

ALASKA LEGISLATURE COMMITTEE FILES 2001-2002 8672

10541 SENATE HEALTH EDUCATION & SOCIAL SERVICES

4AAC52.510-Parental Access to Records

The federal regulations allow for up to 45 days to comply with a parent's request for records. The state regulation is requiring a very limited 10-business day window for compliance to this request from parents. The 10-business day limit is very difficult to comply with especially within a large district where student's records may be in several different locations. ASD would prefer a minimum of 15 business days for compliance.

4AAC52.530-Release of Records; Disciplinary Records

The addition of the contract service provider to the list of individuals who may have access to a student's records is an important and needed addition.

4AAC52.540-Parental Right to Independent Evaluation

It is important to detail the conditions under which an independent evaluation can be obtained by the parent at district expense. Reference to the federal regulations is confusing and not sufficient.

4AAC52.550-Due Process Hearing

The regulations continue to describe a two-tiered due process hearing. This is preferred to the one tiered process proposed in the new statute language. The issue of discipline of students certified for special education is one of the most controversial components of special education law. The requirements of a manifestation determination, functional behavioral assessment and other stipulations of this area of law are extremely important and must be detailed in our state regulations. Reference to federal law within this regulation is insufficient and confusing. This complex area must be clearly delineated to protect students' rights and assist districts in the provision of FAPE.

4AAC52.700-Public School Foundation Program

Changes and clarification in the definition of intensive services are very positive and allow greater flexibility in appropriately identifying these students.

Items not written within the proposed Special Education Regulations

Federal regulation CFR 300.142 METHODS FOR ENSURING SERVICES requires states to create an interagency agreement that ensures the provision of FAPE. This includes the financial responsibility of each non-educational public agency including State Medicaid and other public insurers of children with disabilities. This must precede the financial responsibility of the LEA. It is vital that this issue is addressed in the Alaska Special Education Regulations. As our districts are impacted with reduced revenues and increased needs of students with disabilities, the financial impacts are significant. The state is required to assist by

creating the interagency agreements and providing mechanisms to fund services through other appropriate means. This must be done without a corresponding decrease in services that the parents and students are currently receiving through these funding agencies.

To: Sheila Box <sheila_box@eed.state.ak.us>
Subject: Comments on Regs

NAME: Ann Turner Olson
email: Ann_Olson@health.state.ak.us
Phone: 465 - 2817
Regulation: Proposed Regulations 4 AAC 52
Submit: Submit

comments:

DFYS Comments of EDD Proposed Regulations
4 AAC 52 Education for Children with Disabilities

Comments from DFYS

The proposed regulations for the Education of Children with Disabilities, 4 AAC 52.700 (c), states that "for funding purposes under AS 14.17.420, a student may be counted as receiving special services if (3) the student's IEP team determines that out-of-state residential placement is necessary."

The necessity for placement out-of-state in order to obtain residential psychiatric treatment is determined based upon a child's need for psychiatric and behavioral treatment and services. Although a child's educational needs are included in the review for placement out-of-state in residential psychiatric treatment, the IEP team is not the eventual group to determine such placement is necessary. Treatment, in-state or out-of-state, in a residential psychiatric treatment center is almost never due solely because of a child's IEP.

DFYS requests EED to take into account the processes described below which DHSS currently has in place to review and approve children for treatment and placement out-of-state. We ask that EED work together with the division to consider the impact 4 AAC 52.700 (c) (3) may have on the funding and provision of educational services when a child is placed out-of-state for residential treatment.

Background: Out-of-state Placement in Residential Psychiatric Childcare Center (RPTC)

The Division of Family and Youth Services has policies and procedures for the placement of children in custody in out-of-state RPTC facilities. All referrals for such placement initially come from a child's social worker and/or juvenile probation officer. Referrals are reviewed by the Regional Placement Committee (RPC) chaired by the psychiatric nurse in each of DFYS' four regions. When a Regional Placement Committee determines a child's treatment needs cannot be met in state, a referral is made to the Out-of-state Placement Committee (OSPC).

The OSPC is chaired by the DFYS Social Services Program Officer and includes representatives from the divisions of Family and Youth Services, Juvenile Justice, EED/Special Education, Mental Health and Developmental Disabilities and the Deputy Compact Administrator for the Interstate Compact on the Placement of Children (ICPC).

The ICPC (AS 47.70) requires a placement evaluation and approval before placement out-of-state is made and requires the placement be in the best interests of the child. DFYS policy requires that this evaluation include a review of a child's educational needs. If the child has an IEP, this must be included in the review materials. In fact, many children who are placed out-of-state will have an IEP through their local school district.

Future Issues for DFYS and EED to Consider

1. School district personnel on DFYS regional placement committees
2. DFYS and DJJ workers on school district IEP teams
3. Funding implications of 4 AAC 52.700 (c) (3) for children placed in out-of-state residential psychiatric treatment centers

X-Sender: cfmorehouse@jnumail1.state.ak.us
X-Mailer: QUALCOMM Windows Eudora Pro Version 4.2.0.58
Date: Mon, 26 Feb 2001 13:42:55 -0800
To: Sheila Box <sheila_box@eed.state.ak.us>
From: IUSR_WEBSERVER@webserver (by way of Charito Morehouse
<charito_morehouse@eed.state.ak.us>)
Subject: Comments on Regs

NAME: Joy Gray
email: mgray@mtaonline.net
Phone: 907-357-4729
Regulation: 4aac52 Special Ed
Submit: Submit

comments:

My son, age 6, is developmentally delayed and is currently in preschool for part of the day as well as kindergarten for part of the day. He is delayed in speech, fine and gross motor skills. As of this year, because of state regulations, he is now identified as cognitively impaired even though his teachers and therapists categorize him as developmentally delayed. This is to facilitate continuing his special services. I would be for passing the regulation to extend the developmental delay classification to age 8. He is a bright young boy with an active imagination and smiles constantly. I do not think he is cognitively impaired. However, I do think he does need smaller class sizes and extra help. Please consider changing the regulations to the benefit of Alaska's kids. It would be appreciated by all. Thank you. - Joy Gray

4 AAC 52.130 Mental Retardation

ASPA recommends DOEED change the criteria for intellectual test performance to (1) score at or below a standard score of 75 on an individual standardized test of intelligence, (2) exhibit deficits in adaptive behavior, and (3) demonstrate commensurate delays in academic attainment. This definition brings the state of Alaska in line with the standards set for by the American Association of Mental Retardation. ASPA is concerned about the potential for pushing the 75 higher by using the standard error of measurement rationale. If DOEED does concur with ASPA's proposed changes we would also support a statement that indicates 75 is the absolute cap for IQ scores.

4 AAC 52.130 (n) Criteria for Determination of Eligibility Early Childhood Developmental Delay

ASPA supports the extension of Early Childhood Developmentally Delay Certification through age nine (9) as permitted by Federal Reauthorization of IDEA.

4 AAC 52.120 (n) (iii) "includes expressive and receptive language". ASPA recommends changing the wording to "speech/language development which includes expressive and receptive language articulation or fluency". Significant articulation and fluency problems in the absence of language related problems should continue to be part of Early Childhood Developmental Delay certification. Severely disordered oral communication can severely impact the child's progress.

4 AAC 52.130 (n) (2) (C) ASPA questions how feasible it will be to observe young children in multiple environments as required in this provision. Typically, preschool age children are evaluated in one session and may not be involved in a preschool program or even a daycare program. Home visits are excellent but are costly, time intensive and not practical given the shortages special education and related services are experiencing.

Within this section is reference to 52.130 page 24 (d) refers to early childhood developmental delay as a reevaluation before the child reaches age 8. Other sections refer to the child as "no more than 8". Page 12 refers to "through age 8". This language is inconsistent with other sections and is confusing. Does "no more than 8" mean up to age 9? Does "no more than 8" mean no more than 8 years 1 day? Please provide clarification to early developmental delay and the age guidelines.

ASPA supports wording that cannot be misinterpreted such as "on or before the 9th birthday".

52.140 ...30 calendar days after eligibility

The Federal wording allows for school days. If a student is assessed during the summer and determined eligible for service the IEP cannot reasonably be developed and implemented during the time school is not in session, ASPA supports the definition of "day" as school day.

52.140 (e) In accordance with 52.150

"It is the districts' responsibility to ensure that an IEP [for a child placed out of district] is developed and implemented". This statement confuses us. Does the sending district write the IEP? How does a district write an IEP for another location, especially one outside the district? Is the intent of this regulation to place responsibility on the sending district to ascertain the receiving district writes and implements an IEP? How is the sending district to manage supervision of another districts/placements action? ASPA requests clarification of the intent and implementation of this regulation.

4 AAC 52.170 preschool children are covered by the least-restrictive environment

Does this regulation mandate that preschool students with disabilities must be enrolled in a private preschool? At this point in time neither kindergarten nor preschool enrollment is mandated by the state. Federal or State law does not mandate preschool unless the student has disabilities. How does the state propose a student, who is not yet of school age, be educated in an environment with other

non-handicapped peers? Does Alaska plan to mandate public preschool? Does the state propose to pay for enrollment of children with handicaps at private preschools? This regulation will be open to much misinterpretation and must be clarified. ASPA supports a notation for preschool aged children such that efforts to provide a least restrictive environment does not include enrollment in a private preschool at public expense.

4 AAC 52.180 Reevaluation

ASPA reads this as the job of the eligibility team to determine continued need for services within the context of the educational needs of the child. ASPA supports this change in the regulation. Needless time is spent on unnecessary and costly reevaluation to determine whether or not a specific IDEA handicapping condition continues to exist (i.e. discrepancy between ability and achievement for Learning Disabilities) rather than looking at the types of services the child requires to meet his/her educational needs. ASPA appreciates this adoption of the Federal changes and wishes further clarification that the purpose of the evaluation is not to continue to establish the presence of a disability through needless evaluation but rather determine the present need of the child and whether those needs must be met through special education services.

4 AAC 52.510

Does this request for records stating a 10 business day guideline with no more than 45 days hold during the summer when many school personnel, including records departments, are closed? ASPA requests a notation be made regarding exceptions for summer and extended holidays (Winter, Spring Breaks) or a reference to school days as the guideline.

4 AAC 52.550 Due Process

The Federal regulations for IDEA encourage mediation prior to due process hearings. ASPA supports the same for Alaska school districts. ASPA would like DOEED to provide for mediation as a prerequisite to due process hearings as a less costly and less antagonistic setting than due process hearings in order to problem solve school-parental disputes.

4 AAC 52.590 (a) and (b) are amended (page 39-40)

(b) A child is entitled to a surrogate parent if

Does (4) the child is committed to the department of Health and Social Services negate other aspects? That is, if a parent is known and located does the child require not just become entitled to a surrogate parent?

4 AAC 52.990 Definitions

F (5) "days" means calendar days. (Page 47)

Other federal special education regulations refer days with respect to evaluations and placement procedures to be school or business days. ASPA takes strong exception to this definition of day as calendar day. Many times consent for assessment is obtained just before the winter break from school. In this instance, seventeen to eighteen days of the time limit is lost to vacation. School psychologists and other related service personnel are often in a school one-to-two days per week. What provides a reasonable time line to conduct a thorough evaluation by all involved parties is lost with a count of calendar days.

Forty-five days is equivalent to seven weeks. That gives a psychologist or occupational therapist who is in a building once a week only seven opportunities to observe, assess, review records, consult with colleagues prior to arriving at placement decision. For evaluations of complex handicapping conditions those seven opportunities must be shared with resource teachers, speech pathologists, occupational and physical therapists plus planning meetings, eligibility meetings and IEP meetings. Given that these regulations focus on *children* it is inappropriate for them to be subjected to full days of total assessment. We don't do this with any other high stakes examinations. Benchmarks, IOWA's, graduation exams are all spread out across several days.

HB 71
Fiscal Note Budget Narrative

Current state law and the proposed HB 71 require the state to oversee gifted education programs provided by school districts. Federal special education funding may not be used for these purposes since gifted education is not a federal mandate. Therefore, the following funds are required to enable the state to fulfill its oversight responsibility.

Personal Services

*.5 FTE Education Specialist II, 21 A/B	\$36,200
**10 FTE Admin. Clerk II, 8 B	<u>\$ 4,200</u>
Total	\$40,400

*This fiscal note includes personal services costs for a .5 FTE Education Specialist II. This position is reflected on page 1 of the fiscal note as 1 new full-time position. The other half of this position is reflected in a department increment in the FY2002 budget for the statewide correspondence program.

**An existing position will be used for the Administrative Clerk II position. No new position is being requested in this fiscal note.

Travel

Due Process Training for 2 days @ \$1,000 each	\$ 2,000
Monitoring to accompany contractor for 4 visits @ \$1,000 each	<u>\$ 4,000</u>
Total	\$ 6,000

Contractual

Contractor:	
Training, 10 days @ \$500 per day	\$ 5,000
Due Process Hearings, 4 @ \$5,000 each	\$20,000
Monitoring visits, 2 contractors at \$500 per day, 3 days each, 4 districts per year	\$12,000
Monitoring visits, \$1,000 each trip, 4 trips	\$ 4,000
Postage, phone, copier, printing	<u>\$ 6,000</u>
Total	\$47,000

Supplies

Training materials, other supplies	<u>\$10,000</u>
Total	\$10,000

Grand Total \$103,400

List of Participants for Legislative Review Meeting

Sept. 14th & 15th, 2000

Anchorage, AK

Governor's Council

David Maltman: Executive Director
 Darrell Sanborn: Council Member and Superintendent, Unalaska City Schools
 Reggie Joule: Council Member; State Representative
 Kathy Fitzgerald: Parent; Member of Council's Executive Committee
 Kathy Craft: Parent; AK Children's Mental Health Coordinator

Disability Law Center

Belinda Patrick: Advocate
 Janel Wright: Staff Attorney
 Bob Briggs: Staff Attorney
 Ann Hutchins: Parent
 Don Shackelford: Parent; former school administrator; UAA faculty member

PARENTS, Inc.

