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ABSTRACT

This sixth-year (1986 through 1992) summative evaluation examines in depth the participant attributes, services provided, and longitudinal benefits of the Early Childhood Development programs in the Kansas City, Missouri, school district. The report contains the following: (1) profile of participants in the Parents as Teachers (PAT) and Early Learning Center (ELC) programs since implementation; (2) comparison between the PAT and the statewide Second Wave Study populations; and (3) longitudinal assessments of academic performance of former PAT and ELC students. Following a summary of major findings, the report describes the evaluation of the screening component of the program, which served 7,250 children. Next, evaluation of the Parents as Teachers program is described. The report then describes the Early Learning Center (ELC) program. The report concludes with tabulations of screenings, parent perceptions, PAT enrollment and characteristics, ELC teacher and parent perceptions, and ELC participant characteristics. ELC District locations and ELC child observation record variables are appended. (WP)

Summative Evaluation of the Early Childhood Development Program

1991-1992

Evaluation Office

The School District of Kansas City, Missouri

September 1992

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Summative Evaluation
of the
Early Childhood Development Program

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Sharon L. Newbill
Program Evaluator

September 1992

Evaluation Office
Desegregation Planning Department
The School District of Kansas City, Missouri

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Summative Evaluation
of the
Early Childhood Development Program

Sixth Year 1991-1992

Major Findings and Recommendations

The sixth year summative evaluation examines in depth participant attributes, services provided, and the longitudinal benefits of the Early Childhood Development Programs. All components of the Early Childhood Development Program were functioning well, and had achieved considerable success with parents and children. Enrollments and/or participation in the programs have increased steadily during the six years of implementation. Participants have benefitted from the programs as evidenced by increased parental awareness of child development, enriched quality of life for developmentally challenged children, and significant remediation of developmental delays. Also, parental perceptions of the Kansas City, Missouri School District (KCMSD) were positively influenced by participation in these programs.

A great deal of useful information is contained in the body of the report, especially that describing the participant profile of the Parents As Teachers (PAT) and Early Learning Center (ELC) population since implementation, and comparisons between the PAT and the statewide Second Wave Study population, and longitudinal assessments of academic performance of former PAT and ELC students. Only the most salient findings which are relevant to program implementation and functioning are summarized here.

The **Screening Component** was well implemented in its sixth year. The number of children screened has increased considerably through the years, with over 7250 children served. Unfortunately, the percentage of children at-risk for developmental delay has increased through the years as well. Current year observations of the screening process found the screening goals achieved in the majority of cases. Discrepancies between goals specified in the 1991-1992 Program Implementation Model and actual procedures employed by the screening staff resulted in less frequent observation of some goals. Inadequate staffing, specifically the lack of certified professionals, caused a delay in the completion of some screening appointments. Yet, the average time of most screening appointments was less than the 90 parents were

told to expect. The majority of parents surveyed indicated that the screenings were informative, understandable and provided adequate service.

The **Parents as Teachers** program was examined thoroughly. A detailed study of the records of a sample of PAT participants enrolled between 1985-1986 and 1989-1990 indicated that the PAT sample differs from the KCMSD population and from the Second Wave Study population. Given these results, it is ill-advised to attribute the conclusions about PAT families contained in the Second Wave Study to families participating in the PAT program.

Current year parent perceptions of the PAT screening service and program were very positive. Over 90% believed their confidence as a parent and their knowledge of child development had increased as a result of the PAT program. Furthermore, over 80% felt they were better able to identify unusual or abnormal conditions that might interfere with their child's development. Parents felt the private visits and assistance of the parent educator were the most helpful aspects of the program.

Achievement was examined using ITBS test scores for a 1990 kindergarten cohort of former PAT students currently enrolled in the second grade. In considering the results, it should be remembered that these children exited the PAT program at age three, which is two years prior to entering kindergarten. Lack of funding has not allowed continued contact with these children, except for two hours the entire school year. The effects of the two year gap on the continued progress of these children are unknown. The PAT cohort scored at or above district norms in reading from kindergarten through second grade; scored slightly above the district in language in first and second grades, but substantially below the district at kindergarten; and scored slightly below the district in math every year. Refined comparisons between former PAT and non-PAT students were performed using analyses of variance. A peer group of non-PAT students was selected randomly and compared to former PAT students. The comparison groups were enrolled in the second grade in 1991-1992 and in the same schools. Second grade former PAT students scored higher than their non-PAT peers in language and math, but lower in reading. None of the differences between the comparison groups were significant ($p < .05$).

The **Early Learning Center** program was examined thoroughly also. Current year ELC classrooms were observed to assess the implementation of the High/Scope curriculum, which outlines the activities and student behaviors expected during class time. It was noted that during most of class time children were involved in group lessons (36%) or work/cleaning

behaviors (36%). In group lesson time, students might have been on the rug together or working in small groups at tables, with each group working with an adult. Work and clean-up found the children in the work areas, working alone or with others. Gross motor play (14%), eat and clean-up (7%), and story time (5%) comprised the remainder of classroom time.

The frequency of the occurrence of particular student behaviors varied depending on the activity period, and a behavior might have been emphasized in one or more activity periods. The result was that, in at least one third of all observations, every student behavior occurred during at least one activity period. Behaviors observed with the highest frequency (i.e., in all activity periods) were comprehending others, speaking, and carrying out the activities planned.

Nearly all of the 1991-1992 ELC teachers felt prepared to work with at-risk children and implement the High/Scope curriculum. A concern with the classroom situation expressed by the teachers was the pupil:teacher ratio. Nearly two-thirds felt the ratio was inappropriate for their children, suggesting a more appropriate ratio would be 8:1 rather than the current 10:1. The majority of paraprofessionals expressed satisfaction with their training, their relationship with the ELC teacher and their involvement in the classroom activities.

A sample of parents with children currently enrolled in an ELC classroom was surveyed. All parents indicated that their child had enjoyed going to the ELC classroom. The majority of the parents were very favorable towards the ELC program, including the screening process, and the perceived benefit to their child. Parents felt the classroom component was the most helpful aspect, with the majority claiming attendance at parent participation activities. Nearly all believed their confidence as a parent and knowledge of child development had increased as a result of the ELC experience.

Historic files of a sample of ELC students enrolled between 1986-1987 and 1988-1989 were examined. Classroom behaviors for this sample of ELC students were examined using a modified version of the Child Observation Record (COR) form used by the KCMSD ELC classroom teachers. These classroom behaviors were assessed: initiative, social relations, representing things, and language and literacy. The most recent behavioral assessment made by the teacher was used in this evaluation. The children sampled scored above average in every category, with scores generally in the top third. Clearly, these delayed children benefitted from the enriched classroom activities received in the ELC environment.

Factor analysis was used to reduce the data compiled for the ELC students to those factors which represent the relationships among variables, and to identify the underlying structure in

the set of variables. Factor analysis reduced the ELC student data to eight factors which accounted for 68% of the variance in the sample. The results of the eight factor analysis procedures suggested three important dimensions explain the underlying structure in the ELC student data: development, which includes classroom behaviors and developmental tests; family status; and health.

In this study, above average scores in classroom behaviors, as recorded in the COR, dominate the developmental construct, with 16% of the variance explained by Factor 1. The other developmental attributes appear on Factors 4 through 8 and collectively account for 31.5% of the variance. The following factors reveal these population attributes:

1. Children scoring average on the KIDS fine motor test and with PLS language risk showing 1-5 months delay gained entry into the ELC program by failing the DIALR motor test. Also, these children could expect complete remediation of the language risk at exit.
2. Children with average scores on the KIDS gross motor test had vision problems.
3. Children found 12 months or more delay on the PLS language test had vision and oral hygiene problems.
4. Children scoring low on the KIDS gross motor test failed the DIALR motor test and were typically male.

The remaining factors support the profile of the ELC sample as found in the observed frequency of attributes provided in table form. Family status, defined in the factor analysis as child living with the married mother, but the father not at home, accounted for 11% of the variance in this study (Factor 2). The underlying construct of health appeared on Factors 3 and 6. In this study, the majority of the population lacked health problems, including ear infections. Yet, health problems, specifically vision and dental, were associated with 12 months or more language delay at entry.

Achievement, as measured by ITBS scores, was assessed through longitudinal analysis of a 1989 kindergarten cohort of former ELC students who were currently enrolled in the third grade. As a group, the former ELC cohort scored at or below the district as a whole from first through third grade in reading, language and math. As kindergartners, however, former ELC students outperformed district peers in the subtests examined.

To better evaluate the academic performance of former ELC students as compared to their peers, a sample of non-ELC students were selected randomly as a comparison group. All students, both former ELC and non-ELC, were in the third grade and enrolled in the same

school during the 1991-1992 school year. Analyses of variance with grade equivalent ITBS scores as the measure of achievement were performed. Former ELC students scored below the non-ELC peer group in reading and language through the year. The difference in reading scores was statistically significant ($p < .05$). In math, former ELC students outperformed the comparison group, but the difference was not statistically significant.

Considering the above average scores in ELC classroom behaviors as assessed on the COR and the above-district performance in kindergarten for these students, the decline in achievement after kindergarten suggests a failure of the KCMSD elementary schools to maintain their success, and not a failure of the ELC program.

The findings of this six year summative evaluation suggest the following recommendations for improvement in program functioning:

Screening Component

1. Revise the screening process to either involve the person conducting the screening in the parent review of results or have one professional conduct both the screening and the interpretation. The current procedure of one person screening and another reviewing the results with the parent introduces error into the interpretation of results and lengthens appointment time.
2. Assure adequate staffing of every screening facility, especially with certified professionals. The lack of two certified professionals at the screening facilities appeared to be the principal reason for appointments taking longer than the predicted 90 minutes.
3. Revisit certain parameters in the Program Implementation Model with the screening staff to ensure full implementation of screening goals. Observations found some screening goals as stated in the 1991-1992 Program Implementation Model to occur less frequently than others.

Parents as Teachers Component

1. Continue to train parent educators in proper record keeping procedures and continue with efforts to standardize procedures and forms. In the process of reviewing several hundred files for this evaluation and through conversations with program administrators regarding current practices, an urgent need for complete and accurate records on PAT children became apparent. These data are unique, irreplaceable and cannot be captured retrospectively.
2. Consider implementing a risk factor form, similar to that used in the Second Wave Study. Such a form would be a helpful addition to the records obtained by the parent educator during home visits. An assessment of macroscopic risk factors, such as low income, family stress, inability of parent to cope with child, would not require professional training beyond that which parent educators receive or bring with them to the PAT program. These risk factors provided invaluable insight into the success of the PAT programs in the evaluation of the

Second Wave Study population, and their addition to the KCMSD PAT program would provide useful evaluative information.

Early Learning Center Component

1. Explore the possibility with district administration to reduce the teacher:pupil ratio in the ELC classrooms. Teachers and paraprofessionals indicated in the perception survey that a ratio of 8:1 would better serve the needs of the children.

Program Description

The KCMSD Early Childhood Development program completed the sixth year of full implementation under the court-ordered desegregation program. Program components are Developmental Screening, Parents as Teachers (PAT) and the Early Learning Centers (ELC). PAT offers educational services for parents of children from birth to 3 years and ELC offers early intervention programs for children identified at-risk for educational failure. Both programs have a developmental screening component, with services provided to children ages one to four years. The screening process consists of standardized assessments of language, motor, vision, hearing, and physical development. A major part of the process is identifying preschool children who score six months or more below their chronological age on developmental tests and offering services to parents and children to remediate these delays.

Representatives from the Kansas City, Missouri School District and the Department of Elementary and Secondary Education annually prepare an *Implementation Model for the Early Childhood Development Program*. The *1991-1992 Program Implementation Model* reflects the experiences gained in previous years of program implementation and defines current year enrollment and implementation goals. The premise of the Early Childhood Development program is that "Quality preschool and parent education programs improve the lives of children, their families and the quality of life of the community as a whole" (The School District of Kansas City, Missouri and the Department of Elementary and Secondary Education, 1991, p.1).

Screening

Program Description

According to the *Program Implementation Model*, periodic monitoring of a child's development is a foundation for the educational guidance of parents. Recurrent screening increases the probability of detecting delays or physical problems that may later hinder a child's

academic progress, and provides necessary guidance to parents regarding their child's development and maturation. Developmental screening tests are provided free of charge and on a voluntary basis to all preschool children. These developmental assessments include the Preschool Language Score (PLS) which assesses speech and language, the motor test of the Developmental Indicators for the Assessment of Learning (DIAL R-motor), and the Kindergarten Inventory of Developmental Skills (KIDS) fine motor and gross motor tests.

Evaluation Concerns

Concerns addressed in the summative evaluation of the screening program included:

1. Describe the screening process, services provided and population being served. Is the screening program being implemented according to the guidelines outlined in the *Early Childhood Development Program, Program Implementation Model, 1991-1992*?
2. Are the goals of the screening program, as stated in the *Early Childhood Development Program, Program Implementation Model, 1991-1992,* being achieved?
3. What are the parent perceptions about and attitudes toward the screening program?

