

# FACES 2003 Research Brief



## **Westat**

Nicholas Zill  
Alberto Sorongon  
Kwang Kim

## **Xtria**

Cheryl Clark

## **Administration for Children and Families**

Maria Woolverton

## Children's Outcomes and Program Quality in Head Start

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The Head Start Family and Child Experiences Survey (FACES) provides longitudinal data on a periodic basis on the characteristics, experiences, and outcomes of children and families served by Head Start as well as the characteristics of the Head Start programs that serve them. Each round of FACES is a study with a nationally representative sample of Head Start children and their families. Data collection for the first FACES cohort began in fall of 1997 and for the second cohort in fall of 2000. Data collection for the most recent FACES cohort began in the fall of 2003. This cohort includes a nationally representative sample of approximately 2,400 newly entering 3- and 4-year-old children and their families from 63 Head Start programs.

The FACES data provide information for the Head Start program on important aspects of outcomes, quality, and practices. This Research Brief summarizes key findings related to children’s outcomes and program quality from FACES 2003.

### Academic skills of children in Head Start

#### Most children enter Head Start with below-average skills.

As in the previous rounds of the survey, cognitive assessment data from FACES 2003 showed that most children entered Head Start with early academic skills that were below national norms on standardized measures of vocabulary, early math, early reading, and early writing. Whereas the mean standard score for all U.S. children is 100, with a standard deviation of 15, mean standard scores for children entering Head Start in fall 2003 were 85.6 for vocabulary, 88.4 for early math, 95.0 for early reading, and 86.5 for early writing.<sup>1</sup> This is not surprising, in that most Head Start children come from families with relatively low parent education and income levels. However, there was considerable diversity in skill levels among Head Start children in the study.

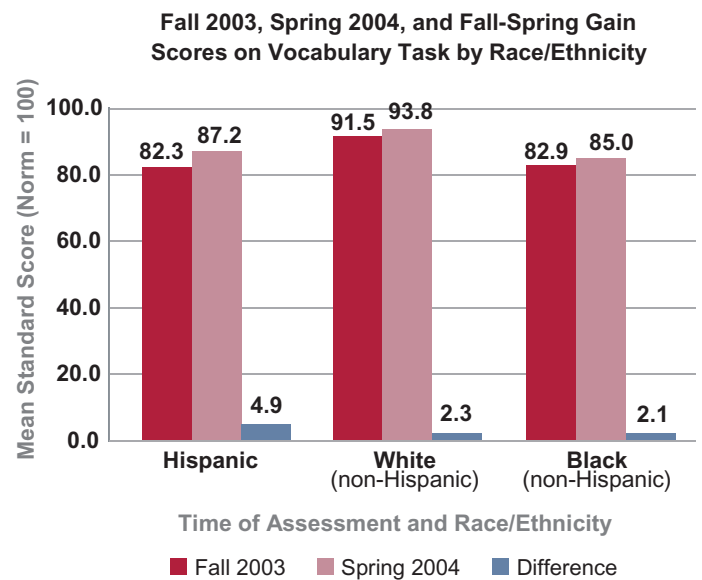
#### Head Start children showed significant gains in vocabulary, early math, and early writing skills during the Head Start program year.

Head Start children showed significant gains during the 2003-04 program year in vocabulary (+2.9 standard score points), early math skills (+1.5 standard score points), and early writing skills (+.7 standard score points).<sup>2</sup> A significant gain in early reading scores was found for 4-year-olds only.

#### Head Start children also showed small gains in other literacy-related areas, such as phonemic awareness and print concepts.

Head Start children showed small raw score gains on measures of phonemic awareness (being able to hear sound components in a word), a story and print concepts task, and a design copying task. There are no national norms available for these tasks.

Figure 1



<sup>1</sup> In FACES 2003, scores from the early math, early reading, and early writing include data from all participating children, including 3-year-old children. In FACES 1997 and FACES 2000, scores from these tasks included data only from children 4-years of age or older.

<sup>2</sup> Unless otherwise stated, all comparisons are statistically significant at  $p < .05$ . Standard scores for this analysis are reported for all children, regardless of age, who were assessed in English in both fall and spring.

**Hispanic children in Head Start showed significant gains in vocabulary over the course of the Head Start year.** In FACES 2003, 60 percent of Hispanic children had sufficient English skills to be assessed in English in both fall 2003 and spring 2004. By the spring, these children showed substantial gains in English vocabulary, which were larger than those shown by Black children and White children (Figure 1). Children who lacked sufficient English skills to be assessed in English and who primarily spoke Spanish at home were assessed in Spanish. These children showed significant gains in Spanish vocabulary from fall 2003 to spring 2004.

