

# FACES 2006



# STUDY DESIGN

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## INTRODUCTION

**T**he Head Start Family and Child Experiences Survey (FACES), first launched in 1997 as a periodic, longitudinal study of program performance, is Head Start's ongoing flagship research initiative. Successive samples of Head Start children, their families, and programs provide descriptive information on the characteristics and experiences of the population served; staff qualifications, credentials, and opinions; Head Start classroom practices and quality; and child and family outcomes. FACES includes a battery of child assessments across multiple developmental domains; interviews with children's parents, teachers, and program managers; and observations of classroom quality. In 2005, the Administration for Children and Families (ACF) funded Mathematica Policy Research, Inc. (MPR) and its partners—Educational Testing Service, Juárez and Associates, and General Support Services—to design and conduct FACES 2006.

This summary highlights basic features of the FACES 2006 study design for those interested in learning more about the study and for those who may be interested in using the data for future analyses. It describes the sample and sampling design as well as the study components, including the composition of the child assessment; classroom observation; and the parent, teacher, and Head Start staff interviews. It then outlines features of the FACES 2006 study and design that differ from previous cohorts. Finally, it offers an overview of the dissemination plans for the FACES data and study findings.

## FACES 2006 Study Design

FACES has been, first and foremost, a performance measurement tool for the Head Start program at the national level. In accordance with the Government Performance and Results Act (GPRA) of 1993 (Pub. L. 103-62) and the 1994 reauthorization of Head Start [Head Start Act, as amended, May 18, 1994, Section 649 (d)], the FACES study collects data on successive nationally representative samples of Head Start programs and classrooms and of the children and families served by Head Start. FACES also seeks to examine the developmental progress of children and their families during and following Head Start participation. Interviews, observations, and assessments carried out on a recurring basis provide the means for assessing how the program is performing, currently and over time, in response to changing demographics and policy mandates.

FACES 2006 is the fourth in a series of national cohort studies; previous cohorts were initiated in 1997, 2000, and 2003. The FACES child sample is selected to represent 3-, 4-, and 5-year-olds as they are entering their first year of the program. The study includes four rounds of data collection—fall and spring of children's first Head Start year, spring of the second Head Start year for children who were 3 years old at the time the sample was selected, and spring of the children's kindergarten year (see *Table 1*). A total of 4,051 children and families will be selected to participate in FACES 2006 from about 350 classrooms in 60 Head Start programs. We

expect that about 3,500 of these children and their families will actually participate in FACES 2006.

| TABLE 1. SUMMARY OF DATA COLLECTION FOR 3- AND 4- YEAR OLD COHORTS, BY WAVE |           |             |             |             |
|-----------------------------------------------------------------------------|-----------|-------------|-------------|-------------|
| Cohort                                                                      | Fall 2006 | Spring 2007 | Spring 2008 | Spring 2009 |
| 3-Year-Old Cohort                                                           | ✓         | ✓           | ✓           | ✓           |
| 4-Year-Old Cohort                                                           | ✓         | ✓           | ✓           |             |

## Use of FACES Data

For nearly a decade, the Office of Head Start, ACF, other federal agencies, local programs, and the public have depended on FACES for valid and reliable national information about the skills and abilities of Head Start children, how they compare with preschool-age children in the United States as a whole, and their readiness for and subsequent performance in school.

FACES data also have been useful in response to additional program requirements. The data and experiences from FACES assisted the 1999 Advisory Committee on Head Start Research and Evaluation as it deliberated the design of the congressionally mandated National Head Start Impact Study (NHSIS). President George W. Bush's announcement in April 2002 of the "Good Start, Grow Smart" early childhood initiative directed the Department of Health and Human Services (DHHS) to develop the Head Start National Reporting System (HSNRS) to monitor child progress in early literacy, language, and numeracy skills. Selection of the child assessment measures for the HSNRS built on ACF's experiences with direct assessment of Head Start children in prior FACES cohorts. In addition, data from FACES have been widely disseminated within the Head Start community to guide efforts to improve training and technical assistance and continuous program improvement.