Methods

Screening data were obtained from administrators of the Early Childhood Development Program. Program implementation and goal accomplishment data for 1991-1992 school year were obtained through screening appointment observations and a parent perception survey. Attainment of stated screening goals and objectives, including numbers screened, accomplishment of the screening goals, and services provided to families and the community were evaluated from observations.

Results

Participation. Numbers of children screened for the years of program implementation are presented in Table 1. More children were screened during the 1991-1992 year than any year previous. Also, the percent of three- to five-year old children determined to be at-risk for educational failure rose through the years. The current year screenings found 4380 of 5284 (83%) at-risk. These children were referred to an ELC, with a total capacity of 1400. This means that 2980 eligible children could not be accommodated in an ELC.

Screening Process. Nineteen screening sessions were observed throughout the school year. The screenings were selected randomly from a screening schedule provided by program administration. Observations occurred primarily at Pershing Early Childhood Program Center

because screenings conducted at preschool locations did not include the parent conference. In the preschool locations, developmental screening of the child and conference with the parent about the results were separate events. Nineteen percent of parents surveyed with children in a preschool reported being unaware that a developmental screening was conducted until it was completed (see *Parent Perceptions* below). Screening administrators reported mailing flyers to parents and obtaining written parental approval prior to screening any child.

Table 2 presents the implementation of the screening goals prescribed in the 1991-1992 Program Implementation Model as observed this year. All screenings were conducted for every child observed (e.g., language, hearing, vision, motor). Also, results were shared with the parent in every case, both verbally and in writing, and the screening team made appropriate recommendations to the parent. Parts of the screening process observed a little over half of the time were: advising parents of children with possible delays to share the results with their family physician (54%), encouraging parents to participate in Parents as Teachers (56%), and discussing appropriate learning activities with parent (58%). It should be noted that 100% of parents received written information regarding child development and resource materials regarding community services.

Of the screenings observed, four to five staff members were present to conduct the screenings: two were certified and three were paraprofessionals. Five is the preferred staffing figure since certified staff perform the screenings with the help of the paraprofessional, but only certified staff can confer with the parent. On occasion, screenings were short staffed, with the absence of a certified professional. Inadequate staffing hindered implementation of the screening program by lengthening appointment time (discussed below).

On average, 4.3 appointments were scheduled per hour, with an average of 2.8 completed. Program administrators report over-booking by about 40% due to the failure of parents to keep the appointment. Indeed, observations found failure of parent and child to appear to be the principal reason for scheduled screenings not being completed. According to administration, no-shows are discouraged by a policy outlined in the appointment letter to parents stating that if 15 minutes late, they may have to reschedule.

A problem observed with screening procedures was the length of time it took to complete some appointments. On average, 82 minutes were required to finish the appointment, which was within the 90 minutes projected in the appointment letter parents received. Yet, 32% of observed appointments lasted over well 90 minutes. Delays seemed to occur with the bottle-

neck created by screenings being conducted by one person and the parent conference conducted by another. The time-lag between screening and conference often was considerable, and may be partially attributed to inadequate staffing since a certified professional must conduct the interview.

The procedure of having one person screen and another confer with the parent not only lengthens the appointment, but potentially builds error into the interpretation of results. On several occasions the child's behavior during the screening process impacted results of the developmental test. Although discussions were supposed to occur between screener and interpreter, observations suggest that the behavior of the child during the screening was not fully known to the person interpreting and explaining the results to the parent.

Parent Perceptions. A sample of parents of parents enrolled in either the PAT or the ELC programs were telephoned randomly for their perceptions of the screening process. The responses of parents who indicated at the beginning of the interview that their child was "screened only" (i.e., did not participate in either PAT or ELC) are reported in Table 3. As it happened, the entire sample of screened-only parents came from the list of screening performed through ELC; none of the PAT parents surveyed indicated their child was screened without participation in the PAT program. Additional perceptions of the screening component can be found in the later sections of the report in discussions of the PAT and the ELC programs by parents participating in these programs.

The majority of parents whose children were screened only called for an appointment and waited more than one month for the appointment to occur. Nearly all indicated that the screening was informative and understandable. Almost two-thirds said they were apprised of the reasons why their child was eligible or ineligible for enrollment in an ELC classroom. Less than a third were referred to additional services, and only about a third of those followed-up on the referral.

Parents as Teachers

Program Description

The Parents as Teachers (PAT) Program is a voluntary program which has been in place in Missouri since 1981 and in the KCMSD since 1985. The KCMSD PAT Centers participated in a statewide evaluative project, the *Second Wave Study of the Parents as Teachers Program* (Pfannenstiel, et al., 1991). The study, hereafter referred to as the Second Wave study, sampled

parents of young children from 37 Missouri school districts enrolled during the 1986-1987 school year.

As part of the sixth year summative evaluation of the PAT component of the Early Childhood Development Program, a partial replication of the Second Wave study was undertaken. The replication was intended to determine how closely the KCMSD PAT program outcomes approximate the statewide findings reported in the Second Wave Study. Additionally, the summative evaluation goes beyond the Second Wave Study by tracking former PAT children into elementary school. Cohort analyses of standardized test scores (Iowa Tests of Basic Skill) provide a longitudinal assessment of the academic performance of former PAT children as compared to district peers. Also, analysis of variance provide a measure of achievement of former PAT students compared to non-PAT peers.

Evaluation Concerns

Concerns addressed in the summative evaluation of the PAT program included:

1. What are the enrollment trends in the PAT program since implementation?
2. What are the risk factors in the KCMSD PAT sample. How do these risk factors compare to those found in the Second Wave study sample? What proportion of PAT children were determined from screening results to be at-risk and, therefore, referred to an ELC?
3. Develop a composite profile of the PAT sample by health, demographic and family, and services provided. How does this profile compare to the Second Wave Study population and to the total KCMSD population?
4. How do the results of the KCMSD PAT evaluation compare to the evaluative findings of the Second Wave study?
5. Describe the services delivered on average during six years of implementation. How does the KCMSD PAT delivery of services compare to the Second Wave study sample?
6. What are parent perceptions about and attitudes toward the Parents as Teachers program?
7. What are the trends in achievement of former PAT children in standardized tests (ITBS) as compared to the district and non-PAT peers?

Methods

Enrollment data were obtained from administrators of the Parents as Teachers program. Parent perceptions were gathered through telephone interviews of a random sample of PAT parents enrolled the current year. A description of the procedure employed to capture data on children enrolled in a PAT program since 1985-1986 school year is warranted since this is

the first in-depth study of the PAT program and participants. Program administration provided to the evaluation office the record keeping forms used by parent educators in serving families and children enrolled in the PAT program. Each parent educator is instructed by program administration to use these forms. According to the program coordinator, record keeping forms are developed, revised and modified at the end of every year to continually meet evolving program needs. Revisions were made especially during the first few years of program implementation. Form content changed little, however, with the principle modifications being format and organization of questions. Thus, the majority of information contained in the later files were expected to be found in the early files, but perhaps on a different form. These forms document services provided (e.g., telephone calls, home visits, and group meetings attended), family/parent background data provided by the parent, and child health and developmental information obtained during home visits, parent interviews, and developmental testings.

A separate file is maintained for every child by the parent educator assigned to the family. The files of children who exited the program are stored at the PAT center serving that family. Only files of families who had exited the program were examined for this report. Thus, the historical records of children enrolled in PAT between 1985 and 1990 were examined.

A computerized database amenable to statistical manipulation was developed from the information contained on the forms used by the parent educator. A list of children enrolled in PAT since 1985 was obtained from KCMSD Student Records office. This list was given to the ten PAT center managers who pulled the records of children in their files. The number of available files varied considerably among centers. A total of 636 former PAT children were listed in the KCMSD student records. Of these, 486 (77%) had a file in one of the PAT centers. This database, which captured three-fourths of the population of PAT children enrolled since 1985, is the source of information used to evaluate six years of implementation of the PAT program.

In order to evaluate achievement, the PAT database was matched to the KCMSD 1992 testing database using student identification number. The matched sample constitutes the 1990 kindergarten cohort of former PAT students who currently are in the second grade. This cohort was used to evaluate achievement of former PAT students on subtests of the ITBS.

Results

Enrollment. Enrollment in the Parents as Teachers program for six years of implementation are presented in Table 4. As indicated in the tables, enrollment in PAT has

increased steadily since the first year of implementation. The number of families served with children ages birth to three years has increased in excess of three-fold since 1986-1987, and enrollment of families with three- through five-year old children has increased almost 6.5 times since 1987-1988.

Parent Perceptions. A random sample of 10% of the parents participating in the 1991-1992 PAT program were given the opportunity to present their perceptions of the program. The interviews were conducted by telephone in June of 1992.

Parent perceptions of the screening service and program aspects were very positive (Table 8) and had improved since the previous survey (Robinson, 1989). Over 90% believed their confidence as a parent and their knowledge of child development had increased as a result of the PAT program. Furthermore, over 80% felt they were better able to identify unusual or abnormal conditions that might interfere with their child's development. The private visits and assistance of the parent educator were the most helpful aspects of the program. Most parents infrequently used the resource room, toys and books, and over half did not participate in group meetings. Not surprisingly, parents found these aspects least helpful. Seventy-two percent of parents, as compared to 66% in the previous survey (Robinson, 1989), indicated that the PAT program had favorably influenced their attitude toward the district.

PAT Participant Attributes.

Sample. Although over three-fourths of the former PAT sample was found in PAT center files, there were considerable amounts of data missing for every child (also referred to as "case" in the following discussions). Data entry personnel employed by the Evaluation Office were instructed to code information "indeterminate" if a form was missing, not filled out, or if the needed information was not clearly stated in parent educator notes. As explained above, not all forms were in use during the early years of program implementation, which may be the reason for some of the missing data. Another explanation for the missing data is the fact that parents voluntarily gave information and/or permission to test their child. Also, some data (i.e., developmental tests) were collected at specific ages of the child and, therefore, would not be available on every child.

A majority of the children with files available for study (Table 5, 71%) enrolled in the program from 1985-1986 through 1987-1988 school years. However, even in the more recent years (since 1988-1989) when the majority of forms currently employed were being used, much data were missing. For example, information on these attributes were missing from at least

two-thirds of children enrolled between 1988-1989 and 1990-1991: social services involved, such as WIC and Well-Baby Clinic, child on special diet, and use of dietary supplements. Additionally, potentially useful information, such as oral health, ear infection, and whether or not child was at-risk for educational failure, were missing from about a third of cases.

Considering the total sample of former PAT children (since 1985-1986), the most disturbing absence of data was the child health summary. Child health information gained by the parent educator through the parent interview form and/or in notes was absent in 36% of cases. Of the cases yielding child health information, high fever (14%) and hospitalized since birth (13%) were most frequently recorded. Otherwise, 49% of the cases did not have a health condition recorded, and may be assumed healthy.

Population Comparisons. A comparison of the KCMSD PAT and Second Wave PAT families revealed the following: 78% of families in KCMSD PAT compared to 27% of Second Wave PAT families were minority; 25% of Second Wave families were one-parent households compared to 49% KCMSD PAT; 16% of both Second Wave and KCMSD PAT mothers had not earned a high school diploma.

A comparison of the KCMSD PAT sample and the KCMSD population as described in the 1990 census (City Development Department, 1991) revealed the following: 42% of KCMSD population was minority as compared to 78% of the KCMSD PAT sample; 61% of the district population between the ages of 0-17 years were minority, yet the PAT sample over-represented the minority population in the district as revealed in census data; 13% of the KCMSD population was comprised of single female households compared to 48% of the PAT sample.

These comparisons suggest that the PAT sample is not representative of the KCMSD census area and differs from the Second Wave Study population. Considering the latter, attributing conclusions about families as learned from the Second Wave Study of PAT programs to families participating in the KCMSD PAT program is not advised.

