal funds estimated from Application Coding Form

(3) total outlays minus income credits during first half

(j) estimate errors and unexplained deviations: subtract corresponding (h) items from (i) items.

In addition, to providing the above information in aggregate form across project, it may also be desirable to provide the information below for each item identified above:

- the average amounts by projects
- the average percents by projects
- the minimum amounts encountered in projects
- the minimum percents encountered in projects
- the maximum amounts encountered in projects
- the maximum percents encountered in projects.

B. Children Served

(1) Profile - children served

The following types of information are used to describe children in the projects during the period July 1 to January 1.

(a) Treatment period - describes the amount of time children spend in projects. Utilizing child entry dates from Child Intake Forms and exit dates from Child Progress/Placement Forms, identify the children in the projects by monthly increments of time in a project, i.e., in project one or less months, one to two months, two to three months, etc.

(b) Race - describes the children in projects according to the race category obtained from the Child Intake Forms.

(c) Area of Home - describes the children in projects according to the area of home category obtained from the Child Intake Forms.

(d) Age by Handicapping Condition - describes the children in projects according to age range and primary handicapping condition. Age and primary handicap are obtained from Child Intake Forms.

For each of the categories identified above display the total number of children and the percent of the grand total. Also, display the average, minimum, and maximum number of children per project and the average, minimum, and maximum percents of project totals.

(2) Child Performance

This portion of the report describes child performance on the CEEDI (The Children's Early Education Developmental Inventory). Children are used in producing the information displayed only if CEEDI domain scores are provided on both child intake and progress/placement forms. In addition children are included only if the test administration dates on the intake and progress/placement forms are at least two months apart.

The information displayed consists of CEEDI domain data describing children of each age range and primary handicapping condition combination. In addition, CEEDI domain data is summarized across each age range and primary handicap, and the total sample. For each population identified the following results are displayed per CEEDI domain:

(a) grand N - number of children in population

(b) grand intake mean - the mean domain scores on intake of children in population

(c) grand intake variance

(d) grand progress mean - the mean domain score on progress/placement of children in population

(e) grand progress variance

(f) grand mean difference - the difference of (d) and (b)

(g) average, minimum, and maximum project N - the number of children in individual projects*

(h) average, minimum, and maximum project intake mean - the mean of intake scores in individual projects*

(i) average, minimum, and maximum project progress mean - the mean of progress/placement scores in individual projects*

(j) average, minimum, and maximum project mean difference - the mean differences from intake to progress in individual projects*

(3) Child Services

This portion of the report describes the services needed by and provided to children. The following information is displayed for each type of service identified on child intake and progress/placement forms and project description update forms:

(a) number of children who were reported to have needed services on child intake forms

(b) number of children who were reported to need service on progress/placement forms

(c) number of children who received the service from projects

(d) number of children who received the service from other sources

(e) average (of the average) amount of time a child received the services

(f) the FTE project staff engaged in providing the service

(4) Child Placement

The following information is designed to describe the placement of children into settings outside the project:

(a) the total number of children placed

(b) the percent of children placed of the grand total number enrolled

(c) the number of children placed in a setting recommended by projects

---

* In items (g) through (j) exclude projects with no children in population served.

(d) the number of children placed in a setting other than that recommended by projects

(e) the number of children for which future placement information is unknown to projects.

Using children identified in (c) and (d) the following information is displayed:

(f) the number of children placed in each type of setting

(g) the number of children placed in each setting level

C. Parent Involvement

The information presented in this portion of the report is designed to provide an overview of the participation of parents in project activities and the services provided to parents by projects.

(1) Parent Participation

The following information, obtained from Project Description Update Forms, is displayed:

(a) the number of families participating in all projects

(b) the percent of all children in all projects whose families are participating

(c) the average, minimum and maximum of each project's percent of families participating

(d) repeat (a), (b), and (c) for parents participating in each of the activities identified as Educational Project Services to children and as project, planning, evaluation and dissemination in the Project Description Update Forms.

(2) Services to Parents

For each type of service identified on the Project Description Update Form display the following information:

(a) number of families served

(b) the percent families served for all children in all projects

(c) the average frequency of service per family

(d) the FTE project staff providing service

D. Project Staff

Staff composition and training/educational services to staff are described using information from Project Description Update Forms.

(1) Staff Breakdown

The following information describes project staff by type of position and level of education:

(a) for each type of position and level of education display the total FTE project staff across projects and the percent that this total represents of the overall total FTE staff

(b) summarize items in (a) for each type of position. and level of education

(2) Staff Training/Education

For each type of training/education provided to project staff display the following items:

(a) number of staff receiving training

(b) number of person-weeks spent in training

(c) number of projects providing training

(d) FTE project staff spent in providing training.

E. Other Group Involvement

(1) Community Involvement

For each type of agency with which projects actively cooperate display the following:

(a) the number of agencies

(b) the number of projects who indicate cooperation

For each type of cooperation display the number of projects indicating such cooperation.

(2) Advisory Board

(a) for each group identified as part of the advisory board, display the total number and relative percent of the overall number of projects

(b) for each type of advisory board function display the number of responding projects and the relative percent of the overall number of projects.

(3) Dissemination

(a) Display the number of national, regional, state-wide, and local workshops/conferences/symposia in which projects will participate and the percent of projects participating in one or more

(b) Display items in (a) for workshops/conferences/symposia provided by the projects themselves

(c) Display the FTE project staff across projects devoted to each type of dissemination activity

(4) Services to Other Groups

For each type of Target Group display the following:

(a) number of programs and persons served with formal training programs

(b) number of programs and persons served with technical assistance

(c) number of programs and persons served by consulting

For each geographic area served and type of services combination display the following:

(a) number of projects serving one or more programs

(b) number of programs served.

EXHIBIT 6-7

QUARTERLY PROJECT REPORT

EXHIBIT 6-7

Quarterly Project Report

Purpose

Provide brief description of project financial and child data obtained from project during quarter.

Scope

The report is produced for each project to be disseminated to the project and to BEH staff following receipt of quarterly materials submitted by projects. Production and dissemination is anticipated approximately one month following the end of the project quarter.

Content

The content of the report focuses upon administrative interactions between projects and the Monitoring and Reporting System. The body of the report is divided into two parts. The first part provides a description of the financial status of the project based on the financial data submitted for the quarter. This information supplies projects with a summary of data on funding remaining for use in providing services. It also provides BEH staff with a brief amount of information for use in detecting budget problems. The information presented is obtained from the following sources:

- Project Description Forms which describe planned activities of the projects at the time of application.
- Project Description Update Forms which update at mid-year the information obtained upon application.
- Child Intake Forms which provide child descriptive and performance data for all children enrolled.
- Child Progress/Placement Forms which provide mid-year or existing performance data and placement information for children who exit from the project prior to mid-year.
- Financial Status Reports, available from all preceding quarters.

The second portion of the report provides a summary of the child data available. This data provides the project with a summary of the child data submitted during the quarter, the composite child data on hand and gross discrepancies in child data submitted. This information will also enable BEH staff to identify potential project reporting problems and discrepancies with project operational plans.

Report Outline

Section I

Identifying Information

This portion of the report briefly identifies the project and may also supply the mailing address of the project for use in dissemination. The following information obtained from Application Coding Forms may be displayed.

- project identification code
- project descriptive name
- project mailing address
- amount of BEH grant
- objective of project
- phase of project operation
- year of project operation.

Section II

Budget Summary

This information draws upon data obtained from Financial Status Reports and Project Description Update Forms.

A. Financial Status

This portion of the input provides a summary of the current gross financial standing of the project. The information is based on Financial Status Reports available from all quarters up to and including the quarter being reported. The following items may be included:

(a) funding available

(1) total funds
(2) federal funds
(3) BEH funds

(b) outlays by quarter

(1) total funds
(2) federal share
(3) BEH share

(c) project income per quarter*

(1) total income of income
(2) federal share of income
(3) BEH share of income

* Project income includes any funds received by the project as a result of project services or products sold to other programs, the educational community or the general public.

(d) unobligated funds per quarter (a-b+c)

(1) total funds
(2) federal share
(3) BEH share

(e) percent unobligated funds - divide items in (d) by corresponding items in (a).

B. Distribution of Resources

The information presented in this portion of the report is designed to roughly describe the expenditures made to date and the remaining resources of the project in terms of the resource allocations made to impact groups upon applications. The items below when portrayed for each impact group and then across impact groups may be used for this purpose:

(a) staff dollars

(1) amount allocated impact group on Project Description Form

(2) amount expended of impact group staff allocations from Project Description Update Form data

(3) estimated share of quarter expenditures

- divide the amount allocated to impact group staff on Project Description Form by the total amount of federal and non-federal funds available. Multiply this value by the total expenditures made per quarter.

(4) estimated funds remaining

- subtract (2) from (1)*
- subtract (3) from (1) for all quarters not included in (2)

(b) other resources

- repeat items in (a)

(c) total production resources (excluding fringe benefits, indirect costs, and project income)

- subtotal items in (a) and (b)
- display relative percent of grand total.

* Does not apply to first quarter reports.

Section III

Child Data Summary

This section of the report is produced using Child Intake and Child Program/Placement data.

A. Data Inventory

The information is provided as a summary of the data which the project has submitted to the Monitoring and Reporting System. The following items may be included:

(a) Child Intake Forms
  (1) number received during quarter
  (2) total number on hand

(b) Child Progress/Placement Forms--progress data only
  (1) number received during quarter
  (2) total number on hand

(c) Child Progress/Placement Forms--with placement data
  (1) number received during quarter
  (2) total number on hand

B. Current Enrollment

The table portrayed below describes the children in the project at the end of the last quarter. Children who have been placed are not to be included.

Table Columns	-	age range
Table Rows	-	primary handicap
Table Elements	-	number of children enrolled
	-	percent of total enrollment.

C. New Data Listing

This portion of the report is used to insure that all information intended to have been submitted by the project was in fact submitted, received, and recorded correctly. The following may be listed for each child form submitted during the last quarter:

- child identification code
- birth date
- enrollment date
- exit date.

This list should be broken into groups according to the type of information submitted and arranged according to child identification code.

EXHIBIT 6-8

MID-YEAR PROJECT PROGRESS REPORT

EXHIBIT 6-8

Mid-Year Project Progress Report

Purpose

Summarize project progress during the period from July 1 to January 1.

Scope

The report is produced for each project for review by BEH staff.

Sources

Data used in the production of this report are obtained from Child Intake Forms, Child Progress/Placement Forms, Project Description Forms, Project Description Update Forms, and Financial Status Reports.

Content

The content of the report of a project reflects the planned activities of the project which were defined on the project's Project Description Form; the activities performed during the reporting period as described on the project's Project Description Update Form; the financial status of the project reported on Financial Status Reports which are filed at the end of the first and second project quarters (October 1 and January 1 respectively); child descriptive and performance data obtained from Child Intake Forms completed when children leave the project or during January.

The report is divided into two sections. The first section describes the financial status of the project and the utilization of resources during the reporting period. The second section describes the impact groups served by the project and the project services provided during the reporting period.

Report Outline

Section I

Financial Summary

A. Identifying Information

The following information is displayed to insure the correct identification of the project:

- project identification code
- project name
- amount of BEH grant
- phase of project operation
- objective of project.

B. Budget Summary

(1) Financial Status

The following describes the funding available and expenditures during the first two quarters:

(a) funding available

(1) total funds
(2) federal funds
(3) BEH funds

(b) outlays by quarter

(1) total funds
(2) federal share
(3) BEH share

(c) project income per quarter*

(1) total income of income
(2) federal share of income
(3) BEH share of income

(d) unobligated funds per quarter (a-b+c)

(1) total funds
(2) federal share
(3) BEH share

(e) percent unooligated funds - divide items in (d) by corresponding items in (a).

(2) Resource Usage

The project utilization of resources is described in terms of impact groups served (i.e., children, parents, staff, and other groups). Resources allocated upon application which were recorded on the Project Description Form are compared to those reported to have been spent which were recorded on the Project Description Update Form.

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* Project income includes any funds received by the project as a result of project services or products sold to other programs, the educational community and the general public.

For each impact group display the following information:

(a) FTE staff (when appropriate) and dollars allocated to each type of resource - see impact group resource descriptions on Project Description Form and Project Description Update Form

(b) FTE staff and dollars utilized during first two quarters (from Project Description Update Form)

(c) subtotal staff resource and other resource allocations in (a)

(d) subtotal staff resource and other resource utilizations in (b)

(e) percent allocated staff resources and other resources of total budget across impact groups

(f) percent expended staff resources and other resources of total expenditures across impact groups

(g) percent expended for staff resources and other resources of amount allocated for staff resources and other resources within impact group.

Summarize the above information across impact groups.