## Rationale for the Study

Successive samples of Head Start children, their families, and programs provide a rich source of ongoing information on the children and families served by Head Start and on the programs and staff who provide these services. Based on a comprehensive "whole-child" view of school readiness, FACES uses multiple methods to collect data on child characteristics and skills from several sources. FACES 2006 provides updated information to document status and change in a number of key areas:

- \$ Demographic characteristics of children and families enrolled in Head Start
- \$ Child and family outcomes as conceptualized under the Head Start Performance Measures and the Child Outcomes Framework
- \$ Quality of observed classroom practice
- \$ Self-reported goals, strengths, needs, and attitudes of participant families, and their expectations for participation in the Head Start program
- \$ Head Start parents' perceptions of the strengths and problems of their larger communities
- \$ Activities and experiences of families while their child is enrolled in Head Start
- \$ Head Start programs' approaches related to family involvement and support
- \$ Responsibilities, training, credentials, and opinions of Head Start staff
- \$ Barriers to and facilitators of the provision of needed services as perceived by families and program staff



- \$ Use of curricula and assessment in Head Start classrooms
- \$ Provision of support for professional development through training, mentoring, and supervision

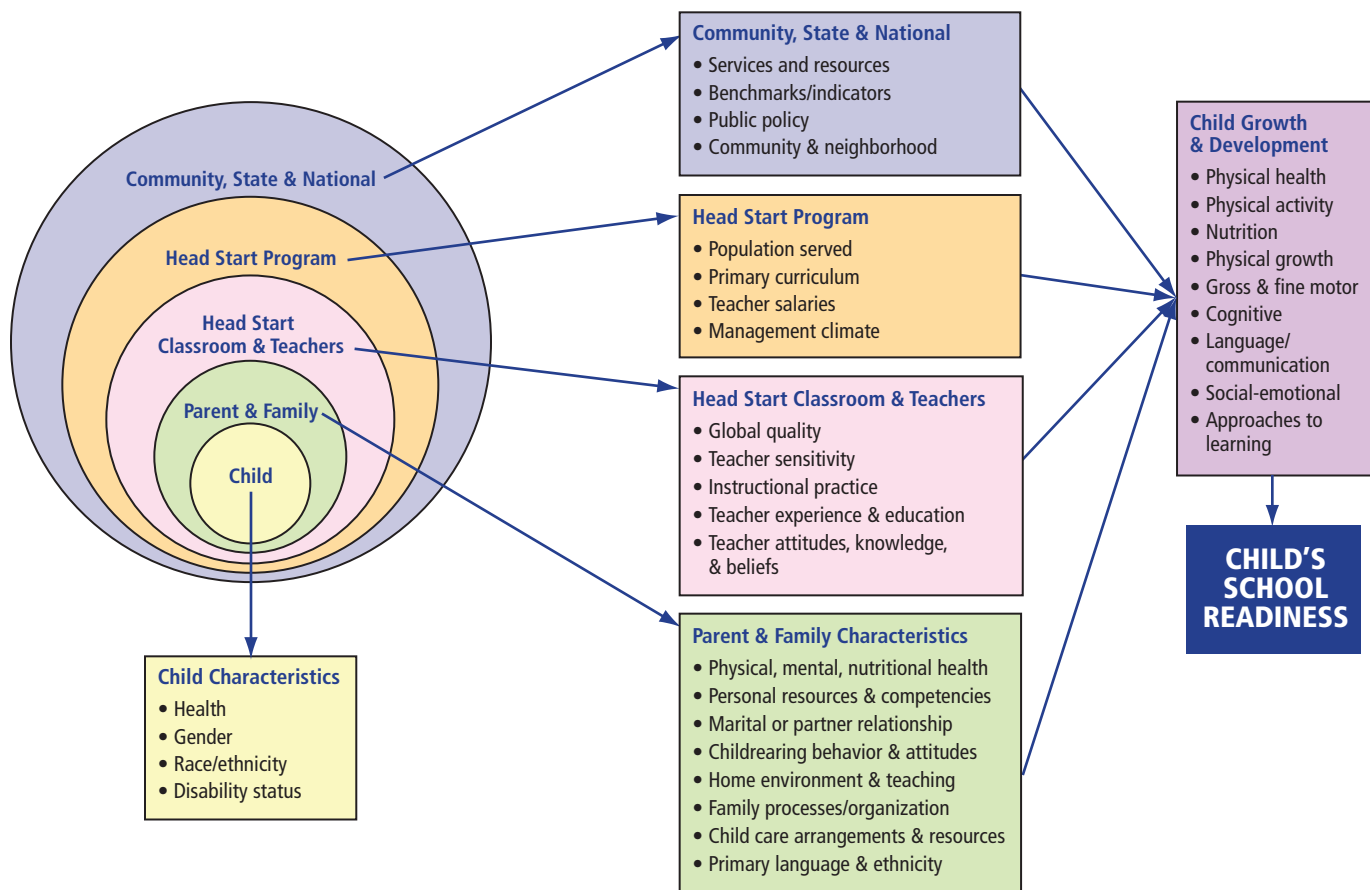
## Conceptual Model and Framework

The conceptual framework for FACES 2006 illustrates the complex interrelationships that help shape the developmental trajectories of children in Head Start (see Figure 1). The child's place is primary and constitutes the central core of the relationships depicted; fostering his or her progress toward school readiness, broadly construed, is Head Start's ultimate goal. The family context—health, economic, and educational resources as well as cultural factors—forms the first ring of influences surrounding the child. Membership in the Head Start community is reflected in the child's classroom and teachers and the wider Head Start program, all of which influence

the quality of the early childhood learning experience. Factors affecting the child's development and well-being also include teacher credentials, classroom quality, and program management. Finally, community, state, and national policy decisions, depicted in the outer ring, also affect the life of a Head Start child. These multidimensional contexts guide all aspects of the FACES study, from the selection of measures to the multilevel analyses that are needed to fully address the program and policy issues in today's Head Start program.

The Head Start experience is designed to promote immediate short-term and long-term goals for children and families. For children, the experience includes preschool education, health screenings and examinations, nutritionally adequate meals, and opportunities to develop social-emotional skills that support school readiness. For parents, the experience involves opportunities to participate in policy

FIGURE 1. CONCEPTUAL MODEL FOR FACES 2006





and program decisions. The program provides parents with chances to participate in the classroom and strives to encourage their active involvement in the education and development of their children. Head Start seeks to promote adult literacy and further parent