Risk Factors. Risk factors were collected only on KCMSD children who participated in the Second Wave Study and, therefore, were available only for 21% of the cases since 1988-1989 (12% of total sample). Forming a composite profile of participant families by risk factors (e.g., low income, low functioning parent, family stress, inability of parent to relate to or cope with child), demographic and family attributes (e.g., ethnicity, single-parent, mother education) was an important feature of the Second Wave Study. It was not possible to duplicate

that effort here due to the limited collection strategy employed in the PAT program. Also, the data did not permit a secure characterization the KCMSD PAT population by most frequently observed risks as allowed in the Second Wave Study. However, the KCMSD PAT sample can be tentatively characterized based on the available cases. Seventy-nine cases had risk factor data recorded, and 107 risk factors were recorded in these 79 cases. The most frequently recorded risk was "Undue stress that adversely affects family functioning" (25% of known cases). Interestingly, the most frequent characteristic of risk found in the Second Wave Study was families under undue stress (one-third of participants). The second most frequently recorded risk factor in the Second Wave Study was "developmental delay detected through observation/screening" which occurred in 20% of cases in the KCMSD PAT sample. Unfortunately, due to sample limitations described above, it was not possible to relate these data to other attributes such as health (e.g., high fever, hospitalized since birth, birth defect, on medication), or demographic and family characteristics to define an "at-risk" family profile as performed in the Second Wave Study. As a result of so much missing data, multivariate analyses of the data were severely constrained. Also, an original goal of this evaluation, that of weighing achievement against participant attributes, could not be accomplished due to the paucity of relevant data. The only procedure which could be conducted with an acceptable degree of reliability was cross-tabulation measures of association (chi-square tests of independence). Two-way procedures were performed on various groupings of variables. The only significant association found involved ear infections. Of the cases with known risk factors, the occurrence of ear infection was significantly associated ($p < .02$) both with developmental delay and low functioning parent. Considering the entire sample (not just those with risk factors recorded) no ear infection was found to be significantly associated ($p < .001$) with children not delayed. Furthermore, children without ear infections had a 2.2 times lower risk of being found at-risk for educational failure.

PAT Profile. Frequency distribution of demographic, family and health information on the available PAT participants is presented in Table 6. This table indicates that the profile of an average participant is: minority (with an almost equal likelihood of being either male or female), living with either both parents or a single, working mother with a high school education. Generally, the child enjoyed regular medical check-ups and was in good health mentally and physically; an ailment which may have been experienced was ear infection. Data on risk for developmental delay were sketchy, with 32% of cases examined lacking information.

(Developmental tests are given at specific ages and the missing data may reflect the age-dependence of test administration.) Of those children with information recorded, only 17% were found at-risk (six months or more of developmental delay as determined from screening tests).

Services. The reader is cautioned to be aware that an optimal number of services a parent educator is to provide is not specified in the Implementation Model. The following describes median or average number of certain services the program has provided over the years.

Per family, the median number of telephone calls made by a parent educator, home visits made, and group meetings parents attended was five (Table 7). Those figures compute to less than one per month given a median of eight months in the program (Table 6). Significantly, the administration reports that most families enrolled in PAT have telephone service. As a free program available to all children between the ages of 0-3 years, the median of eight months participation in the program was less than expected. Importantly, the median number of home visits made equals the number attempted.

Screening services provided through PAT (Table 7) averaged nearly one per case. It is important to understand that screenings are initiated two or three months after enrollment, and these are the cursory physical assessments. Also, children under physician care do not receive a physical growth or nutritional screening. Importantly, developmental screenings are age-dependent, with the Denver conducted at 12 months, the PLS at 18 months, and oral health anywhere between 12-36 months.

Achievement. This section describes the results of a longitudinal analysis of a representative population of children who participated in the PAT program prior to entering kindergarten and who currently are enrolled in an elementary school in the KCMSD. The assessment of achievement is enabled through cohort analysis. The largest cohort of former PAT children available to track were the 1989-1990 kindergarten cohort. Performance of these students on ITBS subtests as compared to the district as a whole were examined from kindergarten through second grade. Also, this cohort was compared to a random sample of non-PAT peers using analysis of variance procedures. The analysis of variance procedure was used to determine whether statistically significant differences exist between former PAT and non-PAT peers in achievement on standardized tests.

Results of the comparative analysis of ITBS test scores between the 1990 kindergarten cohort and the district are present in Table 9a. The PAT cohort scored at or above district

norms in reading from kindergarten through second grade; scored slightly above the district in language as first and second graders, but substantially below the district as kindergartners; and scored slightly below the district in math every year.

To refine the assessment of achievement of former PAT students, it was necessary to eliminate as many pre-existing differences as possible between them and the comparison group. In order to effectively isolate PAT status, a sample of non-PAT students currently enrolled in the same schools as the former PAT students were selected randomly. Students in the two comparison groups were enrolled in the second grade during the 1991-1992 school year. Analysis of variance with grade equivalent ITBS scores as the measure of achievement were performed. The mean scores were converted to percentile ranks for presentation (Table 9b). Second grade former PAT students scored higher than their non-PAT peers in language and math, but lower in reading. None of the differences between the two comparison groups were significant ($p < .05$).

These findings suggest that significant differences in achievement through the second grade do not occur between PAT students and students never having participated in a PAT program. Of note, approximately 10% of the PAT sample were enrolled at some time in an ELC classroom. Also, it should be remembered that PAT children exited the program at age three, which is two years prior to entering kindergarten. Lack of funding does not allow continued contact with these children, except for two hours of service the entire school year. The effects of the two-year gap in parent education on the success of a child in elementary school is unknown, but the potential impact is negative.

Early Learning Centers

Program Description

The ELC component of the Early Childhood Development programs began as a pilot effort in two schools in the spring of 1986. Currently, there are 35 ELC classrooms located in 13 elementary schools and the Pershing Early Learning Center in the KCMSD (see Appendix A, Table A-1). The program was projected to enroll 1400 children for the 1991-1992 school year, and the waiting list for entrance into a classroom was long. Placement in an ELC classroom is voluntary and predicated on screening results indicating special risk for school failure. The curriculum implemented in the classrooms is the High/Scope Curriculum which offers a child-oriented, developmentally appropriate education to children.

The KCMSD ELC program goals and objectives are founded on the results of the High/Scope Perry Preschool study (Weikart, et al., 1970; Weikart, Bond, & McNeil, 1978; Schweinhart & Weikart, 1980; Berrueta-Clement, et al., 1984). The State of Missouri accepted the outcomes of the Perry Preschool study as goals for the Missouri Early Childhood Program, and counseled the KCMSD to do the same in their program. Hence, the long-term goals of the KCMSD ELC program include higher academic performance by participating children, a committed partnership between parent and teacher that will extend into the formal school years, less need for costly remedial and special education services, and reduction of the instances of unacceptable behaviors and delinquency problems in school (*Early Childhood Development Program, Program Implementation Model, 1991-1992*). The attainment of these goals were assessed in the sixth year summative evaluation. The evaluation design is similar to that of the High/Scope Perry Preschool study in that classroom performance and academic success of preschool (i.e., ELC) and no preschool groups are examined longitudinally. It is intended for this study to be the first in a series of follow-up reports which will track cohorts of former ELC students as they progress through school, career, and life.

Evaluation Concerns

Concerns addressed in the sixth year summative evaluation of the Early Learning Centers included:

1. What are the enrollment trends in the ELC program since implementation?
2. Was the ELC program implemented as detailed in the *Program Implementation Model, 1991-1992*?
3. What are the parent, teacher and paraprofessional perceptions about and attitudes toward the ELC program?
4. Describe the profile of ELC participants throughout six years of program implementation. Comparing the level of at-risk at entry to the level at exit, what degree of remediation was gained through participation in the ELC classroom?
5. What are the levels of achievement of former ELC students as measured by ITBS standardized test scores in elementary school? What achievement trends exist since the initiation of the program? How does the achievement of former ELC students compare to district and non-ELC peers?

Program implementation was evaluated from data collected through classroom observations, perceptual questionnaires administered to teachers and parents, and achievement data. Student achievement data, measured by the Iowa Tests of Basic Skills (ITBS), were examined.

Trends in achievement for the oldest cohort of former ELC students were examined as a means of assessing achievement through time.

Methods

Enrollment data, including figures for at-risk students, were obtained from the Early Childhood Development Office. Historic data on children previously enrolled in an ELC classroom between 1986-1987 and 1988-1989 were captured from existing files stored at Pershing Early Childhood Center. A computer database was developed from the information contained in the files. This information was obtained previously on each child according to procedures and forms provided in the *Early Learning Center Staff Handbook* (The School District of Kansas City, Missouri, Early Childhood Development Program, nd.) and *Early Childhood Screening Manual Instructions - Guidelines* (The School District of Kansas City, Missouri, Early Childhood Development Program, 1991). Relevant information gathered by Early Childhood personnel included family demographics, mother's health during the pregnancy, child development, child health assessments, child enrollment and exit dates, child attendance records, parent contacts, and child classroom observation records. Finally, achievement was assessed for a cohort of former ELC students who were enrolled in kindergarten in 1988-1989 and were in the third grade during the 1991-1992 school year.

Results

Enrollment. Space and resources for ELC classrooms are finite, therefore, the Implementation Model limited enrollment in the ELC program during the 1991-1992 school year to 1400. All centers began each year at capacity, and capacity was maintained by placing children into an ELC classroom from the long waiting list of eligible children. However, children were not placed into the program after mid-April of any year since only six weeks of school remain. Available enrollment data for the ELC classrooms throughout the years of implementation are presented in Table 10. End of year enrollment indicates the ELC classrooms were kept full during the year. Also, fewer children exited the program after mid-April this year as compared to the years previous.

Table 11 shows the numbers of children age-eligible to enter kindergarten or returning to an ELC, including the percentage of students still at-risk for both language and motor development. The percentage of at-risk students age-eligible to enter kindergarten continues to rise. The figures suggest that the percentage of students returning to ELC still at-risk may have stabilized at just over 50%.

Classroom observations. Randomly selected ELC classrooms were observed periodically throughout the year. Forty-five minutes of the three hour day in 16 classrooms in 13 centers were observed. Each visit consisted of a planned 45 minute observation with each minute being a separate observation interval. A total of 696 minutes were observed. Data were collected regarding meeting curriculum goals by observation of the key experiences as described in the High/Scope curriculum. The occurrence of these behaviors were noted during each observation session: decision making, planning, carrying out activities, reviewing activities, speaking, comprehension of others, dramatization, independent activity, art work, and physical movement. The behaviors were observed during specific activity periods of the daily routine: group lesson, story time, gross motor, work/clean, and eat/clean. How the class was grouped during instruction was noted, also. The reader is cautioned to be aware that there is no optimal amount of time for the incorporation of a behavior during any activity period in the classroom.

Classroom instruction could occur one of several groupings: 1) total group, with all students in one group, 2) small group, with students in groups of two or more with one adult and not working in areas, 3) areas, students working in specific areas during work time, and 4) individual, with students engaged in the same or different projects, but working individually. From Figure 4, instruction was observed to occur predominantly in a total group configuration (37%), with the remainder of time almost equally divided among the other three possible groups.

The frequency of occurrence of the activity periods observed during the daily routine are in Figure 5. From the figure, it is noted that during most of class time children were involved in group lessons (36%) or work/cleaning behaviors (36%). In group lesson time, students may have been on the rug together or working in groups at small tables, with each group working with an adult. Work and clean-up found the children in the work areas, working alone or with others, or cleaning up their projects. Gross motor play (14%), eat and clean-up (7%), and story time (5%) comprised the remainder of classroom time.

The percent of time each behavior was observed during each activity period is presented in Table 12. The frequency of the occurrence of particular behaviors varied depending on the activity period, and a behavior might be emphasized in one or more activity periods. The result was the observance of every behavior at least one-third of the time during at least one activity

period. Behaviors observed with a high frequency in all activity periods were comprehending others, speaking, and carrying out the activities planned.

Considering each activity period specifically, the predominant behaviors observed during group lesson were comprehending others and speaking opportunities. Story time involved the children predominantly in speaking and carrying out planned activities. Children were observed frequently in all behaviors while engaged in gross motor activities. Both independent behavior and decision making (e.g., overt decision making opportunities which are provided by the teacher and acted upon by the child) had the highest incidence of occurrence during gross motor activities. Planning activities were observed with the greatest frequency during observations of the gross motor activity period. It must be noted that, according the curricular design, planning occurred within the small group setting, which comprised 19% of observations (Figure 4). Twenty-three percent of small group behaviors were planning activities. Thus, it seems probable that the relative infrequency of planning activities indicated in Table 12 is a product of observation randomization, and not ELC curriculum implementation. Work/clean principally involved children in comprehending others, speaking, carrying out planned activities, and art work. Eat/clean involved the children in a manner similar to work/clean (minus the art activity since the behavior was eating not working), and with greater emphasis on reviewing activities. Seemingly, children socialized during eating by discussing their finished business.

Teacher perceptions. Questionnaires were administered to all ELC teachers and paraprofessionals in order to obtain their perceptions of the ELC program, the process of implementation, and their preparedness to implement the program. Fourteen of the 35 teachers (40%) and 15 of 35 paraprofessionals (43%) responded to the questionnaire. The results are presented in Tables 13 and 14.