(3) Budget Distribution

The following information is designed to describe the relationships between budget allocations and expenditures during the first two quarters. This information is intended to reconstruct (1) the budget described by the project for the BEH grant, (2) the total budget of the project which may include the BEH grant, other federal funds, and non-federal funds, and (3) expenditures made during the first two quarters. This information may include the following items:

(a) BEH grant personnel allocation (from HEW608T and recorded on Application Coding Form)

(b) percent of BEH grant allocated to personnel

(c) total amount allocated to staff across impact groups (from Project Description Form)

(d) percent of total impact group allocations made to staff

(e) total amount expended for staff across impact groups (from Project Description Update Form)

(f) percent of total impact group expenditures made for staff

(g) repeat (a) through (f) for other resources category of impact group resources descriptions, i.e., travel, equipment, supplies, construction, and other, as defined on HEW 608T

(h) fringe benefits allocated from BEH grant (recorded on Application Coding Form)

(i) fringe benefit/staff ratio - (h) divided by (a)

(j) estimated total finge benefits allocated impact groups - (i) multiplied by (c)

(k) estimated fringe benefits expended - (i) multipled by (e)

(l) total direct costs

(1) allocated from BEH grant

(2) allocated across impact groups

(3) expended during first two quarters

- computed as sum of staff costs, fringe benefits/fringe benefit estimates, and other costs

(m) total indirect costs

(1) allocated from BEH grant budget

(2) estimated across impact group budget using the ratio of BEH grant direct costs to indirect costs multiplied by total impact group direct cost estimates

(3) expended - from Financial Status Reports, Line 11

(n) total costs

(1) allocatated from BEH grant budget

(2) allocated across impact group budget

(3) expended during first two quarters

- computed as sum of direct and indirect costs

(o) income

(1) anticipated in BEH grant budget

(2) credited during first two quarters

(p) net budget - total costs minus project income

(q) actual net budget

(1) BEH budget estimated from Application Coding Form

(2) total federal and non-federal funds estimated from Application Coding Form

(3) total expenditures minus income during first two quarters

(r) estimate errors and unexplained deviations--subtract (p) from (q).

Section II

Impact Groups

A. Description of the Children

This portion of the report is designed to provide an overview of the children enrolled in the project during the course of the first two quarters of operation.

(1) Period of Treatment

The period of treatment for a child is established as the amount of time the child has spent in the project during the first two quarters of project operation. If a child does not exit the project before the end of the second quarter this period would be the difference between the effective date of the mid-year child progress/ placement data and the date of enrollment.

- breakdown treatment periods into one-month increments
- tabulate the number of children in the project for each increment displayed.

(2) Race Distributions

Describe the children according to the race categories established on Child Intake Forms

- tabulate all children in project during reporting period
- tabulate children with valid CEEDI scores (see criterion below)
- include counts and relative percents per race category

(3) Area of Home Distributions

Describe the children according to the area of home categories established on Child Intake Forms

- tabulate all children in project during the reporting period
- tabulate children with valid CEEDI scores
- include counts and relative percents per area of home category

(4) Age by Handicapping Condition

For each age range and handicapping condition combination the following may be displayed:

(a) number of children anticipated (from Project Description Form)

(b) number of children calculated from Child Intake Forms (using primary handicapping condition)

(c) number of children calculated from Child Intake Forms using secondary handicapping condition

(d) number of children calculated from Child Intake Forms who have valid CEEDI scores using primary handicapping condition

For each row and column of the cross-tabulation (age by handicap), display relative percentages of population totals.

B. Child Performance

The information described below is designed to provide a brief analysis of child performance on the CEEDI (the Children's Early Education Developmental Inventory). Children with valid CEEDI scores are selected for this analysis using the following criterion:

CEEDI administration date on the most recent Child Progress/ Placement Form must be a minimum of two months after the CEEDI administration date on the Child Intake Form.

Establishing the population according to the above criterion the following statistics may be produced for (1) children of each primary handicapping condition, (2) each age range, and (3) the entire population:

- sample n: number of children
- sample pretest means: the average CEEDI domain scores on Child Intake Forms
- sample posttest means: the average CEEDI domain scores on the Child Progress/Placement Forms
- sample mean differences: the difference between pre- and posttest CEEDI domain means
- sample mean variances: the variances calculated for CEEDI pretest, posttest and difference means.

C. Services Provided Children

This portion of the report is intended to describe services to children in reference to the following areas:

(1) Services projected to be provided by the project. This information is obtained from the Project Description Form.

(2) The service needs of children. This information is obtained from two sources. Service needs upon enrollment into the project are recorded on Child Intake Forms. Service needs upon exit from the project or at the end of the reporting period are recorded on the Child Progress/Placement Forms.

(3) Services provided children during the reporting period. This information is recorded for individual children on Child Progress/Placement Forms.

(4) Project staff utilized in providing the services. This information is available in terms of FTE staff planned to be used and that reported to have been used to provide specific types of services from the Project Description Form and the Project Description Update Form, respectively.

For each type of service (types of services are standardized across Child Intake, Child Progress/Placement, Project Description, and Project Description Update Forms), the following information may be displayed:

(1) Projected Services

(a) number of children to be provided service by project

(b) number of children in project who will be provided service by other sources/agencies

(c) average amount of time (in hours per week) a child will receive the service

(2) Service Needs

(a) number of children reported to have needed the service upon enrollment

(b) number of children reported to presently need the service either upon placement or on mid-year progress data

(c) number of children, i.e., reported in (a) who were also reported in (b), i.e., the children who previously need the service but now do not

(3) Services Provided

(a) number of children who received the service from the project

(b) number of children in the project who received the service from other sources/agencies

(c) average amount of time (in hours per week) children received the service

(4) Staff Utilization

(a) FTE project staff planned to be devoted to providing the service

(b) FTE project staff utilized to provide the service

(c) for both (a) and (b) display the relative percentages of staff planned/utilized in the provision of the service of the total FTE staff planned/utilized in the provision of all direct and supplementary services to children

D. Child Placement

With information obtained from Child Progress/Placement Forms, a general picture of the child placements may be portrayed. The following items may be used to describe the circumstances of placement and the placement settings:

(1) Children placed in setting recommended by project

(a) number of children placed

(b) percent placed of total enrollment

(2) Children placed in setting other than that recommended by project

- repeat above items

(3) Children placed in setting unknown to project

- repeat above items

(4) Cross-tabulate the children identified in 1, 2, and 3 according to:

(a) type of placement setting

(b) level of placement setting

(c) total

E. Parent Involvement

The information presented in this portion of the report is designed to provide an overview of the participation of parents in project activities and the services provided to parents by projects.

(1) Parent Participation

The following information, obtained from Project Description Update Forms, is displayed:

(a) the number of families participating in all projects

(b) the percent of all children in all projects whose families are participating

(c) the average, minimum and maximum of each project's percent of families participating

(d) repeat (a), (b), and (c) for parents participating in each of the activities identified as Educational Project Services to children and as project, planning, evaluation and dissemination in the Project Description Update Forms.

(2) Services to Parents

For each type of service identified on the Project Description Update Form display the following information:

(a) number of families served

(b) the percent families served for all children in all projects

(c) the average frequency of service per family

(d) the FTE project staff providing service

F. Project Staff

Staff composition and training/educational services to staff are described using information from Project Description Update Forms.

(1) Staff Breakdown

The following information describes project staff by type of position and level of education:

(a) for each type of position and level of education display the total FTE project staff across projects and the percent that this total represents of the overall total FTE staff

(b) summarize items in (a) for each type of position and level of education

(2) Staff Training/Education

For each type of training/education provided to project staff display the following items:

(a) number of staff receiving training

(b) number of person-weeks spent in training

(c) number of projects providing training

(d) FTE project staff spent in providing training.

G. Other Group Involvement

(1) Community Involvement

For each type of agency with which projects actively cooperate display the following:

(a) the number of agencies

(b) the number of projects who indicate cooperation

For each type of cooperation display the number of projects indicating such cooperation.

(2) Advisory Board

(a) for each group identified as part of the advisory board, display the total number and relative percent of the overall number of projects

(b) for each type of advisory board function display the number of responding projects and the relative percent of the overall number of projects.

(3) Dissemination

(a) Display the number of national, regional, state-wide, and local workshope/conferences/symposia in which projects will participate and the percent of projects participating in one or more

(b) Display items in (a) for workshops/conferences/symposia provided by the projects themselves

(c) Display the FTE project staff across projects devoted to each type of dissemination activity

(4) Services to Other Groups

For each type of Target Group display the following:

(a) number of programs and persons served with formal training programs

(b) number of programs and persons served with technical assistance

(c) number of programs and persons served by consulting

For each geographic area served and type of services combination display the following:

(a) number of projects serving one or more programs

(b) number of programs served.

EXHIBIT 6-9

APPLICATION FOR FEDERAL ASSISTANCE

-- OE FORM 9037

-- HEW-608T

FORM APPROVED
OMB NO. 51-R0971

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

EDUCATION FOR THE HANDICAPPED
INSTRUCTIONS FOR APPLICATION FOR FEDERAL ASSISTANCE (Nonconstruction Programs)

PART I

This form shall be used for applying for Federal Assistance to one, or any combination, of the following programs of the U.S. Office of Education (OE) for the handicapped except for institutions of higher education applying for Handicapped Personnel Preparation (13.451).

Office of Education for Handicapped NAME	Catalog of Federal Assistance NUMBER
Handicapped Research and Demonstration	13.443
Handicapped Early Childhood Assistance	13.444
Handicapped Innovative Programs-Deaf-Blind Centers	13.445
Handicapped Media Services and Captioned Films	13.446
Handicapped Regional Resource Centers	13.450
Handicapped Personnel Preparation	13.451
Handicapped Teacher Recruitment and Information	13.452
Special Programs for Children with Specific Learning Disabilities	13.520

This form shall be used also to request supplemental assistance to proposed changes or amendments, and to request continuation or refunding for approved grants originally submitted on this form.

Submit the original and two copies of the form. Please check the Federal Register for filing dates. When a request is made only for supplemental assistance, amendments or changes to an approved grant, submit only those pages which are appropriate.

Item 1 - Enter the State clearinghouse identifier. This is the code or number assigned by the clearinghouse to applications requiring State clearinghouse coordination for programs listed in Attachment D, Office of Management and Budget Circular No. A-95.

Item 2 - Enter the applicant's application number or other identifier.

Item 3 - Preprinted by the Office of Education.

Item 4 - Enter the name of the applicant, the name of the primary organizational unit which will undertake the grant supported activity, and the complete address of the applicant.

Enter also in Item 4 the applicant's employer identification number assigned by the U.S. Internal Revenue Service, or if the applicant has been assigned a DHEW entity number, consisting of the IRS employer identification number prefixed by "1" and suffixed by a two-digit number, enter the full DHEW entity number.
If the payee will be other than the applicant, type on a separate sheet and attach to this form "Payee:", the payee's name, department or division, complete address, and employer identification number or DHEW entity number.
If an individual's name and/or title is desired on the payment instrument, the name and/or title of the designated individual must be specified.

Item 5 - Enter the descriptive name of this project. For 13.451, also enter "SP" if a special project.

Item 6 - Enter the appropriate catalog number as shown in the Catalog of Federal Domestic Assistance. Numbers are given above. If the assistance will pertain to more than one catalog number, leave this space blank and list the catalog numbers under Part III, Section A.

Item 7 - Enter the amount that is requested from the Federal Government in this application. This amount should agree with the total amount shown in Part III, Section A, Line 5 of Column (e). For revisions, changes, or amendments, show only the amount of the increase or decrease.

Item 8 - Check one grantee type. If the grantee is other than a State, county, or city government, specify the type of grantee on the "Other" line.

Item 9 - Check the type of application or request. If the "Other Changes" block is checked, specify the type of change. The definitions for terms used in Item 9 are as follows.

a. New grant - an action which is being submitted by the applicant for the first time.

b. Continuation grant - an action that pertains to the continuation of a multi-year grant (e.g., the second year award for a project which will extend over five years).

c. Supplemental grant - an action which pertains to an increase in the amount of the Federal contribution for the same period.

d. Changes in the existing grant - specify one or more of the following:

(1) Increase in duration - a request to extend the grant period.

(2) Decrease in duration - a request to reduce the grant period.

OE FORM 9037 7/75

REPLACES EDITION OF 6/73, WHICH IS OBSOLETE.

(3) Decrease in amount - a request to decrease the amount of the Federal contribution.

If more than one type is checked, provide a separate sheet for Item 9 relating the name of the program(s) and Catalog of Federal Assistance Number(s) to the type of application or request.

Item 10 - Check "Grant."

Item 11 - Enter the number of persons directly benefiting from this project according to the following directions:

If only one function or activity is involved, for RESEARCH enter "NA" for not applicable; for DEMONSTRATION, enter the number of children receiving such services; for PRESERVICE TRAINING or INSERVICE TRAINING, enter the number of trainees, or persons receiving inservice training; for DISSEMINATION, enter the number of persons expected to receive or view materials. If more than one function or activity is involved, leave blank.

Item 12

a. Enter the congressional district in which the applicant is located.

b. Enter the congressional district(s) in which most of the actual work on the project will be accomplished city-wide or State-wide, covering several congressional districts, write "city-wide" or Statewide."

Item 13 - Enter planned project duration in months for which Federal funds are requested in this application and may be requested in continuation application(s).

Item 14 - Enter the approximate date the project is expected to begin.

Item 15 - Enter the date this application is submitted.

Item 16 - Complete the certification before submitting the report.

PART II

Negative answers will not require an explanation unless the Federal agency requests more information at a later date. Provide supplementary data for all "Yes" answers in the space provided in accordance with the following instructions:

Item 1 - Provide the name of the governing body establishing the priority system and the priority rating assigned to this project.

Item 2 - Provide the name of the agency or board which issued the clearance and attach the documentation of status or approval. For 13.451 (Handicapped Personnel Preparation) each local educational applicant must include the State educational agency's statement as to personnel needs and how the proposed program relates to the stated needs. For 13.445 (Deaf-Blind Centers) the Regional Committee must approve the regional plan and the plan must be attached to this application.

Item 3 - Attach the clearinghouse comments for the application in accordance with the instructions contained in Office of Management and Budget Circular No. A-95, or those clearinghouse comments made outside the requirements of the circular.

Item 4 - Furnish the name of the approving agency and the approval date.

Item 5 - Show whether the approved comprehensive plan is State, local or regional, or if none of these, explain the scope of the plan. Give the location where the approved plan is available for examination and state whether this project is in conformance with the plan.

Item 6 - Show the population residing or working on the Federal installation who will benefit from this project.