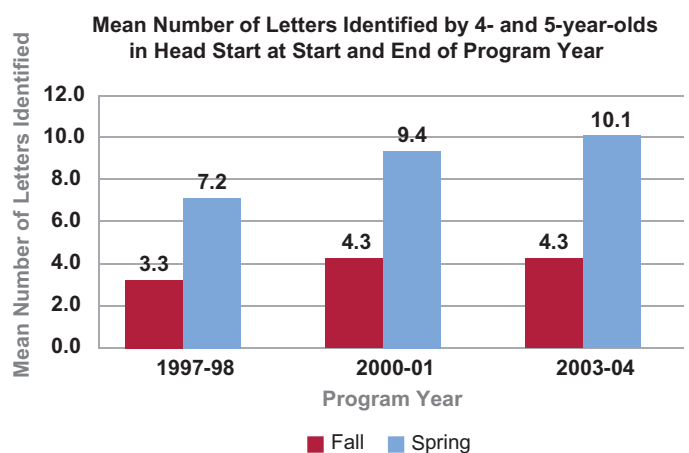
**Cross-cohort comparisons of children’s gains in early literacy skills**

**Over the past few years, the national Head Start program has been stressing the importance of early literacy skills, such as vocabulary and alphabet knowledge.** Cross-cohort analyses were conducted to examine whether there have been improvements in the gains Head Start children make during the program year. Cross-cohort comparisons for early literacy skills are conducted only with data from Head Start children aged 4 and older because in previous cohorts, 3-year-old children were not assessed in all areas. Cross-cohort comparisons show that gains in letter identification and early reading during the Head Start year have increased across the three FACES cohorts. No similar increase in gains was found for vocabulary.

**The average number of letters that Head Start children know by the end of the program year continues to increase. The average Head Start child age 4 and older now meets the Congressional goal of knowing at least 10 letters of the alphabet.**<sup>3</sup> Many research studies have shown that learning the letters of the alphabet is an important stepping stone on the path to becoming a proficient reader. The mean number of letters that 4- and 5-year-old children in Head Start could identify correctly has increased significantly since the 1997-98 program year, when

the first FACES study was conducted (see Figure 2). The mean number of letters correctly identified by children of these ages at the end of the 1997-98 program year was 7.2. The number grew to 9.4 letters by the end of the 2000-01 program year, when the second round of FACES was carried out. It grew further, to 10.1 letters, by the end of the 2003-04 program year. The number of letters children could recognize at the start of the program year also increased significantly across FACES cohorts, from a mean of 3.3 in 1997 to a mean of 4.3 in both 2000 and 2003.

Figure 2

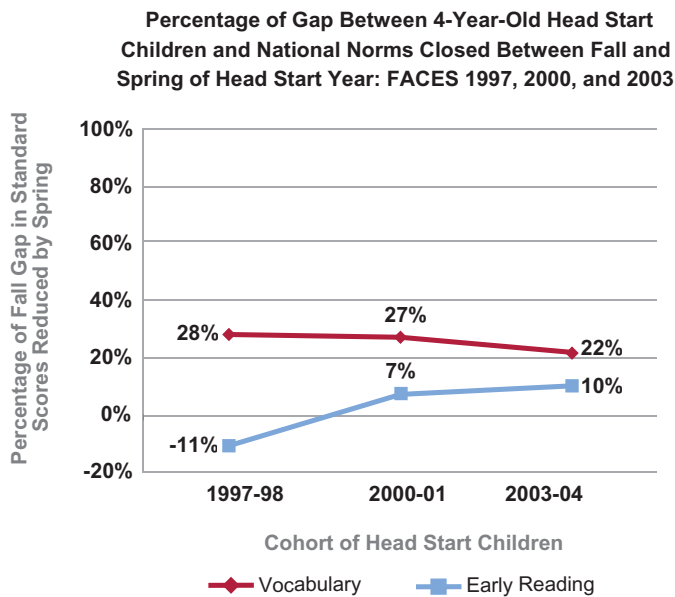


**The gap between the early reading skills of Head Start children (4 years and older) and national norms for all U.S. children of the same age narrowed significantly from fall 2003 to spring 2004 (+.7 standard score points) (see Figure 3).** This gap had not narrowed significantly in FACES 1997 and FACES 2000.