Nearly all of the teachers felt prepared to work with at-risk children and implement the High/Scope curriculum (Table 13). Almost 80% agreed that they had an opportunity to provide suggestions regarding in-service training. A concern with the classroom situation expressed by the teachers was the pupil:teacher ratio. Nearly two-thirds felt the ratio was inappropriate for their children. In write-in comments teachers suggested a ratio of 8:1 rather than the current 10:1 would be more appropriate. Also, the teachers commented on the need to have a substitute during the absence of paraprofessionals. Another concern involved transportation. The majority were not satisfied with timeliness, presence of aides, or politeness of bus

personnel, and half were dissatisfied with bus safety. However, satisfaction with school building principal, and support staff, including speech therapist and home-school coordinator, had improved since the previous survey (Robinson, 1989).

The majority of paraprofessionals expressed satisfaction with their training, their relationship with the ELC teacher and their involvement in the classroom activities (Table 14). In write-in comments, the most frequent suggestion was reducing the class size from 20 to 15 or less, which supports teacher comments above.

Parent perceptions. A random sample of 10% of the parents of students currently enrolled in the Early Childhood Program were interviewed by telephone to obtain their perceptions of and satisfaction with the ELC program. The majority of these parents (69%) indicated their child was screened only and had not been enrolled in an ELC classroom this year. Their responses to screening questions were presented above in the discussion of the Screening Program (Table 3). The responses of the remainder of the parents surveyed, i.e., those with a child in an ELC classroom, are presented in Table 15.

The results of this year's survey were comparable to the 1989 survey (Robinson, 1989). All parents surveyed believed their child had enjoyed going to an ELC classroom. Nearly all parents were very favorable towards the ELC program, including the screening process, and the benefit of the program to their child. Screening appointments were conducted either during the summer screening session or made by telephone, and the latter occurred typically within 2 weeks. Parents felt the classroom component was the most helpful aspect of the program, and 73% stated they attended parent participation activities in the class. Over 95% believed their confidence as a parent and knowledge of child development had increased as a result of the ELC experience. Transportation was not a concern for most of the parents. For the majority of parents, the ELC program influenced their attitude toward the district, and that influence was positive for 87%.

ELC Participant Attributes.

Sample. Three former ELC kindergarten cohorts were obtained from KCMSD student records: 1987-1988, 1988-1989 and 1989-1990. These children were enrolled in an ELC the year prior to entry into a KCMSD kindergarten classroom, or at age three to four years. These children were enrolled in an ELC classroom between 1986-1987 and 1988-1989. Files compiled by the ELC teacher for these children (N= 564) were searched for information relevant to demographic/family characteristics, length in ELC and attendance, health, devel-

opment, services provided while in the program, and observational record kept by the ELC teacher. All data collected for this study were part of the record-keeping process of ELC personnel and, as such, were expected to be in every child's file. The attributes of the KCMSD ELC population, including services provided, as determined from an examination of these historical records are discussed below.

Services Provided. The services provided to the families of the ELC children sampled are presented in Table 16. The program was well-implemented during the years, with teachers making parent contacts, home visits, and conducting developmental screenings of the children. Telephone calls were not a primary means of reaching parents, probably due to the difficulty of securing current numbers, since the KCMSD population is quite mobile. Of note is the high average of classroom visits made by parents (3.5) and the fact that 64% of parents made at least one visit to their child's room.

ELC Profile. As shown in Table 17, 94% of ELC children were minority, and both sexes were equally represented. A child typically enrolled in a center for one school year (9 months) and attended an average of 14 days per month. Classes were held four days a week (half day of class) and were run on the KCMSD school schedule. The family situation for most children consisted of living with a married mother, but the father was not living in the home. A third of children lived with both parents and a quarter of the mothers were in their teens.

A child is eligible for enrollment in an ELC classroom if scores on one of the four developmental tests (e.g., PLS, DIALR-motor, KIDS fine motor, and KIDS gross motor) found six months or more delay. Different tests may have been used from year to year, making it difficult to track performance on a particular test through time. For example, from Table 18, 47% of the ELC population did not show a significant language delay as assessed on the PLS language test. These children failed (i.e., had a six month or more delay) one of the other tests, perhaps the DIALR-motor test, to gain entry into an ELC classroom.

Considering the development of the ELC sample population, the mean delay at entry, as measured by PLS language score, was 6.9 months. On average, a child gained over 4 months remediation of this delay after one year in an ELC classroom (mean risk at exit of 2.6 months), which is a considerable improvement. Performance on fine and gross motor tests were measured by KIDS subtests conducted by ELC personnel. In fine motor skills, 51% of ELC children functioned in the lower stanines (falling in the low 22% of the normative population) and 47% were average (falling among 56% of the normative population). Children fared better

in gross motor skills, with the majority (52%) scoring in the average stanines, and 31% scoring high (falling in the upper 22% of the normative population).

Considering health attributes, mother and child were healthy generally (Table 18). The most common childhood ailment was ear infections, with half the sample being affected. Few children suffered from speech, hearing or vision problems.

Classroom behaviors were assessed by ELC teachers at least twice a year using observations similar to those recorded in the High/Scope studies. The Child Observation Record (COR) forms used by the KCMSD ELC teacher were adapted in the present study to correspond to categories used by High/Scope. The form adapted for the purposes of evaluating ELC classroom behaviors is provided in Appendix B, Table B-1. These classroom behaviors were assessed: Initiative, Social Relations, Representing Things, and Language and Literacy. The most recent behavioral assessment made by the teacher was used in this evaluation.

From Table 18, the children scored above average in every category, with scores generally in the top third. Clearly, these delayed children benefitted from the enriched classroom activities received in the ELC environment.

Factor analysis offers a statistical method to reduce complex data to those factors which represent the relationships among numerous variables. The goal of factor analysis is to identify the underlying structure in a set of observed variables. Through an orthogonal (VARIMAX) factor analytic rotated solution (SPSS-X FACTOR), 22 variables (service items excluded) in the ELC population as described above were reduced to eight factors with eigenvalues greater than 1.0. Sixty-eight percent of the variance was accounted for in the eight factor solution. The results of the factor analysis suggested that three important dimensions explain the underlying structure in the data: development, which included classroom behaviors and developmental tests, family status, and health. The factor solution is presented in Table 19.

In this study, above average scores in classroom behaviors, as recorded by the ELC teacher, dominated the developmental construct, with 16% of the variance explained by Factor 1. The other developmental attributes appeared on Factors 4 through 8 and collectively account for 31.5% of the variance. These factors revealed these population attributes:

1. Children scoring average on the KIDS fine motor test and with PLS language risk showing 1-5 months delay gained entry into the ELC program by failing the DIALR motor test. Also, these children could expect complete remediation of the language risk at exit.
2. Children with average scores on the KIDS gross motor test had vision problems.

3. Children with 12 months or more delay on the PLS language test had vision and oral health problems.
4. Children scoring low on the KIDS gross motor test failed the DIALR motor and were typically male.

The remaining factors support the profile of the ELC sample as found in the observed frequency of attributes in Tables 17 and 18. Family status, defined in the factor analysis as child living with the married mother, but the father not at home, accounted for 11% of the variance in this study (Factor 2). The underlying construct of health appeared on Factors 3 and 6. In this study, the majority of the population lacked health problems. Yet, health problems, when present, were associated with 12 months or more language delay at entry.

These factors offer signals to Early Childhood screening personnel and ELC classroom teachers which may help guide their interaction with and response to this special population of children.

Achievement. Children who have experienced at least one year of the educational intervention as described in the Implementation Model offer a database unique to the Early Childhood Development program - a population of students "at-risk" for academic difficulties and placed in an Early Learning Center instructional environment prior to kindergarten. With the onset of kindergarten instruction in a regular classroom, these former ELC students are exposed to the same academic environment and demands as non-ELC students. A measure of the benefits of the ELC programs to these children, some of whom may enter kindergarten still "at-risk" academically, is gained through a comparative evaluation between former ELC students and district peers.

Traditional achievement data (e.g, standardized test scores) are available for children enrolled in the KCMSD since kindergarten. These data permit a longitudinal analysis of a cohort of children who were enrolled in an ELC classroom prior to entering kindergarten and who now are enrolled in an elementary school in the KCMSD. The oldest former ELC students are now in the fourth grade, but only 25 such students were listed in Student Records. One-hundred, forty-one former ELC students currently in the third grade are the second oldest group, and those that could be followed from kindergarten comprise the 1989 kindergarten cohort. A longitudinal study of the performance of this cohort provides an assessment of the impact of the ELC programs on future academic success. The performance of this cohort is compared to the district as a whole in Table 20A. As a group, former ELC students scored

slightly at or below the district from first through third grade. As kindergartners, former ELC students slightly outperformed district peers in reading, language and math.

To better evaluate the academic performance of former ELC students as compared to their peers, it is necessary to eliminate as many pre-existing differences as possible. In order to effectively isolate ELC status, a sample of non-ELC students were selected randomly as a comparison group. All students, both former ELC and non-ELC, were in the third grade and enrolled in the same schools during the 1991-1992 school year. Analyses of variance with grade equivalent ITBS scores as the measure of achievement were performed. The mean scores were converted to percentile ranks for presentation in Table 20B and Figures 6 through 8. Former ELC students consistently scored below the non-ELC peer group in reading and language. The difference in reading scores was statistically significant ($p < .05$). In math, former ELC students outperformed the comparison group, but the difference was not statistically significant.

Considering the above average scores in ELC classroom behaviors as assessed on the COR and the above-district performance in kindergarten for these students, the decline in achievement after kindergarten suggests a failure of the KCMSD elementary schools to maintain their success, and not a failure of the ELC program.

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Table 1

Early Childhood Development Program
Screenings Completed 1986 through 1992

Age Group (Program) Status	1986-1987	1987-1988	1988-1989	1989-1990	1990-1991	1991-1992
1 to 3 Years (PAT)						
Screened	590	834	1423	1566	1896	1975
At risk (%)	183 (31%)	334 (40%)	400 (28%)	552 (35%)	783 (41%)	479(24%)
3 to 5 Years (ELC)						
Screened	---	2472	4247	4464	4329	5284
At risk (%)	---	1231 (50%)	2460 (58%)	2595 (58%)	3103 (72%)	4380 83%)

Note: Percentages are rounded to the nearest whole percent. PAT screens children up to the third birthday and ELC screens children from three years old to the fifth birthday.

Table 2

Early Childhood Development Program

Screening Observations (N=19), 1991-1992

Observation	Yes	No
1. Screening:		
Vision	100%	---
Hearing	100%	---
Language	100%	---
Motor	100%	---
2. Screening team shared screening results with parent	100%	---
3. Parent was provided with a personal summary of child's results.	100%	---
4. Screening team interpreted results to parent.	100%	---
5. Parents of children with possible delays were advised to share results with family physician.[1]	54%	46%
6. Screening team discussed appropriate learning activities with parent.	58%	42%
7. Screening team made appropriate recommendations to parents	100%	---
8. Parent/family was encouraged to participate in parent education.	56%	44%
9. Parent of 3-4 yr. children with possible delays was informed of and encouraged to participate in ELC.[1]	100%	---
10. Parent in need of other related services (i.e., counseling) was given information on how to obtain such services.	89%	11%
11. Parent was provided with written information regarding child development.	100%	---
12. Parent was provided with resource guide re: community services and Early Childhood programs.	100%	---

Note: Percentages are rounded to the nearest whole percent.

[1] Results include parents with child identified as being at risk only.

Table 3

Early Childhood Education Program

Parent Perceptions (N=111), Screening Program 1992

Questions	Yes	No
1. How did you learn about the program?		
Newspaper	2%	98%
Radio	--	100%
TV	--	100%
Older child	12%	88%
Friends or neighbors	14%	86%
PAT program	14%	86%
Community brochure	7%	93%
School brochure	3%	97%
2. When your child was screened did you attend the summer screening or call for an appointment during the school year?		
Attended summer screening	23%	
Called for an appointment	51%	
Screened at preschool, parent unaware	26%	
3. If you called, how long did you have to wait for a screening appointment?		
1 week or less	17%	
1-2 weeks to 1 month	17%	
2 weeks to 1 month	28%	
More than 1 month	35%	
Can't remember	3%	
4. Was the screening done at a time that was convenient for you?	85%	15%
5. When your child was screened, did you get all the information you needed about the screening results?	89%	11%
6. Were the results of the screening explained in a way that you could easily understand?	84%	16%
7. Did the screening staff refer you to additional services?[1]	31%	69%
8. If yes, did you follow up on the referal and use the service?	34%	66%
9. Did the service provide adequate help?	91%	9%
10. Were you told why your child was or was not eligible for the ELC program?	63%	37%
11. Do you think the district responds to the needs of children?	68%	32%
12. Has the screening program influenced your attitude toward the district?	65%	35%
13. Would you say that you have a positive or negative attitude toward the district?		
Positive	74%	
Negative	26%	

Note: Percentages rounded to the nearest whole percent. Percentages do not include parents not expressing an opinion.

[1] Results include parents in need of additional services only.