Item 7 - Show the percentage of the project work that will be conducted on federally-owned or leased land. Give the name of the Federal installation and its location.

Item 8 - Describe briefly the possible beneficial and harmful impact on the environment of the proposed project. If an adverse environmental impact is anticipated, explain what action will be taken to minimize the impact. Federal agencies will provide separate instructions if additional data is needed.

Item 9 - State the number of individuals, families, businesses, or farms this project will displace. Federal agencies will provide separate instructions if additional data is needed.

Item 10 - Show the Federal Domestic Assistance Catalog number, the program name, the type of assistance, the status and the amount of each project where there is related previous, pending or anticipated assistance. Use additional sheets, if needed.

PART III

General Instructions

This form is designed so that application can be made for funds from one or more handicapped grant programs. Sections A, B, C, and D should provide the budget for the first budget period (a year) and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

Section A. Budget Summary

Lines 1-4, Columns (a) and (b).

WHEN APPLICABLE, the following programs should present budget information for Section A in terms of Research and Development, Demonstration/Service, Evaluation, Dissemination, and Inservice Training, as functions or activities:

13.443 Handicapped Research and Demonstration
13.444 Handicapped Early Childhood Assistance
13.445 Handicapped Innovative Programs--Deaf-Blind Centers
13.446 Handicapped Media Services and Captioned Films
13.450 Handicapped Regional Resource Centers
13.520 Special Programs for Children with Specific Learning Disabilities

For 13.451, Handicapped Personnel Preperation, enter as functions or activities, "Institutes" and/or by category of handicap, "Traineeships."

For 13.452, Handicapped Teacher Recruitment and Information, a breakout by function or activity is not usually necessary.

For applications pertaining to a single Federal grant program (Federal Domestic Assistance Catalog number) and not requiring a functional or activity breakdown, (e.g. 13.452 enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a single program requiring budget amount by multiple functions or activities, enter the name of each activity of function on each line in Column (a), and enter the catalog number in Column (b).

For applications pertaining to multiple programs where one or more programs require a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

Lines 1-4, Columns (c) through (g).

Show only Federal funds requested.

For new applications, use only Column (e).

For continuing grant program applications, enter in Column (c) the estimated amounts of Federal funds which will remain unobligated at the end of the grant funding period. Enter in Column (e) the amounts of Federal funds needed for the upcoming period.

For supplemental grants and changes to existing grants, enter in Column (e) the amount of the increase or decrease of Federal funds. In Column (g) enter the new total budgeted amount (Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e). The amount(s) in Column (g) should not equal the amount in Column (e).

Line 5 - Show the totals for all columns used.

Section B. Budget Categories

In the column headings (1) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1-4, Column (a), Section A. When additional sheets were prepared for Section A, provide similar column headings on each sheet. For each program, function or activity fill in the total requirements for funds (Federal) by object class categories.

LINES 6a-h - Show the estimated amount for each direct cost budget (object class) category for each column with program, function or activity heading as follows:

Line 6a - "Personnel" must show salaries and wages only. Fees and expenses for consultants must be included on Line 6h.

Line 6b - Leave this line blank if fringe benefits applicable to direct salaries and wages are treated as part of the indirect cost rate.

Line 6c - Indicate travel of employees only. Travel of consultants, trainees, etc. should not go on this line, nor should local transportation (i.e., where no out-of-town trip is involved).

Line 6d - Indicate the cost of nonexpendable personal property. Such property means tangible personnel property having a useful life of more than one year and an acquisition cost of $300 or more per unit. A grantee may use its own definition of nonexpendable personal property provided that such definition would at least include all personal property as defined above.

Line 6e - Show all tangible personal property except that which is on Line 6d.

Line 6f - Use for (1) procurement contracts (except those which belong on other lines such as equipment and supplies) and (2) subgrants or other assistance-like payments to secondary recipient organizations such as affiates, cooperating institiutions, delegate agencies, political sub-divisions, etc. Line 6f must not include payments to individuals such as stipends and allowanced for trainees, consulting fees, benefits, etc.

Line 6g - Present funding will not allow for new construction. Minor alterations and renovations are allowable costs.

Line 6h - All direct costs not clearly covered by Lines 6a through 6g must be included here. Examples are computer use charges, non-salary and wage payments to individuals (stipends, dependency allowances and trainee travel cost), space or equipment rental, equired fees, consulting fees and travel, communication costs, rental of space, utilities and custodial services, printing materials, and local transportation.

Line 6i - Show the totals of Lines 6a to 6h in each column.

Line 6j - Show the amount of indirect cost. Refer to Federal Management Circular FMC 74-4.

Line 6k - Enter the total of amount on Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in Column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g) Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Column (e) on Line 5. When additional sheets were prepared, the last two sentences apply only to the first page with summary totals.

Line 7 - Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program narrative statement the nature and source of income. The estimated amount of program income may be considered by the Federal grantor agency in determining the total amount of the grant.

Section C. Source of Non-Federal Resources

Enter "NA."

Section D. Forecasted Cash Needs

Line 13 - Enter the amount of cash needed by quarter from the grantor agency during the first year.

Line 14 - Enter "NA."

Line 15 - Enter "NA."

Line 16-19 - Enter in Column (a) the same grant program titles shown in Part I. A breakdown by function or activity is not necessary. For new applications and continuing grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding periods (usually in years). This Section need not be completed for amendments, changes, or supplements to funds for the current year of existing grants.

If more than four lines are needed to list the program titles submit additional schedules as necessary.

Line 20 - Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

Section F. Other Budget Information

(Additional sheets may be attached)

Line 21 - Use this space and additional sheets if necessary to explain amounts for individual direct object cost categories that may appear to be out of the ordinary or to explain the following details:

PERSONNEL SALARIES FROM 6a. Include a statement which shows the total commitment of time and the total salary to be charged to the project for each key member of the project staff cited Part IV, 5a.

TRAVEL FROM 6c. Foreign travel should be separately identified and justified. No foreign travel will be authorized under the grant unless prior approval is obtained.

EQUIPMENT FROM 6d. List items of equipment in the following format: Item, Number of Units, Cost per Unit, Total Cost.

CONTRACTUAL FROM 6f. Indicate the name of the agency or organization that will receive each proposed contract. This should be supported by Part IV, 3d.

OTHER FROM 6h. (a) Give the total number of consultants that will work on the project and their costs (fees and travel).

(b) For training programs or such functions or activities also give: (1) Costs for stipends in terms of number of weeks times number of trainees (by degree level) times average stipend; (2) Costs for dependency allowances: number of weeks times number of dependents times weekly allowance for each dependent; and (3) Costs of travel for students; number of students for whom travel allowances are requested times the average round-trip fare claimed per student.

(c) Give the total direct cost for any or all new training activities not previously funded by the OE if this is a continuation application.

(d) Give costs for pupil transportation.

(e) Show any category and its cost included under OTHER that amounts to at least one percent of the total Federal funds requested in Section A above.

Line 22 - Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Line 23 - Give the dollar amount of non-Federal funds proposed to be used on the project. Provide any other explanations required herein or any other comments deemed necessary.

PART IV – PROGRAM NARRATIVE

Prepare the program narrative statement in accordance with the following instructions for all new grant programs and all new functions or activities for which support is being requested. Requests for continuation or refunding and changes on an approved project should respond to Item 5b only. Requests for supplemental assistance should respond to question 5c only.

Note that the program narrative should encompass each program and each function or activity for which funds are being requested (see Sections A and B in Part III). Relevant regulations (attached) should be carefully examined for criteria upon which evaluation of an application will be made and the program narrative must respond to such criteria under the related headings below. The program narrative should begin with an overview statement of the major points covered below.

I. OBJECTIVES AND NEED FOR THIS ASSISTANCE

Describe the problem and demonstrate the need for assistance and state the principal and subordinate objectives of the project. Supporting documentation or other testimonies from concerned interests other than the applicant may be used. States applying for 13.451 must supply documentation for the needs. Any relevant data based on planning studies should be included or footnoted. Projects involving Demonstration/Service activities should present available data, or estimates, for need in terms of number of handicapped children (by type of handicap and by type of service) in the geographic area involved.

Projects involving Training should present available data, or estimates, for need in terms of number of personnel by position type (e.g. teachers, teacher-aides) by type of handicap to be served. Note that in Part II, Item 2, documentation by the State must be supplied for 13.451 (Handicapped Personnel Preparation).

2. RESULTS OR BENEFITS EXPECTED.

Identify results and benefits to be derived. Projects involved in Training and/or Demonstration/Service activities must also fill out the attached supplementary questionaire.

3. APPROACH

a. Outline a plan of action pertaining to the scope and detail of how the proposed work will be accomplished for each grant program, function or activity, provided in the budget. Cite factors which might accelerate or decelerate the work and your reason for taking this approach as opposed to others.

For 13.444 (Handicapped Early Childhood Assistance), 13.445 (Handicapped Innovative Programs--Deaf-Blind Center), and 13.520 (Special Programs for Children with Specific Learning Disabilities) describe the planned educational curriculum, the types of attainable accomplishments set for the children served, and supplementary services including parent education. For 13.444 and 13.445 describe the composition and responsibilities of the Advisory Council. For 13.445 (Handicapped Innovative Programs--Deaf-Blind Centers), when the scope and nature of activities differ among several geographic locations receiving Federal funding, explain. For 13.520 describe the replication strategy.

For 13.451 (Handicapped Personnel Preparation) describe the substantive content and organization of the training program, including the roles or positions for which students are prepared, the tasks associated with such roles, the competencies that must be acquired, and the program staffing. Describe the practicum facilities including their use by students, accessibility to students and their staffing.

b. Provide for each grant program, function or activity, quantitative quarterly projections of the accomplishments to be achieved.

For 13.444 (Handicapped Early Childhood Assistance), 13.445 (Handicapped Innovative Programs--Deaf-Blind Center), 13.520 (Special Programs for Children with Specific Learning Disabilities) and those demonstration/service programs funded under 13.443 (Handicapped Research and Demonstration), 13.446 (Handicapped Media Services and Captioned Films), and 13.450 (Handicapped Regional Resource Centers) project the number of children to receive demonstration/services by type of handicapping condition, and number of persons receiving inservice training (see supplementary questions). For 13.451 (Handicapped Personnel Preparation), project the number of students to be trained by type of handicapping condition using the supplementary questionaire.

For non-demonstration/service and non-training activities of all programs, but particularly for 13.443 (Handicapped Research and Demonstration), 13.446 (Handicapped Media Services and Captioned Films), and 13.450 (Handicapped Regional Resource Centers), planned activities should be listed in chronological order to show the schedule of accomplishments and their target dates.

c. Identify the kinds of data to be collected and maintained and discuss the criteria to be used to evaluate the results and successes of the project. For all demonstration/service activities, relate the evaluation procedures to the child-centered objectives set for project participants. For 13.451 (Handicapped Personnel Preparation) provide evidence that the positions for which students are receiving training will address needs as exolained in 1 and 2 above and that parents, practicing teachers, etc. are involved in program planning, implementation, and evaluation.

For all activities, explain the methodology that will be used to evaluate project accomplishments.

d. List organizations, cooperators, consultants, or other key individuals who will work on the project along with a short description of the nature of their effort or contribution. Especially for demonstration/service activities, describe the liaison with community or State organizations as it affects project planning and accomplishments.

4. GEOGRAPHIC LOCATION.

Give a precise location of the project or area to be served by the proposed project. Maps or other graphic aids may be attached.

5. IF APPLICABLE, PROVIDE THE FOLLOWING INFORMATION:

a. For research or demonstration assistance requests, present a biographical sketch of the program director with the following information; name, address, phone number, background, and other qualifying experience for the project. Also, list the name, training and background for other key personnel engaged in the project.

b. Discuss accomplishments to date and list in chronological order a schedule of accomplishments, progress or milestones anticipated with the new funding request. If there have been significant changes in the project objectives, location approach, or time delays, explain and justify. For other re-

quests for changes or amendments, explain the reason for the change(s). If the scope or objectives have been changed or an extension of time is necessary, explain the circumstances and justify. If the total budget has been exceeded, or if individual budget items have changed more than the prescribed limits contained in Attachment, K FMC74-7, explain and justify the change and its effect on the project.

c. For supplemental assistance requests, explain the reason for the request and justify the need for additional funding.

d. (1) No application for Department of Health, Education, and Welfare assistance is approved unless the applicant has on file with the Department an accepted assurance of compliance with the Civil Rights Act of 1964 on Form HEW 441. If a copy of Form HEW 441 is not already on file with the Department, it must be submitted with this application.

(2) Department of Health, Education, and Welfare policy requires that if any phase of this project will involve subjecting individuals to the risk of physical, sociological, or other harm, certain safeguards must be instituted and an assurance must be filed. The attached Form HEW 596 is self-explanatory, and is required in any program of Education for the Handicapped in which Research and Development and/or Demonstration/Service activities occur.

(3) If this is an application for continued support, include (1) the report of inventions conceived or reduced to practice required by the terms and conditions of the grant, or (2) a list of inventions already reported, or (3) a negative certification.