Faye Nieto: Executive Director
 Tim Weiss: Program Director
 Gail Igo: Staff Advocate
 Ardyce Turner: PARENTS, Inc. Board Member
 Jan Guertin: Juneau Staff Advocate

EED Participants

Bruce Johnson: Deputy Commissioner
 Greg Maloney: State Director of Special Education
 Wendy Tada: Special Education Staff Member
 Phil Reeves: Asst. Attorney General working with EED

District Participants

Robyn Rehmann: Special Education Director, Anchorage School District
 Ann Shortt: Assistant Superintendent, Fairbanks School District
 Ron Delay: Student Services Director, Juneau
 Ron Erickson: Superintendent, Haines Borough School District
 John Owens: Special Education Director, Northwest Arctic Borough School District

ALASKA STATE LEGISLATURE



Interim:
600 East Railroad Avenue
Wasilla, Alaska 99654
(907) 376-3370
(907) 376-3157 Fax

Session:
State Capitol
Juneau, Alaska 99801-1182
(907) 465-6600
(907) 465-3805 Fax

SENATOR LYDA GREEN SENATE DISTRICT N

SB40: EDUC. OF DISABLED OR GIFTED CHILDREN

QUESTIONS TO ASK

- 1) Section 19 of SB40 removes the current language regarding all of the requirements for individualized education programs and replaces it with a requirement that the programs shall be developed and reviewed and revised in conformance with federal requirements. Are those federal requirements as detailed as the current state statute and are they sufficient as a guideline for IEPs?
- 2) Gifted children are included in AS 14.30, Education for Exceptional Children, instead of being placed in a new statute section. Why is this?
- 3) On page 15, beginning on line 4, the "least restrictive environment" is defined for gifted children. Some would argue that the "least restrictive environment" would be an environment in which gifted children were being taught solely at an advanced level with other gifted children. What is the reason for the language in this bill? (NOTE: This is the same language as the "least restrictive environment" for special education children. This question comes from a woman who complained about the language)
- 4) Which sections (specifically) of this bill are required by federal law and which are not?
- 5) What would these changes mean in the way of federal funding for education?

SB40: EDUC. OF DISABLED OR GIFTED CHILDREN

SECTIONAL ANALYSIS

Prepared by Aurora Hauke, Senate HESS Committee Aide

AS 14.16 Special Schools

AS 14.16.050 Applicability of education laws, requirements relating to students and educational programs

Sec. 1: AS 14.16.050(a)(4) is amended to reflect the separation of exceptional children into children with disabilities and gifted children.

AS 14.30 Education for Exceptional Children

AS 14.30.180 Purpose

Sec. 2: AS 14.30.180 is amended to change "exceptional children" to "each child with a disability" and updates Individuals with Disabilities Education Act 97 reference.

AS 14.30.186 Coverage

Sec. 3: AS 14.30.186(a) is amended to provide that the borough or city school district or REAA where the child lives shall provide special education services. If the child is enrolled in a treatment facility, correctional or youth facility, boarding school, or statewide correspondence study program, that district is responsible for providing the special education services.

Sec. 4: AS 14.30.186(e) is amended to reflect the clarification of exceptional child as child with a disability. The language that says that a child being educated under the compulsory attendance exceptions (i.e. homeschooling, tutoring, etc.) may receive special education services is removed. This was redundant with the language that stated that a child being educated under the compulsory attendance exceptions may not be compelled to receive special education services.

Sec. 5: A new subsection is added which allows the department to establish standards in regulations in the allocation of financial responsibilities of educational agencies listed in AS 14.30.186(a) (see above).

AS 14.30.191 Educational evaluation and placement

Sec. 6: AS 14.30.191(a) is amended to clarify that a school district must obtain "written informed" consent from child's parent before initial evaluation or placement "of a child with a disability" in a special education program.

*Does this mean
a district does
not have to
provide LD
services*

- Sec. 7: AS 14.30.191(b) is amended to change "exceptional child" to "child with a disability" and removes redundant language.
- Sec. 8: AS 14.30.191(c) is amended to clarify that before a school district initiates or refuses a change in the placement or educational program of "a child with a disability", the district shall notify the child's parent.
- Sec. 9: AS 14.30.191(d) is amended to include the parent of the child evaluated to participate in the determination of the child's eligibility for special education services.
- Sec. 10: New subsections are added to AS 14.30.191 to provide that a school district provide written notice of its decision and define "hearing".

AS 14.30.193 School district hearings repealed and reenacted as Due process hearing

- Sec. 11: Due process hearing procedures laid out.
- (a) A school district or parent of a child with a disability may request a hearing in writing within 12 months of the date that the school district provides the parent written notice of the decision which the parent disagrees with.
 - (b) The school district must contact the department to request appointment of a randomly selected hearing officer, which must be done within five days of receipt of request.
 - (c) Each party has the right to reject, without statement of cause, one hearing officer within five days of notification of appointment. The department then has five days to appoint another hearing officer.
 - (d) Five days after appointment (giving time for rejection process), the hearing officer shall inform the parties of availability of mediation. If mediation doesn't work, the hearing officer shall conduct a hearing, after which the officer shall issue a written decision.
 - (e) A hearing officer's decision is final and binding unless appealed. A child may not be evaluated, placed, transferred, or compelled to receive special education services until appeal time expired or until a filed appeal is reviewed.
 - (f) A hearing officer's decision is subject to appeal to the superior court.
 - (g) The department shall maintain a list of hearing officers qualified through a training program as a public record.
 - (h) A student 18-21 with a disability has the same rights and obligations as a parent of a child with a disability in this section.

New Section AS 14.30.194 Mediation

Sec. 12: New Section AS 14.30.194 Mediation added providing that the department shall establish mediation process which conforms to federal law and shall encourage the use of said mediation process. The department shall maintain a list of individuals who are qualified through a training program.

AS 14.30.231 Advisory committee changed to Advisory panel

Sec. 13: AS 14.30.231 title changed to Advisory panel and language within modified to reflect said change. Also, "exceptional children" changed to "children with disabilities"

AS 14.30.250 Teacher qualifications

Sec. 14: "Exceptional children" changed to "children with disabilities".

AS 14.30.270 Substitutes

Sec. 15: "Exceptional children" changed to "children with disabilities".

AS 14.30.272 Procedural Safeguards

Sec. 16: Language changes: "exceptional children" changed to "children with disabilities"; "an impartial hearing" changed to "a due process hearing"; and federal statute updated.

AS 14.30.274 Identification of exceptional children changed to Identification of children with disabilities

Sec. 17: "Exceptional children" changed to "children with disabilities". Agency responsible for establishing and implementing procedures for identifying and locating children with disabilities changed to the agency which is responsible under AS 14.30.186 (the agency where the child is enrolled).

AS 14.30.276 Least restrictive environment

Sec. 18: "Exceptional children" changed to "children with disabilities" and "exceptionality" changed to "disability".

AS 14.30.278 Individualized education program

Sec. 19: Removes all current language regarding requirements of an individualized education program and adds new language stating that an individualized education program shall be developed no later than 30 days after determination of child's eligibility in accordance to federal requirements.

AS 14.30.285 Transfers of exceptional children

- Sec. 20: "Exceptional children" changed to "children with disabilities" in 14.30.285(a)
- Sec. 21: 14.30.285(b) is amended to change language of "exceptional child" to "child with a disability". Also, the school district rather than the department shall determine if a child may be sent to an educational program or residential school outside the child's district if appropriate educational programs are not available.
- Sec. 22: 14.30.285(e) is amended to change "exceptional child" to "child with a disability".
- Sec. 23: 14.30.285(f) is amended to clarify that the consent of the child's parent shall be informed before the child is transferred.
- Sec. 24: 14.30.285(g) is amended to clarify that the consent of the parent must be informed and that the withholding of said informed consent doesn't relieve the school district of the obligation to provide special education services. The language "an exceptional child" is changed to "a child with a disability".

AS 14.30.325 Surrogate parents

- Sec. 25: 14.30.325(a) is amended to provide that the department will (instead of may) provide for the appointment of surrogate parents in matters relating to education. "Exceptional children" is changed to "a child with a disability"

AS 14.30.335 Eligibility for federal funds

- Sec. 26: "Exceptional children" changed to "children with disabilities".

AS 14.30.340 Provision of special education in a private school, home, or hospital setting

- Sec. 27: "An exceptional child" changed to "child with a disability". If a child with a disability is enrolled in a private school, including a religious school, the school district in which the child resides shall make the special education services available in conformance with federal requirements. There are also some minor clarification language changes in subsection (b).

AS 14.30.347 Transportation of exceptional children changed to Transportation of children with disabilities

- Sec. 28: "Exceptional child" changed to "child with a disability".

AS 14.30.350 Definitions

- Sec. 29: 14.30.350(2), which defines "children with disabilities," is repealed and reenacted. "Child with a disability" means a child with one or more of mental retardation, learning disabilities, emotional disturbance, deafness, deaf-blindness, hearing impairment, orthopedic impairment, other health impairment, speech impairment, visual impairment, multiple disabilities, early childhood development delay, autism, and/or traumatic brain injury.
- Sec. 30: 14.30.350(8), the definition of "parent" is changed to reflect that a parent may be a child's natural or adoptive parent, a guardian (not the state if the child is in legal custody of the state), a person who is acting in the place of the child's natural or adoptive parent, or a child's surrogate parent as appointed by the department.
- Sec. 31: 14.30.350(9), the definition of "related services" is changed to conform to federal statute definition.
- Sec. 32: 14.30.350(10), the definition of "school district" is changed to a borough school district, a city school district, a REAA, a state boarding school, and the state centralized correspondence study program.
- Sec. 33: (11) The definition "special education" is changed to mean an educational program that is considered as "special education" in federal statute.
- Sec. 34: New definitions of "due process hearing" and "informed consent."

Article 3A. Education for Gifted Children added

- Sec. 35: Article 3A. Education for Gifted Children added to include the following:

Sec. 14.30.351. Purpose. The purpose of this new article is to provide an appropriate education for each gifted child who enrolls in a public school.

Sec. 14.30.352. Coverage. Each school district shall establish a program for identification and provision of services to gifted children.

Sec. 14.30.353. Identification, evaluation, and placement of gifted children. Provides that each school district shall establish and implement procedures to ensure that gifted children are identified and located and shall obtain written informed consent of the child's parent before an initial evaluation or placement. Educational evaluations shall be given at least once every three

years. A school district must notify the parent if they initiate or refuse a change in child's placement. When the evaluation is completed, an opportunity for consultation must be provided to the parent by the school district. A parent may obtain an independent educational evaluation by choosing a person from a list provided by the SD or by a person who the parent and SD agree upon, at the expense of the SD if the parent disagrees with SD's evaluation. The school district may initiate a due process hearing to show that its evaluation is appropriate and is not required to pay for independent educational evaluation if the hearing officer rules in their favor. If a parent obtains an independent evaluation at private expense the results must be considered by the SD and may be presented in due process hearings as evidence. If the hearing officer request an independent evaluation, the SD pays for it. The school district must provide written notice of its decisions to the parent.

Sec. 14.30.354. Individualized gifted education program. The school district will provide for the development of an individualized gifted education program. It must include statements of child's present level of performance, annual goals, and services to be provided to the child to the extent to which the child will be able to participate in regular educational programs, as well as the projected dates for initiation of services and duration of services, criteria and evaluation procedures, schedules for determining whether objects are being achieved. Persons participating in the development must include SD representative who is qualified to provide or supervise the provision of gifted education, the child's teacher, parent, the child (if appropriate), and other individuals selected by the parent or SD.

Sec. 14.30.355. Least restrictive environment. Gifted children are to be educated in regular educational environment as much as possible. Removal from this environment only occurs when education in regular classes with supplementary aids and services cannot be achieved satisfactorily.

Sec. 14.30.356. Procedural safeguards. A SD shall inform the parent of the rights to review the child's educational record and evaluation tests and procedures, to refuse to permit evaluation or change in educational placement, to be informed of the results of evaluation, to obtain independent evaluation from a person on a list provided by the SD or a person agreed upon by both parties, to request an impartial hearing, to appeal a hearing officer's decision, and to give consent to deny access to others to the child's educational record.

Sec. 14.30.357. Due process hearing. This is the same language as provided for in the special education section.

Sec. 14.30.358. Teacher qualifications; substitutes. Teachers of gifted children must possess valid teacher certificate and any training the department requires. The employment of a person otherwise qualified as a substitute teacher is not prohibited from serving as a substitute for gifted children.

Sec. 14.30.359. Definitions. Definitions given for appropriate education, due process hearing, educational records, gifted children, gifted education, informed consent, and school district.

AS 14.30.640. Eligibility for service.

Sec. 36: "Exceptional children" changed to "children with disabilities."

AS 29.60 Oil and Hazardous Substance Municipal Impact Assistance

Sec. 37: Definition of school district under AS 29.60.599(7) changed to be in conformity to definition of school district in previous sections of this bill.

AS 47.80 Persons with Disabilities

Sec. 38: Article 2 (Governor's Council on Disabilities and Special Education), AS 47.80.090 (Responsibilities), subsection (9), "exceptional children" is changed to "children with disabilities", and gifted children are included in the duty of the council to provide information and guidance for the development of special education programs and services.

Sec. 39: Article 6 (General Provisions), AS 47.80-900, subsection (6), the definition of "person with a handicap" is changed to include children with disabilities instead of exceptional children.

REPEALERS

Sec. 40: The following are repealed:

AS 14.30.186(b) (Education for Exceptional Children, Coverage): REAA board shall provide special education services in a school in the area for exceptional children residing in the area served by the school. (NOTE: this can be removed because it has been included in subsection (a).

AS 14.30.193(b) (Education for Exceptional Children, School district hearings): Parent may request a hearing if they disagree with the school district's intended placement of a child. (NOTE: this is a mistake in the bill. AS 14.30.193 was already repealed and reenacted).