**Head Start children (4 years and older) in FACES 2003 showed significant gains in vocabulary knowledge from fall to spring (+3.1 standard score points).** These gains were similar across the three FACES cohorts (see Figure 3).

<sup>3</sup> Estimates of the number of letters known in FACES are derived from the early reading measure in the Woodcock-Johnson battery. Based on the 9 letters that children are asked to name on the task, a percent correct is calculated for each child from the number of letters correctly named. This percent correct is then applied to the 26 total letters in the alphabet to get a percentage-based estimate of the number of letters children know.

Figure 3



Note: Vocabulary and early reading scores for this analysis are reported for children 4 years of age or older who were assessed in English in both fall and spring

### Social skills of children in Head Start

**Head Start children showed growth in their social skills during the Head Start year.** In FACES 2003, Head Start children (all ages combined) showed significant fall-spring gains on a measure of social skills/cooperative classroom behavior, similar to gains observed in the FACES 1997 and 2000 cohorts. Significant fall-spring declines in withdrawn behavior rated by classroom teachers were observed in FACES 2003 which had not been observed in the previous two FACES cohorts. However, teacher-rated hyperactive behaviors did not show significant declines during the Head Start program year in FACES 2003, although significant declines in teacher-rated hyperactive behavior had been observed in both FACES 1997 and FACES 2000.

### Program quality and teacher qualifications in Head Start

**FACES 2003 data showed that quality in Head Start continues to be good.** According to observer ratings using the Early Childhood Environment Rating Scale-Revised version (ECERS-R), which assesses the classroom’s learning materials, activities, and interactions, the mean Head Start classroom score was 4.81 on a scale of 1 (inadequate) to 7

(excellent). Not only is the average ECERS-R score of Head Start classrooms higher than those of other center-based preschools, the distribution of quality in Head Start is higher than that found in many private or public-school preschool settings, with virtually no Head Start classrooms receiving scores indicating inadequate quality, and 28.4 percent of classrooms receiving scores in the high quality range.

### FACES 2003 found higher teacher educational credentials than in previous FACES cohorts.

Consistent with Head Start’s efforts to increase the education level of its teachers, a larger proportion of teachers in FACES 2003 had an Associate’s degree or higher (72.1%) than in FACES 2000 (56.8%). The percentage of teachers with a Bachelor’s degree in FACES 2003 was 37.8 percent.

### Head Start children and families

**Head Start serves a diverse group of children.** In fall 2003, 4-year-old children made up 49.2 percent of the newly entering children in Head Start, while 45.7 percent of the newly entering children were 3 years of age, and 5.1 percent were 5 years old. Almost all of the children (96.5%) were born in the United States. The children primarily fell into three racial/ethnic groups: non-Hispanic White (30.1%), non-Hispanic Black (30.8%), and Hispanic (30.7%). In spring 2004, Head Start teachers reported that 12 percent of Head Start children had diagnosed disabilities with IEPs (Individualized Education Program or Plan) or IFSPs (Individual Family Service Plan).

**Approximately one third of Head Start children are English language learners (ELL).** The percentage of children whose parents reported speaking to the child primarily in a non-English language at home showed a gradual increase from 28.3 percent in fall 1997 to 30.0 percent in fall 2000 and 32.6 percent in fall 2003. The largest group of ELL children was Hispanic (85.9% of ELL).

**A majority of mothers of Head Start children are in their twenties, single, in the workforce, and hold a high school diploma.** Mothers of Head Start children had an average age of 28.1 years. Approximately 40 percent of mothers were currently married, 41 percent were never married, and 18 percent were separated or divorced. Thirty-five percent of mothers

reported being employed full-time, while 18 percent were working on a part-time basis. In FACES 2003, more than two thirds of mothers (68%) had a high school diploma or its equivalent, compared to 65 percent in FACES 2000, and 73 percent in FACES 1997. Only 4 percent had a college degree or higher, which is similar to FACES 2000 and FACES 1997.

**A majority of fathers of Head Start children are single, employed full-time, and hold a high school diploma.** The average age of fathers of Head Start children was 31.0 years. Less than one half of the fathers (42%) were currently married, one third (34%) reported never being married and 16.6 percent were separated or divorced. A majority of the fathers (72%) worked full-time, and 8 percent worked part-time. In FACES 2003, 69 percent of fathers had a high school diploma or its equivalent, compared to 64 percent in FACES 2000 and 56 percent in FACES 1997. Only 3 percent had a college degree or higher in FACES 2003, which is similar to FACES 2000 and FACES 1997.