OMB Approval NO. 29-R0218

APPLICATION FOR FEDERAL ASSISTANCE
(NONCONSTRUCTION PROGRAMS)
PART I

1. STATE CLEARINGHOUSE IDENTIFIER

2. APPLICANT'S APPLICATION NUMBER

3. FEDERAL GRANTOR AGENCY

Office of Education (Handicapped)
ORGANIZATIONAL UNIT

Application Center
ADMINISTRATIVE OFFICE

400 Maryland Avenue, SW
STREET ADDRESS - P.O. BOX

Washington, D. | D.C. | 20202
CITY | STATE | ZIP CODE

4. APPLICANT NAME

DEPARTMENT DIVISION

STREET ADDRESS - P.O. BOX

CITY | COUNTY

STATE | ZIP CODE

5. DESCRIPTIVE NAME OF THE PROJECT

6. FEDERAL CATALOG NUMBER

7. FEDERAL FUNDING REQUESTED

$

8. GRANTEE TYPE

_____ STATE, _____ COUNTY, _____ CITY, _____ OTHER *(Specify)*

9. TYPE OF APPLICATION OR REQUEST

_____ NEW GRANT, _____ CONTINUATION, _____ SUPPLEMENT, _____ OTHER CHANGES *(Specify)*

10. TYPE OF ASSISTANCE

_____ GRANT, _____ LOAN, _____ OTHER *(Specify)*

11. POPULATION DIRECTLY BENEFITING FROM THE PROJECT

12. CONGRESSIONAL DISTRICT

a.

b.

13. LENGTH OF PROJECT

14. BEGINNING DATE

15. DATE OF APPLICATION

16. THE APPLICANT CERTIFIES THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF THE DATA IN THIS APPLICATION ARE TRUE AND CORRECT, AND THAT HE WILL COMPLY WITH THE ATTACHED ASSURANCES IF HE RECEIVES THE GRANT.

TYPED NAME	TITLE	TELEPHONE NUMBER		
		AREA CODE	NUMBER	EXTENSION
SIGNATURE OF AUTHORIZED REPRESENTATIVE				

For Federal Use Only

N-608T

OMB Approval NO. 29-R0218

PART II
PROJECT APPROVAL INFORMATION

ITEM 1.
Does this assistance request require State, local, regional, or other priority rating?

Name of Governing Body _____
Priority Rating _____

☐ Yes ☐ No

ITEM 2.
Does this assistance request require State, or local advisory, educational or health clearances?

Name of Agency or Board _____

☐ Yes ☐ No (Attach Documentation)

ITEM 3.
Does this assistance request require clearinghouse review in accordance with OMB Circular A-95?

(Attach Comments)

☐ Yes ☐ No

ITEM 4
Does this assistance request require State, local, regional, or other planning approval?

Name of Approving Agency _____
Date _____

☐ Yes ☐ No

ITEM 5
Is the proposed project covered by an approved comprehensive plan?

Check one:
☐ State
☐ Local
☐ Regional

☐ Yes ☐ No Location of Plan _____

ITEM 6
Will the assistance requested serve a Federal installation?

Name of Federal Installation _____
Federal Population benefiting from Project _____

☐ Yes ☐ No

ITEM 7
Will the assistance requested be on Federal land or installation?

Name of Federal Installation _____
Location of Federal Land _____
Percent of Project _____

☐ Yes ☐ No

ITEM 8
Will the assistance requested have an impact or effect on the environment?

See instructions for additional information to be provided.

☐ Yes ☐ No

ITEM 9
Will the assistance requested cause the displacement of individuals, families, businesses, or farms?

Number of:
Individuals _____
Families _____
Businesses _____
Farms _____

☐ Yes ☐ No

ITEM 10
Is there other related assistance on this project previous, pending, or anticipated?

See instructions for additional information to be provided.

☐ Yes ☐ No

HEW-608T

OMB Approval NO. 29-R0138

PART III - BUDGET INFORMATION

SECTION A - BUDGET SUMMARY

GRANT PROGRAM, FUNCTION OR ACTIVITY (a)	FEDERAL CATALOG NO. (b)	ESTIMATED UNOBLIGATED FUNDS		NEW OR REVISED BUDGET		
		FEDERAL (c)	NON-FEDERAL (d)	FEDERAL (e)	NON-FEDERAL (f)	TOTAL (g)
1.		$	$	$	$	$
2.						
3.						
4.						
5. *TOTALS*		$	$	$	$	$

SECTION B - BUDGET CATEGORIES

6. OBJECT CLASS CATEGORIES	GRANT PROGRAM, FUNCTION OR ACTIVITY (1)	(2)	(3)	(4)	TOTAL (5)
a. PERSONNEL	$	$	$	$	$
b. FRINGE BENEFITS					
c. TRAVEL					
d. EQUIPMENT					
e. SUPPLIES					
f. CONTRACTUAL					
g. CONSTRUCTION					
h. OTHER					
i. TOTAL DIRECT CHARGES					
j. INDIRECT CHARGES					
k. *TOTALS*	$	$	$	$	$
7. PROGRAM INCOME	$	$	$	$	$

SECTION C - NON-FEDERAL RESOURCES

(a) GRANT PROGRAM	(b) APPLICANT	(c) STATE	(d) OTHER SOURCES	(e) TOTALS
	$	$	$	$
9.				
10.				
11.				
12. TOTALS	$	$	$	$

SECTION D - FORECASTED CASH NEEDS

	TOTAL FOR 1ST YEAR	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER
13. FEDERAL	$	$	$	$	$
14. NON-FEDERAL					
15. TOTALS	$	$	$	$	$

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) GRANT PROGRAM	FUTURE FUNDING PERIODS (years)			
	(b) FIRST	(c) SECOND	(d) THIRD	(e) FOURTH
16.	$	$	$	$
17.				
18.				
19.				
20. TOTALS	$	$	$	$

SECTION F - OTHER BUDGET INFORMATION (attach additional sheets if necessary)

21. DIRECT CHARGES:

22. INDIRECT CHARGES:

23. REMARKS:

PART IV - PROGRAM NARRATIVE (attach per instructions)

HEW-608T

PART V

ASSURANCES

The Applicant hereby assures and certifies that he will comply with the regulations, policies, guidelines, and requirements including OMB Circular No. A-95 and FMC Circulars 74-4 and 74-7, as they relate to the application, acceptance and use of Federal funds for this Federally assisted project. Also the Applicant assures and certifies with respect to the grant that:

1. It possesses legal authority to apply for the grant; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body, authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

2. It will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and in accordance with Title VI of that Act, no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the applicant receives Federal financial assistance and will immediately take any measures necessary to effectuate this agreement.

3. It will comply with Title VI of the Civil Rights Act of 1964 (42 USC 2000d) prohibiting employment discrimination where (1) the primary purpose of a grant is to provide employment or (2) discriminatory employment practices will result in unequal treatment of persons who are or should be benefiting from the grant-aided activity.

4. It will comply with requirements of the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced as a result of Federal and federally assisted programs.

5. It will comply with the provisions of the Hatch Act which limit the political activity of employees.

6. It will comply with the minimum wage and maximum hours provisions of the Federal Fair Labor Standards Act, as they apply to hospital and educational institution employees of State and local governments.

7. It will establish safeguards to prohibit employees from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

8. It will give the grantor agency or the Comptroller General through any authorized representative the access to and the right to examine all records, books, papers, or documents related to the grant.

9. It will comply with all requirements imposed by the Federal grantor agency concerning special requirements of law, program requirements, and other administrative requirements approved in accordance with FMC 74-7.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

FORM APPROVED
O.M.B. NO. 51-R097

EDUCATION FOR THE HANDICAPPED

APPLICATION FOR FEDERAL ASSISTANCE (Nonconstruction Programs)

SUPPLEMENTARY QUESTIONNAIRE

INSTRUCTIONS

All programs in the Education for the Handicapped may involve Demonstration/Service activities and/or Training or Inservice Training activities. Any applicant whose project calls for such activities must fill out the relevant portions of the tables below. Data presented should be for the year of funding requested and should be used as o one base measure to determine accomplishment for Demonstration/Service and/or Training or Inservice Training activities *(see "Part IV, 3. Approach. b" in the Instructions for the Application).*

In Table I enter projected performance data for the first budget period into the appropriate boxes. Use age as of the start of the grant project. On lines above line 11, count multihandicapped individuals only once, by primary handicapping condition, and indicate the number of multihandicapped in line 12. Data for lined I through 11 are for those enrolled or receiving major services, and not those merely screened, referred or given minimal or occasional services.

In Table 2, Training/Inservice Training Activities, each person or trainee is to be counted only once by primary "area of concentration."

1. APPLICANT NAME *(from Item 4 on the Application)*

DEPARTMENT DIVISION

STREET ADDRESS - P.O. BOX

CITY COUNTY

STATE ZIP CODE

2. DESCRIPTIVE NAME OF THE PROJECT *(from Item 5 on the Application)*

TABLE I
PART A - DEMONSTRATION SERVICE ACTIVITIES

TYPE OF HANDICAP	NUMBER OF HANDICAPPED CHILDREN TO BE SERVED BY AGE					
	AGES 0-2	AGES 3-5	AGES 6-8	AGES 9-12	AGES 13-18	AGES 19 AND OVER
TRAINABLE MENTALLY RETARDED						
EDUCABLE MENTALLY RETARDED						
SPECIFIC LEARNING DISABILITIES						
DEAF-BLIND						
DEAF						
HARD OF HEARING						
VISUALLY HANDICAPPED						
SERIOUSLY EMOTIONALLY DISTURBED						
SPEECH IMPAIRED						
OTHER HEALTH IMPAIRED						
CRIPPLED						
TOTAL						
OF THE ABOVE TOTAL, GIVE THE NUMBER OF MULTIHANDICAPPED						

See reverse for Table 2

TABLE I PART B – PROJECT STAFF PROVIDING SERVICES TO RECIPIENTS IN TABLE IA		
TYPE OF STAFF	NUMBER	
	FULL-TIME	PART-TIME *(As full-time equivalents)*
IOFESSIONNEL PERSON- EL *(excluding teachers)*		
EACHERS		
\RAPROFESSIONAL		

TABLE I PART C – IF APPLICABLE: SERVICES TO THOSE HANDICAPPED NOT INCLUDED IN TABLE IA	
SERVICE	NUMBER OF HANDICAPPED
SCREENED	
DIAGNOSTIC AND EVALUATIVE	
FOUND TO NEED SPECIAL HELP	
OTHER RESOURCE ASSISTANCE	

TABLE 2 - PRESERVICE/INSERVICE TRAINING ACTIVITIES

HANDICAPPED AREA OF PRIMARY CONCENTRATION	NUMBER OF PERSONS TO RECEIVE INSERVICE TRAINING			NUMBER OF STUDENTS TO RECEIVE PRESERVICE TRAINING BY DEGREE SOUGHT			
	INSTITUTES	TRAINEESHIPS	OTHER	A.A.	B.A.	M.A.	POST-MASTERS
ULTIHANDICAPPED							
DMINISTRATION							
\RLY CHILDHOOD							
RAINABLE MENTALLY ETARDED							
DUCABLE MENTALLY ETARDED							
ECIFIC LEARNING SABILITIES							
EAF-BLIND							
EAF							
\RD-OF-HEARING							
SUALLY HANDICAPPED							
RIOUSLY EMOTIONALLY STURBED							
EECH IMPAIRED							
IPPLED							
HER HEALTH IMPAIRED							
TOTAL							

ormalized arrangements with institutuions of higher education or faculty.

ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE REGULATION UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

_____ (hereinafter called the "Applicant")
(Name of Applicant)

HEREBY AGREES THAT it will comply with title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Regulation of the Department of Health, Education, and Welfare (45 CFR Part 80) issued pursuant to that title, to the end that, in accordance with title VI of that Act and the Regulation, no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives Federal financial assistance from the Department; and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant by the Department, this assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant for the period during which the Federal financial assistance is extended to it by the Department.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant by the Department, including installment payments after such date on account of applications for Federal financial assistance which were approved before such date. The Applicant recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign this assurance on behalf of the Applicant.

Dated _____

_____
(Applicant)

By _____
(President, Chairman of Board, or comparable authorized official)

_____

_____
(Applicant's mailing address)

HEW-441
(12-64)

Explanation Of

HEW FORM NO. 441, ASSURANCE OF COMPLIANCE WITH THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE REGULATION UNDER TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

Section 80.4 of the Department of Health, Education, and Welfare's Regulation effectuating Title VI of the Civil Rights Act of 1964 requires that every application to the Department for Federal financial assistance shall contain or be accompanied by an Assurance that the program or facility to be assisted will be conducted or operated in compliance with Title VI of the Civil Rights Act and with all requirements imposed by or pursuant to the Department's Regulation.

Section 80.4 further provides that "the form of the foregoing Assurance and the extent to which like Assurances will be required of subgrantees, contractors, transferees, successors in interest and other participants," shall be specified by the responsible Department official. Under this authority, HEW Form No. 441 has been specified as the form of Assurance which shall apply to all applications for Federal financial assistance (except for continuing state programs which must meet the requirements of Section 80.4(b) and school districts availing themselves of Section 80.4(c) of the Regulation) submitted to the Department after January 3, 1965; also the circumstances have been specified under which an Applicant shall obtain comparable written Assurances of compliance from its subgrantees, contractors, and transferees. (See answers to Questions 11 and 12 below in this regard.)

HEW Form No. 441 constitutes a legally enforceable agreement to comply with Title VI of the Civil Rights Act of 1964, and with all requirements imposed by or pursuant to the Regulation of the Department of Health, Education, and Welfare issued thereunder. Applicants are urged to read the Department's Regulation before executing the Assurance.

The following explanation of the requirements of the Department's Regulation and the examples of the kinds of discriminatory practices prohibited by them are for the guidance of the Applicants.

1. *By executing the Assurance (HEW Form No. 441), what does an Applicant agree to do?*

A. The Applicant agrees to make no distinction on the ground of race, color, or national origin in providing to individuals any service, financial aid, or other benefit under any program receiving Federal financial assistance extended to the Applicant by the Department.