AS 14.30.195 (Education for Exceptional Children, Hearings): This can be repealed because it has been included in the due process section (AS 14, 30.193).

AS 14.30.315(b) (Education for Exceptional Children, State support of programs for gifted children): Nothing in this section prohibits the department from requiring approval of programs of special education and related services for other categories of exceptional children. This can be repealed because "other categories of exceptional children" have been separated.

AS 14.30.350(3) (Education for Exceptional Children, Definitions): Definition of consent. This can be repealed because the definition of informed consent is added.

AS 14.30.350(5) (Education for Exceptional Children, Definitions): Definition of exceptional children. I wouldn't repeal this if they're going to include special education children and gifted children under this section (14.30) entitled "Education for Exceptional Children," even though that might be the only place the term is used.

AS 14.30.350(6) (Education for Exceptional Children, Definitions): Definition of gifted children. The rationale for repealing this is only included in the rationale for repealing the above. The only reason you would need this defined in this section of the statute would be to define the above.

AS 14.30.350(7) (Education for Exceptional Children, Definitions): Definition of individualized education program team. The need for this definition is removed with the rewording of the section on individualized education programs.

UNCODIFIED LAW

Sec. 41: New section added to uncodified law: REVISOR'S INSTRUCTIONS. The revisor of statutes is requested to change the heading of AS 14.30.193 from "Education For Exceptional Children" to "Education For Children With Disabilities," change the heading of AS 14.30.193 from "School district hearings" to "Due process hearings," and change the heading of

AS 14.30.285 from "Transfers of exceptional children" to "Transfers of children with disabilities."

Sec. 42: Add a new section: TRANSITION: REGULATIONS.

(a) The state Board of Education may adopt regulations necessary to implement the changes made by this Act before the effective date of this Act.

(b) Regulations adopted by the Board of Education in effect on July 1, 2001 continue in effect until amended or repealed if they are not inconsistent with the statutory changes.

EFFECTIVE DATES

Sec. 43: Section 42(a) takes effect immediately.

Sec. 44: All other sections take effect July 1, 2001.

Report faults school funds

■ **\$42 MILLION:** Panel says more money needed to meet standards.

By **ROSEMARY SHINOHARA**
Anchorage Daily News

A governor's task force of business and civic leaders released a report Monday saying Alaska schools have lost purchasing power and are underfunded. The report proposes that the state spend an additional \$42.4 million the first year of a five-year plan to help schools improve for a total of \$100 million by 2006.

That's beyond any money needed for higher enrollment.

"If anything this proposal is conservative," said Roger Chan, chief financial officer for Veco Corp. and a member of the task force.

The task force report said a "general loss of purchasing power" has left schools with inadequate funding, and as a result, many students haven't had the opportunity to meet state academic standards and pass new tests required for graduation.

It did not identify where any additional money should come from, but considered whether there's enough now and how much more might make a difference.

The group tied its proposal to estimates for correcting a half-dozen weaknesses in the school systems:

- Schools lack up-to-date textbooks. Books copyrighted in the 1970s and 1980s are common, and many students must share. At \$40 per textbook, with 135,000 Alaska public school students, \$5.4 million would buy one new book a year for each student.

- Curriculum in most districts doesn't match what's covered on the new state tests. To redo the coursework, the task force allocated \$500,000 for each of two years.

- The state now adds 20 percent to each district's funding for teaching students with disabilities, gifted students and students who don't speak English well. It isn't enough, the task force said, because the number of disabled and bilingual students is growing too rapidly.

The group recommended \$5.3 million more be spent annually for special and bilingual education.

- Districts need money to offer remedial classes to kids who fail the state tests. The task force estimated districts might offer summer school for a third of all students — 44,000 — at an average cost of \$40,000 per program in each of 250 schools. That equals \$10 million.

- Schools are falling behind in maintenance; \$4 million is proposed for the first year.

■ **UNIVERSITY:**
UA President Mark Hamilton praises lawmakers in annual request for cash.
B-1

SCHOOLS: Governor's task force finds state classrooms are underfunded

NDN 2-6-2001

- Alaska teacher salaries are not as competitive as they once were. The task force recommends spending \$9.4 million more each year, cumulatively, to give districts the opportunity to raise teacher salaries by 2 percent. It also suggests forgiving student loans for teachers who teach in Alaska, for \$800,000 the first year, and improving the teacher retirement plan at an unknown cost.

The group recommends another \$7 million the first year to conduct research, to provide rewards for successful schools and to offer help to low-performing ones.

The proposals add up to \$42.4 million more for next year, on top of about \$600 million the state spends annually on schools.

Although the task force identified common needs of Alaska schools, most of the money would go to districts as part of their regular state entitlement. The districts would have the final say on how to spend it.

The task force says state money eventually ought to be tied to gains in achievement, said Bob Weinstein, mayor of Ketchikan and chairman of the task force. Exactly how that would work isn't clear in the task force report.

Under a 1997 state law, high school students must pass state tests in reading, writing and math to earn diplomas beginning in 2002. And in 2003, the state will begin identifying which schools are "distinguished" and which are deficient, based mostly on student achievement.

Sen. Gary Wilken, R-Fairbanks, who has proposed a smaller increase to education funding, said the task force's rationale for increased spending impressed him, though the amount "certainly raised the bar."

"It's definitely got a gulp factor to it," Wilken said. "Once you swallow that, and look at where the number comes from, you say this isn't a number plucked from the sky. There's a reason for it."

Judging by the response to his own bill, which calls for spending \$20 million more on education for the upcoming year, Wilken said he thinks legislators are open to funding increases.

"In kind of a left-handed way, the discussion this year on the competency test highlights the fact that this is a pretty big deal, and our schools better be ready for it," Wilken said.

The task force, organized by Gov. Tony Knowles, included a roster of presidents and directors from oil and Native corporations and education organizations, plus a mayor and an assemblywoman. It held three days of meetings and produced its report in about a month's time.

The task force report now goes to the Alaska Board of Education, which plans a public hearing next Tuesday over the Legislative Teleconference Network.

- Alaska Department of -
EDUCATION
& EARLY DEVELOPMENT

Highlights of HB 71/SB 40

"An Act Relating to the Education of Children with Disabilities and Gifted Children"

Purpose:

1. To update state special education statutes to conform with the federal Individuals with Disabilities Education Act, as amended in 1997 (IDEA 97). IDEA 97 contains a number of policy amendments and emphasizes the importance of parental rights and parental participation in identifying and serving children with disabilities.
2. To delineate the federal and state requirements for providing educational services to children with disabilities, and the state requirements for providing educational services to gifted children.
3. To ensure that Alaska continues to qualify for federal special education funds.
4. To define Alaska's special education policy in areas where federal requirements provide states with discretion.

Revisions to Current State Law

Changes to the current state law include the following:

- The term "exceptional children" is replaced by the terms "child with a disability" and "gifted child". The statutory sections that pertain to children with disabilities have been separated from those that pertain to gifted children.
- Under current state law, the school district of a student's residence must provide special education and related services for a child with a disability. ~~The revised statute requires state boarding schools and statewide correspondence schools that enroll children with disabilities from outside their districts to provide special education and related services to these students.~~
- The due process hearing procedure is changed, ~~requiring the department rather than the school district to assign hearing officers.~~ Appeals of hearing officer decisions will be made to ~~superior court rather than the department.~~ Similar hearing procedures will be used for both special education and gifted education.
- Mediation, a voluntary dispute resolution process for school districts and parents of children with disabilities, is added to the state statute in conformance with IDEA 97.
- *with
does* Currently, children with disabilities enrolled in private schools are entitled to a full range of special education services from their public school district of residence. The revised statute limits district responsibility for providing special education services to children voluntarily enrolled in private schools to match the requirements contained in IDEA 97.

- Districts are required to serve only gifted children enrolled in the school district and attending public school.
- Districts are no longer required to provide related services, such as individualized transportation services, to gifted children.
- Significant changes to definitions include the following:
 - "serious emotional disturbance" is changed to "emotional disturbance" to reflect the federal definition;
 - "preschool developmental delay" is changed to "early childhood developmental delay" to reflect current terminology;
 - "parent" is changed to:
 1. specify that the state cannot serve as the child's guardian in educational matters; and,
 2. include a person with legal responsibility for a child's welfare who is acting in place of a child's natural or adoptive parent;
 - "related services" is changed to incorporate the federal IDEA 97 definition;
 - "school district" is changed to add state boarding schools and the state centralized correspondence study program;
 - "special education" is changed to incorporate the federal IDEA 97 definition;
 - "due process hearing" is added and defined according to AS 14.30.193;
 - "informed consent" is added to provide more specific guidance regarding what informed parental consent constitutes;
 - "gifted education" is added to distinguish gifted education from special education; and,
 - "Individualized gifted education program" is added to distinguish gifted program plans from special education program plans.

Budget Considerations

The department has the responsibility for administering the state's gifted education program under the current law, but has not had the resources to address due process hearings, training, and technical assistance for parents and school districts.

The department has requested an increment of \$177,700 in general funds in the FY 2002 budget to cover the costs for administering this program, since federal special education funds cannot be used for this purpose.

TONY KNOWLES
GOVERNOR
governor@gov.state.ak.us

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

P.O. Box 10000
Juneau, Alaska 99811-0000
(907) 465-2500
Fax (907) 465-2552
www.gov.state.ak.us

AL-46

January 15, 2001

The Honorable Rick Halford
President of the Senate
Alaska State Legislature
State Capitol
Juneau, AK 99801-1182

Dear President Halford:

Alaska's responsibility for providing quality educational services for our children extends to all children, including those with unique educational needs. I transmit today a bill clarifying the state's role in the education of our exceptional children.

In 1997, Congress authorized amendments to the Individuals with Disabilities Education Act (IDEA). The subsequent federal regulations related to the IDEA took effect in May 1999. This bill amends inconsistent components of our state statutes to bring Alaska into compliance with these current federal special education mandates, including emphasizing the participation of parents in making decisions relating to special education eligibility and services.

An important protection provided to both school districts and children with disabilities is the due process hearing. This bill clarifies the procedures for requesting a due process hearing and streamlines the process for selecting a hearing officer by having the Department of Education and Early Development (department) randomly assign officers from a list maintained by the department. These procedures will help due process hearings be completed in a fair and timely fashion.

Alaska law presently requires that a school district provide special education services to children with disabilities who reside in the district. State law also exempts children from attending public school if children are enrolled in an alternative education program. This has resulted in confusion regarding which school district or other educational agency is responsible for providing special education services when children are enrolled in

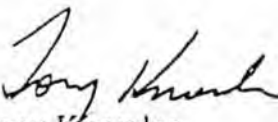
The Honorable Rick Halford
January 15, 2001
Page 2

alternate programs. This bill addresses this problem by providing for allocation of the responsibilities and coordination of the provision of special education services among the various educational agencies.

Present state law provides a combined program of services for gifted children and for children with disabilities. The detailed requirements of the federal IDEA and the federal program financing apply only to the state's educational programs for children with disabilities; federal money for the IDEA may not be used for programs for gifted children. To be consistent with federal requirements, this bill separates statutes regarding special education requirements for children with disabilities from those regarding requirements for gifted children. However, the bill maintains procedural safeguards for both programs.

As part of Alaska's commitment to quality education for all children, including children with disabilities and gifted children, I urge your prompt and favorable action on this bill.

Sincerely,


Tony Knowles
Governor

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LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

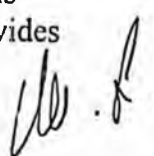
State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM

February 2, 2001

SUBJECT: Sectional Summary of SB 41 - relating to kindergarten.

TO: Senator Bettye Davis
Attn: Richard Benavides

FROM: Michael F. Ford 
Legislative Counsel

You have requested a sectional summary of the above-described bill.

As a preliminary matter, note that a sectional summary of a bill should not be considered an authoritative interpretation of the bill and the bill itself is the best statement of its contents. If you would like an interpretation of the bill as it may apply to a particular set of circumstances, please advise.

Section 1. Requires each school district to offer a kindergarten program.

Section 2. Changes the legal school age from six to five years old.

Section 3. Requires that a five year old must attend kindergarten unless exempt under AS 14.30.010(b).

Section 4. Changes the compulsory attendance law to require a five year old to attend school, except as provided under AS 14.30.010(b).

Section 5. Effective date.

MFF:glc
01-093.glc

SECTIONAL ANALYSIS

ALASKA STATE LEGISLATURE

Senate
Health, Education &
Social Services
Committee

Senate
Labor & Commerce
Committee

Senate
State Affairs
Committee

While in Session
State Capitol
Juneau, Alaska 99801
(907) 465-3822
Fax: (907) 465-3756

While in Anchorage
716 West 4th Ave.
Anchorage, Alaska 99501
(907) 269-0144
fax: (907) 269-0148

SENATOR BETTYE DAVIS

Memorandum

To: Senator Lyda Green, Chair
Senate HESS Committee

From: Senator Bettye Davis

Date: January 30, 2002

RE: Request for Hearing, SB 41

I respectfully request a hearing for Senate Bill 41, Kindergarten and School Age.

The aim of a Kindergarten program is to provide a strong foundation from which students can grow to become active participants in life-long learning. Children's early learning experiences have a profound effect on their development. In Kindergarten, children's receptivity to new influences and capacity to learn are at their peak. During this period, they acquire a variety of important skills, knowledge, and attitudes that will affect their ability to learn, their personal development, their relationships with others, and their future participation in society.

I have attached the following:

- Current version of the bill
- Sponsor Statement
- Sectional Analysis
- Background Information

ALASKA STATE LEGISLATURE

Senate
Health, Education &
Social Services
Committee

Senate
Labor & Commerce
Committee

Senate
State Affairs
Committee



SENATOR BETTYE DAVIS

While in Session
State Capitol
Juneau, Alaska 99801
(907) 465-3822
Fax: (907) 465-3756

While in Anchorage
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Anchorage, Alaska 99501
(907) 269-0144
fax: (907) 269-0148

Senate Bill 41

"An Act Kindergarten programs and compulsory education; funding grants for public schools; and providing for an effective date."