Table 4

Early Childhood Development Program
Parents as Teachers Enrollment

Year	0 - 3 Years[1]	3 - 5 Years
1986-1987	1563	No Program[2]
1987-1988	2031	413
1988-1989	3177	843
1989-1990	3874	2153
1990-1991	4490	2324
1991-1992	4928	2633

1 Birth to 36 months.

2 Not funded under PAT during 1986-1987.

Table 5
Early Childhood Development Program
Parents as Teachers
Participant Sample Date of Entry into Program

Date	N	%
1985	6	1%
1986	161	33%
1987	178	37%
1988	122	25%
1989	16	3%
1990	3	.6%
Total	486	

Table 6
Early Childhood Development Program
Parents as Teachers Participant Characteristics 1985-1992

DEMOGRAPHICS

Sex	N[1]	%
Female	237	49%
Male	249	51%
Total	486	

Ethnicity	N	%
Minority	382	83%
Non-Minority	80	17%
Total	462	

Length in PAT (mos)	N	%
Less than 6 mos	189	39%
6 mo-1 yr	114	24%
1-1.5 yrs	69	14%
1.5-2 yrs	37	8%
2-2.5 yrs	28	6%
2.5-3 yrs	24	5%
Greater than 3 yrs	20	4%
Median (N=480)	8 months	

FAMILY INFORMATION

Child Lives With	N	%
Both parents	230	48%
Mother	228	48%
Father	4	.8%
Extended Family	14	3%
Total	476	

Mother's Marital Status	N	%
Married	209	46%
Single	188	42%
Separated	35	8%
Divorced	19	4%
Widowed	1	.2%
Total	452	

Teen Parent	N	%
Yes	53	12%
No	378	88%
Total	431	

Father Present	N	%
Yes	221	48%
No	240	52%
Total	461	

Mother's Education	N	%
High school	219	64%
College (some)	110	32%
Grad. sch.	13	4%
Post-Grad.	1	.3%
Median (N=343)	12th Grade	

Mother Employed	N	%
Yes	196	49%
No	200	50%
Total	397	

Pregnancy Complications	N	%
Yes	97	23%
No	334	77%
Total	431	

Child Delayed	N	%
Yes	53	17%
No	250	83%
Total	303	

Table 6 (cont.)
Early Childhood Development Program
Parents as Teachers Participant Characteristics 1985-1992

HEALTH

Ear Infection	N	%	Regular Medical Checkups	N	%
Yes	141	41%	Yes	125	41%
No	207	59%	No	178	59%
Total	348		Total	303	
High Fever	**N**	**%**	**Hospitalized**	**N**	**%**
Yes	44	14%	Yes	41	13%
No	265	86%	No	268	87%
Total	309		Total	309	
On Medication	**N**	**%**	**Birth Weight <5 lbs**	**N**	**%**
Yes	15	5%	Yes	12	4%
No	294	95%	No	297	96%
Total	309		Total	309	

Note: Percentages are rounded to the nearest whole percent.

[1] Sample size represents the number, children with data available for that attribute. The number will vary among attributes as data are missing in some cases.

Table 7
Early Childhood Development Program
Parents as Teachers Participant Characteristics 1985-1992
Services Provided

Telephone Calls Made (N=419)[1]

	N	%
None	77	18%
1-5	152	36%
6-10	118	28%
11-15	47	11%
16+	25	6%
Median[2]	5	

Home Visits Made (N=481)

	N	%
None	4	.8%
1-5	302	62%
6-10	142	29%
11-15	31	6%
16+	6	1%
Median	5	

Group Meetings Attended (N=472)

	N	%
None	305	65%
1-5	159	34%
6-18	8	2%
Median	5	

Home Visits Attempted (N=478)

	N	%
None	2	.4%
1-5	89	60%
6-10	135	28%
11-15	42	9%
16+	9	2%
Median	5	

Dental Screenings (N=484)

	N	%
0	198	41%
1	241	50%
2	42	9%
3	3	.6%
Mean	.7	

Denver Screenings (N=485)

	N	%
0	126	26%
1	310	64%
2	45	9%
3	4	.8%
Mean	.9	

PLS Screenings (N=486)

	N	%
0	189	39%
1	275	57%
2	22	5%
Mean	.7	

Nutritional Survey (N=486)

	N	%
0	261	54%
1	199	41%
2	23	5%
3	3	.6%
Mean	.5	

Table 7 (cont.)
Early Childhood Development Program
Parents as Teachers Participant Characteristics 1985-1992
Services Provided

Semel Screenings (N=486)			Vision Screenings (N=485)		
	N	%		N	%
0	160	33%	0	176	36%
1	300	62%	1	259	53%
2	24	5%	2	46	10%
3	2	.4%	3	3	.6%
Mean	.7		Mean	.8	

Hearing Screenings (N=485)			Physical Assessments (N=485)		
	N	%		N	%
0	145	30%	0	147	30%
1	289	60%	1	294	61%
2	46	9%	2	33	7%
3	5	1%	3	10	2%
Mean	.8		Mean	.8	

Note: Percentages are rounded to the nearest whole percent.

[1] Sample size represents the number of children (cases) with data available for that attribute. The number will vary among attributes as data are missing in some cases.

[2] Median values provide a better estimae of an average when the data are skewed.

Table 8

Early Childhood Education Program

Parents as Teachers Program

Parent Perceptions (N=120), Spring 1992

Questions	Yes	No
1. How did you learn about the program?		
Newspaper	3	97%
Radio	1%	99%
TV	---	100%
Older child	1%	99%
Friends or neighbors	28%	73%
PAT program	---	100%
Community brochure	15%	85%
School brochure	---	100%
2. Has the overall PAT program been helpful to you as a parent?	96%	4%
3. Was the screening done at a time that was convenient for you?	98%	2%
4. When your child was screened, did you get all the information you needed about the screening results?	92%	8%
5. Were the results of the screening explained in a way that you could easily understand?	96%	4%
6. Did the screening staff refer you to additional services?	27%	73%
7. If yes, did you follow up on the referal and use the service?	61%	39%
8. If yes, did the service provide adequate help?	100%	---
9. Did you have private visits with the parent educator?	100%	---
10. If yes, were these visits helpful?	99%	1%
11. If yes, were these visits scheduled at a time that was convenient for you?	98%	2%
12. Did you attend group meetings sponsored by the PAT program?	44%	56%
13. If yes, were these meetings helpful?	93%	7%
14. If yes, were the meetings scheduled at times that were convenient for you?	82%	18%
15. Have you used the resource room at the Parent Education Center?		
More than once a month	8%	
Once a month	13%	
Once or twice since entered program	16%	
Not at all	62%	
16. Have you used toys or books from the Parents as Teachers resource room?	47%	53%

Table 8 (cont.)

Early Childhood Education Program

Parents As Teachers Program

Parent Perceptions (N=120), Spring 1992

Questions	Yes	No
17. If yes, did the parent educator bring these to you or did you check them out yourself?		%
Parent educator	50%	
Self	21%	
Both	29%	
18. If yes, have these materials been helpful?	100%	---
19. As a result of the program, has your knowledge of child development increased?	94%	6%
20. As a result of the program, has your confidence as a parent increased?	91%	9%
21. As a result of the program, are you better able to identify conditions that might interfere with your child's normal development?	84%	16%
22. Which part of the program was most helpful to you?[1]		
Screening	12%	
Private visits	52%	
Group meetings	4%	
Resource room	1%	
Parent educator	32%	
23. Do you think the district responds to the needs of children?	82%	18%
24. Has the PAT program influenced your attitude toward the district?	66%	34%
25. Would you say that you have a positive or negative attitude toward the district?		
Positive	72%	
Negative	28%	

Note: Percentages are rounded to the nearest whole percent. Percentages do not include parents not expressing an opinion.

[1] Parents could respond to more than one item.

Table 9a

Early Childhood Development Program
Kindergarten Cohort Former PAT Students (N=40)
ITBS Percentile Ranks Compared to District

Test Students	Cohort 1990 Kindergarten	1991 First Grade	1992 Second Grade
Reading			
PAT	70	50	53
District	56	50	53
Language			
PAT	53	73	67
District	74	64	66
Math			
PAT	62	59	65
District	64	64	67

Note: Percentile ranks are based on mean grade equivalent scores.

Table 9b

Early Childhood Development Program
Summery Data Comparing Former PAT Students
and a Random Sample of Non-PAT Students
1992 Second Grade ITBS Percentile Ranks

Test	PAT (N=35)	Non - PAT (N= 40)	Probability
Reading	50	59	.59
Language	68	67	.96
Math	65	61	.73

Note: Percentile ranks are based on adjusted mean grade equivalent scores.

Table 10
Early Childhood Development Program
Early Learning Centers Enrollments

Year	End - of - Year N
1987-88	617
1988-89	942
1989-90	983
1990-91	990
1991-92	1392

Note: From June enrollment data provided by the ECD Office.

Table 11

Early Childhood Development Program
End-of-Year Status of Early Learning Center Students

	Entering Kindergarten		Returning to ELC	
Year	N	N (% at risk)[1]	N	N (% at risk)[1]
1987-1988	----	---- ----	247	---- ----
1988-1989	394	---- ----	230	---- ----
1989-1990	618	41 (7%)	334	40 (12%)
1990-1991	578	114 (20%)	351	97 (28%)
1991-1992	625	187 (30%)	336	177 (53%)
1992-1993	838	428 (51%)	528	272 (52%)

Note: Percentages are rounded to the nearest whole percent. Data indicated screened students age-eligible to attend kindergarten for a given year and represented end-of-year figures for the prior year, i.e., 578 of the 1989-1990 ELC students were age-eligible to enter kindergarten in 1990-1991.

[1] At risk for both language and motor development.

Table 12

Early Childhood Development Program

Early Learning Center Observations (N=696 Minutes)

Occurrence of Student Behaviors During Classroom Activities

Behavior	Group Lesson		Story Time		Gross Motor		Work/ Clean		Eat/Clean	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1. Decision making	9%	91%	5%	95%	42%	58%	9%	91%	16%	84%
2. Plan activity	8%	92%	---	100%	83%	17%	11%	89%	21%	79%
3. Carry out activity	45%	55%	46%	55%	99%	1%	91%	9%	79%	21%
4. Review activities	7%	93%	9%	91%	---	100%	9%	91%	32%	68%
5. Speaking activities	67%	33%	52%	48%	97%	3%	93%	8%	89%	11%
6. Comprehend others' expressions	98%	2%	100%	---	99%	1%	98%	2%	89%	11%
7. Dramatic activity	15%	85%	---	100%	84%	16%	46%	54%	---	100%
8. Independent behavior	4%	96%	---	100%	90%	10%	21%	80%	32%	68%
9. Art activity	17%	83%	5%	96%	77%	23%	80%	20%	---	100%
10. Movement activity	17%	83%	---	100%	100%	---	---	100%	---	100%

Note: Percentages are rounded to the nearest whole percent.

Table13

Early Childhood Development Program
Early Learning Center Teacher Perceptions (N=14), 1991-1992

Questions		Yes	No
1.	Have a copy of 1991-1992 program implementation model?	100%	---
2.	Been informed of goals for ELC?	100%	---
3.	Background has prepared me to work with at risk children?	93%	7%
4.	In-service training in High/Scope adequately prepared me to teach curriculum?	93%	7%
5.	Believe High/Scope appropriate for my students?	100%	---
6.	Used COR to record child's progress?	100%	---
7.	Believe COR is an appropriate record of child's progress?	75%	25%
	ESP	50%	50%
	Hearing	64%	36%
	Vision	64%	36%
	Growth chart	71%	29%
	Health history	71%	29%
	Nutrition form	71%	29%
8.	Parents understand screening results?	67%	33%
9.	I made home visits or other parent contacts?	100%	---
10.	I kept records of home visits or other parent contacts made.	100%	---
11.	Teacher assistant has made home visits or other parent contacts with me.	100%	---
12.	I scheduled monthly parent participation activities.	100%	---
13.	Parent participation activities were scheduled at convenient times for parents?	79%	21%
14.	In-service training schedule meets my needs?	93%	7%
15.	In-service training content meets my needs?	92%	8%
16.	I've applied in-service training in classroom.	100%	---
17.	Had opportunity to provide suggestions and requests regarding in-service training?	79%	21%
18.	Pupil: teacher ratio is appropriate for children?	29%	71%
19.	Classroom facilities are adequate?	71%	29%
20.	Curriculum materials are adequate?	100%	---
21.	Equipment available to children is adequate?	100%	---

Table 13 (cont.)