2. *What is meant by "distinction on the ground of race, color, or national origin"?*

A. "Distinction on the ground of race, color, or national origin" includes (1) any type of segregation, separate or different treatment, or other discrimination on that ground; (2) the imposition of any admission, enrollment quota, eligibility, or other requirement or condition which individuals must meet in order to be provided any service, financial aid, or other benefit under a program or to be afforded an opportunity to participate in a program, if the race, color, or national origin of individuals is considered in determining whether they meet any such requirement or condition; (3) the use of membership in a group as a basis for the selection of individuals for any purpose, if in selecting members of the group there is discrimination on the ground of race, color, or national origin; and (4) the assignment of personnel to provide services, or the assignment of times or places for the provision of services, on the basis of the race, color, or national origin of the individuals to be served. It does not, however, include distinctions on the ground of race, color, or national origin determined by the responsible Department official to be necessary to the conduct of research or experimental programs having as their primary objective the discovery of new knowledge concerning special characteristics of particular racial or other ethnic groups.

3. *What is meant by "service, financial aid, or other benefit"?*

A. "Service, financial aid, or other benefit" under a program receiving Federal financial assistance includes any education or training, any evaluation, guidance, counseling, or placement service, any health, welfare, rehabilitation, housing, or recreational service, any referral of individuals for any of the foregoing services, any scholarship, fellowship or traineeship stipend or allowance, and any loan or other financial assistance or benefit (whether in cash or in kind), which is made available to individuals (1) with the aid of Federal financial assistance, or (2) with the aid of the Applicant's or of other non-Federal funds required to be made available for the program as a condition to the receipt of Federal financial assistance, or (3) in or through a facility provided with the aid of Federal financial assistance or the non-Federal matching funds referred to in (2).

4. *What requirements are placed on the use of facilities?*

A. The Applicant agrees to make no distinction on the ground of race, color, or national origin in making available to individuals the use of any land, building, equipment, or other facility leased, acquired, constructed, improved, or equipped with the aid of Federal financial assistance extended to the Applicant by the Department, including—

(*a*) the use of any room, dormitory, ward, or other space in the facility;

(*b*) the use of any equipment in the facility;

(*c*) the use of any office, waiting room, restroom, eating, recreational, concession, or other accommodation or convenience provided in the facility;

(*d*) the use of any facility not provided with the aid of Federal financial assistance if the availability of such facility is required as a condition to the receipt of Federal financial assistance for the Federally-assisted facility.

5. *What requirements are placed on the opportunities to participate in a program receiving Federal assistance?*

A. The Applicant agrees to make no distinction on the ground of race, color, or national origin in affording opportunities to individuals to participate (other than as employees) in any program receiving Federal financial assistance extended by the Department to the Applicant, including opportunities to participate—

(*a*) as providers of any service, financial aid, or other benefit to individuals under the program (e.g., as physicians, surgeons, dentists, or other professional practitioners seeking the privilege of practicing in a Federally-aided hospital or other facility),

(*b*) as conferees, observers, consultants, or advisers, or as members of advisory or planning groups, or

(*c*) as volunteers (e.g., as voluntary workers, or as patients or other subjects of study or experimentation in research, survey, demonstration, or like programs).

6. *Does that mean that an Applicant who signs the Department's Assurance may nevertheless make distinctions among his employees on the basis of race, color, or national origin?*

A. Title VI of the Civil Rights Act does not concern itself with employment practices except where a primary objective of the Federal financial assistance is to provide employment. Thus, where a basic objective of the program is to provide employment, the Applicant's employment practices are subject to the Department's Regulation. However, even where this is not the case an Applicant may be precluded from engaging in any discriminatory employment practices under the provisions of Title VII of the Civil Rights Act, Executive Orders 10925 and 11114, and the Merit System Regulations.

7. *When an Applicant's employment practices are covered by the Department's Regulation, what requirements must be met?*

A. The Applicant agrees to make no distinction on the ground of race, color, or national origin in its employment practices (including recruitment or recruitment advertising, hiring, layoff or termination, upgrading, demotion, or transfer, rates of pay or other forms of compensation, and use of facilities) with respect to individuals seeking employment or employed under any program receiving Federal financial assistance extended to the Applicant by the Department, in those programs where a primary objective of the Federal financial assistance is to provide employment to such individuals. This includes programs under which the employment is provided—

(*a*) as a means of extending financial assistance to students or to needy persons,

(*b*) to students, fellows, interns, residents, or others in training for related employment (including research associates or assistants in training for research work), or

(*c*) to reduce unemployment or to provide remunerative activity to individuals who because of severe handicaps cannot be readily absorbed in the competitive labor market.

8. *What effect will the Regulation have on a college or university's admission practices or other practices related to the treatment of students?*

A. An institution of higher education which applies for any Federal financial assistance of any kind must agree that it will make no distinction on the ground of race, color, or national origin in the admission practices or any other practices of the institution relating to the treatment of students.

(*a*) "Student" includes any undergraduate, graduate, professional, or postgraduate student, fellow, intern, student, or other trainee receiving education or training from the institution.

(*b*) "Admission practices" include recruiting and promotional activities, application requirements, eligibility conditions, qualifications, preferences, or quotas used in selecting individuals for admission to the institution, or any program of the institution, as students.

(*c*) "Other practices relating to the treatment of students" include the affording to students of opportunities to participate in any educational, research, cultural, athletic, recreational, social, or other program or activity; the performance evaluation, discipline, counseling of students; making available to students any housing, eating, health, or recreational service; affording work opportunities, or scholarship, loan or other financial assistance to students; and making available for the use of students any building, room, space, materials, equipment, or other facility or property.

9. *Does the Assurance of nondiscrimination apply to the entire operation of an institution?*

A. Insofar as the Assurance given by the Applicant relates to the admission or other treatment of individuals as students, patients, or clients of an institution of higher education, a school, hospital, nursing home, center, or other institution owned or operated by the Applicant, or to the opportunity to participate in the provision of services, financial aid, or other benefits to such individuals, the Assurance applies to the entire institution. In the case of a public school system the Assurance would be applicable to all of the elementary or secondary schools operated by the Applicant.

10. *What about a university which operates several campuses?*

A. Section 80.4(d)(2) of the Regulation provides for a more limited Assurance only where an institution can demonstrate that the practices in part of its operation in no way affect its practice in the program for which it seeks Federal funds. This would be a rare case.

11. *If an Applicant intends to make use of other individuals to help carry out the Federally-assisted program, does the requirement not to discriminate apply to such a subgrantee or contractor?*

A. It does. The Applicant must require any individual, organization, or other entity which it utilizes, to which it subgrants, or with which it contracts or otherwise arranges to provide services, financial aid, or other benefits under, or to assist it in the conduct of, any program receiving Federal financial assistance extended to the Applicant by the Department, or with which it contracts or otherwise arranges for the use of any facility provided with the aid of Federal financial assistance for a purpose for which the Federal financial assistance was extended, to comply fully with Title VI of the Civil Rights Act of 1964 and the Regulation of the Department of Health, Education, and Welfare issued thereunder.

12. *Must this Assurance of nondiscrimination by the subgrantee, etc., be in writing?*

A. In the case (1) of any contractual or other arrangement with another such individual or entity which will continue for an indefinite period or for a period of more than three months, (2) of any subgrant, or (3) of any conveyance, lease, or other transfer of any real property or structures thereon provided with the aid of Federal financial assistance extended to the Applicant by the Department, the Applicant shall obtain from such other person, subgrantee, or transferee, an agreement, in writing, enforceable by the Applicant and by the United States, that such other individual or entity, subgrantee, or transferee will carry out its functions under such subgrant, or contractual or other arrangement, or will use the transferred property, as the case may be, in accordance with Title VI of the Act and the Regulation will otherwise comply herewith.

13. *What obligations does the Applicant have to inform beneficiaries, participants, and others of the provisions of the Regulation?*

A. The Applicant must make available to beneficiaries, participants, and other interested persons information regarding the provisions of the Regulation and protections against discrimination provided under Title VI of the Civil Rights Act. The Department will issue shortly more detailed instructions on carrying out this phase of the Regulation.

14. *What obligations does the Applicant have to keep records and to make them available to the Department?*

A. From time to time, Applicants may be required to submit reports to the Department, and the Regulation provides that the facilities of the Applicant and all records, books, accounts, and other sources of information pertinent to the Applicant's compliance with the Regulation be made available for inspection during normal business hours on request of an officer or employee of the Department specifically authorized to make such inspections. More detailed instructions in this regard will also be forthcoming from the Department in the near future.

15. *Must separate Assurance forms be filed with each application?*

A. As a general rule once a valid Assurance is given it will apply to any further application as long as there is no indication of a failure to comply.

FORM APPROVED
OMB NO. 68-R1143

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

IDENTIFICATION NUMBER *(If known)*

PROTECTION OF HUMAN SUBJECTS CERTIFICATION

☐ Contract ☐ New
☐ Grant ☐ Renewal
☐ Fellowship ☐ Continuation

STATEMENT OF POLICY. Safeguarding the rights and welfare of human subjects involved in activities supported by grants or contracts from the DHEW is the responsibility of the institution which receives or is accountable to the DHEW for the funds awarded for the support of the activity. In order to provide for the adequate discharge of this institutional responsibility, it is the policy of the Department that no grant or contract for an activity involving human subjects shall be made unless the application for such support has been reviewed and approved by an appropriate institutional committee. (Reference: "Institutional Guide to DHEW Policy on the Protection of Human Subjects.")

1. TITLE OF PROPOSAL

2. PROJECT DIRECTOR, PROGRAM DIRECTOR, FELLOW

POSITION TITLE

3. INSTITUTIONAL COMPONENT OR DEPARTMENT

4. CHECK ONE OF THE FOLLOWING STATEMENTS AS APPLICABLE:

☐ A. This application does not propose any activities that would involve human beings who might be considered subjects, human material, or personal data from primary or secondary sources.

☐ B. This is to CERTIFY that this application which does propose activities involving human subjects has been reviewed and approved by our institutional committee on the date of in accordance with the DHEW policy and the institutional assurance on file with the DHEW. (The review date should be recent; certification is invalid if review date would precede award date by more than one year.)

☐ C. This is to CERTIFY that this application which proposes to involve human subjects is pending review on the date of in accordance with the DHEW policy and the institutional assurance on file with the DHEW. If the committee does not review and approve the proposal by or on the date certified, the agency office requesting this certification will be notified immediately by telephone, telegraph, or mail. (Review date should precede requested or planned date of award by at least one month whenever possible.)

☐ D. This application proposes to involve human subjects. This institution does not now have an active assurance on file with the DHEW. I understand that information on the assurance procedure will be received should the application become eligible for an award.

5. SIGNATURE OF INSTITUTIONAL OFFICIAL AUTHORIZED TO SIGN PROPOSALS

DATE

6. TITLE

TELEPHONE NO. *(Code, No., Extension)*

7. NAME AND ADDRESS OF INSTITUTION *(Street, City, State, ZIP code)*

NOTE TO AGENCY: This form should NOT be included with application forms that have provision for human subject certification. It may be used to request certification, or correction of certification.

HEW 596 (Formerly NIH 1611)
8-72

ENCLOSE THIS FORM WITH THE PROPOSAL OR RETURN IT TO THE AGENCY REQUESTING ITS COMPLETION

EXHIBIT 6-10

HCEEP PROGRESS REPORT

AND

FINANCIAL STATUS REPORT (HEW-601T)

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

TO : Project Directors, Handicapped Children's Early Education Program

DATE: June, 1975

FROM : Jane DeWeerd

SUBJECT: Progress Report Instructions

Recently you received a copy of the progress report form as revised by the Forms Clearance Office of O.E. The purpose of this memo is to provide clarification of the instructions. The financial status report is to be submitted to this address rather than to our office:

Education for the Handicapped
Grant and Procurement Management Division
U. S. Office of Education
400 Maryland Avenue, S. W.
Washington, D. C. 20202

Please send the original and 2 copies of the financial report and the Progress Performance Report to that address.

If you have questions concerning the financial status report, please address them to the Grant and Procurement Management Division. The phone number is 245-2392. Please cite your CSG number if you call.

The progress report, Program Performance Report, should be submitted to our office by August 15 at the latest. Please send three copies to:

Handicapped Children's Early Education Program
U. S. Office of Education
400 Maryland Avenue, S. W.
Washington, D. C. 20202
ATTENTION: Mr. Terry Berkeley

The progress report provides very useful information to assist us in monitoring progress, reporting accomplishments to the Congress and Office of Management and Budget, and preparing realistic projections of accomplishments when budget requests are made for the program. The information in the progress reports helps us determine the impact of the program and recommend strategies for the allocation of funds available to the program. It is important that the information contained in the progress reports be accurate, so that it could be verified.

It will be helpful to have numerical data which can be summed across projects whenever possible. This can be augmented with narrative informat

The instructions for Part II (Accomplishment Reporting) ask you to refer to your current proposal and discuss accomplishments with reference to the objectives. The instructions ask that any slippages from the objectives be explained. If the number of children served varied significantly from the projection in your application, for instance, please state the reason. If activities are behind the projected timetable, please explain. Likewise, if the project has more than met the objectives in the proposal, please indicate this.

The topics to be discussed are listed under part II, A.

(1) DIRECT AND SUPPLEMENTARY SERVICES FOR CHILDREN:

The number of children enrolled in the project and receiving direct services is to be entered on the table in Part III. (Item 12 asks for children from the number listed above who have more than one handicap, but were listed in the table by their primary handicap.)

NOTE: Projects in the outreach phase are requested to use Table II to give the number of children being served by continuation funds from other agencies, not by project funds for outreach.

Please indicate the extent of the direct service, and the type provided. For instance, 24 children in home-based program, 2 hours once a week with parent follow up daily; 10 children in two groups 3 hours daily in a classroom setting.

