



# **Head Start FACES 2000:**

## **A Whole-Child Perspective on Program Performance**

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# HEAD START FACES 2000

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### Executive Summary

In 1997, Head Start launched the Family and Child Experiences Survey (FACES), a study of a national random sample of Head Start programs designed to answer critical questions about child outcomes and program quality. In 2000, FACES began data collection on a new national cohort—FACES 2000—and plans are underway for a third cohort. Now, longitudinal data on successive, scientifically representative samples of children, families, teachers, classrooms, and programs are available.

In both studies, children entered Head Start at a great disadvantage to other children, as evidenced by the children's initial scores on standardized assessments of cognitive skills. Findings from both cohorts of FACES show that the gap between Head Start children and the general population of preschool-age children narrows during the Head Start year on key components of school readiness. This is true to a greater extent in the 2000-2001 program year. However, despite the gains they make, Head Start children enter kindergarten still substantially below national averages on such assessments.

Children made significant gains during the Head Start year relative to national norms, most notably in the areas of vocabulary knowledge and early writing skills. In the areas of letter recognition and knowledge of book and print conventions, children in 2000-2001 made significantly greater gains than Head Start children in 1997-1998. Gains in vocabulary and early writing were similar to those in 1997-1998. In both

cohorts, children who entered Head Start with lower skill levels made greater gains than those who entered with higher skill levels. This finding may be related in part to the tendency of scores to move closer to the population mean over successive assessments.

In the domain of social and emotional development, children also showed growth in social skills and reduction in hyperactive behavior during the Head Start year. Children with high levels of shy, aggressive, or hyperactive behaviors (scoring in the top quarter) showed significant reduction of these behaviors.

FACES 2000 also found that Head Start classrooms continue to be of good quality across a wide variety of indicators. In 2000-2001 there was an increased percentage of new teachers with advanced degrees entering Head Start, compared to 1997-1998. Head Start teachers in FACES 2000 were more likely to be younger, new to teaching Head Start, and entering with higher educational levels including graduate degrees. They were also more likely to be trained in Early Childhood Education and to be members of a professional organization. Results also show that Head Start teachers with higher levels of educational attainment, and with more years of teaching experience overall, were more likely to have knowledge and positive attitudes about early childhood education practices, which subsequently influenced classroom quality. Thus, teacher attitudes and knowledge mediate the relationship between teacher education and classroom quality.



- Head Start child was found to enter at about the 16th percentile in vocabulary and early writing skills, at about the 31st percentile in letter recognition, and at about the 21st percentile in early math, when compared to the full spectrum of American children in the same age range.
- There was considerable diversity in skill levels among Head Start children, however. The highest quarter of Head Start children were at or above the national average (50th percentile) in early language and number skills, while the lowest quarter of children ranked on average in the lowest 2 percent of all U.S. preschoolers in these areas.
  - As in 1997-1998, the gap between Head Start children and other preschool-age children narrowed during the Head Start year, especially with respect to vocabulary knowledge and early writing skills. Despite these gains, Head Start children still trail in these measures compared to national averages.
  - Head Start children showed greater progress in letter recognition skills than they had in 1997-1998, but they still did not reach national averages in this area. Although the children made progress in early math skills, they did not make gains toward national averages in this domain.
  - In 2000, Head Start children entered the program knowing about 4 letters of the alphabet, and left the program knowing about 9 letters on average, close to the congressional mandate of being able to name at least 10 letters.
  - Children who entered the program with lower levels of knowledge and skill showed larger gains during the program year, yet still lagged considerably behind national averages. Children who started with higher assessment scores in the fall wound up with higher scores in the spring, but showed less dramatic gains. The finding of greater gains for children who entered with lower scores may be related in part to the tendency of scores to move closer to the population mean over successive assessments.
  - Spanish-speaking children in Head Start showed significant gains in English vocabulary skills without declines in their Spanish vocabulary skills. They did not gain in letter recognition skills.
  - Based on follow-up of the 1997-1998 cohort, Head Start graduates showed further progress toward national averages during kindergarten. Gains of between a third to more than half a standard deviation were observed in vocabulary, early math, and early writing skills during kindergarten. Most Head Start graduates could identify most or all of the letters of the alphabet by the end of kindergarten and more than half could recognize beginning sounds of words. Nevertheless, Head Start graduates remained behind their more advantaged peers in early achievement.
  - The size of gains that children made while in Head Start were predictive of their achievement levels by the end of kindergarten.
  - Children showed growth in social skills and reduction in hyperactive behavior during the Head Start year. According to teacher report, the average score of Head Start children on a cooperative classroom behavior rating scale increased significantly from fall to spring. In addition, the average score of Head Start children on a hyperactive behavior rating scale decreased significantly during the program year.
  - Children with high levels (scoring in the top quarter) of shy, aggressive, or hyperactive behavior showed significant reductions in these problem behaviors in Head Start.
  - Behavior in Head Start is predictive of adjustment and performance in early elementary school. Cooperative classroom behavior ratings and problem behavior ratings by Head Start teachers of children at the end of Head Start were predictive of behavioral adjustment ratings by kindergarten teachers in the spring of the kindergarten year. In addition, children