Sponsor Statement

The aim of a Kindergarten program is to provide a strong foundation from which students can grow to become active participants in life-long learning. Children's early learning experiences have a profound effect on their development. In Kindergarten, children's receptivity to new influences and capacity to learn are at their peak. During this period, they acquire a variety of important skills, knowledge, and attitudes that will affect their ability to learn, their personal development, their relationships with others, and their future participation in society. The learning experienced in Kindergarten provides the basis for the acquisition of literacy skills (including technological and computer literacy), mathematics skills, and science skills, and prepares them for successful learning experiences in later grades.

This bill would require that all children be enrolled in a kindergarten program. This legislation is based on the belief that early learning and preparation for all students who enter the first grade should be a major focus.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

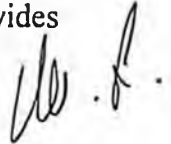
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Section 5. Effective date.

MFF:glc
01-093.glc

UNITED STATES
DEPARTMENT OF EDUCATION



NEWS

FOR RELEASE:
December 1, 2000

Contact: David Thomas
(202) 401-1579

READING AND MATH GAINS MEASURED AFTER YEAR OF KINDERGARTEN

Education Study Finds All Children Improve, At-risk Children Close Gaps for Basic Skills

Speech

Children from all backgrounds significantly improve their reading and math performance during kindergarten and increase their readiness for future schooling, according to a new report from the U.S. Department of Education's National Center for Education Statistics (NCES). And the gains reported in *The Kindergarten Year* are about the same regardless of the child's background. Significant gaps remain, however, in more advanced skills between at-risk children and their peers.

"This report clearly shows that kindergarten benefits all children," U.S. Secretary of Education Richard W. Riley said. "But it also reminds us that a half-day of kindergarten and regular school cannot do everything. The challenge for at-risk students raises compelling questions. Would universal pre-school reduce the gaps in skills that appear before children even enter kindergarten? Would all-day kindergarten make a difference? Would after-school programs in elementary and middle schools be especially beneficial to at-risk students in closing the gap? What can parents do long before their children enter kindergarten? How can community-based organizations give parents more support?"

"There's certainly mixed news in the report," said Gary Phillips, acting commissioner of education statistics. "The good news is that during kindergarten, all types of students improve their readiness for school. On the other hand, the pattern of group differences entering kindergarten is still there at the end of kindergarten. Furthermore, the gap between at-risk and more advantaged students is reduced for more basic skills, but widened for more complex skills."

The Kindergarten Year provides national data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, which included a representative sample of 22,000 children, their families, schools and classrooms. The study is the second in a series of planned reports from the longitudinal study, which provides first-time data on children attending public and private kindergartens.

The study found that children increased their specific knowledge and skills in reading from when they first entered kindergarten. After a year of kindergarten, those who could recognize their letters increased from 65 percent to 94 percent; children who could understand the letter-sound relationship at the beginning of words rose from 29 percent to 72 percent; and those who could understand the letter-sound relationship at the end of words increased from 17 percent to 52 percent.

By the end of kindergarten, nearly all children recognize shapes and numbers (99 percent) and a majority understand the relative size and order of objects. Also, almost five times (18 percent) as many children could solve simple addition and subtraction problems at the end of kindergarten as at the beginning.

The Kindergarten Year identifies four risk factors for kindergartners: single-parent households, welfare recipients, mother with less than a high school education, and homes where English is not the primary language. Students with two or more risk factors enter kindergarten with much lower reading and math skills, but by the end of the year have virtually erased the gaps for the most basic skills. At-risk children remain behind in the more advanced skills such as recognizing words by sight or solving simple math problems.

The study found that patterns at the beginning of the school year persist and that by the end of the kindergarten year:

- Older children have higher specific reading and math knowledge and skills than their younger counterparts;
- According to teachers, children whose mothers who have more education are more likely to persist at tasks, seem more eager to learn, and pay closer attention than children whose mothers have less education;
- Teachers also report that kindergartners with fewer risk factors are more likely to accept peer ideas and form friendships, and less likely to argue, fight, or get angry than children with more risk factors.

Future studies will continue to follow the same sample of children through fifth grade, regularly gathering data on their reading and math achievement, social skills, physical development, and school experiences. The study will reveal the extent to which differences that exist when children enter school persist or change over time and how schooling influences progress.

The full text of *The Kindergarten Year* is available on the NCES Web site at <http://nces.ed.gov/ecls/>. A copy of the report can be ordered by calling toll free 1-877-4ED-PUBS (1-877-433-7827) TTY/TDD 1-877-576-7734; via e-mail at edpubs@inet.ed.gov; or through the Internet at <http://www.ed.gov/pubs/edpubs.html>.

###

Executive Summary

The kindergarten year marks a period of rapid change in the ways children think about themselves and the world around them (Bredekamp and Copple 1997; Sameroff and McDonough 1994). This change is influenced by both developmental factors (e.g., age, maturation) and environmental factors (e.g., schooling, home educational activities, family resources). Across this first year of schooling, children will acquire the knowledge and skills that will prove integral to their future success in school and in life.

Children enter school demonstrating a vast array of knowledge and skills, some children further along than others (West, Denton, and Germino Hausken 2000). The kindergarten year serves multiple purposes and is geared toward the development of both cognitive and noncognitive knowledge and skills (Seefeldt 1990). And, depending on the child, knowledge and skills develop in different areas and at different rates across this year of school.

To enrich the picture of children's first experience in formal education—the kindergarten year—we need to understand the knowledge and skills children possess as they enter kindergarten and we need to gain insight into how these develop across the kindergarten year. This report attempts to answer two basic sets of questions about children's knowledge and skill acquisition during the kindergarten year.

1. What gains are children making from the fall of their kindergarten year to the spring of their kindergarten year in their reading and mathematics knowledge and skills? Do these gains differ by child, family, and kindergarten program characteristics? As children are exiting kindergarten and preparing for first grade, how do their knowledge and skills differ by child, family, and kindergarten program characteristics (e.g., age, family risk factors)?
2. What gains are children making in specific knowledge and skills (e.g., recognizing letters, recognizing numbers, paying attention)? Do children's gains in specific knowledge and skills differ by child, family, and kindergarten program characteristics? At the end of their kindergarten year when children are preparing for first grade, do their

specific knowledge and skills differ by child, family, and kindergarten program characteristics (e.g., age, mother's education)?

The findings in this report come from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K). The ECLS-K, sponsored by the U.S. Department of Education, National Center for Education Statistics (NCES), selected a nationally representative sample of kindergartners in the fall of 1998 and is following these children through the end of fifth grade. The full ECLS-K sample is comprised of approximately 22,000 children who attended about 1,000 kindergarten programs during the 1998-99 school year. The children attended both public (85 percent) and private (15 percent) kindergartens that offered full-day (55 percent) and part-day (45 percent) programs. All kindergarten children within the sampled schools were eligible for the sampling process, including language minority and special education students. The sample includes children from different racial/ethnic and socioeconomic backgrounds. In the fall of 1998, about 95 percent of kindergartners were entering school for the first time. This report focuses on these first-time kindergartners. When information on children's cognitive knowledge and skills is presented, this report focuses on the children in the sample who received the cognitive assessment in English in both the fall and the spring of their kindergarten year.¹

Findings

Question 1: Gain, Differences in Gain, and Spring Kindergarten Status in Children's Knowledge and Skills

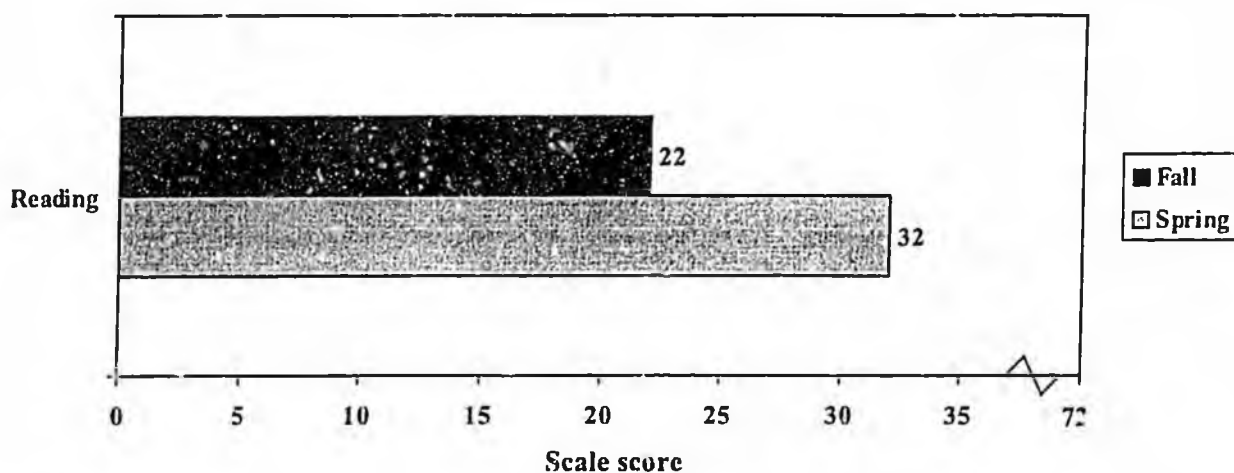
To address the first set of questions, the change from the fall of kindergarten to the spring of kindergarten in children's reading and mathematics scale scores was examined. These scores reflect children's overall performance in these domains. The possibility that particular groups of children might demonstrate more or less gain over the kindergarten was also explored

¹ Approximately 30 percent of Hispanic children and 19 percent of Asian children were not assessed in English and are not included in the estimates related to cognitive knowledge and skills. The Hispanic children who were proficient in Spanish were assessed in Spanish (for details see *Methodology and Technical Notes, Constructs, and Variables Used in Analysis*). The Hispanic and the Asian children not assessed in English are included in the estimates related to noncognitive knowledge and skills. And, due to specific instructions listed in the child's school record, about one-half percent of children were excluded from the cognitive assessment based on a disability.

(e.g., children at risk for later school difficulty might not acquire reading knowledge and skills at the same rate as children not at risk for later school difficulty).

As their kindergarten year comes to a close, children demonstrate higher levels of reading and mathematics knowledge and skills than they demonstrated as they entered school for the first time. Children's reading scale scores increased by 10 points from the fall to the spring (figure A). Therefore, the gain from fall to spring is about one standard deviation (an appreciable increase).

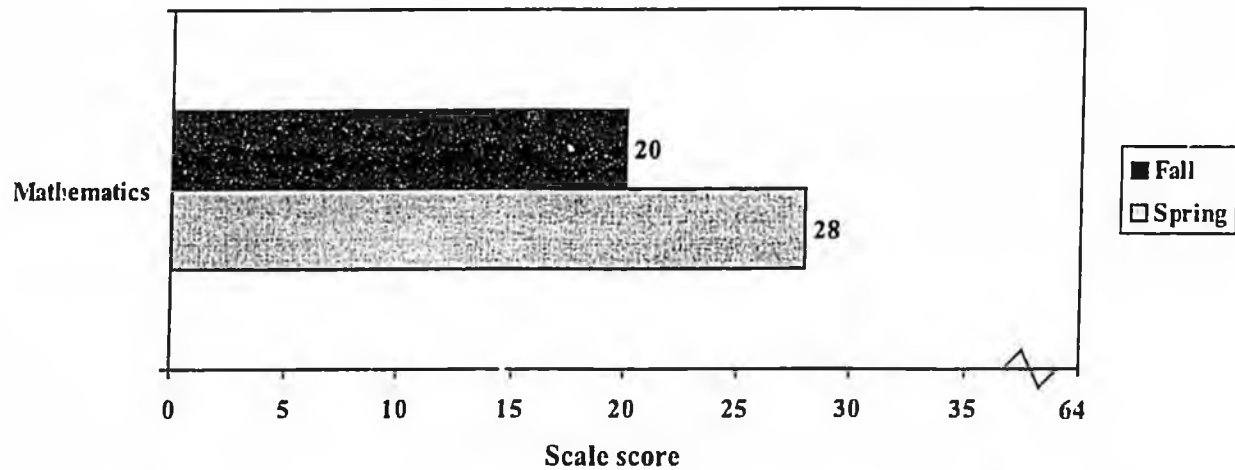
Figure A.—First-time kindergartners' mean reading scale scores: Fall 1998 and spring 1999



NOTE: The ECLS-K assessment was designed for both kindergarten and first-grade children. Therefore a mean score of approximately 30 in the spring of kindergarten is not unexpected.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Children's mathematics scores increased by eight points from the fall to the spring (figure B). Thus, children's mathematics knowledge and skills increased about one standard deviation during the kindergarten year. For the most part, the gains children demonstrate in their overall reading and mathematics knowledge and skills do not differ markedly by child, family, and kindergarten program characteristics. For example, there is not more than a two-point difference in the gains children demonstrate in reading and mathematics by mother's education.

Figure B.—First-time kindergartners' mean mathematics scale scores: Fall 1998 and spring 1999



NOTE: The ECLS-K assessment was designed for both kindergarten and first-grade children. Therefore a mean score of approximately 30 in the spring of kindergarten is not unexpected.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

The absence of a substantial differential gain in children's general reading and mathematics knowledge and skills is seen again when we consider other characteristics of children, their families, and their kindergarten programs, such as children's age as they enter school and family risks for later school difficulty. The same is true when we look at school type and kindergarten program type. However when we consider the specific knowledge and skills children are acquiring (e.g., letter recognition, addition and subtraction, making friends, paying attention), children are developing particular cognitive and noncognitive knowledge and skills at different rates.