education, where needed and appropriate, and to provide opportunities for careers and training in early childhood education. The program also seeks to promote family self-sufficiency through provision of case management, assessment, referral, and crisis-intervention services. Head Start acts as an advocate for necessary family-focused social services through interagency coordination and agreements. Measurement of these child and family goals both during the program years and through followup at the end of kindergarten allows fuller understanding of how well Head Start prepares children and their parents for participation in school.

### Potential Research Questions

The FACES study is designed to enable researchers to answer a wide range of research questions that are crucial for aiding program managers and policymakers:

1. What are the cognitive and social skills of Head Start children at the beginning and end of their first year in the program? Has Head Start program performance improved over time? Do children in the program show larger gains in cognitive and social skills over the course of the program year than they did in the 1997, 2000, and 2003 cohorts? Do they show greater declines in problem behavior, such as hyperactivity and aggression?
2. Do the gains in cognitive and social skills that Head Start children achieve carry over into kindergarten? Do larger gains (or greater declines in problem behavior) translate into higher achievement at the end of kindergarten?
3. What are Head Start programs using for a comprehensive curriculum? Do they use a specialized curriculum or curricular approaches targeted at literacy or mathematics? How has this practice changed over time? Do programs that use certain types of curricula show greater gains in children's cognitive or social skills than others do?
4. What are Head Start programs using for their assessments of children in the program? Have these assessment practices changed over time? How do they use the data obtained from the assessments?
5. What are the qualifications of Head Start teachers in terms of education, experience, and credentials? Are average teacher education levels rising in Head Start? Do programs that employ high proportions of teachers with bachelor's degrees or associate's degrees show greater gains in children's cognitive and social skills than programs whose teachers have lower levels of education?
6. What are Head Start programs doing in terms of professional development activities for education staff? How much are they using the resources of the training and technical assistance network and other available resources? Have these program practices changed over time?
7. What is the observed quality of classroom practice relative to benchmarks from other studies and over time? What program- and classroom-level factors are related to observed classroom quality? How is observed quality related to children's cognitive and social outcomes?
8. What are the demographic characteristics of the population of children and families served by Head Start? How has this population changed? How are programs handling the challenges associated with assisting large numbers of children and families whose primary language is not English?
9. What are the characteristics of children who demonstrate gains that are greater than average? Smaller than average? Are any classroom, teacher, or program characteristics associated with children's making greater or lesser gains in cognitive or social skills?