Early Childhood Development Program

Early Learning Center Teacher Perceptions (N=14), 1991-1992

Questions		Yes	No
22.	Supplies/materials available for children's use are adequate?	100%	---
23.	My concerns about buses are:	50%	50%
	Safety	43%	57%
	Timeliness	21%	79%
	Consistent presence of aides	36%	64%
	Politeness of personnel		
24.	Satisfied with support of program administrator?	100%	---
25.	Contact with program administrator is adequate?	86%	14%
26.	Satisfied with support of transportation technician?	100%	---
27.	Satisfied with support of building level principal?	92%	8%
28.	Satisfied with support of paraprofessionals?	93%	7%
29.	Services provided by speech therapists meets students needs?	60%	40%
30.	Services provided by home/school coordinator meets students needs?	86%	14%
31.	Services provided by resource teacher meets students needs?	79%	21%

Note: Percentages are rounded to the nearest whole percent. Percentages do not include teachers not expressing an opinion.

Table 14

Early Childhood Development Program

Early Learning Center Paraprofessional Perceptions (N=15), 1991-1992

Questions		Yes	No
1.	In-service training in High/Scope adequately prepared me to assist in the classroom?	100%	—
2.	I work directly with children in the classroom?	100%	—
3.	Satisfied with my role in the classroom?	85%	15%
4.	Teachers with whom I work involve me in planning classroom activities?	87%	13%
5.	Used COR to record child's progress?	87%	13%
6.	Satisfied with teachers response to the concerns I have about children?	93%	7%
7.	I made home visits or other parent contacts with the teacher?	93%	7%
8.	I made home visits or other parent contacts on my own?	40%	60%
9.	In-service training schedule meets my needs?	93%	7%
10.	In-service training content meets my needs?	86%	12%
11.	I've applied in-service training in classroom?	100%	—
12.	Had opportunity to provide suggestions and requests regarding in-service training?	93%	7%
13.	My concerns about buses are:		
	Safety	73%	27%
	Timeliness	80%	20%
	Consistent presence of aides	53%	47%
	Politness of personnel	53%	47%
14.	Satisfied with support of program administrator?	93%	7%
15.	Contact with program administrator is adequate?	93%	7%
16.	Satisfied with support of building level principal?	87%	13%
17.	Services provided by speech therapist meets students needs?	56%	44%
18.	Services provided by home/school coordinator meets students needs?	93%	7%
19.	Services provided by resource teacher meets students needs?	86%	14%

Note: Percentages are rounded to the nearest whole percent. Percentages do not include paraprofessionals not expressing an opinion.

Table 15

Early Childhood Education Program

Early Learning Center Program

Parent Perceptions (N=49), Spring 1992

Questions	Yes	No
1. How did you learn about the program?		
Newspaper	---	100%
Radio	---	100%
TV	---	100%
Older child	18%	82%
Friends or neighbors	29%	71%
PAT program	18%	82%
Community brochure	8%	92%
School brochure	2%	98%
2. Has the overall ELC program been helpful to you as a parent?	94%	4%
3. Has the ELC been helpful to your child?	96%	4%
4. Has your child enjoyed going to the ELC?	100%	---
5. When your child was screened did you attend the summer screening or call for an appointment during the school year?		
Attended summer screening	49%	
Called for an appointment	49%	
Screened at preschool, parent unaware	2%	
6. If you called, how long did you have to wait for a screening appointment?		
1 week or less	26%	
1-2 weeks	30%	
2 weeks to 1 month	17%	
More than 1 month	8%	
Can't remember	17%	
7. Was the screening done at a time that was convenient for you?	94%	6%
8. When your child was screened, did you get all the information you needed about the screening results?	100%	---
9. Were the results of the screening explained in a way that you could easily understand?	100%	---
10. Did the screening staff refer you to additional services?	27%	73%
11. If yes, did you follow up on the referal and use the service?	54%	46%
12. If yes, did the service provide adequate help?	100%	---
13. Were you told why your child was eligible for the ELC program?	92%	8%
14. Did you have individual meetings with your child's teacher?	94%	6%
15. If yes, were these meetings helpful?	98%	2%

Table 15 (cont.)
Early Childhood Education Program
Early Learning Center Program
Parents Perceptions (N=49), Spring 1992

Questions		Yes	No
16.	If yes, were these meetings scheduled at a time that was convenient for you?	94%	6%
17.	Did you attend parent participation activities?	73%	27%
18.	If yes, did the teacher explain why certain things were being done in certain ways?	94%	6%
19.	If yes, was the observation of your child's classroom helpful to you?	98%	2%
20.	If yes, were the parent participation activities scheduled at times that were convenient for you?	92%	8%
21.	As a result of the program, has your knowledge of child development increased?	96%	4%
22.	As a result of the program, has your confidence as a parent increased?	95%	5%
23.	Which part of the program was most helpful to you?		
	Screening	6%	
	Private visits	20%	
	Parent participation opportunities	24%	
	Classroom experience for child	38%	
	Child care provided	2%	
	Transportation	8%	
24.	Did your child use bus transportation provided by the district?	100%	---
25.	If yes, were the buses on time when picking up your child?	83%	17%
26.	If yes, were the buses on time when bringing your child home?	91%	9%
27.	If yes, was the Early Childhood Office responsive to your transporation concerns?	96%	4%
28.	If yes, was the bus driver friendly and courteous?	98%	2%
29.	If yes, was there a transportation aide on the bus?	100%	---
30.	Do you think the district responds to the needs of children?	89%	11%
31.	Has the ELC program influenced your attitude toward the district?	79%	21%
32.	Would you say that you have a positive or negative attitude toward the district?		
	Positive	87%	
	Negative	13%	

Note: Percentages are rounded to the nearest whole percent. Percentages do not include parents not expressing an opinion.

Table 16
Early Childhood Development Program
Early Learning Center Participant Characteristics
Services Provided

Parent Contacts Made	N	%
None	19	3%
1-5	278	50%
6-10	198	35%
11-15	49	9%
16-20	14	3%
20+	4	1%
MEAN (N=562)	6	

Parent Contact Attempted	N	%
None	11	2%
1-5	224	40%
6-10	229	41%
11-15	76	14%
16-20	15	3%
20+	7	<1%
MEAN (N=562)	7	

Teacher Calls	N	%
None	354	63%
1-5	204	36%
5+	3	<1%
MEAN (N=561)	.7	

Teacher Home Visits	N	%
None	265	47%
1-5	265	47%
5+	32	6%
MEAN (N=562)	1.6	

Parent Class Visits	N	%
None	78	14%
1-5	361	64%
6-10	96	17%
10-15	23	4%
15+	4	1%
MEAN (N=562)	3.5	

Grp Mtgs Parent Attnd	N	%
None	481	85%
1-5	79	14%
5+	1	<1%
MEAN (N=561)	.2	

Developmental Screening	N	%
0	172	31%
1	267	47%
2	112	20%
3	11	2%
4	1	<1%
MEAN (N=563)	.9	

Growth Screening	N	%
0	4	<1%
1	67	12%
2	391	69%
3	95	17%
4	6	<1%
MEAN (N=563)	2.1	

PLS Screening	N	%
0	109	19%
1	75	13%
2	325	58%
3	53	9%
MEAN (N=563)	1.6	

Nutritional Survey	N	%
0	8	1%
1	103	18%
2	367	65%
3	78	14%
4	6	1%
MEAN (N=563)	2	

Table 16 (cont.)
Early Childhood Development Program
Early Learning Center Participant Characteristics
Services Provided

Dental Screenings	N	%
0	6	1%
1	89	16%
2	383	68%
3	80	14%
4	5	1%
MEAN (N=563)	2	

Vision Screenings	N	%
0	7	1%
1	74	13%
2	385	68%
3	90	16%
4	7	1%
MEAN (N=563)	2	

Hearing Screening	N	%
0	6	1%
1	80	14%
2	378	67%
3	92	16%
4	7	1%
MEAN (N=563)	2	

Note: Percentages are rounded to the nearest whole percent.

Table 17
Early Childhood Development Program
Early Learning Center Participant Characteristics
Demographic and Family Attributes

DEMOGRAPHICS

Sex (N=558)[1]	N	%	Ethnicity (N=350)	N	%
Female	276	50%	Minority	330	94%
Male	282	51%	Non-minority	20	6%

Length in ELC (mos)	N	%	Days Attended Class per Month	N	%
less than 6 mos	52	9%	1-10	25	5%
6 mo-1 yr	413	74%	11-15	448	81%
1-1.5 yr	94	17%	>15	80	15%
1.5-2 yr	2	<1%	MEAN (N=553)	14.1 days	
MEAN (N=561)	9.9 mos				

FAMILY INFORMATION

Child Lives With (N=560)	N	%	Mother's Marital Status (N=293)	N	%
Both parents	197	35%	Married	171	58%
Mother	346	62%	Single	113	39%
Father	1	<1%	Separated	3	1%
Other	16	3%	Widowed	6	2%

Teen Parent (N=547)	N	%	Social Services Involved[2] (N=173)	N	%
Yes	143	26%	Preschool	69	40%
No	404	74%	Well-baby Clinic	54	31%
			WIC	31	18%
			Head Start	19	11%

Note: Percentages are rounded to the nearest whole percent.

[1] Sample size represents the number of children (cases) with data available for that attribute. The number will vary among attributes as data are missing in some cases.
[2] Social services involved prior to enrolling in an ELC.

Table 18
Early Childhood Development Program
Early Learning Center Participant Characteristics
Health and Developmental Attributes

HEALTH

Pregnancy Complications (N=549)[1]	N	%
Yes	102	19%
No	446	81%

Ear Infection (N=548)	N	%
Yes	275	50%
No	273	50%

High Fever (N=549)	N	%
Yes	46	8%
No	503	92%

On Medication (N=551)	N	%
Yes	30	5%
No	521	95%

Seizures/Convulsions (N=528)	N	%
Yes	14	3%
No	514	97%

Physical Disability (N=469)	N	%
Yes	15	3%
No	454	97%

Acquired Deficiency Disease (N=533)	N	%
Yes	109	2%
No	424	98%

Poor Oral Health (N=546)	N	%
Yes	85	16%
No	460	84%

Sickle Cell Anemia (N=466)	N	%
Yes	7	2%
No	459	99%

Birth Defect (N=502)	N	%
Yes	5	1%
No	497	99%

Hospitalized (N=551)	N	%
Yes	111	20%
No	440	80%

Birth Weight < 5 lbs (N=547)	N	%
Yes	40	7%
No	507	93%

Heart Problems (N=18)	N	%
Yes	9	2%
No	509	98%

Involved in Accident (N=547)	N	%
Yes	15	3%
No	471	97%

Inherited Deficiency/ Disease (N=498)	N	%
Yes	4	1%
No	485	99%

DietarySupplements/ Vitamins (N=526)	N	%
Yes	121	23%
No	405	77%

DEVELOPMENT

PLS Language Risk At Entry[2]	N	%
0 mos	18	6%
1-5 mos	121	41%
6-12 mos	117	40%
12-18 mos	26	9%
18-24 mos	8	3%
24-36 mos	3	<1%
MEAN MOS (N=293)	6.9 mos	

PLS Language Risk at Exit[2]	N	%
0 mos	150	49%
1-5 mos	105	35%
6-12 mos	38	13%
12-18 mos	9	3%
18-24 mos	2	<1%
MEAN MOS (N=304)	2.6 mos	

Table 18 (cont.)
Early Childhood Development Program
Early Learning Center Participant Characteristics
Health and Developmental Attributes

DEVELOPMENT (cont.)

DIALR Motor (N=377)	N	%	Vision Problems (N=450)	N	%
Pass	201	53%	Yes	42	9%
Fail	176	47%	No	408	91%
Hearing Problems (N=450)	**N**	**%**	**Speech Problems (N=450)**	**N**	**%**
Yes	56	12%	Yes	11	2%
No	394	88%	No	439	89%
KIDS Fine Motor Stanine Score	**N**	**%**	**KIDS Gross Motor Stanine Score**	**N**	**%**
Low (0-3)	193	51%	Low (0-3)	64	7%
Avg (4-6)	176	47%	Avg (4-6)	193	93%
High (7+)	7	2%	High (7+)	116	31%
MEAN STANINE (N=376)	3.5		MEAN STANINE (N=373)	5.4	

Child Observation Record Mean Scores	
Initiative (17 possible)	12.7
Social Relations (34 possible)	27.6
Representation (16 possible)	10.4
Language & Literacy (33 possible)	23.2

Note: Percentages are rounded to the nearest whole percent.

[1] Sample size represents the number of children (cases) with data available for that attribute. The number will vary among attributes as data are missing in some cases.

[2] PLS Language risk represents the difference between a child's chronological age and developmental age as determined from the PLS language test.