positively influence classroom quality through the quality of teachers hired, their experience, and attitudes and knowledge.

### **Relationship of Program and Classroom Characteristics to Children's Outcomes**

- Higher teacher salaries are linked to greater gains in several cognitive and social-emotional areas, including letter identification, oral communication of basic social information, and cooperative classroom behavior. Children in programs with higher teacher salaries also showed greater improvement in hyperactive problem behavior during the Head Start year.
- Use of an integrated curriculum is linked to greater gains in several cognitive and social-emotional areas. Specifically, children in Head Start programs using High/Scope showed larger fall-spring gains in letter identification and cooperative classroom behaviors than children in programs using other curricula. Children in programs using High/Scope also showed greater improvement in total behavior problems and hyperactive problem behavior.
- Teachers' educational credentials are linked to greater gains in early writing skills. Children taught by Head Start teachers with bachelor's degrees or associate's degrees showed gains toward national averages in an assessment of early writing skills, whereas children taught by teachers with lesser credentials merely held their own against national norms.
- Provision of preschool services for a longer period each day is linked to greater cognitive gains. Children in full-day classes in Head Start showed larger fall-spring gains in letter recognition and early writing skills than did children in part-day classes.
- There is indirect evidence that encouraging parents to engage in more educational activities with their children at home is linked to greater cognitive gains.

Children whose parents report reading to them every day show larger fall-spring gains in vocabulary knowledge and letter recognition skills than children whose parents report reading once or twice or less frequently per week.

- Within the generally good quality range of Head Start classrooms, variation in quality as measured by the ECERS-R Language scale or the Caregiver Interaction Scale is not associated with differences in fall-spring achievement gains across classes.
- Within the narrow range of group size in Head Start, variation in child:adult ratios is not associated with or is negatively associated with differences in fall-spring achievement gains across classes.

### **Relationship of Family and Parental Characteristics to Children's Outcomes**

- Almost 90 percent of Head Start families manifested at least one of a set of six selected socioeconomic risk factors. About one fifth of the families had four or more risk factors. Children in these families had lower parent ratings on emergent literacy and higher teacher and parent ratings of problem behavior. In the assessments, these children scored lower on design copying, color naming, one-to-one counting, book knowledge, vocabulary, early math, early writing, letter identification, social awareness, comprehension, and print concepts.
- Twenty-five percent of the parents were classified as moderately or severely depressed. Parents who were more depressed reported that their children had more problem behaviors and fewer positive social behaviors. Their children also had lower scores on one-to-one counting, creativity, and early math assessments, after controlling for parent education, income, and other demographic factors.
- More than one fifth of the parents had witnessed violent crime. Five percent were victims of violent crime in the neighborhood, while a similar



