## OVERVIEW OF THE 2006 STUDY DESIGN

### Sample and Sampling Design

The sample design for FACES 2006 is similar to that of earlier FACES studies and includes a multistage sample selection of (1) programs, (2) centers, (3) classrooms, and (4) children. Sampling at the first three stages is done with probability proportional to size; that is, programs with a larger expected enrollment of children new to Head Start have a higher chance of getting into the sample than smaller programs, although all eligible programs have a chance of getting into the sample. The same principle applies for larger centers and classrooms with a larger number of newly entering children.

The sampling frame of eligible Head Start programs for FACES 2006 is constructed from the Head Start Program Information Report (PIR). However, migrant and seasonal worker programs, American Indian and Alaskan Native programs, programs in Puerto Rico and other U.S. territories, and programs not directly providing services to 3-, 4-, and 5-year-olds (such as Early Head Start) are excluded from the frame. From this frame, a sample of 60 programs is selected. In addition, approximately two centers per program and three classrooms per center are selected for participation. Within each classroom, a sample of newly enrolled children with parental consent is selected. We initially oversampled 3-year-olds to ensure comparable sample sizes between 3-year-olds and 4-year-olds at the kindergarten year, given the longer follow-up time for this younger cohort.

Thus, the FACES 2006 sample includes 60 programs, about 120 centers, 350 classrooms, and 3,500 children (see Table 2). The children will be followed through the spring of their kindergarten year if they remain in Head Start during the year prior to kindergarten.

### Study Components

As noted, to describe the characteristics, experiences, and outcomes for children and families served by Head Start, FACES includes a battery of child assessments across multiple developmental domains; interviews with children's parents,

| TABLE 2. SAMPLE SIZES                                                                                                                                   |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Expected number of eligible and participating programs                                                                                                  | 60      |
| Expected number of centers selected and participating (up to 2 per program)                                                                             | 110-120 |
| Expected number of classrooms selected and participating (up to 3 per center)                                                                           | 330-360 |
| Expected Number of children with parental consent (90%)                                                                                                 | 3,646   |
| Expected number of assessed children in fall 2006 (95%)                                                                                                 | 3,464   |
| Note: In each stage, the sampling unit (program, center, class) may also refer to grouped sampling units (program groups, center groups, class groups). |         |

teachers, and program managers; and observations of classroom quality (see Table 3).

**Direct child assessment and parent and teacher ratings.** To examine the developmental changes and school readiness skills of children who participate in Head Start, FACES 2006 administers the following, both during and after the period of program participation:

- \$ A child assessment battery consisting of tasks drawn from available standardized preschool assessments measuring children's cognitive (language, literacy and mathematics) and physical (height and weight) outcomes. All direct measures of children's developmental outcomes are obtained through an untimed, one-on-one assessment of the child at each wave.
- \$ Questionnaires for obtaining parent and teacher ratings of children's academic and social-emotional development and health.

**Parent interview.** Parent interviews collect information in a variety of areas, including the characteristics of households and household members, levels and types of participation in Head Start and in other community services, parent-child relationships and aspects of the child's home life, and parents' ratings of their child's social behavior and development. For FACES 2006, interviews are conducted with (1) Head Start parents in fall 2006 and spring 2007, (2) Head Start parents in spring 2008, and (3) kindergarten parents in spring 2008 and spring 2009.