Table 19

Early Childhood Development Program
Early Learning Center Factor Analysis
Rotated Factor Loadings

	Factor 1 Classroom Behaviors	Factor 2 Family Status	Factor 3 Health	Factor 4 KIDS Fine	Factor 5 KIDS Gross	Factor 6 Devlpmt/Health	Factor 7 Development/Sex	Factor 8 Development
% Variance Explained/Variable	16%	11%	9%	7%	7%	6%	6%	5.5
Represent	.83380							
Language/Literacy	.79796							
Initiative	.79277							
Social Relations	.76176							
Child Lives		-.92331						
Mother Martial Status		.91473						
Acquired Disease/Deficiency			.87626					
Pregnancy Complications			.67662					
Hearing Problems			.49262	.35637				
DIAL-M							-.38882	-.66159
Speech Problems								.71931
KIDS Gross					.74487		-.36042	
Accident					.74783			
Hospitalized					.54560			
KIDS Fine				-.72605				
Remediation				.80815				
At Risk (entry)				.46940		-.46307		.39806
Dietary Supplements						.71433		
Poor Oral Health	-.35964		.38123		-.35216	-.48926		
Vision Problems						-.54576		
Ear Infection							.79296	
Sex							.55476	

58

Table 20a

Early Childhood Development Program
Kindergarten Cohort Former ELC Students
ITBS Percentile Ranks Compared to District

Test / Students	Cohort 1989 Kindergarten	1990 First Grade	1991 Second Grade	1992 Third Grade
Reading				
ELC Total	82	56	46	38
ELC Minority (N =131)	81	57	46	39
ELC Non-Minority (N =10)	87	49	50	32
District	77	56	50	45
Language				
ELC Total	59	72	62	54
ELC Minority (N =123)	58	72	64	56
ELC Non-Minority (N =10)	70	56	49	36
District	53	74	64	58
Math				
ELC Total	70	59	62	48
ELC Minority (N =127)	70	59	63	49
ELC Non-Minority (N =10)	60	60	53	39
District	64	64	64	49

Note: Percentile ranks are based on mean grade equivalent scores.

Table 20b

Early Childhood Development Program
Summary Data Comparing Former ELC Students
and a Random Sample of Non-ELC Students
1992 Third Grade ITBS Percentile Ranks

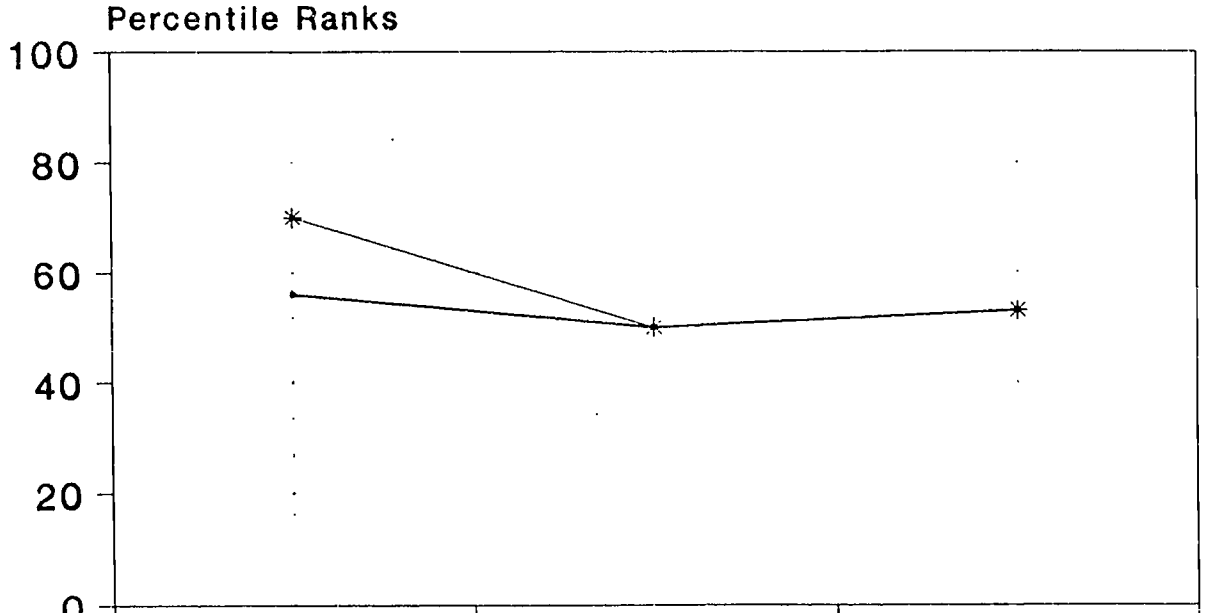
Test	ELC (N =130)	Non-ELC (N=141)	Probability
Reading	33	47	.15[1]
Language	53	58	.59
Math	50	46	.66

Note: Percentile ranks were converted from adjusted mean grade equivalent scores.

[1] Difference statistically significant ($p<.05$).

FIGURE 1

ITBS Reading Achievement
1990 Kindergarten Cohort PAT Students



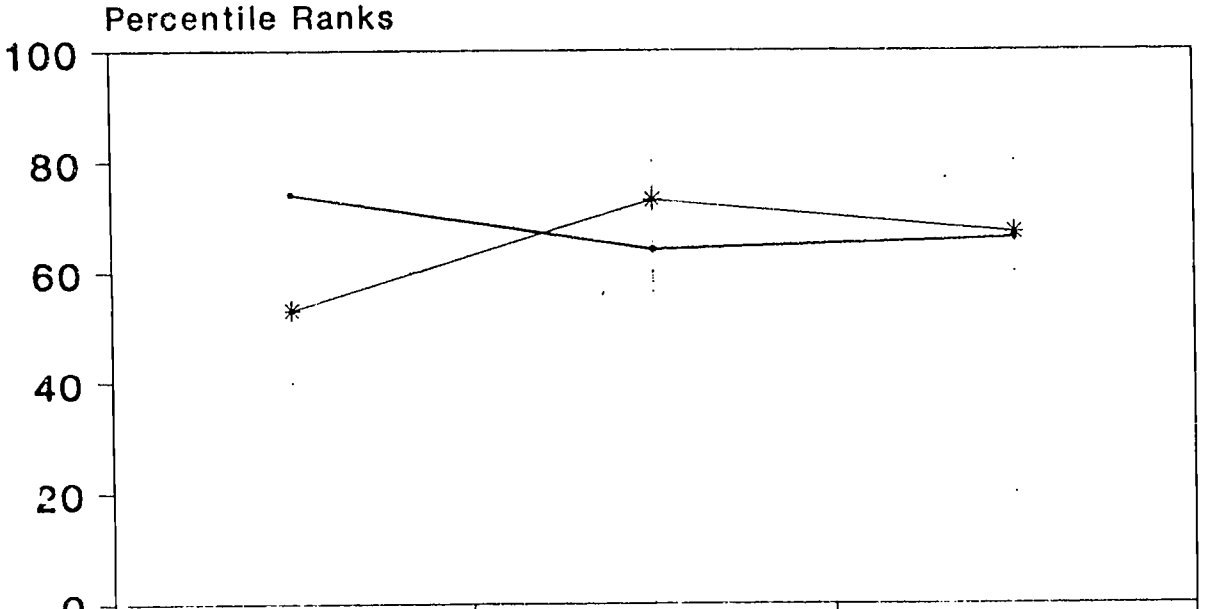
	Kinder '90	First '91	Second '92
Former PAT	70	50	53
District	56	50	53

"Prepared by the Research Office"

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 2

ITBS Language Achievement
1990 Kindergarten Cohort PAT Students

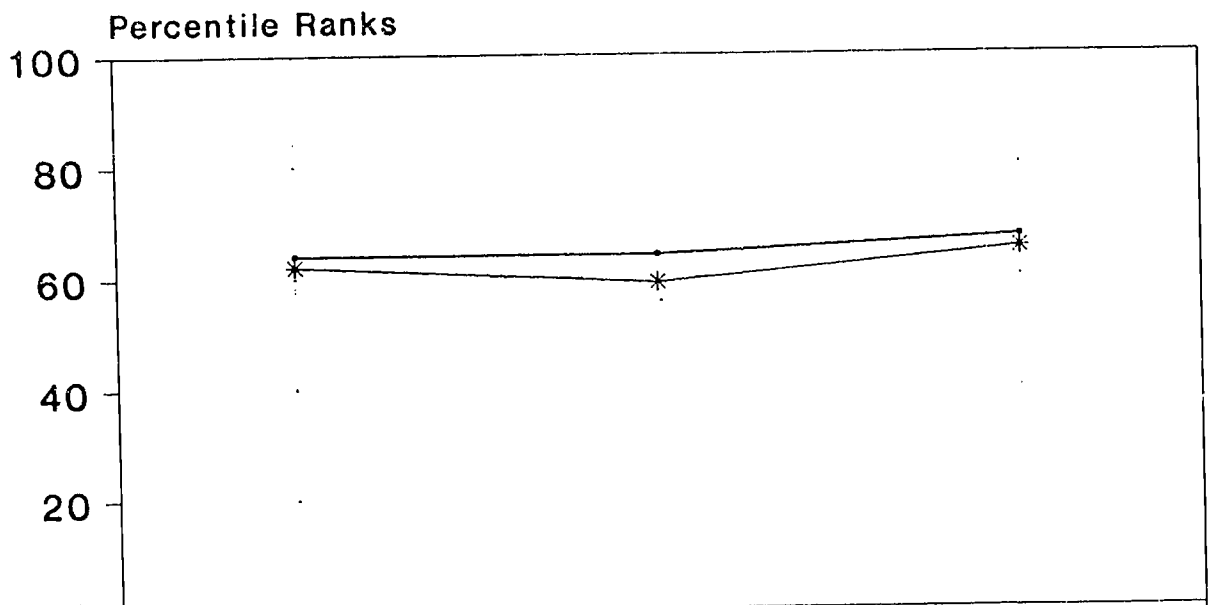


	Kinder '90	First '91	Second '92
Former PAT	53	73	67
District	74	64	66

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 3

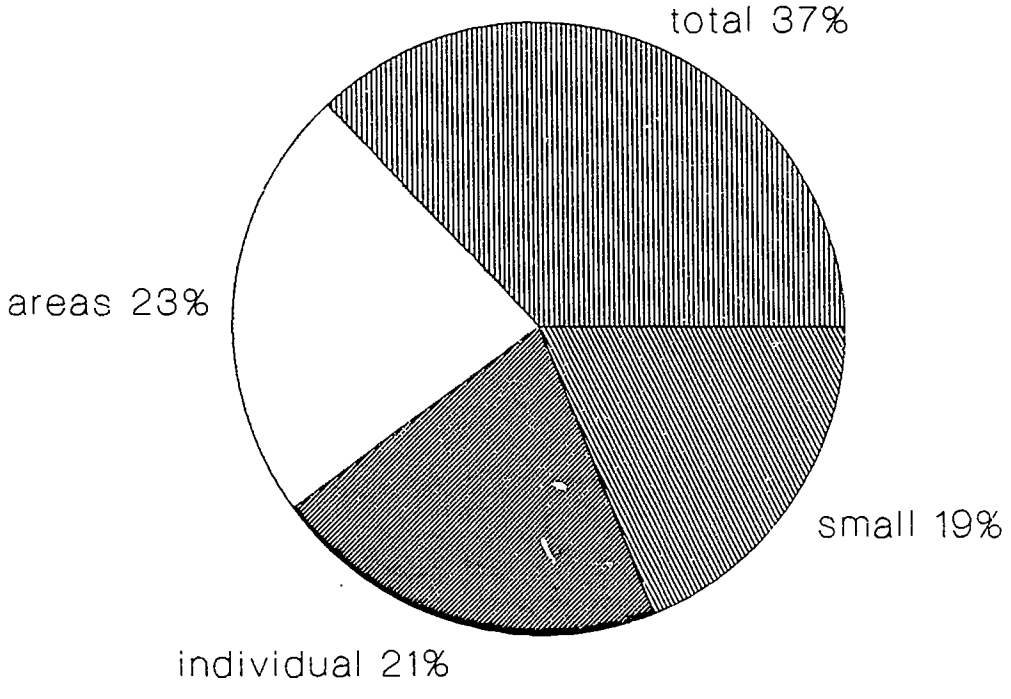
ITBS Math Achievement
1990 Kindergarten Cohort PAT Students



	Kinder '90	First '91	Second '92
Former PAT	62	59	65
District	64	64	67

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 4
Early Childhood Program
ELC Classroom Observations