**The majority of fathers do not reside with their children enrolled in Head Start.** More than one half (53.6%) of the fathers did not live in the household with their Head Start children, and nearly one third of the non-household fathers (31.9%) saw their children fewer than 5 days during the previous year. These figures are very similar to FACES 2000, where 52.2 percent of the fathers did not live in the household and 35.7 percent of non-household fathers saw their children fewer than 5 times a year.

**Head Start families have low incomes.** FACES 2003 data showed that the median annual household income of Head Start families was \$13,200. Also, 60 percent of the families received WIC (special supplemental food program for Women, Infants, and Children), 53 percent received food stamps, and 19 percent received TANF (Temporary Assistance for Needy Families).

# APPENDIX

## Data collection instruments

Brief descriptions of the data collection instruments reported in this Research Brief are listed below. Please refer to the forthcoming FACES 5th Progress Report for detailed descriptions of all the instruments used in FACES 2003.

- The vocabulary test used in FACES 2003 includes a shortened 48-item adaptive version of Peabody Picture Vocabulary Test (PPVT) – Third Edition. This version was constructed using Item Response Theory (IRT) techniques and maintains the strong psychometric qualities of the original. Spanish vocabulary was assessed using an adaptive version of the Test de Vocabulario en Imagenes Peabody (TVIP).
- Early reading, early writing, and early math skills were measured in FACES 2003 using selected items from both revised and third editions of the Woodcock-Johnson Psycho-Educational Battery. IRT techniques were used to generate standard scores based on the norming populations for the revised edition (WJ-R) and the third edition (WJ-III). Scores reported in this research brief use the norming population for the revised edition.
  1. The Letter-Word Identification task measures children’s reading skills in identifying isolated letters and words that appear in large type on the pages of the test book.
  2. The Spelling/Dictation task measures prewriting skills, such as drawing lines and copying letters, writing specific upper- or lower-case letters of the alphabet, and writing specific words and phrases, punctuation, and capitalization.
  3. The Applied Problems task measures children’s skill in analyzing and solving practical problems in mathematics, such as simple counting, addition, or subtraction operations.
- Phonemic awareness was measured by an abbreviated version of the Preschool Children’s Test of Phonological Processing (Pre-CTOPP) Elision task. It uses pictures to assist children in determining how the meaning of a word changes when one of its component sounds is taken away.
- The story and print concepts task asked children to identify where the name of the book is written, where the material to be read begins, and in what direction the reading proceeds. A story was read to the children and then they answered basic questions about both the content of the story and the mechanics of reading.
- Children’s perceptual-motor skills were measured by the Draw-A-Design task of McCarthy Scales of Children’s Abilities which asked the child to draw copies of a series of increasingly complex geometric figures.
- A global rating of classroom quality based on learning materials, activities, and interactions in the classroom was obtained using the Early Childhood Environment Rating Scale-Revised (ECERS-R). The scale assesses six domains of classroom quality: space and furnishings, personal care routines, language and reasoning, activities, interaction, and program structure.

The following table shows a list of all the measures used in FACES 1997, 2000, and 2003.

	<b>FACES 1997</b>		<b>FACES 2000</b>		<b>FACES 2003</b>	
	Fall	Spring	Fall	Spring	Fall	Spring
<b>Child Cognitive Measures</b>						
Peabody Picture Vocabulary Test-III	•	•	•	•	•	•
Woodcock-Johnson: Letter Word Identification	•	•	•	•	•	•
Woodcock-Johnson: Applied Problems	•	•	•	•	•	•
Woodcock Johnson: Dictation	•	•	•	•	•	•
McCarthy Draw-A-Design	•	•	•	•	•	•
Story and Print Concepts: Book Knowledge	•	•	•	•	•	•
Color Names and Counting	•	•	•	•	•	•
Social Awareness Task	•	•	•	•		
Assessment Behavior Scale	•	•	•	•	•	•
Parent Report of Emerging Literacy Scale			•	•	•	•
Leiter Revised Sustained Attention Task				•		
Pre-LAS Simon Says					•	•
Pre-LAS Art Show					•	•
Pre CTOPP Elision					•	•
Test de Vocabulario en Imagenes Peabody (TVIP)	•	•	•	•	•	•
Batería Woodcock-Muñoz: Identificación de letras y palabras	•	•	•	•	•	•
Batería Woodcock-Muñoz: Problemas Aplicados	•	•	•	•	•	•
Batería Woodcock-Muñoz: Dictado	•	•	•	•	•	•
<b>Child Social-Emotional Measures</b>						
<b>Teacher Report</b>						
Social Skills/Cooperative Classroom Behavior	•	•	•	•	•	•
Behavior Problems	•	•	•	•	•	•
Preschool Learning Behavior Scale					•	•
<b>Parent Report</b>						
Social Skills/Positive Approaches to Learning	•	•	•	•	•	•
Behavior Problems	•	•	•	•	•	•
Child Observation Record	•	•	•	•		
<b>Independent Observer</b>						
Howes Peer Play Scale	•	•				