| TABLE 3. SUMMARY OF FACES 2006 CHILD ASSESSMENT AND CLASSROOM OBSERVATION BATTERY                                                                                                     |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Measure                                                                                                                                                                               | Instrument                       |
| <b>Language and Literacy Outcomes</b>                                                                                                                                                 |                                  |
| Simon Says (PreLas 2000)                                                                                                                                                              | Child Direct Assessment          |
| Art Show (PreLas 2000)                                                                                                                                                                | Child Direct Assessment          |
| Peabody Picture Vocabulary Test - 4 (PPVT)/Test de Vocabulario en Imagenes Peabody (TVIP)                                                                                             | Child Direct Assessment          |
| Spelling (Woodcock-Johnson III Tests of Achievement/Bateria Woodcock-Muñoz Pruebas de Aprovechamiento-III)                                                                            | Child Direct Assessment          |
| Letter-Word Identification (Woodcock-Johnson III Tests of Achievement/Bateria Woodcock-Muñoz Pruebas de Aprovechamiento-III)                                                          | Child Direct Assessment          |
| Word Attack (Woodcock-Johnson III Tests of Achievement/Bateria Woodcock-Muñoz Pruebas de Aprovechamiento-III) <sup>a</sup>                                                            | Child Direct Assessment          |
| Story and Print Concepts - <i>Little Bear/Osito</i>                                                                                                                                   | Child Direct Assessment          |
| Child's Accomplishments: color naming, writing, recognize name/letters, pretends to read                                                                                              | Teacher Report, Parent Interview |
| Academic Skills Ratings                                                                                                                                                               | Teacher Report                   |
| <b>Mathematics Outcomes</b>                                                                                                                                                           |                                  |
| Applied Problems (Woodcock-Johnson III Tests of Achievement/Bateria Woodcock-Muñoz Pruebas de Aprovechamiento-III)                                                                    | Child Direct Assessment          |
| Mathematics Assessment Items from the Early Childhood Longitudinal Study - Birth Cohort PreK version (ECLS-B) and ECLS-K Kindergarten Version                                         | Child Direct Assessment          |
| Counting Circles/Counting Stars                                                                                                                                                       | Child Direct Assessment          |
| Child's Accomplishments: counting                                                                                                                                                     | Teacher Report, Parent Interview |
| Academic Skills Ratings: mathematics, science, and social studies <sup>b</sup>                                                                                                        | Teacher Report                   |
| <b>Physical Health and Development</b>                                                                                                                                                |                                  |
| Child's Height and Weight                                                                                                                                                             | Child Direct Assessment          |
| Child's Accomplishments: speech, motor development                                                                                                                                    | Teacher Report, Parent Interview |
| Child's Health and Disability                                                                                                                                                         | Teacher Report, Parent Interview |
| Special Concerns: difficulty hearing, seeing test materials, speech difficult to understand                                                                                           | Interviewer Observation          |
| <b>Social-Emotional Outcomes and Approaches to Learning</b>                                                                                                                           |                                  |
| 55 Items from Behavior Problems Index, Personal Maturity Scale, Social Skills Rating Scale, and Preschool Learning Behavior Scale                                                     | Teacher Report                   |
| 21 Items from Behavior Problems Index, Personal Maturity Scale, Social Skills Rating Scale, and Preschool Learning Behavior Scale                                                     | Parent Interview                 |
| Leiter Examiner Ratings: (1) Attention, (2) Organization/Impulse Control, (3) Activity Level, (4) Sociability (Leiter International Performance Scale Revised, Examiner Rating Scale) | Interviewer Observation          |
| <b>Classroom Environments</b>                                                                                                                                                         |                                  |
| Child-Adult Counts                                                                                                                                                                    | Classroom Observation            |
| Arnett Caregiver Interaction Scale (lead teacher)                                                                                                                                     | Classroom Observation            |
| Early Childhood Environment Rating Scale (ECERS-R)                                                                                                                                    | Classroom Observation            |
| Classroom Assessment Scoring System (CLASS; instructional support)                                                                                                                    | Classroom Observation            |

<sup>a</sup>Word Attack is administered in the kindergarten year only.

<sup>b</sup>Teachers rate children's skills in science and social studies in the kindergarten year only.