# CHAPTER I

## Cognitive Gains Made by Head Start Children and Their Achievement in Kindergarten

The Head Start Family and Child Experiences Survey (FACES) provides information about the knowledge and skills that children who attend Head Start have when they enter the program and the gains they make during the Head Start year and the first year of elementary school. The information is helpful in assessing how well the Head Start program is performing, and what changes and reforms may be needed to improve program performance. The information is gained through direct, one-on-one assessment of nationally representative samples of Head Start students in the fall and spring of the program and at the end of their kindergarten year. Although there is no non-Head Start comparison group in FACES, the use of assessment measures with national norms permits comparisons between the skills of children in the sample and children of the same ages in the norming samples.<sup>5</sup>

### FINDINGS

Children who entered Head Start in the fall of 2000 had academic skill and knowledge levels well below national averages. They were comparable to the levels found in the initial round of FACES, conducted three years earlier in fall 1997. As in the earlier study, children made significant gains during the Head Start year, most notably in the areas of vocabulary knowledge and pre-writing skills. In the areas of letter

<sup>5</sup> This chapter focuses on cognitive measures with national norms. See Chapter II for information about social-emotional measures and the Appendix for a complete listing of measures used in FACES.

### RESEARCH QUESTIONS

Assessment data from FACES 2000 were used to address the following research questions:

1. What skills and knowledge do children have when they enter Head Start programs?
2. Do children make significant gains in knowledge and skills during the Head Start year? During the kindergarten year?
3. How do these gains vary across skill areas and among children who enter the program with lower or higher knowledge levels?
4. Are the gains that Head Start children make changing? Did they change significantly between the 1997-1998 program year and the 2000-2001 year?

In making these comparisons, the analysis focused on children who were assessed in English in both the fall and spring of the Head Start year. Information is presented in a later section about the skills and knowledge of children who were initially assessed in Spanish because they came from Spanish-speaking homes and their knowledge of English was insufficient for testing in English in the fall.



























# CHAPTER II

## Social Skills and Problem Behavior of Head Start Children and Their Adjustment to Kindergarten

The Head Start Family and Child Experiences Survey (FACES) provides information about desirable and undesirable social behavior that children who attend Head Start display when they enter the program, at the end of the program year, and at the end of the first year of elementary school. The information is obtained through behavior ratings provided by parents, Head Start teachers, and kindergarten teachers. Desirable behavior includes cooperation with adults, friendly play, and caring for and sharing with other children. Undesirable behaviors include disruptive or overly aggressive behavior toward other children or defiant behavior toward adults, hyperactivity, excessive shyness, lack of self-confidence, and social withdrawal.

Information about children's social behavior is important because children's academic achievement and adjustment once they get to school depend not only on their mastery of basic intellectual skills, but also on their acquisition of social skills and positive approaches to learning. They also depend on the amelioration of negative behavior patterns they may have acquired that are likely to be disruptive or counterproductive in the school setting (Pianta & McCoy, 1997; Zill & West, 2001). Thus, data on behavioral changes that occur during and after program participation are helpful in evaluating how well the Head Start program is performing in preparing children for school, and what changes and reforms may be needed to improve program performance.<sup>9</sup>

<sup>9</sup> This chapter focuses on social-emotional measures of school readiness. See Chapter I for information about cognitive measures and the Appendix for a complete listing of measures used in FACES.

### RESEARCH QUESTIONS

Behavior rating data from FACES 2000 were used to address the following research questions:

1. Do children show significant gains in social skills and significant declines in problem behavior during the Head Start year?
2. How do gains vary across behavior areas and among children who enter the program with lower levels of social skills or higher levels of problem behavior?
3. Are the behavioral gains that Head Start children make changing? Did they change significantly between the 1997-1998 program year and the 2000-2001 year?
4. How well do Head Start graduates adjust to the demands of elementary school? Is their behavior at the end of Head Start predictive of adjustment in kindergarten?

In making these comparisons, data are presented on the full sample of children, including both those who were assessed in English in both the fall and spring of the Head Start year, and those who were assessed primarily in Spanish in the fall and primarily in English in the spring.



















Zill, N., & West, J. (2001). *Entering kindergarten: A portrait of American children when they begin school*. Washington, DC: National Center for Education Statistics, U.S. Department of Education.