The supplementary services for the children listed as receiving direct services should be indicated (e.g. 5 children received physical therapy weekly for one hour).

Both demonstration and outreach projects are requested to indicate how many children were screened during the year by the project. If the exact number is not known, please write "estimate" and give the number.

(2) PARENT/FAMILY PARTICIPATION:

Give the number of parents served this year and indicate how they were served. Please attach as Appendix I evidence you may have collected on the effectiveness of the parent participation component. (e.g., parent attitude changes toward their handicapped children, increased information in the areas of child development and special education, increased confidence and involvement in the community, etc.)

(3) ASSESSMENT OF CHILD PROGRESS

State the goals for your project in terms of child functioning as given in your proposal and describe how progress was assessed. Show the extent to which the general goal was met. In Appendix II provide evidence of c progress, for groups of children rather than on an individual basis.

(4) INSERVICE TRAINING FOR PROJECT STAFF

Describe the inservice training, extent and type (how often, how long t sessions were, format, as workshop, demonstration/lecture by consultant etc.) participants and evaluation procedures used.

(5) TRAINING FOR PERSONNEL FROM OTHER PROGRAMS OR AGENCIES

If training was provided for personnel of other agencies, describe the training, list agencies involved, numbers and type of trainees and hours of training received, with topics. State what procedures were used to evaluate effectiveness of the training.

(6) DEMONSTRATION AND DISSEMINATION ACTIVITIES

Indicate the number of visitors to the project, or give your best estimate marked "estimate". Describe your demonstration and dissemination efforts, quantified where possible.

(7) COORDINATION WITH OTHER AGENCIES

Describe coordination with the public schools during this report year, and with other appropriate agencies. Describe cooperative activities w other agencies and any joint referral, resource sharing or other activi

(8) CONTINUATION AND REPLICATION

Give the status of continuation for your project (source and number of ren served under continuation) in brief. If any additional continuatio resources have been added during this report period, please note.

Describe the activities undertaken this year to work for stimulation of programming based upon your project. Indicate the results of these eff

TABLE IB

The number of children directly served by the project has already been provided, in Table IA. Both demonstration and outreach projects are requested to complete Table IB. The first item asks for new services for handicapped children which were developed as a result of the project's activity in terms of numbers of children who were not previously receiving appropriate services. This would include children in projects replicating your model or providing services based upon your model or instituted as a result of aid from your project.

The services would not have to be duplications of your model's services, but would also include services initiated because of the example or aid of your project, or because of the inspiration of the stimulation provide by seeing your project work effectively with young children. As Appendix III please attach a list of places, with addresses, which are included in the impact covered by item 1. Please mark with an asterisk those program which are replicating your model in essential particulars (using your curriculum materials as their major materials as a minimum).

In order to be included here, the agency or program helped or inspired to provide the services must regard itself as having provided the service as a result of your project's assistance or example.

Children receiving improved or augmented services would be counted in item 2. The program serving the children must regard the improvement or addition to their programming as resulting from the assistance or example of your project.

A program which was already serving children but now has added a component such as parent participation as a result of contact with your project would be counted in item 2.

TABLE IC

Please note that this section refers to children who have "graduated" from the project during this report year.

TABLE ID

For the last item, please indicate whether the information which is available to you on the maintenance of placement in the mainstream of children who have graduated throughout the period the project has been funded is complete or partial information. (You have not been required to collect this information, but if you have done so, it is very helpful to us in providing evidence of the value of early intervention.)

Supporting Statement
for
Financial Status Report and Performance Report
for Bureau of Education for the Handicapped Program, 13.444
Handicapped Children's Early Education Program

N. E.

General Instructions

The material in the General Instructions is self-explanatory.

Financial Status Report

The Financial Status Report for this program is the form prescribed in Exhibit E-1 of Attachment E to OMB Circular No. A-102.

The instructions for preparation of the Financial Status Report are supplemented in accordance with the instructions contained in Matthias Lasker's memorandum of May 3, 1974.

Performance Report

The Performance Report for the above program is prescribed in accordance with Attachment I to OMB Circular No. A-102. This program is experimental in nature, and is attempting to determine the most effective approaches to educating handicapped children. The requested data on grantee performance is required for planning of future year activities. Copy of the approved A-102 application is attached for reference purposes.

Part I

1-5. These are identification items which are required to identify the particular report being submitted and are self-explanatory.

Part II

The information and analyses required under this part are in accordance with the instructions contained in paragraph 3 of Attachment I to OMB Circular No. A-102; i.e., accomplishments, slippages in terms of material presented in the application. Section B of this Part II requests material in response to paragraph 3a of Attachment I. The other two points in Section B are self-explanatory.

Part III

The plan data for the tables found in Part III was completed for the application. Grantees who had such activities are requested to complete the tables in terms of actual performance and to explain any differences in the Table IA data which amounts to more than 10 percent.

Bureau of Education for the Handicapped
Instructions for Financial and Performance Reporting
for
Handicapped Children's Early Education Program

GENERAL INSTRUCTIONS

These instructions shall be used to prepare the Financial-Status Report and the Performance Report for the Office of Education's Handicapped Children's Early Education Program (Catalog of Federal Domestic Assistance Number 13.444).

Both the Financial Status Report and the Performance Report must be submitted annually not later than 90 days after the close of the grant award period. Forward the original and two copies of each report to:

Education for the Handicapped
Grant and Procurement Management Division
U.S. Office of Education
400 Maryland Avenue, SW.
Washington, D.C. 20202

FINANCIAL STATUS REPORT
for
Handicapped Children's Early Education Program

The following are explanatory remarks for certain items found in the standard instructions for the Financial Status Report (copies enclosed):

Item 1 — Enter "USOE (Handicapped — Early Childhood)."

Item 2 — Enter your grant number.

Item 4 — If your organization has been assigned a DHEW entity number consisting of the IRS employer identification number prefixed by "1" and suffixed by a two-digit number, enter the full DHEW entity number rather than the employer identification number assigned by the IRS.

Item 10 — For certain line items, definitions will be found in the OE General Provisions, 45 CFR 100a. 401. Column headings for Item 10 should be the same as those found in your approved application, Section B, Part III. Those projects solely supported for "outreach" activities enter the word "Outreach" as the heading for Column 1 and leave the other columns blank.

BUREAU OF EDUCATION FOR THE HANDICAPPED

Program Performance Report
for
Handicapped Children's Early Education Program

Part I

1. Date of Report: 2. Grant Number:

3. Period of Report: From _____ To _____

4. Grantee Name and Descriptive Name of Project:

5. Certification. I certify that to the best of my knowledge and belief this report (consisting of this and subsequent pages and attachments) is correct and complete in all respects, except as may be specifically noted herein.

_____

_____

Typed Name and Signature of
Project Director(s) or
Principal Investigator(s)

Part II
"Accomplishment" Reporting

A. All grantees except those supported solely for "Outreach" activities are to follow the organization of categories listed below in presenting their performance reports. The categories are based on activities common to all Early Childhood projects with the exceptions noted above for projects solely supported for outreach activities.

(1) Direct and Supplementary Services for Children's Services
(2) Parent/Family Participation
(3) Assessment of Child's Progress
(4) Inservice Training for Project Staff
(5) Training for Personnel from other Programs or Agencies
(6) Demonstration and Dissemination Activities
(7) Coordination with other Agencies
(8) Continuation and Replication

For each of the above activities discuss the objectives and subobjectives presented in the approved application (in narrative format) in terms of:

(a) Accomplishments and milestones met.

(b) Slippages in attainment and reasons for the slippages.

Refer back to your application and utilize your quantitative quarterly projections, scheduled chronological order and target dates, and data collected and maintained as well as criteria and methodologies used to evaluate results for (a) and (b). In discussing training for personnel from other programs include descriptions of types of training, institutions or organizations involved, and numbers of trainees and hours of training received. Also highlight those phases of the plans of action presented in your application that proved most successful, as well as those that upon implementation did not appear fruitful.

NOTE: "Outreach" grantees are to discuss accomplishments and slippages in terms of replication and stimulation of services, resources provided and field testing and dissemination and training in terms of types of personnel receiving training and the number of hours involved.

Also discuss the following when applicable:

(1) Unanticipated or anticipated spinoff developments (i.e., those which were not part of your originally approved subobjectives, but which are contemplated within the purpose of the Education for the Handicapped legislation, such as new cooperative interagency efforts, a decision by volunteer(s) to pursue a career in special education, new public school policy to integrate handicapped children into regular classrooms, enactment of mandatory or other State legislation affecting early education, relevant new course offering at universities, etc.).

(2) Where outputs are quantified in response to any portion of Part II, relate quantifications to cost data for computation of unit costs. Analyze and explain high-cost units.

(3) Indicate other matters which you would like OE to know about (e.g., community response to the project, matters concerning the project's working relationship with OE, technical assistance of OE staff, or any other relevant subject).

Part III

All grantees except those solely for "outreach" activities must respond to the attached tables.

Table IA

Enter actual performance data for this report period into the appropriate boxes. Use age as of the time of the original application, or the continuation application, whichever is later. On lines above line 11, count multihandicapped individuals only once, by primary handicapping condition, and indicate the number of multihandicapped in line 12. Data for lines 1 through 11 are for those directly served; i.e., services to those enrolled or receiving major services, and not those merely screened, referred or given minimal or occasional services.

	TYPE OF HANDICAP	NUMBER OF HANDICAPPED SERVED BY AGE					
		AGES 0-2	AGES 3-5	AGES 6-9	AGES 10-12	AGES 13-18	A
1.	Trainable Mentally Retarded						
2.	Educable Mentally Retarded						
3.	Specific Learning Disabilities						
4.	Deaf-Blind						
5.	Deaf/Hard of Hearing						
6.	Visually Handicapped						
7.	Seriously Emotionally Disturbed						
8.	Speech Impaired						
9.	Other Health Impaired						
10.	Crippled						
11.	TOTAL						
12.	Multihandicapped in line 11						

If the data in the above table differ by more than 10 percent from the data originally presented in your approved application, please explain the differences.

Table IB

Number of Handicapped Children Receiving Service

Number of handicapped children receiving service not previously available in programs developed as a result of your projects example and/or assistance. Known _____ Estimated _____

Number of handicapped children (not counted above) receiving improved or augmented services through major improvements, modifications or additions traceable to the example and/or assistance of your project. Known _____ Estimated _____

Table IC

Placement of Children Participating in Early Childhood Program During Reporting Period

Indicate the placement of children who left your project during the year covered by this report period.
Note: Count each child only once by primary type of placement below.

Type of Placement	Number of Children	
	Full-time	Part-time
Integrated placement (i.e., in regular programs with children who are not handicapped)		
Nursery schools		
Day-care programs		
Head Start		
Pre-kindergarten		
Kindergarten		
Primary grade		
First		
Second		
Other		
Special education placement (i.e., in classes only for handicapped children but situated in regular private or public school)		
Pre-kindergarten		
Kindergarten		
Primary grades		
First		
Second		
Other		
Institutional Placement		
Scheduled to remain in Early Childhood Program in coming year		
Other (specify) _____		
_____		

Table ID

Cumulative number of children entered into integrated placement (if known) prior to this report period	No. _____
Estimated retention rate of cumulative number in integrated placement	_____ %

INSTRUCTIONS FOR PREPARING THE FINANCIAL STATUS REPORT

Item 1 – Enter the name of the Federal grantor agency and organizational element to which this report is submitted.

Item 2 – Enter the grant number or other identifying number assigned by the Federal grantor agency.

Item 3 – Enter the name and complete mailing address, including the ZIP code for the grantee organization.

Item 4 – Enter the employer identification number assigned by the U.S. Internal Revenue Service.

Item 5 – This space is reserved for an account number or other identifying numbers which may be assigned by the grantee.

Items 6 and 7 – Mark the appropriate boxes.

Item 8 – Enter the month, day, and year of the beginning and ending of this project period. For formula grants which are not awarded on a project basis, show the grant period.

Item 9 – Enter the month, day, and year of the beginning and ending dates of the period for which this report is prepared. The frequency of the report will be established by the Federal grantor agency.

PLEASE READ BEFORE COMPLETING ITEM 10 – The purpose of vertical Columns (1) through (6) is to provide financial data for each program, function, and activity in the budget as approved by the Federal grantor agency. If additional columns are needed, use as many additional forms as needed and mark *"continuation"* on each form; however, the summary totals of all programs, functions or activities should be shown in the *"total"* Column of the first page.

For grants pertaining to a single Federal grant program (catalog number) or several grant programs which do not require a functional or activity classification, enter under Columns (1) through (6) the title of the program(s). For grants pertaining to multiple programs where one or more programs require a further breakdown by function or activity, use a separate form for each program showing the applicable functions or activities in separate columns. For grants containing several functions or activities which are funded from several programs, prepare a separate form for each activity or function when requested by the Federal grantor agency.

Item 10 – STATUS OF FUNDS

Line a. Enter the total outlays reported on Line 10e of the last report. Show zero, if this is the initial report.

Line b. Enter the total gross program outlays for this report period, including disbursements of cash realized as program income. For reports which are prepared on a cash basis, outlays are the sum of actual cash disbursements for goods and services, the amount of indirect expense charged, the value of in-kind contributions applied, and the amount of cash advances and payments made to contractors and subgrantees. For reports prepared on an accrued expenditure basis, outlays are the sum of actual cash disbursements, the amount of indirect expense incurred, the value of in-kind contributions applied, and the net increase (or decrease) in the amounts owed by the grantee for goods and other property received and for services performed by employees, contractors, subgrantees, and other payees.