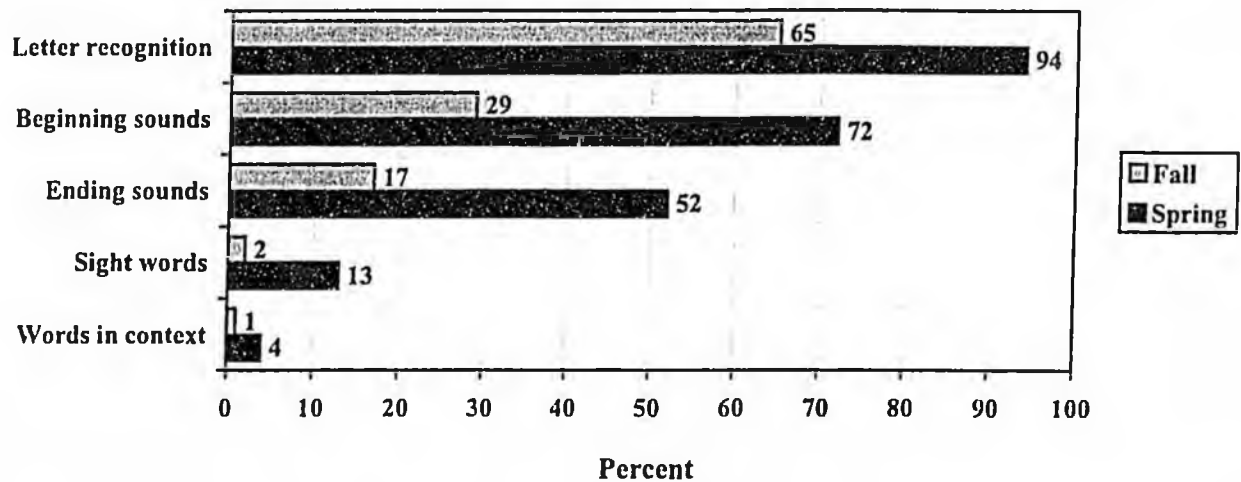
Question 2: Gain, Differences in Gain and Spring Kindergarten Status in Children's Specific Knowledge and Skills

To address the second set of questions, children's specific cognitive and noncognitive knowledge and skills were examined. Furthermore, the question of whether certain groups of children were more likely to acquire specific cognitive and noncognitive knowledge and skills than others was explored (e.g., does the probability that children acquire the reading skill of sight-word recognition vary by the level of their mother's education?). Finally, information is presented on the specific knowledge and skills children demonstrate in the spring of their kindergarten year as they are preparing for first grade.

In addition to the overall reading and mathematics scale scores, the ECLS-K assessment battery provides information on specific proficiencies. In the reading domain, the ECLS-K assessment battery provides information on: letter recognition; understanding of the letter-sound relationship at the beginning of words; understanding of the letter-sound relationship at the ending of words; sight-word recognition; and understanding of words in context. In the mathematics domain, the ECLS-K assessment battery provides information on: recognizing single-digit numbers and basic shapes; counting beyond 10, recognizing the sequence in basic patterns, and comparing the relative size (dimensional relationship) of objects; recognizing two-digit numbers, identifying the next number in a sequence, and identifying the ordinal position of an object; performing simple addition and subtraction; and performing basic multiplication and division.

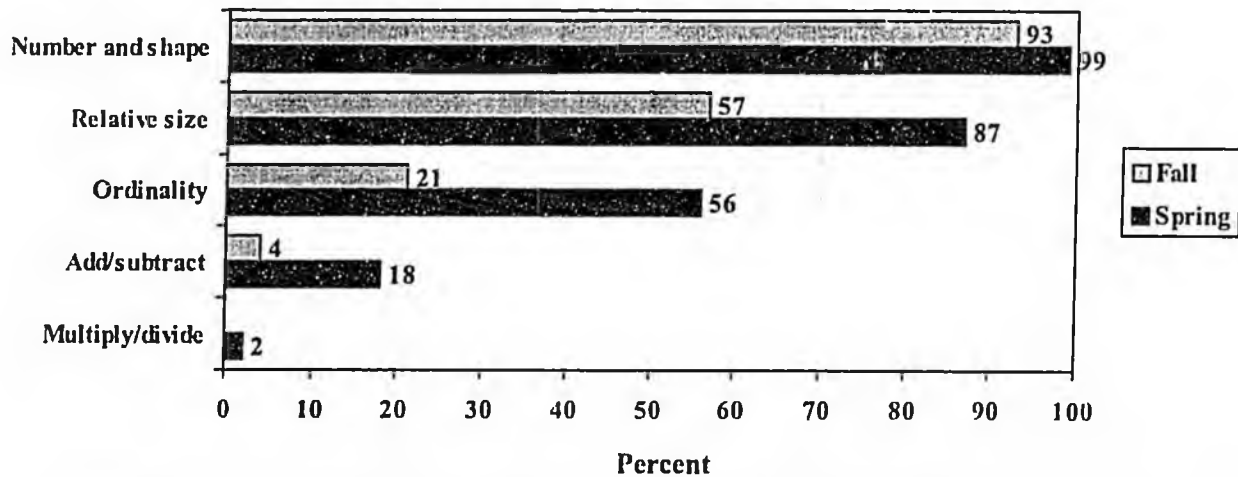
Across the kindergarten year, children acquire specific knowledge and skills in reading and mathematics (figures C and D). By the end of their kindergarten year, nearly all children recognize their letters, their numbers and their shapes. The percent of children who can recognize words by sight and demonstrate an understanding of words in context, though still relatively low, increased from kindergarten entry to kindergarten exit. And the numbers of children adding and subtracting also increased from kindergarten entry to kindergarten exit. We see less dramatic changes in children's social skills and approaches to learning across the kindergarten year, with a large percentage of children exhibiting prosocial behaviors and positive approaches to learning.

Figure C.—Percentage of first-time kindergartners demonstrating specific reading knowledge and skills: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

Figure D.—Percentage of first-time kindergartners demonstrating specific mathematics knowledge and skills: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

When we examined children's overall gains in reading and mathematics knowledge and skills, as measured by their reading and mathematics scale scores, by child, family and kindergarten program characteristics, we found little evidence of differential gains from fall to spring. Based on those findings, the conclusion might be that from fall to spring of kindergarten, all children are acquiring knowledge and skills at approximately the same rate, and that they are learning the same things. However, this is not completely accurate. We see a very different picture when we look at children's acquisition of specific knowledge and skills.

To illustrate, children from the more disadvantaged backgrounds (those with at least one risk factor) are closing the gaps in basic skills (i.e., recognizing their letters and counting beyond 10, recognizing the sequence in basic patterns and comparing the relative size of objects). However, these same children lag further behind their more advantaged classmates when it comes to gaining more sophisticated reading and mathematics knowledge and skills (i.e., recognizing words by sight or solving simple addition and subtraction problems). In fact, the gap has widened. The same basic patterns we see when we consider cumulative family-risk factors are present when we consider other child characteristics, such as race/ethnicity.

Furthermore, to illustrate, we see some evidence of differential gain in the frequency with which children demonstrate specific social skills. According to their teachers, younger children are more likely to acquire the skill of paying attention than their older counterparts during the kindergarten year.

As children are completing kindergarten and preparing for first grade, almost all (94 percent) children know their letters, and 72 percent understand the letter-sound relationship at the beginning of words, while 52 percent understand the letter-sound relationship at the ending of words. In fact, 13 percent demonstrate a proficient understanding of words by sight and 4 percent, words in context (figure C). In mathematics, 99 percent of children recognize their numbers and basic shapes, and the majority (87 percent) demonstrate understanding of dimensional relationships among objects (relative size). Just over half (56 percent) of children demonstrate an understanding of the mathematical concept ordinality. Moreover, 18

percent show they can add and subtract, and 2 percent are successfully performing multiplication and division (figure D).

Summary

Young children need knowledge and new experiences to develop and thrive. Schools offer a plethora of learning and development opportunities for children. Consequently, it is not surprising that across the kindergarten year children are rapidly acquiring the knowledge and skills integral to succeed in school and life.

This report presents a simple picture of the gains children make across the kindergarten year. The ECLS-K will follow these children through the fifth grade. We will be able to track children's performance and the differences in their performance, not only by child and family characteristics but also by teacher and school characteristics. This report represents only the beginning of understanding the role of the kindergarten year in children's development. Future analyses, based on the information from the ECLS-K, will help us understand the role of such things as child care, home educational environment, teachers' instructional practices, class size and the general climate, and facilities and safety of the schools.



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Changes in American society and education over the last 20 years have contributed to the popularity of all-day (every day) kindergarten programs in many communities (Gullo, 1990). The increase in single parent and dual employment households, and the fact that most children spend a significant part of the day away from home, also signal significant changes in American family life compared to a generation ago. Studies show that parents favor a full-day program which reduces the number of transitions kindergartners experience in a typical day (Housden & Kam, 1992; Johnson, 1993). Research also suggests that many children benefit academically and socially during the primary years from participation in full-day, compared to half-day, kindergarten programs (Cryan et al., 1992).

Families who find it difficult to schedule both kindergarten and a child care program during the day are especially attracted to a full-day program (Housden & Kam, 1992). In many areas, both public and private preschool programs offer full-day kindergarten (Lofthouse, 1994). Still, some educators, policymakers, and parents prefer half-day, everyday kindergarten. They argue that a half-day program is less expensive and provides an adequate educational and social experience for young children while orienting them to school, especially if they have attended preschool. Many districts thus offer both half-day and full-day kindergarten programs when possible, but the trend is clearly in the direction of full-day kindergarten.

THE DEMOGRAPHICS OF FULL-DAY KINDERGARTEN

Well over 3.3 million children attend kindergarten in the United States, nearly as many children as attend first grade (Smith et al., 1994, p. 54). In 1993, about 54% of kindergarten teachers taught full-day classes, and about half of kindergartners attended full-day programs. Two-thirds of full-day kindergarten teachers taught in high-poverty areas, while fewer than one-third (29%) taught in schools with a low incidence of poverty (Heaviside et al., 1993). Teachers of classes with high minority enrollments were also more likely to teach full-day classes than were teachers of classes with low minority enrollments (67% versus 43%). State aid for all-day students is often used to fund full-day kindergarten. One reason for the high ratio of full-day to half-day kindergarten programs in high-poverty and high-minority schools is that state and federal funding for at-risk students is often used to supplement all-day funding, since all-day programs typically require extra classroom space, increased staffing for special services and programs, and additional classroom kindergarten teachers (Fromberg, 1992; Housden & Kam, 1992).

Full-day kindergarten is also popular because it eliminates the need to provide buses and crossing guards at mid-day. A higher proportion of kindergarten teachers taught full-day classes in rural areas in 1993 (66%)

than in city schools (59%), in towns (53%), or in schools in the urban "fringe" (39%) (Heaviside et al., 1993).

RESEARCH ON THE EFFECTS OF FULL-DAY KINDERGARTEN

Research studies confirm that attendance in full-day kindergarten results in academic and social benefits for students, at least in the primary grades (Cryan et al., 1992; Karweit, 1992). Early studies seemed to offer little reliable evidence one way or the other because they used small samples or unique populations, failed to use rigorous standards, or concentrated almost exclusively on academic outcomes (as opposed to children's attitudes toward school, for example).

Cryan et al. (1992), however, are among the researchers who have found a broad range of effects, including a positive relationship between participation in full-day kindergarten and later school performance. After comparing similar half-day and full-day programs in a statewide longitudinal study, Cryan et al. found that full-day kindergartners exhibited more independent learning, classroom involvement, productivity in work with peers, and reflectiveness than half-day kindergartners. They were also more likely to approach the teacher and they expressed less withdrawal, anger, shyness, and blaming behavior than half-day kindergartners. In general, children in full-day programs exhibited more positive behaviors than did pupils in half-day or alternate-day programs.

Results similar to those of Cryan et al. have been found in other studies (Holmes and McConnell, 1990; Karweit, 1992). These positive effects and the academic gains in the first years of school support the value of developmentally appropriate full-day kindergarten.

CHARACTERISTICS OF EFFECTIVE FULL-DAY KINDERGARTEN PROGRAMS

Observers of trends in kindergarten scheduling argue that changing the LENGTH of the kindergarten day begs the underlying issue: creating developmentally and individually appropriate learning environments for ALL kindergarten children, regardless of the length of school day (Karweit, 1992; Katz, 1995).

Full-day kindergarten allows children and teachers time to explore topics in depth; reduces the ratio of transition time to class time; provides for greater continuity of day-to-day activities; and provides an environment that favors a child-centered, developmentally appropriate approach. Recent research indicates that, compared to children in didactic programs, children in child-centered kindergarten programs rated their abilities significantly higher, had higher expectations for success on academic tasks, and were less dependent on adults for permission and approval (Stipek et al., 1995).

Experts urge teachers, administrators, and parents to resist the temptation to provide full-day programs that are didactic rather than intellectually engaging in tone. Seat work, worksheets, and early instruction in reading or other academic subjects are largely inappropriate in kindergarten. By contrast, developmentally appropriate, child-centered all-day kindergarten programs:

- * integrate new learning with past experiences through project work and through mixed-ability and mixed-age grouping (Drew & Law, 1990; Katz, 1995) in an unhurried setting;
- * involve children in first-hand experience and informal interaction with objects, other children, and adults (Housden & Kam, 1992);
- * emphasize language development and appropriate preliteracy experiences;

- * work with parents to share information about their children, build understanding of parent and teacher roles, emphasize reading to children in school and at home, and set the stage for later parent-teacher partnerships;
- * offer a balance of small group, large group, and individual activities (Katz, 1995);
- * assess students' progress through close teacher observation and systematic collection and examination of students' work, often using portfolios; and
- * develop children's social skills, including conflict resolution strategies.

CONCLUSION

Recent research supports the effectiveness of full-day kindergarten programs that are developmentally appropriate, indicating that they have academic and behavioral benefits for young children. In full-day programs, less hectic instruction geared to student needs and appropriate assessment of student progress contribute to the effectiveness of the program. While these can also be characteristics of high-quality half-day programs, many children seem to benefit, academically and behaviorally, from all-day kindergarten. Of course, the length of the school day is only one dimension of the kindergarten experience. Other important issues include the nature of the kindergarten curriculum and the quality of teaching.