# CHAPTER III

## Relationship Between Curricula and Family, Program, and Classroom Characteristics

There is a lack of substantial evidence about the relative efficacy of various types of standardized curricula available to preschool programs and their relationship to children's school readiness. Accordingly, the Head Start Program Performance Standards require that programs have a curriculum, and delineate the areas that must be covered by it, but do not prescribe one. Programs may use curricula from a variety of sources, develop one of their own, or use a combination of curricula. In 2001-2002, the Head Start Program Information Report queried local programs about the curricula they use. In descending order of frequency, center-based programs were most likely to use the Creative Curriculum, High/Scope, a locally designed curriculum, and High Reach (beyond these a variety of other curricula were used). This chapter examines the following: the curricula Head Start programs in the FACES sample are using; the training and ongoing support teachers receive in the use of their curricula; teacher satisfaction with their curricula; and the relationships between the type of curricula used and child, family, program, and classroom characteristics. The relationship between curricula and Head Start classroom quality is discussed in Chapter IV. Chapter V discusses the relationships between curricula and children's cognitive gains and social development in Head Start.

### METHODS

The sample for this chapter includes 231 center-based Head Start teachers from 43 Head Start programs in the FACES 2000 study. Field staff conducted personal

### RESEARCH QUESTIONS

In this chapter, the following research questions will be addressed:

1. What percentage of Head Start programs use a curriculum?
2. What types of curricula are used in Head Start programs?
3. From whom do Head Start teachers receive training and ongoing support in the use of their curriculum?
4. What percentage of Head Start teachers have access to a copy of their curriculum?
5. What aspects of the curriculum do Head Start teachers like?
6. What is the relationship between the type of curriculum used and the characteristics of children and families served?
7. Are there regional and rural-urban differences in the types of curriculum used by Head Start programs?
8. What is the relationship between the type of curriculum used and classroom quality?























of materials accessible, that stimulate growth in all developmental domains.

*The Assessment Profile for Early Childhood Programs: Research Edition Individualizing Scale.* This is based on a scale from the Assessment Profile for Early Childhood Programs (Abbott-Shim & Sibley, 1998). For FACES 2000 it has been revised and shortened to five observational items measuring how the teacher plans the classroom activities to meet the varying learning needs of each child, how the teacher keeps track of the children's work during the year through the use of individual child portfolios, and how the teacher is able to accommodate children with disabilities. A high score indicates that teachers are able to adjust classroom activities to meet the learning needs of individual children.

*The Arnett Caregiver Interaction Scale (Arnett, 1989).* This rating scale consists of 26 items that measure the teacher's sensitivity, punitiveness, detachment, permissiveness, and encouragement of child independence and self-help skills. A high score indicates greater teacher sensitivity, responsiveness and encouragement of children's independence and self-help skills, and lower levels of punitiveness and detachment.

*Teacher Interview.* The teacher from each classroom was asked specific questions about the nature of the curriculum used, attitudes and knowledge about early childhood education practice, how they monitor the progress of individual children, and what accommodations the teacher makes to meet the learning needs of each student, including those with special needs. The interview also collected extensive information about the teachers' backgrounds (e.g., age, ethnicity), experience (e.g., total years teaching,

years teaching Head Start), and qualifications (e.g., whether the teacher has a BA or AA, whether the teacher had some graduate school education, whether the teacher has a Child Development Associate, the course of study, and licensure). Ethnicity was included in these analyses because it may be linked to differences in teacher qualifications and experience and because the types of teachers in the classrooms may be influenced by the backgrounds of the families and children attending the Head Start program as well as the larger community served by the program.<sup>12</sup>

*Teacher Attitudes and Knowledge.* The 24-item Teacher Beliefs Scale (Burts, Hart, Charlesworth, & Kirk, 1990) was included in the teacher interview, and consists of statements worded to reflect positive attitudes and knowledge of generally accepted practices in preschool settings, or to reflect a lack of these attitudes and knowledge. In FACES 2000 we used one factor comprising 9 items that explained most of the variation in scores for the entire scale. A high score indicates higher positive attitudes and knowledge about early childhood education practices.

*Quality Composite Score.* We found that several of the key quality indicators were highly correlated with each other, suggesting that for analytical purposes we can explain a greater amount of variation in quality by reducing the three indicators in question to one measure. Scores from the ECERS-R Language Scale score and the Assessment Profile Scheduling and Learning Environment were combined to form this single score for quality. A higher score indicates higher levels of quality.