**Head Start staff interviews.** To examine classroom characteristics that relate to the quality of educational services for children, FACES 2006 conducts interviews with lead teachers about their educational background, professional experience, and instructional practices in the fall of 2006, and in the spring of 2007 and 2008. To measure program characteristics that relate to service quality, the study conducts brief telephone interviews with program directors prior to the start of the 2006 program year and longer face-to-face interviews with center directors and education coordinators in fall 2006. Program directors confirm information from the most recent version of the Program Information Report (PIR) and provide information about the training and technical assistance provider in their region, the curriculum or curricula used in their program, and their program's methods of child assessment. They also describe their educational background and experience, as well as their satisfaction with their current position. We ask questions concerning details of educational philosophy, curriculum, and classroom activities

of the center director, education coordinator, and classroom teachers. Center directors also provide additional information about organizational and administrative features of their program, including challenges they face, the collaboration and coordination of services for Head Start families, parent involvement in program activities, and staff recruitment and retention.

**Head Start classroom observations.** In the spring of each Head Start year, the study conducts classroom observations of the quality of equipment, materials, and teacher-child interactions using standardized observational methods and coding schemes that have been widely used in child development research.

**Kindergarten teacher questionnaires.** Children's kindergarten teachers complete questionnaires in the spring of 2008 and 2009 after children have completed Head Start and have entered kindergarten. The kindergarten teacher questionnaire asks about teachers' demographic characteristics,

**TABLE 4. SUMMARY OF DATA COLLECTION COMPONENTS, BY WAVE**

|                                 | Fall 2006           | Spring 2007 | Spring 2008           | Spring 2009           |
|---------------------------------|---------------------|-------------|-----------------------|-----------------------|
| 3-Year-Old Cohort               | Child in Head Start |             | Child in Head Start   | Child in Kindergarten |
| Assessment                      | ✓                   | ✓           | ✓                     | ✓                     |
| Parent Interview                | ✓                   | ✓           | ✓                     | ✓                     |
| Teacher Child Rating            | ✓                   | ✓           | ✓                     | ✓                     |
| Teacher Interview               | ✓                   | ✓           | ✓                     | ✓                     |
| Classroom Observation           |                     | ✓           | ✓                     |                       |
| Center Director Interview       | ✓                   |             |                       |                       |
| Education Coordinator Interview | ✓                   |             |                       |                       |
| 4-Year Old Cohort               | Child in Head Start |             | Child in Kindergarten |                       |
| Assessment                      | ✓                   | ✓           | ✓                     |                       |
| Parent Interview                | ✓                   | ✓           | ✓                     |                       |
| Teacher Child Rating            | ✓                   | ✓           | ✓                     |                       |
| Teacher Interview               | ✓                   | ✓           | ✓                     |                       |
| Classroom Observation           |                     | ✓           |                       |                       |
| Center Director Interview       | ✓                   |             |                       |                       |
| Education Coordinator Interview | ✓                   |             |                       |                       |

education levels, degrees and teaching certificates, courses in child development, and years of teaching experience. We also ask teachers about the frequency of language, literacy, and early mathematics activities in the classroom and about the overall behavior of children in the class.

### Data Collection Schedule and Periodicity

As noted, FACES 2006 collects data at four time points over a 33-month period beginning in fall 2006 and ending in spring 2009. Table 4 shows the timing of the data collection components by wave.

## WHAT'S NEW IN FACES 2006

The study instruments and procedures for FACES 2006 have changed somewhat from those used in the 2003 cohort of FACES. These changes, particularly those related to measures of key constructs, have been carefully considered in order to balance the need to support comparisons to previous FACES cohorts with the need to update the measurement battery and to address emerging policy issues. The modifications primarily involve retaining a larger 3-year-old cohort, changes in measures used, and changes in the process of data collection.

### Larger 3-Year-Old Sample

The sample of 3-year-olds in FACES 2006 will be larger than in prior FACES cohorts. The initial sample size for the 3-year-olds was increased so the numbers of children who were sampled as 3- and 4-year-olds are comparable at the end of the study (that is, spring of kindergarten). By oversampling 3-year-olds, FACES 2006 compensates for the attrition that occurs in the extra year of followup for this cohort. Otherwise, the sample sizes of participating programs, classrooms, and children in FACES 2006 are comparable to those used in FACES 2003.