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The Kindergarten Year

Findings from the Early Childhood Longitudinal Study,
Kindergarten Class of 1998–99

Jerry West, National Center for Education Statistics
Kristin Denton, Education Statistics Services Institute
Lizabeth M. Reaney, Education Statistics Services Institute

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Westat, Incorporated—in affiliation with the Institute for Social Research and the School of Education at the University of Michigan, and the Educational Testing Service, under the direction of the National Center for Education Statistics (NCES)—conducted the base-year study. We would like to express our appreciation for the efforts of the staff from each of these organizations, and especially to the more than 400 field staff who conducted the child assessments and parent interviews in fall 1998 and spring 1999.

We wish to acknowledge the support that we have received from the Head Start Bureau of the Administration on Children, Youth and Families; the Economic Research Service of the U.S. Department of Agriculture; the National Institute for Child Health and Human Development; and the U.S. Department of Education's Office of Special Education Programs, Office of Bilingual Education and Minority Languages Affairs, and Planning and Evaluation Service.

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Executive Summary

The kindergarten year marks a period of rapid change in the ways children think about themselves and the world around them (Bredekamp and Copple 1997; Sameroff and McDonough 1994). This change is influenced by both developmental factors (e.g., age, maturation) and environmental factors (e.g., schooling, home educational activities, family resources). Across this first year of schooling, children will acquire the knowledge and skills that will prove integral to their future success in school and in life.

Children enter school demonstrating a vast array of knowledge and skills, some children further along than others (West, Denton, and Germino Hausken 2000). The kindergarten year serves multiple purposes and is geared toward the development of both cognitive and noncognitive knowledge and skills (Seefeldt 1990). And, depending on the child, knowledge and skills develop in different areas and at different rates across this year of school.

To enrich the picture of children's first experience in formal education—the kindergarten year—we need to understand the knowledge and skills children possess as they enter kindergarten and we need to gain insight into how these develop across the kindergarten year. This report attempts to answer two basic sets of questions about children's knowledge and skill acquisition during the kindergarten year.

1. What gains are children making from the fall of their kindergarten year to the spring of their kindergarten year in their reading and mathematics knowledge and skills? Do these gains differ by child, family, and kindergarten program characteristics? As children are exiting kindergarten and preparing for first grade, how do their knowledge and skills differ by child, family, and kindergarten program characteristics (e.g., age, family risk factors)?
2. What gains are children making in specific knowledge and skills (e.g., recognizing letters, recognizing numbers, paying attention)? Do children's gains in specific knowledge and skills differ by child, family, and kindergarten program characteristics? At the end of their kindergarten year when children are preparing for first grade, do their

specific knowledge and skills differ by child, family, and kindergarten program characteristics (e.g., age, mother's education)?

The findings in this report come from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K). The ECLS-K, sponsored by the U.S. Department of Education, National Center for Education Statistics (NCES), selected a nationally representative sample of kindergartners in the fall of 1998 and is following these children through the end of fifth grade. The full ECLS-K sample is comprised of approximately 22,000 children who attended about 1,000 kindergarten programs during the 1998–99 school year. The children attended both public (85 percent) and private (15 percent) kindergartens that offered full-day (55 percent) and part-day (45 percent) programs. All kindergarten children within the sampled schools were eligible for the sampling process, including language minority and special education students. The sample includes children from different racial/ethnic and socioeconomic backgrounds. In the fall of 1998, about 95 percent of kindergartners were entering school for the first time. This report focuses on these first-time kindergartners. When information on children's cognitive knowledge and skills is presented, this report focuses on the children in the sample who received the cognitive assessment in English in both the fall and the spring of their kindergarten year.¹

Findings

Question 1: Gain, Differences in Gain, and Spring Kindergarten Status in Children's Knowledge and Skills

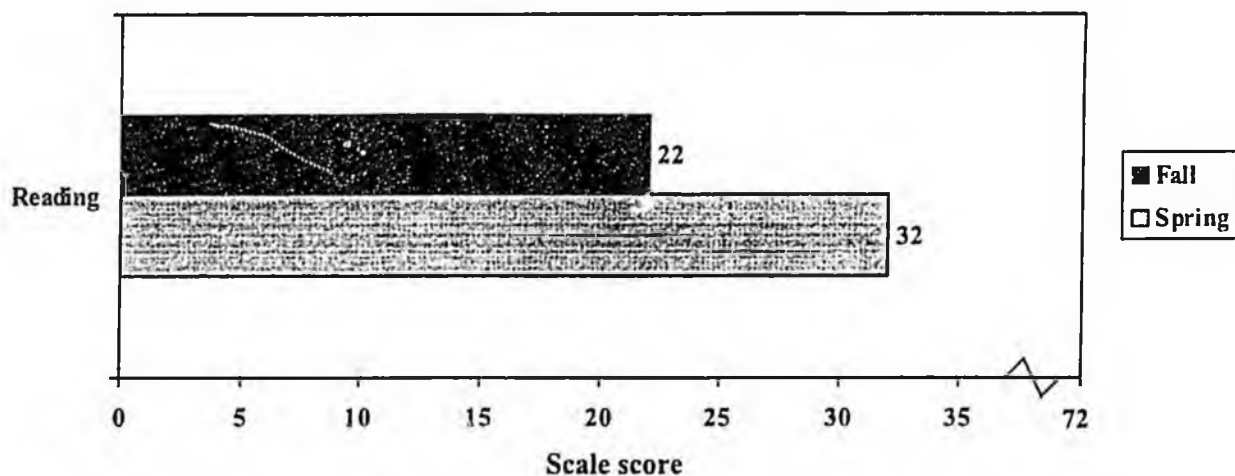
To address the first set of questions, the change from the fall of kindergarten to the spring of kindergarten in children's reading and mathematics scale scores was examined. These scores reflect children's overall performance in these domains. The possibility that particular groups of children might demonstrate more or less gain over the kindergarten was also explored

¹ Approximately 30 percent of Hispanic children and 19 percent of Asian children were not assessed in English and are not included in the estimates related to cognitive knowledge and skills. The Hispanic children who were proficient in Spanish were assessed in Spanish (for details see *Methodology and Technical Notes, Constructs, and Variables Used in Analysis*). The Hispanic and the Asian children not assessed in English are included in the estimates related to noncognitive knowledge and skills. And, due to specific instructions listed in the child's school record, about one-half percent of children were excluded from the cognitive assessment based on a disability.

(e.g., children at risk for later school difficulty might not acquire reading knowledge and skills at the same rate as children not at risk for later school difficulty).

As their kindergarten year comes to a close, children demonstrate higher levels of reading and mathematics knowledge and skills than they demonstrated as they entered school for the first time. Children's reading scale scores increased by 10 points from the fall to the spring (figure A). Therefore, the gain from fall to spring is about one standard deviation (an appreciable increase).

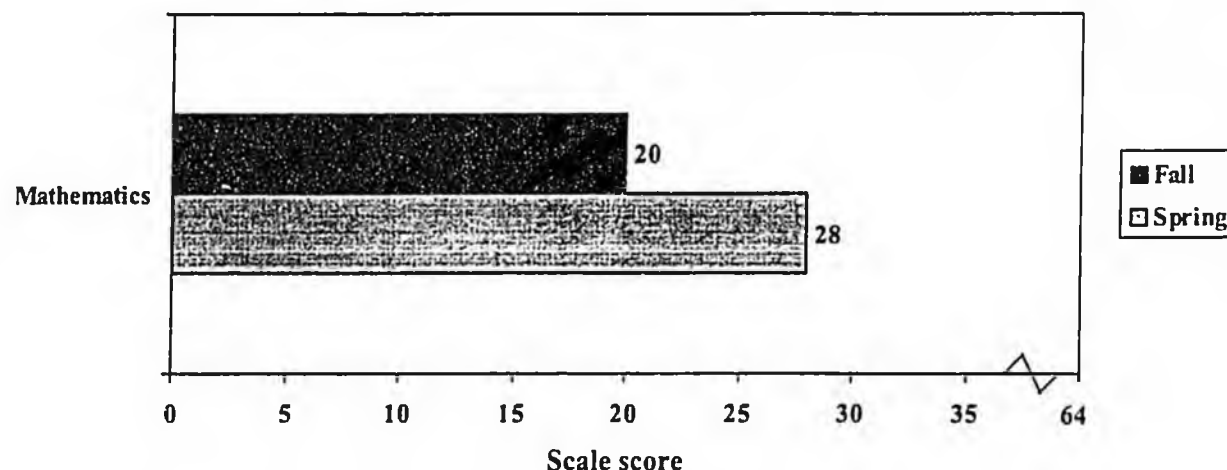
Figure A.—First-time kindergartners' mean reading scale scores: Fall 1998 and spring 1999



NOTE: The ECLS-K assessment was designed for both kindergarten and first-grade children. Therefore a mean score of approximately 30 in the spring of kindergarten is not unexpected.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

Children's mathematics scores increased by eight points from the fall to the spring (figure B). Thus, children's mathematics knowledge and skills increased about one standard deviation during the kindergarten year. For the most part, the gains children demonstrate in their overall reading and mathematics knowledge and skills do not differ markedly by child, family, and kindergarten program characteristics. For example, there is not more than a two-point difference in the gains children demonstrate in reading and mathematics by mother's education.

Figure B.—First-time kindergartners' mean mathematics scale scores: Fall 1998 and spring 1999



NOTE: The ECLS-K assessment was designed for both kindergarten and first-grade children. Therefore a mean score of approximately 30 in the spring of kindergarten is not unexpected.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

The absence of a substantial differential gain in children's general reading and mathematics knowledge and skills is seen again when we consider other characteristics of children, their families, and their kindergarten programs, such as children's age as they enter school and family risks for later school difficulty. The same is true when we look at school type and kindergarten program type. However when we consider the specific knowledge and skills children are acquiring (e.g., letter recognition, addition and subtraction, making friends, paying attention), children are developing particular cognitive and noncognitive knowledge and skills at different rates.

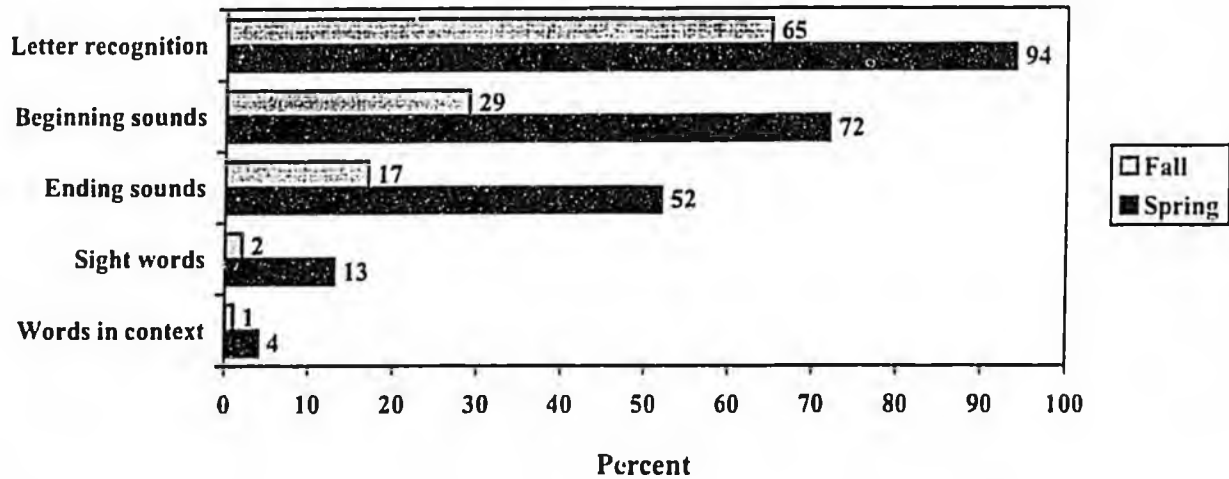
Question 2: Gain, Differences in Gain and Spring Kindergarten Status in Children's Specific Knowledge and Skills

To address the second set of questions, children's specific cognitive and noncognitive knowledge and skills were examined. Furthermore, the question of whether certain groups of children were more likely to acquire specific cognitive and noncognitive knowledge and skills than others was explored (e.g., does the probability that children acquire the reading skill of sight-word recognition vary by the level of their mother's education?). Finally, information is presented on the specific knowledge and skills children demonstrate in the spring of their kindergarten year as they are preparing for first grade.

In addition to the overall reading and mathematics scale scores, the ECLS-K assessment battery provides information on specific proficiencies. In the reading domain, the ECLS-K assessment battery provides information on: letter recognition; understanding of the letter-sound relationship at the beginning of words; understanding of the letter-sound relationship at the ending of words; sight-word recognition; and understanding of words in context. In the mathematics domain, the ECLS-K assessment battery provides information on: recognizing single-digit numbers and basic shapes; counting beyond 10, recognizing the sequence in basic patterns, and comparing the relative size (dimensional relationship) of objects; recognizing two-digit numbers, identifying the next number in a sequence, and identifying the ordinal position of an object; performing simple addition and subtraction; and performing basic multiplication and division.