*Child:Adult Ratio.* Classroom observers counted the number of children, the number of adults, and the number of paid staff at two time periods during the

<sup>12</sup> While age was also included in the teacher interview, it was so highly correlated with the teacher's years of experience that it was not included in analysis beyond the descriptive level. However, since ethnicity did prove to be related to other factors in classroom quality, we continued to include it in our analysis.







Start classrooms but there was a wide range of teaching experience. Approximately 21 percent of the Head Start teachers were relatively new, having been teaching in Head Start for less than two years, and 28 percent had taught in Head Start for 10 years or more.

Compared to the fall 1997 cohort, there were several statistically significant differences.<sup>16</sup> More new teachers (21 percent) taught in fall 2000, compared with fall 1997 when only 14 percent had taught Head Start for less than 2 years. Also, the percentage of teachers who taught from five to nine years declined from 34 percent in fall 1997 to 28 percent in fall 2000. Approximately the same number of teachers in both cohorts had been teaching in Head Start for ten years or more (28 percent in fall 2000 and 29 percent in fall 1997).

Most Head Start teachers have good teaching qualifications, but lower than those of teachers in public elementary schools. In a survey of pre-kindergarten classrooms in the U. S. public schools in 2000-2001, 86 percent of pre-kindergarten teachers had a bachelor's or higher degree (Smith, Kleiner, Parsad, & Farris, 2002). In the FACES fall 2000 cohort, 27.8 percent had a bachelor's degree, 18.6 percent had an associate's degree, and another 32.2 percent had some college but no degree. Overall, 46.4 percent of teachers had either a bachelor's or an associate's degree with 38.7 percent having a bachelor's degree or higher and 57 percent having an associate's degree or higher. Seventy-four percent of all teachers reported having the Child Development Associate (CDA) credential or a state-awarded preschool certificate, with 58 percent having the Child Development Associate only.

The proportion of teachers with a bachelor's degree or higher increased significantly from 28.1 percent in fall 1997 to 38.7 percent in fall 2000, primarily due to an increase in the proportion of teachers with graduate level degrees, defined as a master's degree, its equivalent, or higher. In fall 2000, 10.9 percent of teachers reported having these advanced degrees compared with only 3.2 percent in fall 1997, and in fall 2000 16 percent of teachers reported having received some graduate level training.<sup>17</sup> This increase was significantly correlated with the increase in the proportion of new teachers in Head Start, from 14 percent to 21 percent over the same time period. In fall 2000, 32.9 percent of teachers with graduate level education or higher were new teachers, compared with only 13.3 percent in fall 1997.<sup>18</sup> These results suggest that there is an increased number of new teachers with advanced degrees entering Head Start.

In addition to an increase in teachers with advanced degrees, more teachers are reporting having studied Early Childhood Education or Child Development in their studies for their highest degree, whether for an associate's or bachelor's degree or higher. In fall 2000, 78 percent indicated that their field of study included Early Childhood Education or Child Development, compared with approximately 62 percent in fall 1997. However, the proportion of teachers having a Child Development Associate or state preschool certificate has stayed approximately the same (74 percent in fall 2000 compared with 76 percent in fall 1997).

There was also an increase in the membership of teachers in a national professional association for early childhood educators (e.g., NAEYC, NHSA, and NEA), from 53 percent in fall 1997 to 62 percent in fall 2000.

<sup>16</sup> The chi-square comparison using unweighted data on the independent samples was statistically significant at  $p < .05$ . Unweighted data were used because no classroom weights were created for the fall 1997 sample.

<sup>17</sup> The chi-square comparison using unweighted data on the independent samples was statistically significant at  $p < .01$ .

<sup>18</sup> In fall 2000 the chi-square test using weighted data was statistically significant at  $p < .001$ . Further, a comparison of the two proportions from fall 1997 to fall 2000 using unweighted data also revealed a statistically significant increase at  $p < .01$  ( $z = 4.441$ ).





























































































































































































