### Measures Changes

For FACES 2006, we have carefully balanced the need for consistent measurement of outcomes, while allowing for improvements in instrumentation and techniques. In some instances, new versions of instruments are being used. For example, the

Woodcock-Johnson Psycho-Educational Battery—Third Edition (W-J III) replaces the Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R), and the Peabody Picture Vocabulary Test—Fourth Edition (PPVT-IV) replaces the Peabody Picture Vocabulary Test—Third Edition (PPVT-III). In other instances, measures have been dropped because they have not demonstrated relations with outcomes in previous cohorts, overlap with items from another instrument, are too time-consuming, or are no longer of major policy interest. For instance, the McCarthy Draw-a-Design task has been dropped because visual-spatial items from the W-J III spelling task are sufficient to report on fine motor skills. The Pearlin Mastery Scale and the Kaufman Functional Academic Skills Test (K-FAST) have also been dropped because neither has yielded unique information, and they are somewhat time-consuming.



Measures in FACES 2006 also have been updated in an effort to obtain more comprehensive information on children and their environments. For example, subtests from the Leiter Examiner Rating Scales have been substituted for the previous FACES assessor ratings of the child's behavior during the assessment in order to obtain a more comprehensive picture of the child's attention, self-regulation, and cooperation. The Instructional Support subscale of the Classroom Assessment Scoring System (CLASS) has been added to measure instructional climate. Measures also have been updated to support comparisons with the Head Start Impact Study and have been informed by the protocols developed for the Early Childhood Longitudinal Study—Birth Cohort (ECLS-B) preschool wave, the Early Childhood Longitudinal Study—Kindergarten Cohort (ECLS-K), and other National Center for Education Statistics school surveys.



## Additional Information Gathered on Children

In an effort to address two major policy areas, children's mathematics skills and childhood obesity, FACES 2006 has added items to gather additional information on children. In addition to the W-J III Applied Problems subtest, items from the ECLS-B mathematics assessment have been added to enhance the measurement of skills beyond number and operations to include geometry, patterns, and measurement.

Direct measurement of children's height and weight has been added. Questions about the availability of outdoor play areas, time spent outdoors and in sedentary activities, presence of television in children's bedrooms, and consumption of sweetened beverages and unhealthy snacks also have been added to the parent interview, as a means of measuring nutritional and activity practices in the home. FACES 2006 also has added questions to the teacher interview dealing with outdoor play and consumption of sweetened beverages, again to consider child nutrition and activity levels.

## Use of Computer-Assisted Technology

FACES 2006 will use computer-assisted interviewing techniques to conduct the child assessments, the parent interviews, and the Head Start teacher interviews. In addition, it will offer Head Start teachers the option of completing the teacher-child ratings on the Web or on paper, and it will offer kindergarten teachers similar options for completing interviews and teacher-child ratings. For the direct child assessments, computer-assisted personal interviewing (CAPI) will be used to facilitate the



movement from one assessment to the other without the assessor's having to calculate stopping or starting points and will ensure that all basal and ceiling rules are followed. These technological enhancements to FACES are intended to lessen the burden on respondents and improve the efficiency of data collection.

## DISSEMINATION OF FACES 2006 DATA AND FINDINGS

Annual reports regarding FACES 2006 are produced in the fall of each year. These reports update researchers and ACF on the progress of the study. Specifically, the annual reports will relay the plans for and the most current findings from the study and highlight notable analyses, findings, and recommendations. For example, this Year 1 Report discusses how the study design supports Head Start program performance measurement and how it will address other policy and program questions. The Year 2 Report will describe characteristics of children, families, and programs in the fall of 2006 and draw comparisons with earlier FACES cohorts and programs. The Year 3 Report will document children's progress during their first year of Head Start, compare subgroups of children by family background characteristics and by program characteristics, and compare progress with the progress of previous cohorts of FACES. Additional reports in the following years will similarly document children's progress and growth as children continue through Head Start and kindergarten.

Research briefs will be prepared to inform the early childhood practitioner and policy research communities about the FACES study and about changes in Head Start children, families, staff, programs, and communities. Finally, data files and users' manuals will be prepared and made available for interested researchers through the University of Michigan's Inter-university Consortium for Political and Social Research (ICPSR). The first data files, containing the fall 2006 and spring 2007 data, will be made available in 2008.

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