	FACES 1997		FACES 2000		FACES 2003	
	Fall	Spring	Fall	Spring	Fall	Spring
<b>Parent Measures</b>						
Pearlin Mastery Scale	•	•	•	•	•	•
CES-D Depression Scale	•	•	•	•	•	•
Combined Activities Scale	•	•	•	•	•	•
Weekly Activities Subscale	•	•	•	•	•	•
Monthly Activities Subscale	•	•	•	•	•	•
K-FAST			•		•	
Parent Involvement in Head Start	•	•	•	•	•	•
<b>Classroom Measures</b>						
Counts of children and adults	•	•	•	•	•	•
Assessment Profile: Scheduling	•	•	•	•		
Assessment Profile: Learning Environment	•	•	•	•	•	•
Assessment Profile: Individualizing	•	•	•	•		
ECERS (ECERS-R in 2000 and 2003)	•	•	•	•	•	•
Arnett Scale of Caregiver Behavior: Lead Teacher	•	•	•	•	•	•
Arnett Scale of Caregiver Behavior: Assistant Teacher	•	•				
Teacher Beliefs Scale			•		•	



## FACES 2003 fall/spring scores reported in this Research Brief

The following table shows the fall 2003 and spring 2004 means and standard deviations for the norm-referenced scores from FACES 2003 for all children assessed in English in the fall and the spring.

Scales (standard scores)	Number of Cases	FALL 2003		SPRING 2004	
		Mean	SD	Mean	SD
PPVT-III (vocabulary)	1756	85.6	11.6	88.5	11.1
WJR: Letter-Word Identification (early reading)	1757	95.1	7.9	94.9	10.6
WJR: Applied Problems (early math)	1730	88.4	15.0	89.9	15.1
WJR: Dictation (early writing)	1624	86.5	13.6	87.2	12.2

The following table shows the fall 2003 and spring 2004 means and standard deviations for the criterion-referenced scores from FACES 2003 for all children assessed in English in the fall and the spring.

Scales	Number of Cases	FALL 2003		SPRING 2004	
		Mean	SD	Mean	SD
Phonemic Awareness	1745	3.8	1.6	4.8	1.7
Story & Print Concepts	1759	3.0	2.1	4.6	2.4
Design Copying	1762	3.6	1.2	4.7	1.3

The following table shows the fall 2003 and spring 2004 means and standard deviations for the PPVT-III (vocabulary) scores from FACES 2003 for Hispanic, Black (non-Hispanic), and White (non-Hispanic) children assessed in English in the fall and the spring.

Scales	Number of Cases	FALL 2003		SPRING 2004	
		Mean	SD	Mean	SD
Hispanic	381	82.3	11.9	87.2	10.5
Black (non-Hispanic)	612	82.9	10.4	85.0	10.4
White (non-Hispanic)	553	91.5	10.4	93.8	10.4

The following table shows the fall 2003 and spring 2004 means and standard deviations for scores from FACES 2003 for children 4 years old and older who were assessed in English in the fall and the spring.

<b>Scales (standard scores)</b>	<b>Number of Cases</b>	<b>FALL 2003</b>		<b>SPRING 2004</b>	
		<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>
PPVT-III (vocabulary)	949	85.8	12.8	88.9	11.6
WJR: Letter-Word Identification (early reading)	947	93.1	8.8	93.8	11.4
Number of Letters Known *	947	4.3	-	10.1	-

\* Derived from the Letter-Word Identification measure.

The following table shows the fall 2003 and spring 2004 means and standard deviations for the social-emotional development ratings for all children as reported by Head Start teachers.

<b>Scales</b>	<b>Number of Cases</b>	<b>FALL 2003</b>		<b>SPRING 2004</b>	
		<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>
Cooperative Classroom Behavior	2091	15.5	4.6	17.6	4.5
Withdrawn Problem Behavior	2074	2.0	2.2	1.8	2.2
Hyperactive Problem Behavior	2102	1.2	1.5	1.1	1.4