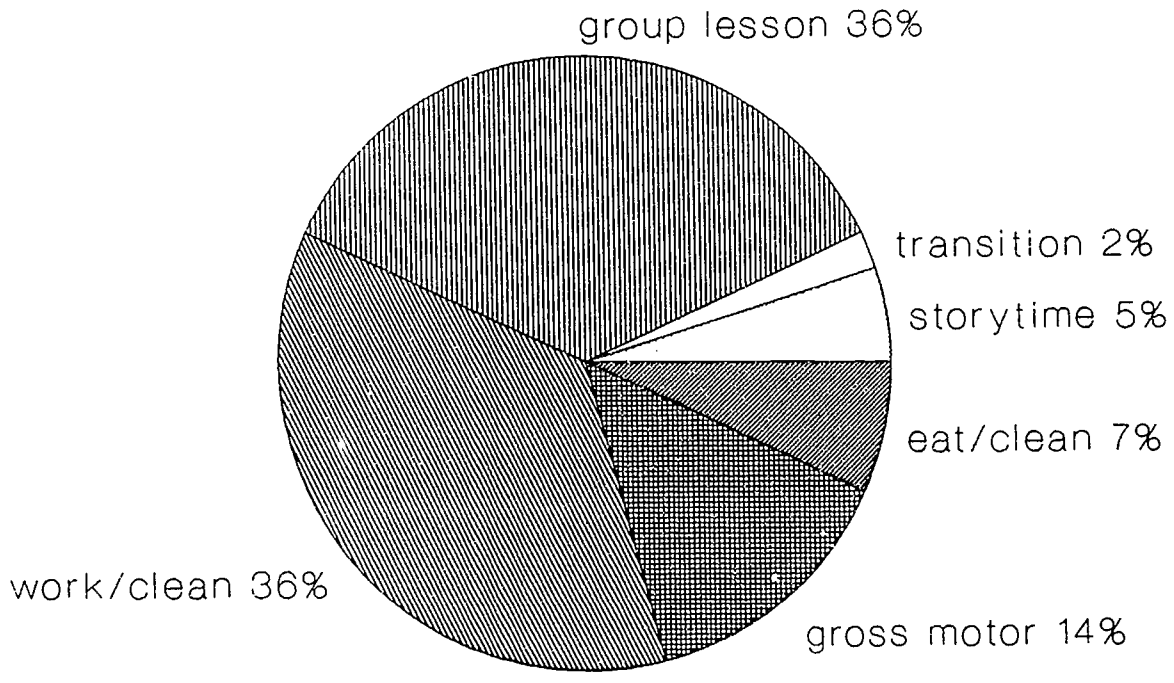


Classroom Groups

percent of observation minutes

67

FIGURE 5
Early Childhood Program
ELC Classroom Observations

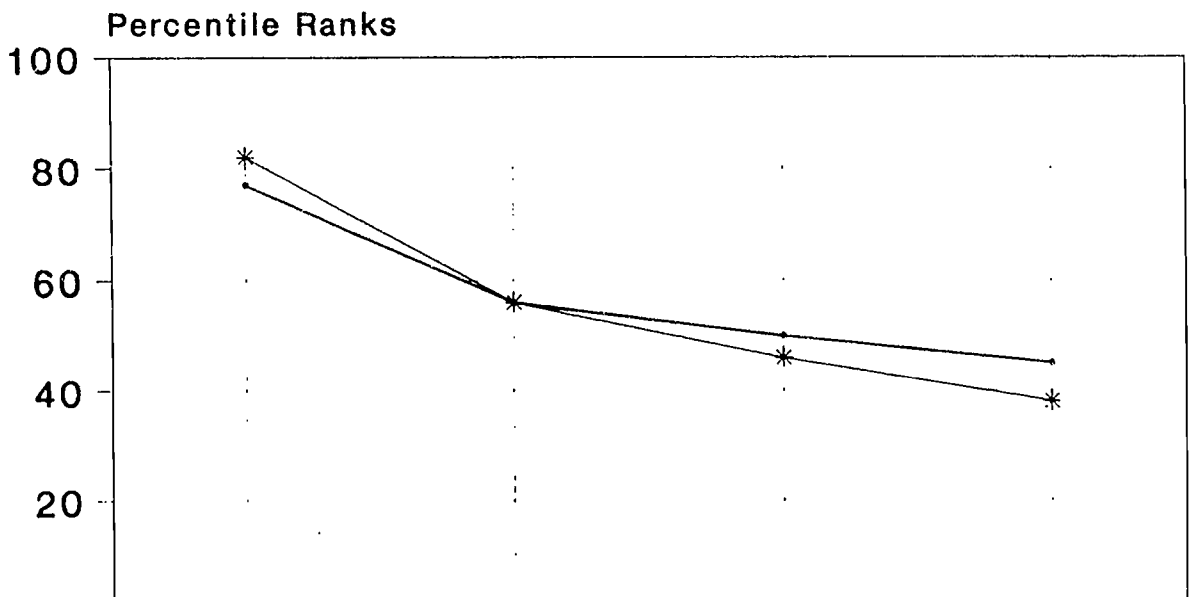


Classroom Activity Periods

percent of observation minutes

FIGURE 6

ITBS Reading Achievement
1989 Kindergarten Cohort ELC Students

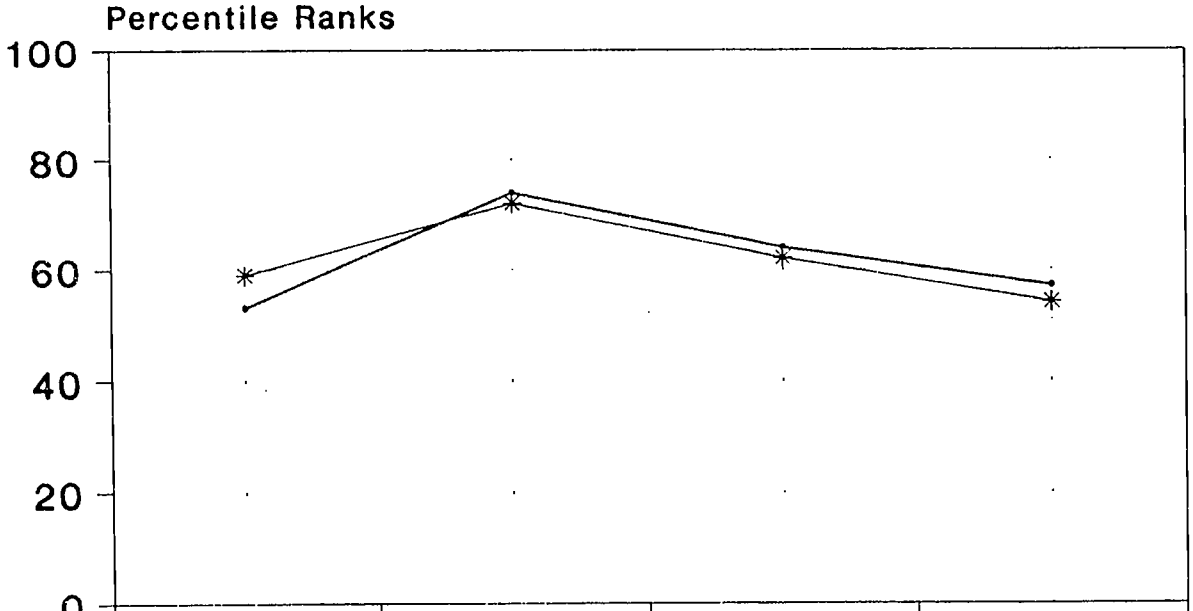


	Kinder '89	First '90	Second '91	Third '92
Former ELC	82	56	46	38
District	77	56	50	45

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 7

ITBS Language Achievement
1989 Kindergarten Cohort ELC Students



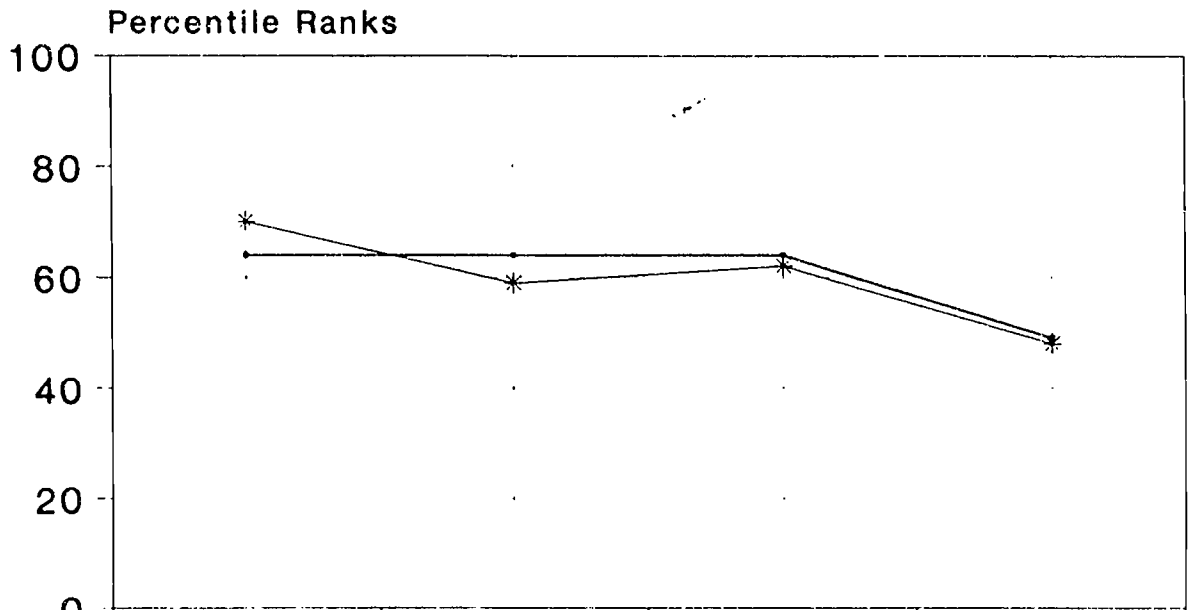
	Kinder '89	First '90	Second '91	Third '92
Former ELC	59	72	62	54
District	53	74	64	57

Note:Percentile ranks were converted from mean grade equivalent scores.

FIGURE 8

ITBS Math Achievement

1989 Kindergarten Cohort ELC Students



	Kinder '89	First '90	Second '91	Third '92
Former ELC	70	59	62	48
District	64	64	64	49

Note:Percentile ranks were converted from mean grade equivalent scores.

Appendix A, Table A-1

Early Learning Centers District Locations

1987 - 1988	1988 - 1989	1989 - 1990	1990 - 1991	1991 - 1992
Askew	Askew	Askew	Askew	Askew
Attucks	Attucks	Attucks*	Attucks*	Attucks*
Franklin*	Franklin*	Franklin*	Franklin*	Early Childhood Center
Graceland	Graceland	Graceland	Graceland	Franklin*
Cook (Hartman)*	Hartman*	Hartman*	Hartman*	Graceland
Holmes	Holmes	Holmes	Holmes	Hartman*
Kumpf	Kumpf	Kumpf	Kumpf	Holmes
Longfellow	Longfellow	Longfellow*	Longfellow*	Kumpf
Switzer	(New Faxon) Switzer*	New Faxon*	New Faxon*	Longfellow*
N. Rock Creek*	N. Rock Creek*	N. Rock Creek*	Trailwoods/N. Rock Creek*	Pershing
Richardson	Richardson	Richardson	Troost*	Switzer Annex
Weeks	Troost	Troost*	Weeks*	Trailwoods
Whittier	Weeks	Weeks*	Whittier	Troost*
	Whittier	Whittier	Willard/Holliday*	Weeks*
	Willard	Willard/Holliday		Whittier

Appendix B, Table B-1

EARLY LEARNING CENTER CHILD OBSERVATION RECORD VARIABLES FOR DATA ENTRY 1991-1992

Summary of Items sheet from High/Scope Preschool Child Observation Record, 1990 adapted to KCMSD ELC COR form currently and historically in use.

Curriculum Component — COR # Item and Possible Score

I. Initiative

A. Expression of Choices and Plans (**COR #1** - 0-6)
B. Problem-Solving with Materials (**COR #4** - 0-4)
C. Diversity of Activities and Contacts (**COR #6** - 1-4)
D. Adherence to General Classroom Procedures (**COR #13** - 1-3)

_____**INITIATIVE SCORE (2-17)**

II. Social Relations

E. Warmth & Complexity (**COR #11 Adult** -1-9)
F. Warmth & Complexity (**COR #11 Peer** - 1-9)
G. Social Problem-Solving (**COR # 12 Peer** - 1-8)
H. Social Problem-Solving (**COR #12 Adult** - 1-8)

_____**SOCIAL RELATIONS SCORE (3-34)**

III. Representing Things

I. Spontanteous Representation Using Materials (**COR #7** - 1-5)
J. Spontaneous Representation in Dramatic Play (**COR #8** - 0-7)
K. Representation through Art Media (**COR #9** - 0-4)

_____**REPRESENTING THINGS SCORE (1-16)**

IV. Language and Literacy

L. Receptive Language (**COR #14 Verbal/Gestural** - 0-6)
M. Language (**COR #15A - Complexity of Grammar** - 1-4)
N. Language (**COR #15B - Vocabulary** - 1-3)
O. Language (**COR #15C - Descriptive Detail** - 1-3)
P. Language (**COR #15D - Clarity** - 1-3)
Q. Reading (**COR #17** - 0-5)
R. Writing (**COR #19** - 0-9)

_____**LANGUAGE AND LITERACY SCORE (4-33)**

The Kansas City, Missouri School District