Line c. Enter the amount of all program income realized in this period which is to be used in the project or program in accordance with the terms of the grant. For reports prepared on a cash basis, enter the amount of cash income received during the reporting period. For reports prepared on an accrual basis, enter the amount of the net increase (or decrease) in the amount of accrued income since the beginning of the report period.

Line d. This amount should be the difference between amounts shown on Lines b and c.

Line e. Enter the sum of amounts shown on Lines a and d above.

Line f. Enter the amount pertaining to the non-Federal share of program outlays included in the amount on Line e.

Line g. Enter the Federal share of program outlays. The amount should be the difference between Lines e and f.

Line h. When the report is prepared on a cash basis, enter the total amount of unpaid obligations for this project or program including unpaid obligations to subgrantees. If the report is prepared on an accrued expenditure basis, enter the amount of undelivered orders and other outstanding obligations. Do not include any amounts that have been included on Lines a through g. On the final report, Line h should have a zero balance.

Line i. Enter the non-Federal share of unpaid obligations shown on Line h.

Line j. Enter the Federal share of unpaid obligations shown on Line h. The amount shown on this line should be the difference between the amounts on Lines h and i.

Line k. Enter the sum of the amounts shown on Lines g and j. If the report is final, the report should not contain any unpaid obligations.

Item l – Enter the total cumulative amount of Federal funds authorized.

Line m. Enter the unobligated balance of Federal funds. This amount should be the difference between Lines k and l.

Item 11 – INDIRECT EXPENSE

a. Type of rate – Mark the appropriate box.

b. Rate – Enter the rate in effect during the reporting period.

c. Base – Enter the amount of the base to which the rate was applied.

d. Total Amount – Enter the total amount of indirect cost charged during the report period.

e. Federal Share – Enter the amount of the Federal share charged during the report period.

If more than one rate was applied during the project period, include a separate schedule which shows the bases against which the indirect cost rates were applied, the respective indirect rates, the month, day, and year the indirect rates were in effect, amounts of indirect expense charged to the project, and the Federal share of indirect expense charged to the project to date. (See Office of Management and Budget Circular No. A-87 which contains principles for determining allowable costs of grants and contracts with State and local governments.)

Item 12 – Space is provided for any explanation deemed necessary by the grantee or for the provision of information required by the Federal grantor agencies in compliance with the governing legislation.

Item 13 – Complete the certification before submitting this report.

CHAPTER VII SUMMARY OF PRINCIPAL RESULTS AND CONCLUSIONS

In this chapter, principal results of the evaluation are summarized and conclusions are presented based on these results. Results and conclusions are presented first for program impact on child growth, followed by results and conclusions associated with the project-based measures. Following the statement of each of the principal conclusions drawn, reference is made (in parentheses) to the specific pages on which the related results are discussed in further detail.

It should be stated again that, because of the relatively small sample of children and HCEEP projects, the definitiveness of several analysis results and associated conclusions is reduced. Further, the small sample sizes precluded more complex analyses that would take into account additional variables in an effort to infer program effects. Finally, because of the relatively low incidence of the more severe handicapping conditions in the projects sampled and in the sample of children, results and conclusions drawn should not be generalized to these groups.

Program Impact on Child Growth

Overall Program Impact

(1) The Handicapped Children's Early Education Program (HCEEP) appears to have a beneficial effect in four of the five growth areas measured by the CEEDI (Personal-Social, Adaptive, Cognitive, and Communication). For the Motor Skills area, the HCEEP may have some beneficial effect, but the impact observed was statistically significant in only one of the two overall analyses. (V-3 to V-11;*

(2) The greatest program impact appears to be in the Personal-Social domain. In this domain, the average gain in test scores from pretest to posttest was almost 2-1/2 times greater than would be expected by age change alone in the absence of project experiences.

For the Adaptive, Cognitive, and Communication areas, the average gain from pretest to posttest was slightly more than 1-1/2 times the expected gain. For the Motor Skills area, the average gain from pretest to posttest was 1.2 times greater than expected on the basis of age change alone. (V-10, V-11)

Impact for Each Handicapping Condition

(1) For each of the six** handicapping conditions investigated, the sample data showed a positive HCEEP impact for each of the five growth areas measured. Thirteen (about half) of these 30 possible impacts (six handicapping conditions with five growth measures for each) were statistically significant. (V-12 to V-16)

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* Each principal conclusion is cross-referenced to the particular page(s) on which the results were detailed.

** Educable Mentally Retarded, Trainable Mentally Retarded, Learning Disabled, Emotionally Disturbed, Speech Impaired, and Hard of Hearing.

(2) For five of the six handicapping conditions investigated (Educable Mentally Retarded, Learning Disabled, Emotionally Disturbed, Speech Impaired, and Hard of Hearing), there was a statistically significant positive HCEEP impact in at least one of the five growth areas measured. For the Trainable Mentally Retarded, the sample data showed a positive impact in each of the five growth areas (with relatively large observed impacts in the Personal-Social, Adaptive, and Communication areas), although none of these five positive impacts were statistically significant. (V-12 to V-16)

(3) For the Educable Mentally Retarded, all of the growth areas measured, except Motor skills, showed a statistically significant positive HCEEP impact. For Learning Disabled, Emotionally Disturbed, and Speech Impaired children, 2-3 of the growth areas showed a statistically significant positive impact (Personal-Social and Adaptive for the Learning Disabled; Personal-Social, Communication, and Motor for the Emotionally Disturbed; and Personal Social, Adaptive, and Motor for the Speech Impaired). For the Hard of Hearing the single statistically significant positive impact occurred in the Communication area. (V-12 to V-16)

(4) Although only about half of the 30 possible impact for the various handicapping conditions and growth areas were statistically significant, all 30 observed sample impacts were positive for the six handicapping conditions, as indicated previously. Further, as indicated in the results section of this report, there is a consistent tendency to obtain statistically significant positive impacts in other sub-analyses when the sample size for a particular sub-analysis exceeds on the order of 80 cases, for all domains except the Motor Skills area. Consequently, it would appear that there would have been a larger number of statistically significant impacts had the sample sizes been larger for each handicapping condition. For example, in considering the Hard of Hearing, other analysis with larger sample size indicate a positive impact in all areas except Motor Skills for children receiving speech and hearing therapy. Since speech and hearing therapy is of major importance for the Hard of Hearing, it would

seem that more statistically significant positive impacts would have occurred for these children had the sample been larger than 12 Hard of Hearing individuals. Finally, in the Personal-Social and Adaptive domain, the observed positive impacts always appear to be appreciable for each of the six handicapping conditions, with the actual pre-post gain being at least 1-1/2 times the gain expected by maturation alone, and often twice as great. Consequently, it would appears reasonable to conclude that the HCEEP program has a beneficial effect for each of the six handicapping conditions investigated, with the HCEEP probably benefically impacting the Personal-Social and Adaptive areas in all cases, with positive impacts in other domains depending on the particular handicapping condition. (V-12 to V-16)

Impact for Other Selected Child Groups

(1) Sex. In comparing program impact for males and females, there appears to be a clear cut and/or appreciable difference only in the Cognitive area, with an indication of a greater program impact for males than for females. (V-20, V-23)

(2) Treatment Length. Although actual treatment length (contact hours) for children was not known, the length of time between pretest and posttest was taken as an indication of treatment length. For the Personal-Social and Adaptive areas, a statistically significant positive impact was observed for both the shorter (4-5 months between pre- and posttest) and the longer (6-7 months between pre- and posttest) treatment lengths. Thus, it appears that these two areas can be beneficially impacted by the HCEEP program with relatively short treatment lengths. However, the data indicate less of an impact in Personal-Social and Adaptive behavior for the longer treatment length. This may indicate a certain amount of "wearing off" of the initial impact in these two areas, or this trend may be due to some unknown systematic difference between the shorter and longer treatment length groups.

For the Cognitive and Communication domains, there is no statistically significant impact for the shorter treatment length (although the observed sample impact is positive), but there is a statistically significant impact for the longer treatment length in both of these areas.

The above findings appear to be consistent with the general operation of HCEEP programs; i.e., the initial focus upon entry of a child on Personal-Social realations and Adaptive skills, a necessary focus before efforts can be initiated for improvements in the Cognitive and Communications areas. In conclusion, these findings indicate that at least 1/2 year of program experience is required to benefically impact Cognitive and Communication skills, and also that attention should be given to maintaining earlier improvements achieved for a child in the Personal-Social and Adaptive areas. (V-25, V-26)

(3) Entry Age. Older children at entry (above the sample median of 49 months appear to benefit more from project experiences than younger children, in the Adaptive domain. In the Communication domain, the reverse trend is indicated. In the other three domains, there appears to be no such clear cut and/or appreciable difference between older and younger children. (V-20, V-24)

Impact for Selected Project Types

(1) Home vs. Center-Based Programs. Center-based programs reveal only one statistically significant impact, in the Personal-Social domain. Home-based programs, on the other hand, show four statistically significant positive impacts, in the Personal-Social, Adaptive, Cognitive, and Communication areas. Moreover, for each of the five growth domains, the observed sample impact for the Home-based programs is greater than the impact for the Center-based programs, although the impact is positive in each domain for both the Home and Center-based programs.

Thus, it would appear that the Home-based programs are more effective than the Center-based programs, with a definite beneficial impact in all but the Motor Skills area, and with a definite impact for the Center-based programs in the Personal-Social area only. Because of the nature of Home-based programs, it is likely that the children of Home-based programs are receiving more individual attention and more hours of instruction, which may very well account for the difference in impact between the Home and Center-based programs. (V-42, V-44)

(2) Curriculum. Programs with a structured curriculum appear to have a greater beneficial impact than programs not reporting a structured curriculum. For programs reporting a structured curriculum, all domains except Motor Skills show a statistically significant program impact, whereas the programs not reporting a structured curriculum, only the Personal-Social and Communication areas show a positive impact. Also, in terms of observed sample impacts, programs with a structured curriculum show a greater impact in all domains except Personal-Social, where the observed impact is essentially the same for structured vs. unstructured.

(3) Project Model. In contrasting projects reporting reliance on an underlying developmental model vs. projects not reporting use of an underlying model, there appears to be no consistent difference in impact for these two types of programs. Thus, in the Personal-Social area, both types of programs show a statistically significant impact, but with the programs using a curriculum model showing a greater impact than programs not using a model. In the Adaptive and Cognitive areas, programs not using a model show a statistically significant impact, whereas the programs using a model show less of an impact which is also not statistically significant. In the Communication domain, programs using a model have a greater impact, and this impact is statistically significant; in the Motor Skills area, both types of programs show a small and non-statistically significant impact. (V-42, V-45)

(4) Project Costs. For each of the five domains, the observed sample impact is greater for the medium cost programs ($942 per child to $1,340 per child) than for either lower or higher cost programs (lower cost programs: $350 to $820 per child; higher cost programs: $1,542 to $4,112 per child). Consequently, it appears doubtful whether the investment represented by the higher cost programs is justified, since, if anything, these may be a smaller program impact for these high cost programs. (V-40, V-41)

(5) Child-Staff Ratio. In the Personal-Social area, the programs with the higher child-staff ratios (8.7 to 15.5 children per contact person) evidence a greater positive impact than programs with medium child staff ratios (4.8 to 6.8 children per contact person), and also a greater positive impact than programs with a relatively low child-staff ratio (2.1 to 4.6 children per contact person). In each of the other four growth domains, the programs with a medium child-staff ratio show a greater positive impact than either the lower or higher child-staff ratio programs. Thus, as is the case with the higher cost programs, it appears doubtful whether the lower child staff ratios are justified. (V-40, V-43)

Impact for Selected Parent Groups

(1) Educational Level of Parents. For the Personal-Social, Adaptive, and Cognitive areas, children with parents of a higher educational level evidence in the sample a greater program impact than children with parents of a lower educational level. However, in no case is the difference in impact between the higher and lower educational level group statistically significant. In the Communication domain, essentially no difference is evident in program impact between these two groups of children; and in the Motor Skills area, each group shows negligible, if any, positive impact. (V-25 to V-28)

(2) Occupational Level of Parents. In contrasting children with parents of higher vs. lower occupational levels, results appear to be mixed. For the Personal-Social area, children with parents of a lower occupational level evidence a somewhat greater program impact than children with parents of a higher occupational level, although this difference in impact is not statistically significant. For the other four domains, the reverse is true, with the higher occupational level group showing a greater impact, although not statistically significant. (V-27 to V-29)

(3) Parent-Program Involvement. For three of the five growth areas (Personal-Social, Adaptive, and Cognitive), children whose parents carry out on a daily basis activities prescribed by the project showed a larger positive impact than children whose parents carry out on a less than daily basis (e.g., once a week) activities prescribed by the project. For the communications area, curiously, the less than daily group shows a greater positive impact. (V-34, V-39)

Reliability and Validity of the CEEDI

The assessment of scale validity and reliability is contained in Appendix I to this report. As elaborated on there, the validity of the five domain scales was addressed by looking at (1) the relationship between the scales' total raw scores and the age of the children, (2) the relationship between the percent of children passing each scale's items (the item difficulties) and the children's age, and (3) the correlations among the five scales. It was expected that total score-age correlations would be fairly high and that the item difficulties would increase from the first to the last item on each scale and decrease with children of increasing age. In addition, it was expected that the correlations among scales would be high, even after partialling out the age of the children. Pretest and posttest data were analyzed separately.

The reliability of each scale was assessed in terms of internal consistency, using Cronbach's Alpha and item-total correlations, and in terms of test-retest correlations. The test-retest reliabilities were only approximated by looking at the correlations between pre- and posttest scores for each scale. Conclusions based upon these analyses are presented below.