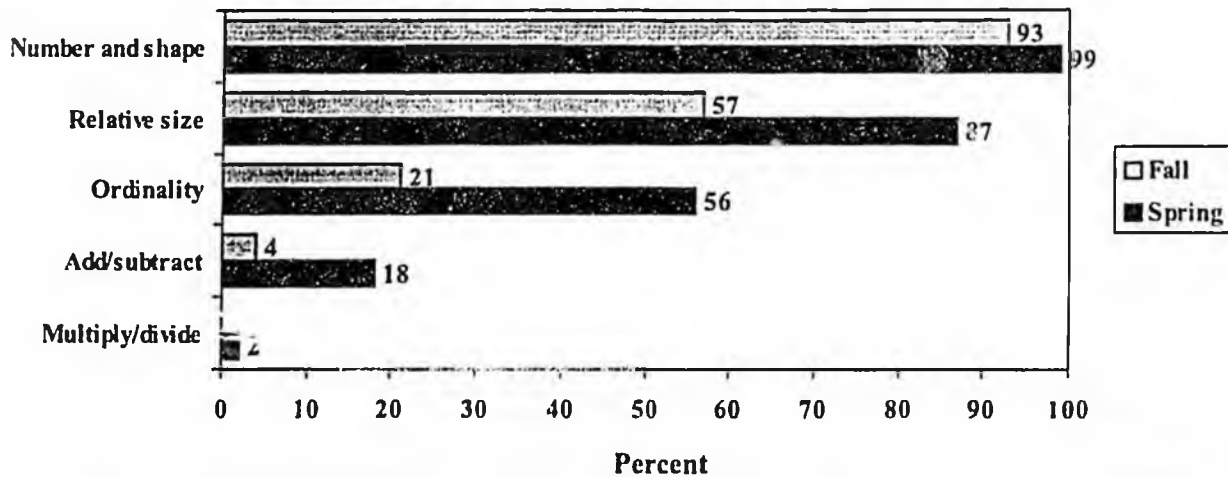
Across the kindergarten year, children acquire specific knowledge and skills in reading and mathematics (figures C and D). By the end of their kindergarten year, nearly all children recognize their letters, their numbers and their shapes. The percent of children who can recognize words by sight and demonstrate an understanding of words in context, though still relatively low, increased from kindergarten entry to kindergarten exit. And the numbers of children adding and subtracting also increased from kindergarten entry to kindergarten exit. We see less dramatic changes in children's social skills and approaches to learning across the kindergarten year, with a large percentage of children exhibiting prosocial behaviors and positive approaches to learning.

Figure C.—Percentage of first-time kindergartners demonstrating specific reading knowledge and skills: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

Figure D.—Percentage of first-time kindergartners demonstrating specific mathematics knowledge and skills: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

When we examined children's overall gains in reading and mathematics knowledge and skills, as measured by their reading and mathematics scale scores, by child, family and kindergarten program characteristics, we found little evidence of differential gains from fall to spring. Based on those findings, the conclusion might be that from fall to spring of kindergarten, all children are acquiring knowledge and skills at approximately the same rate, and that they are learning the same things. However, this is not completely accurate. We see a very different picture when we look at children's acquisition of specific knowledge and skills.

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Summary

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This report presents a simple picture of the gains children make across the kindergarten year. The ECLS-K will follow these children through the fifth grade. We will be able to track children's performance and the differences in their performance, not only by child and family characteristics but also by teacher and school characteristics. This report represents only the beginning of understanding the role of the kindergarten year in children's development. Future analyses, based on the information from the ECLS-K, will help us understand the role of such things as child care, home educational environment, teachers' instructional practices, class size and the general climate, and facilities and safety of the schools.

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The Kindergarten Year

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Classically, kindergarten has represented a place where children are given the opportunity to explore their world through play. Over the last 100 years, this idea has been refined to stress the importance of opportunity for active engagement and exploration in real-world settings (Dewey 1976, 1944; Roopnarine and Johnson 1993; Seefeldt and Barbour 1994). In the United States, kindergarten took root as an agent for change to help enrich the lives of children from disadvantaged backgrounds, with education seen as an important tool for social reform (Roopnarine and Johnson 1993; Seefeldt and Barbour 1994). Early childhood education continues today to be seen as an important influence on young children's development and learning, and most children regardless of their backgrounds attend kindergarten programs.

The original purpose of kindergarten—to “support children's social and emotional adjustment to group learning”—has been expanded to include support for children's cognitive development and preparation for the academic instruction to come (Bredekamp and Copple 1997, p. 142). While the cognitive benefits seem apparent, the effect of kindergarten on socioemotional development is less clear. Though historically the role of kindergarten was focused on socialization, a majority of children today have experience in early care and group settings prior to entering kindergarten (Bredekamp and Copple 1997; West et al. 2000;

West et al. 1992). Consequently, the role of kindergarten may be evolving toward a more cognitive purpose.

Over the years, research on our nation's children suggests that, by late elementary school, children are demonstrating differences in their knowledge and skills by characteristics such as socioeconomic status, level of maternal education, and race/ethnicity (Donahue et al. 1999; Reese et al. 1997). We are now beginning to document that some of these differences exist as children are just entering kindergarten (West et al. 2000).

To enrich the picture of children's first experience in formal education—the kindergarten year—we need to understand the knowledge and skills children possess as they enter kindergarten and we need to gain insight into how children's knowledge and skills develop across the kindergarten year. This report attempts to answer two basic sets of questions about children's knowledge and skill acquisition during the kindergarten year.

1. What gains are children making from the fall of their kindergarten year to the spring of their kindergarten year in their reading and mathematics knowledge and skills? Do these gains differ by child, family, and kindergarten program characteristics? As children are exiting kindergarten and preparing for first grade, how do their knowledge and skills differ by child, family, and kindergarten program characteristics (e.g., age, family-risk factors)?
2. What gains are children making in specific knowledge and skills (e.g., recognizing letters, recognizing numbers, paying attention)? Do children's gains in specific knowledge and skills differ by child, family, and kindergarten program characteristics? At the end of their kindergarten year when children are preparing for first grade, do their specific knowledge and skills differ by child, family, and kindergarten program characteristics (e.g., age, mother's education)?

To address the first set of questions, the change from the fall of kindergarten to the spring of kindergarten in children's reading and mathematics scale scores will be examined.² These

² The calculation of the reading and mathematics scale scores is described in the *Methodology and Technical Notes*.

scores reflect children's overall performance in these domains. The possibility that specific groups of children might demonstrate different rates of gain (e.g., children at risk for later school difficulty might not be acquiring reading knowledge and skills at the same rate as children not at risk for later school difficulty) will also be explored.

To address the second set of questions, specific cognitive and noncognitive knowledge and skills will be examined, and whether certain groups of children acquire specific cognitive and noncognitive knowledge and skills at different rates will be explored (e.g., do children's rates of acquiring the reading skill of sight-word recognition vary by the level of their mother's education?).

When group differences are discussed, children's knowledge and skills are examined by a common set of child, family, and kindergarten program characteristics. Children's knowledge and skills are examined in terms of children's sex, their age when they enter school, and their race/ethnicity. Characteristics of the family consist of the educational level of children's mothers and a composite index of family risks, which is comprised of children having a non-English primary language in the home, children living in a single-parent family, children's mothers having less than a high school education, and children's families having received welfare assistance (i.e., Aid to Families with Dependent Children). Consequently, the risk index ranges from 0 risks to 4. In this report, we collapsed the index into 3 categories, 0 risks, 1 risk, and 2 or more risks. The index provides information on the potential related effects when these risks exist in concert. Finally, children's knowledge and skills are explored by whether the children are enrolled in full- versus part-day kindergarten programs and in public versus private kindergarten programs. The characteristics examined in this report are likely to be highly interrelated. For example, the number of first-time kindergartners with different numbers of family risk factors varies by race/ethnicity. About 72 percent of Hispanic and black children come from families with one or more risk factors, as compared with 61 percent of Asian children, and 29 percent of white children (Zill and West 2000). While acknowledging this, this report looks at each characteristic separately when describing the children's knowledge and skills.

Organization of Report

The remainder of this report is organized into four sections. The findings are presented in two sections followed by a summary, and a methodology and technical notes section. The first findings' section pertains to the overall gains children make during the kindergarten year in reading and mathematics. Findings in this section are based on children's overall reading and mathematics scale scores. The second section of findings describes the extent to which children acquire specific reading and mathematics knowledge and skills during the kindergarten year. This section also includes information about children's acquisition of various social skills over the school year. In this section, findings are reported in terms of the probabilities that children demonstrate specific reading and mathematics proficiencies, and the percent of children who demonstrate specific social skills. Each of the two sections on findings presents information in three basic areas. First, each section begins with a description of the gains children make from fall of kindergarten to spring of kindergarten. Second, differences in the gains children make are examined for different groups of children defined by a set of child, family, and kindergarten program characteristics. Third, differences in children's status at the spring of kindergarten or as they are about to enter first grade are examined for these same groups of children. Comparisons made in the text were tested for statistical significance to ensure that the differences are larger than might be expected, due to sampling variation. All differences described are significant at the .05 level.

National Data on Kindergartners in the United States

The findings in this report come from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K).³ The ECLS-K, sponsored by the U.S. Department of Education, National Center for Education Statistics (NCES), selected a nationally representative sample of kindergartners in the fall of 1998 and is following these children through the end of fifth grade. The full ECLS-K sample is comprised of approximately 22,000 children who attended about 1,000 kindergarten programs during the 1998-99 school year. The children attended

³ Detailed information on the base-year design of the ECLS-K is presented in the *ECLS-K User's Manual* (NCES 2001-029). The data set related to this report may be obtained through NCES upon request (e-mail: ECLS@ed.gov).

both public (85 percent) and private (15 percent) kindergartens that offered full day (55 percent) and part day (45 percent) kindergarten programs. All kindergarten children within the sampled schools were eligible for the sampling process, including language minority and special education students. The sample includes children from different racial/ethnic and socioeconomic backgrounds. In the fall of 1998, about 95 percent of kindergartners were entering school for the first time. This report focuses on these first-time kindergartners.⁴ When information on children's cognitive knowledge and skills is presented, this report focuses on the children in the sample who received the cognitive assessment in English in both the fall and the spring of their kindergarten year.⁵

This report includes information that was captured through direct one-on-one child assessments, parent interviews, and teacher questionnaires administered in the fall and the spring of the children's kindergarten year. The *Methodology and Technical Notes* section provides more detail on the instrumentation and operations.

Question 1: Gain, Differences in Gain, and Spring Kindergarten Status in Children's Knowledge and Skills

During the early elementary school years, children are rapidly acquiring both cognitive and social knowledge and skills (Bredenkamp and Copple 1997; Sameroff and McDonough 1994). In this section, gain in children's reading and mathematics knowledge and skills will be addressed. The ECLS-K directly assessed children's cognitive skills with a reading and mathematics battery.⁶ The reading assessment captured information on children's basic literacy skills, such as understanding the directionality of print, recognizing letters, identifying sounds, word reading, vocabulary, and reading comprehension. The mathematics

⁴ See table 1 for the sample demographics.

⁵ Approximately 30 percent of Hispanic children and 19 percent of Asian children were not assessed in English and are not included in the estimates related to cognitive knowledge and skills. The Hispanic children who were proficient in Spanish were assessed in Spanish (for details see *Methodology and Technical Notes, Constructs, and Variables Used in Analysis*). The Hispanic and Asian children not assessed in English are included in the estimates related to noncognitive knowledge and skills. Due to specific instructions listed in the child's school record about one-half percent of children were excluded from the cognitive assessment based on a disability.

⁶ In addition to reading and mathematics, the ECLS-K also assessed children's general knowledge. These data are not included in this report.

assessment measured children's conceptual understanding of numbers, shapes, patterns, mathematical operations, and processes for problem solving.

To address children's social knowledge and skills, teachers were asked to assess individual behaviors exhibited by the children. For this report, these teacher-rated items were not scaled. Instead, children's individual behaviors will be reported on in the next section, where developmental gain in relation to specific knowledge and skills is addressed.

To understand how children's reading and mathematics knowledge and skills are changing across the kindergarten year, their overall gains in their knowledge and skills will be described. Next, differences in these gains by child, family, and kindergarten program characteristics will be explored. And finally, information about their status and the differences in their status in the spring of their kindergarten year, as they are preparing for first grade, will be presented.

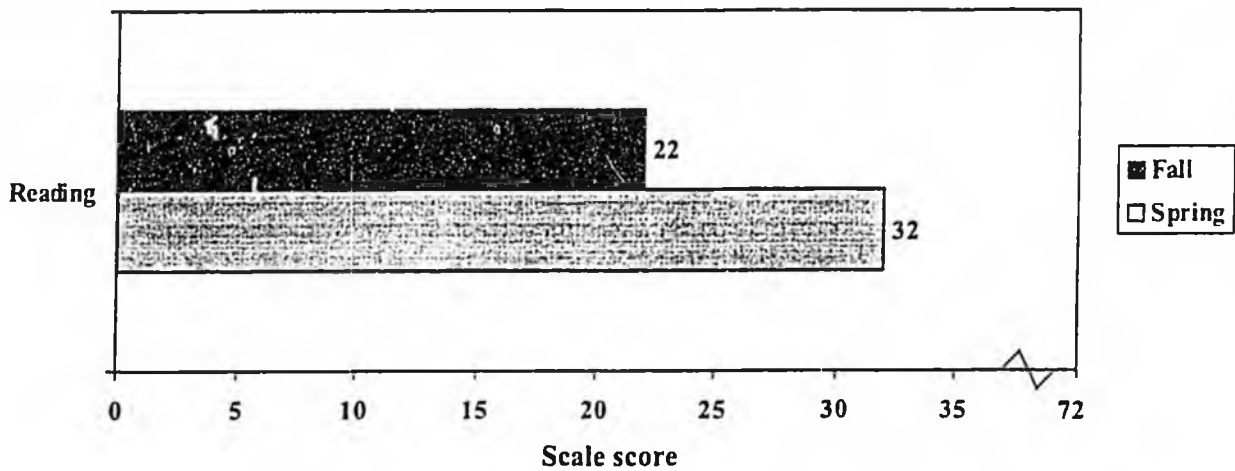
Gain in Knowledge and Skills from Fall to Spring

As their kindergarten year comes to a close, children demonstrate higher levels of reading and mathematics knowledge and skills than they demonstrated as they entered school for the first time (figures 1 & 2, table 2).⁷ Children's reading scale scores increased by 10 points from the fall to the spring. Consequently, the gain from fall to spring is about one standard deviation (an appreciable increase). Children's mathematics scores increased by eight points from the fall to the spring. Thus, children's mathematics knowledge and skills increased about one standard deviation during the kindergarten year.⁸

⁷ The reading scale ranged from 0-72, with fall scores ranging from 10-70 and spring 10-71. The math scale ranged from 0-64, with fall scores ranging from 6-60 and spring scores 7-60.