(1) Correlations between total raw scores and age in months were uniformly high for each domain on both the pretest and posttest. These correlations ranged between 0.68 and 0.81. The item difficulties showed a general increasing trend from the first to the last items in each scale for all age groups (children were grouped into age categories of one year, e.g., 0-1, 1-2...,7-8). Across age groups the item difficulties decreased with increasing age for almost all items. The correlations among scales, after partialling out age were moderately high, ranging between 0.49 and 0.87, indicating at least that each scale was not just measuring age. Based upon this evidence, it was concluded that the CEEDI--as an experimental measure--shows promise of being a valid measure of child development.

(2) Using Cronbach's Alpha, all five domains on both the pretest and posttest showed evidence of very high internal consistency. This reliability estimate was always at least 0.97. In addition, the item-total correlations were quite substantial. Although ranging between 0.11 and 0.86, at least 60 percent of these correlations were above 0.50 for each domain. As evidence of test-retest reliability, the correlations between pre- and posttest scores ranged between 0.79 and 0.93. With from 4 to 7 months between testing, one might reasonably expect actual test-retest correlations over a period of a few weeks to be quite high. In any case, there appears to be ample reason to consider the CEEDI to be a reliable set of measures.

(3) The CEEDI also appears to provide an adequate range of item difficulties for children less than one year old to eight years old. Only four children obtained a domain total raw score of zero on the pretest, and none did so on the posttest. Similarly, no children obtained perfect scores on either the pre- or posttest.

Verifying Handicapping Conditions and Assessing Service Needs

(1) For over three-quarters (77 percent) of the 141 children pretested with the CEEDI and diagnosed by the Verifying Psychologists, there was agreement between the psychologists and the HCEEP projects as to the primary handicapping conditions of the children. Of the 32 discrepant cases, 19 can be accounted for as differences in emphasis as to primary and secondary conditions, or in degree of severity. This would indicate that there is essential agreement in 90 percent of the diagnoses of handicapping conditions. Thus, the HCEEP projects studied appear to be accurately diagnosing the primary, and concomitant, handicapping conditions of the children participating in the program. (V-50 to V-53)

(2) Alternatively, the Verifying Psychologists detect only 10 children (7 percent) judged to be not handicapped in terms of BEH handicapping condition categories. Five of these 10 children were diagnosed by the HCEEP projects to be not handicapped, but were characterized as needy because of cultural deprivation, economic disadvantage, etc. (not BEH handicaps). This result implies that only a small percentage of children in the HCEEP projects studied are not handicapped, as defined by BEH categories. (V-52)

(3) The analysis of data on children judged to be multiply-handicapped indicates that a group of related handicapping conditions including--Educable Mentally Retarded, Speech Impaired, Learning Disabled, and Emotionally Disturbed--accounts for 45 of 98 (46 percent) judged secondary handicapping conditions. Hence, the bulk of definitional, identification, and diagnosis problems are related to these four handicapping conditions. (V-53 to V-55)

(4) The services judged by the Verifying Psychologists to be most needed by the 141 children studied are: diagnostic/evaluative services, speech therapy, social services, and educational services. For the children judged to be needing of these services, 80 percent were provided speech therapy and 90 percent or more were provided the other three services. Overall 15 service categories studied, 9 services were being provided to 80 percent or more of the children with needs. Therefore, the HCEEP projects studied are providing a broad range of services to a large percentage of children needing these services. (V-55-V-59)

(5) The percentages of children receiving services, across 15 service categories, judged by the psychologist to be not needed ranged from about 4 to 0 percent. Thus, the HCEEP projects studied are, with few exceptions, prudent in the provision of services to only those children needing the services. (V-57)

Parent Involvement

(1) Of 129 parents of HCEEP project children interviewed, 100 (78 percent) reported that the projects prescribed activities to be conducted with their children at home. The emphasis of the prescribed activities was language skills, motor skills, self-help skills, and cognition and attention skills. Ninety-six percent of these parents carried out these home activities, the majority (68 percent) on a daily basis. Ninety-seven percent of the parents reported that the HCEEP projects provided the necessary instruction and materials to conduct the home activities. Thus, the HCEEP projects studied are preparing the majority of parents to work with their children at home on skills development. From the parents' perspective, this is the most important aspect of parental involvement. (V-62, V-63)

(2) Analysis of other parent involvement activities supports the conclusion presented above in that all activities reported by 20 percent or more of the parents dealt with direct child-related matters. Parent participation on other program activities--planning, dissemination, administration, evaluation--was reported by 5 percent or less of the parents interviewed. This result clearly indicates that only a small percentage of parents are involved in program activities not directly child related in the HCEEP projects studied. (V-63, V-64)

(3) Approximately 96 percent of the parents interviewed reported that they had perceived positive changes in the behavior of their children resulting from th HCEEP projects. The parents noted the positive changes most often in the skill areas of language, motor, language, motor, attention, and self-help. These are, of course, the skills which parents reported (see above) most often for the conduct of prescribed home activities. Thus, in the eyes of almost all parents, the HCEEP projects studied are producing positive changes in their children. (V-64, V-65)

(4) Additionally, 80 percent of the parents reported that they had personally benefitted from participation in the HCEEP projects, most reporting knowledge of how to work with their children. Further, most parents (66 percent) believed the HCEEP projects had helped them form realistic expectations for their children's future. Hence, as perceived by parents, the HCEEP projects have provided most parents with the base needed to assist their children after they leave the projects, i.e., how to work with their children and a realistic expectation of progress. (V-65, V-66)

(5) The parents interviewed were well satisfied with services provided (97 percent), project facilities and equipment (87 percent), and qualifications of project staff (97 percent). When asked how HCEEP projects might be changed to better serve children, 36 percent of the parents recommended, for the most part, changes in amount (more) rather than different ways of operating. More than 82 percent of parents perceived the HCEEP projects studied to be operating effectively. No parents perceived the HCEEP projects as unsuccessful in terms of program effectiveness. These results indicate that practically all parents are satisfied with the HCEEP projects studied, that a significant percentage of parents would like more of the same in the way of services, and that the bulk of parents perceive the HCEEP projects studied to be successful in program effectiveness. (V-66)

Cost Analysis

(1) The child-contact staff ratios for 29 HCEEP projects, providing data, ranged from a low of 2.1 to 1, to a high of 15.5 to 1, with a median of 6 to 1. Twenty-five percent of the projects had child-contact staff ratios of 4.1 to 1 or lower. The ratios for these 7 projects appear to be extremely low. These low ratios would be understandable in a hospital setting where the handicaps of the children are severe and/or the children are very young, i.e., infants. (V-69, V-70)

(2) By comparison, the upper 25 percent of the HCEEP projects have child-contact staff ratios ranging from 11.2 to 1, to 15.5 to 1. These ratios are reasonable if the projects have older, preschool children with less severe handicaps, e.g., projects in public school settings dealing with EMR children or home-based projects in which the teacher/therapist visits the home once-a-week. (V-69, V-70)

(3) The cost of contact staff per child for 28 HCEEP projects, providing data, ranged from a low of $353/child to a high of $4,112/child, with a median of approximately $1,000/child. The cost of contact staff per child paralleled, or correlated positively with the contact staff-child ratios for most of the projects. The cost of contact staff per child for the upper 25 percent of the HCEEP projects exceeded approximately $1,782/child. Again, for these 7 HCEEP projects the cost per child appears to be extremely high, with the exception, of course, of projects educating/treating severely handicapped and/or very young children. (V-69 to V-71)

(4) The cost of contact staff per child for the lower 25 percent of the HCEEP projects was less than approximately $720/child. Again, the cost per child for these 7 projects appear reasonable if the projects educate/treat older, preschool children with less severe handicaps, or are home-based projects in which the teacher/therapist visits the home once-a-week. (V-69 to V-71)

(5) The results of the analysis of staff effort by function reveal that the direct time with children functions is only a little over one-fourth (26 percent) of the effort. This percentage of staff effort appears to be proportionately low. On the other hand, the dollar value of free services, contributed volunteer services, to the 28 HCEEP projects is almost a quarter million dollars (average of $9,000 per project). This is a significant contribution of free services. (V-71 to V-75)

Follow-Up of Graduates

(1) For 755 children "graduated" from the 32 HCEEP projects studied between May and August of 1974, the placement setting was known by the projects for 688 children (91 percent). the 688 children were relatively evenly distributed in three types of settings: special education programs, regular school classes with ancillary special education services, and regular school classes with services. Approximately 74 percent of the children were placed in public schools. These results

indicate that the HCEEP projects studied are aware of the placement of the large percentage of their graduates, are placing about two-thirds of their graduates in regular school classes, and place three-quarters of their graduates in public schools. Thus, the HCEEP projects studied are effective in moving their graduates into more advanced educational settings. (V-77 to V-80)

(2) Of the 95 children who were followed-up, teacher/therapists interviewed in the placement setting reported that 89 percent of the children were appropriately placed, i.e., the children had the appropriate skills to enter the class. Also, the teachers/therapists in the placement setting reported that assistance, if needed, was available from the HCEEP projects for 50 percent of the children. For 21 children (22 percent), the teachers/therapists reported need of assistance, but it was not available. These results indicate that the large percentage of graduates are appropriately prepared for placement, that further assistance, if needed, is available for half of the graduates, but that assistance needed for almost one-quarter of the graduates is not available. When teachers/therapists were asked to compare HCEEP graduates with non-handicapped children in their programs on social and cognitive behavior, the HCEEP graduates were judged equal to or at a lower level than the non-handicapped children. However, when the teachers/therapists compared HCEEP graduates with similarly handicapped children who had no HCEEP experience, the HCEEP graduates were judged to be more advanced.* Thus, the HCEEP projects studied appear to have a perceived positive impact on the social and cognitive behavior of their graduates. (V-80 to V-89)

(4) The results obtained with the rating scales of 15 behavioral items of social and cognitive skills (abstracted from the CEEDI), completed by the teachers/therapists in the placement settings for the 95 HCEEP graduates, revealed a plateau in development between ages 5 and 6

* Not all teachers/therapists were able to make this comparison in that in some instances teachers were not familiar with other children having similar handicapping conditions.

years of developmental age. This finding indicates that the behavior items selected for the scale did not adequately cover the developmental ages of 7 and 8 years. Therefore, the scale should be modified to overcome this inadequacy if it is to be used in the future. (V-86 to V-90)

Replication and Dissemination Strategies

Replication

(1) The 32 HCEEP projects studied reported 196 whole or partial replications. Of these, 59 (30 percent) were reported by third-year projects (not yet into the outreach phase) and 137 (70 percent) were reported by fourth, fifth, and sixth-year projects. Three third-year and 1 fourth-year project reported no replications. From the sample of 78 replications programs responding to a mail questionnaire, 22 (28 percent) indicated that they were not replications of the HCEEP projects reporting them as replications. This finding was somewhat substantiated by on-site interviews with 15 replication programs in that 3 replication programs (20 percent) reported that they were not replications of the reporting HCEEP projects. These results indicate that a significant percentage of the whole or partial replications reported by the HCEEP projects studied are not replications. (V-95 to V-97)

(2) Of the substantiated replication programs, the bulk are state education agencies, local education agencies, or Head Start programs. Also, the bulk of the fund for replication programs come from federal sources. Private monies and funds from foundations support a small percentage of substantiated replication programs. (V-97 to V-99)

(3) The major types of contact with 28 HCEEP projects reported by 56 substantiated replication programs were: special materials, e.g., curriculum and diagnostic/evaluation (74 percent), general literature (72 percent), staff orientation (63 percent), and staff in-service training (63 percent). Thus, the HCEEP projects studied are providing general

literature and special materials, and direct contact through staff orientation and in-service to replication programs. Also, the contacts by HCEEP projects with replications average 3 to 4 for periods ranging from one or two hours to 1-1/2 weeks. (V-100 to V-102)

(4) When the 56 substantiated replication programs were compared with the reporting HCEEP projects on aspects of educational program, child population served, and staff characteristics to determine correspondence, slightly more than one-half of the replications programs were determined to correspond, at least partially on education program. The HCEEP projects and replication programs served children with essentially the same handicapping conditions. Ethnic background, and mix of males to females. However, the HCEEP projects tended to serve children with single or special handicapping conditions, or from one ethnic group more often than replication programs. The replication programs had higher child-contact staff ratios than the HCEEP projects and the individual comparisons of replications and HCEEP project ratios indicated little relation. Thus, the HCEEP projects and replication programs correspond moderately on educational programs, correspond well on child populations served, and correspond little on child-staff ratios. (V-102 to V-116)

Dissemination Strategies

(1) The HCEEP projects studied use a wide range of dissemination methods which are apparently in use by the third year of funding. The methods used in descending order use are: brochure (96 percent), slide/audio-slide (96 percent), workshop/conference (93 percent), newspaper (90 percent), speeches (76 percent), publications (74 percent), radio, media (70 percent), video tape (48 percent), and other audio-visual (45 percent). The order in which the methods are developed proceed from inexpensive methods which reach the general public and educational community, to more in-depth, costlier methods which provide for transmission of detailed information to specialized audiences. (V-116 to V-119)

(2) Replication programs that had contact with the HCEEP projects reported that they became aware of the HCEEP projects by personal communication with persons not on the HCEEP project Staff. However, over half of the replication programs reported named the HCEEP project director as the reason for interest. Thus, personal communication by non-project related persons and the HCEEP project director are important links in the dissemination process. (V-119, V-120)

(3) The HCEEP projects did not appear to focus their dissemination activities on selected types of agencies or geographic areas. The types of agencies most frequently focused on were states and local education agencies and Head Start programs. The HCEEP projects focused on other in-state agencies, geographically. (V-120, V-121)