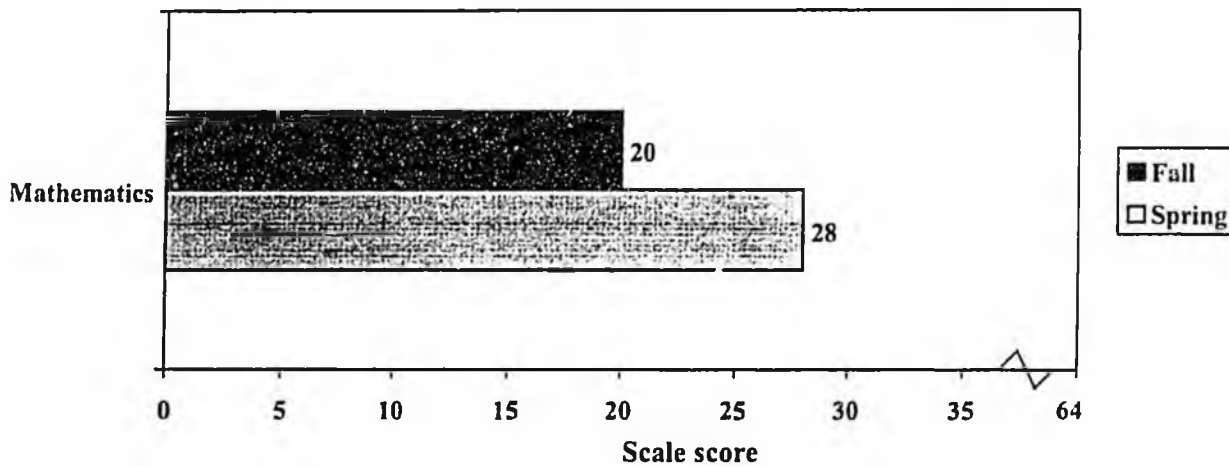
⁸ A standard deviation provides information on the spread of the distribution of scores. In a normal distribution, approximately 68 percent of scores fall within plus or minus one standard deviation of the mean, and approximately 95 percent fall within plus or minus two standard deviations of the mean. The means and standard deviations for children's overall reading and mathematics performance in this report are as follows—Mean (standard deviation): fall reading—22 (8), fall mathematics—20 (7), spring reading—32 (10), spring mathematics—28 (9), change in reading—10 (6), and change in mathematics—8 (5).

Figure 1.—First-time kindergartners' mean reading scale scores: Fall 1998 and spring 1999



NOTE: The ECLS-K assessment was designed for both kindergarten and first-grade children. Therefore a mean score of approximately 30 in the spring of kindergarten is not unexpected.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Figure 2.—First-time kindergartners' mean mathematics scale scores: Fall 1998 and spring 1999



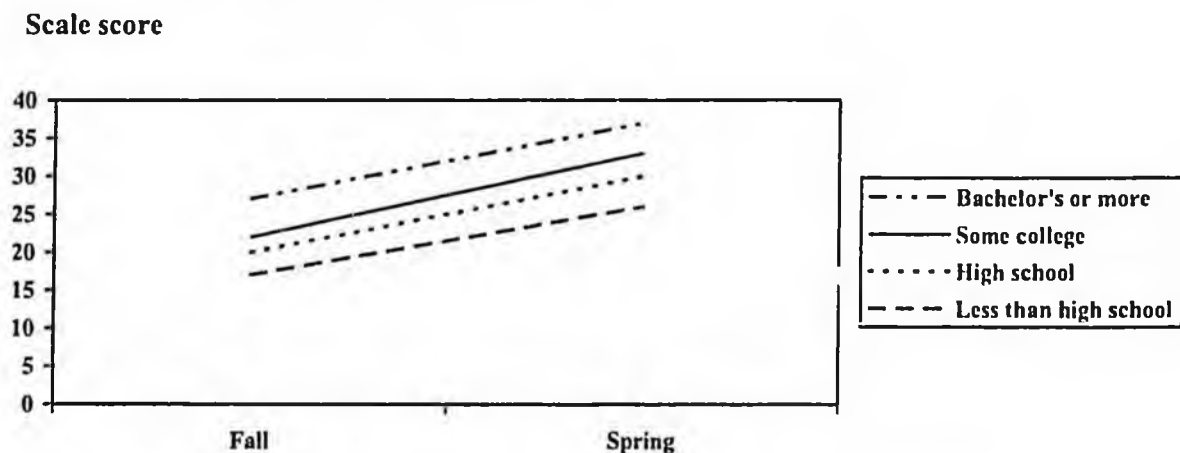
NOTE: The ECLS-K assessment was designed for both kindergarten and first-grade children. Therefore a mean score of approximately 30 in the spring of kindergarten is not unexpected.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Differences in Gain of Children's Knowledge and Skills by Child, Family and Kindergarten Program Characteristics

Children gain reading and mathematics knowledge and skills during the kindergarten year; and, for the most part, these gains do not differ markedly by child, family, and kindergarten program characteristics (table 2). For example, there is not more than a two-point difference in the gains children demonstrate in reading and mathematics by mother's education (figure 3).

This absence of a substantial differential gain in children's general reading and mathematics knowledge and skills is seen again when we consider other characteristics of children, their families, and their kindergarten programs, such as children's age as they enter school and family risks for later school difficulty. The same is true when we look at school type and kindergarten program type. Thus, the differences we see in the fall have not diminished over the school year. However, as we will see in the next section, when we consider the specific knowledge and skills children are acquiring (e.g., letter recognition, addition and subtraction, making friends, paying attention), children are developing particular cognitive and noncognitive knowledge and skills at different rates.

Figure 3.—First-time kindergartners' reading mean scale scores, by mother's education: Fall 1998 and Spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Differences in Children's Knowledge and Skills by Child, Family and Kindergarten

Program Characteristics: Spring of Kindergarten

As children are just beginning school, their knowledge and skills already differ (West et al. 2000; Zill and West 2000). This begs the question—at the end of their kindergarten year as they are preparing to enter first grade, do children's knowledge and skills still differ by child, family, and kindergarten program characteristics? In other words, as children enter school for the first time, their reading and mathematics knowledge and skills differ by their age at entry, the level of their mother's education, their race/ethnicity, and risk factors associated with school success, such as primary language in the home or living in a single-parent household. Do we find these same differences after a year of formal schooling?

Age: Since kindergarten attendance is not mandatory in all states, parents have some flexibility in deciding when to enroll their children. Most states have age of entry guidelines that require children to have turned age 5 sometime between August 31 and January 1. Therefore, the majority of children entering kindergarten in the fall of 1998 were born between September 1992 and December 1993 (West et al. 2000). When considering the variation in children's knowledge and skills by their age, we focus our comparisons on children born between September 1992 through December 1993 (i.e., the "mainstream" ages). We present some limited information on children who are slightly older than the mainstream—those born January through August of 1992. These children represent a unique and diverse group (e.g., those whose parents may have delayed them to provide them with an advantage or due to developmental concerns, or whose schools may have a kindergarten readiness requirement), so we do not focus on them in our analysis.

In the spring of their kindergarten year, older children possess higher reading and mathematics knowledge and skills than their younger counterparts⁹ (table 2). Thus, the slight advantage older children possessed as they entered kindergarten persists across the school year.

⁹ Reaney, West, and Denton (2000) found that children's age at school entry accounts for a minimal amount of variance in their beginning knowledge and skills (2–3 percent), once factors such as SES and mother's education are taken into consideration.

Maternal Education: Similar to when they entered kindergarten, at the end of their kindergarten year, children's reading and mathematics knowledge and skills differ by the level of their mother's education. Kindergartners whose mothers have higher levels of education demonstrate higher levels of reading and mathematics knowledge and skills than kindergartners whose mothers have less education (table 2).

Race/Ethnicity: Children who are white and Asian demonstrate higher levels of reading and mathematics knowledge and skills than their black and Hispanic classmates (table 2). Again, this is a pattern we observed at the start of the kindergarten year.

Risk: When considering family risks for later school difficulty (e.g., low maternal education, non-English primary language in the home), it is important to understand how these factors behave cumulatively. Consequently, we consider the impact of multiple risks on children's knowledge and skills. To do this, we constructed an index which consists of the following risk factors: mother's education less than high school, family utilization of AFDC and/or food stamps, single-parent family, and primary home language other than English. The index is scored zero, one or two or more—meaning the presence of none of the risk factors, the presence of one of the risk factors, or the presence of two or more of the risk factors.

The fewer the risk factors present, the better kindergartners seem to be doing in reading and mathematics. At the end of the kindergarten year, just as they did at the beginning, children who have fewer risk factors demonstrate higher levels of reading and mathematics knowledge and skills than those with two or more risk factors (table 2).

School Type and Kindergarten Program Type: The type of school children attend and the type of kindergarten program in which children are enrolled have been associated with their academic school performance. Consequently, we explore children's knowledge and skills by the type of school (i.e., public or private) and the type of kindergarten program they attend (i.e., full day or part day). In the spring, children who attend private kindergartens demonstrate higher levels of reading and mathematics knowledge and skills. The differences by school type should be interpreted with caution, for children demonstrate different levels of knowledge and skills by their school type at the beginning of their kindergarten year (i.e.,

when schools have not had the opportunity to have an effect on children's performance) (table 2). In terms of kindergarten program type (i.e., all day or part day), there is little meaningful difference in the level of children's end-of-year reading and mathematics knowledge and skills.

Question 2: Gain, Differences in Gain, and Spring Kindergarten Status in Children's Specific Knowledge and Skills

Previously, we described the overall gains children experience across the kindergarten year. Seemingly, all children are gaining knowledge and skills at similar rates; however, a different picture emerges when we explore the specific areas in which children are gaining knowledge and skills. When we do this, we find specific groups of children are gaining certain knowledge and skills at different rates. To illustrate this, we look at how children's specific knowledge and skills change from the fall of kindergarten to the spring of kindergarten. Further, we explore whether the gains in children's specific knowledge and skills vary by child, family, and kindergarten program characteristics (e.g., those at risk for later school difficulty). Finally, we examine whether the differences in children's specific knowledge and skills by child, family, and kindergarten program characteristics (e.g., children's age, their mother's education, their race/ethnicity) persist across the kindergarten year (for more information on such differences at school entry, see West et al. 2000).

Gain in Specific Knowledge and Skills from Fall to Spring

Cognitive Knowledge and Skills

In addition to the reading and mathematics scale scores, the ECLS-K assessment battery provides information on specific proficiencies. Additional information on the cognitive assessment battery is provided in the *Methodology and Technical Notes* section.

In the reading domain, the ECLS-K assessment battery provides information on:

- letter recognition;
- understanding of the letter-sound relationship at the beginning of words;
- understanding of the letter-sound relationship at the ending of words;

- sight-word recognition; and
- understanding of words in context.

In the mathematics domain, the ECLS-K assessment battery provides information on:

- recognizing single-digit numbers and basic shapes;
- counting beyond 10, recognizing the sequence in basic patterns, and comparing the relative size (dimensional relationship) of objects;
- recognizing two-digit numbers, identifying the next number in a sequence, and identifying the ordinal position of an object;
- performing simple addition and subtraction; and
- performing basic multiplication and division.

For simplicity, we will refer to these sets of mathematical skills by the most sophisticated skill in the set (i.e., number and shape, relative size, ordinality, add/subtract, multiply/divide). The addition, subtraction, multiplication and division items are presented in the form of word problems with picture support and in numerical statements.

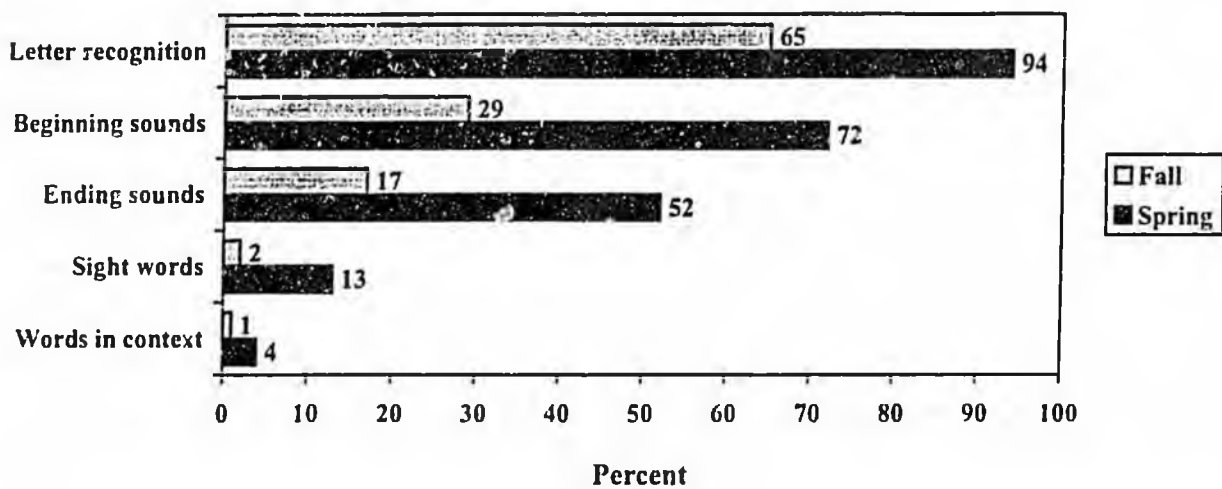
In terms of specific knowledge and skills in reading, at kindergarten entry, two-thirds of children (65 percent) can recognize their letters and some understand the letter-sound relationship at the beginning and ending of words (29 percent and 17 percent, respectively).¹⁰ When we look at these skills at the end of kindergarten, the picture is very different. As they are finishing kindergarten, nearly all first-time kindergartners are recognizing their letters (94 percent), and nearly three out of four children (72 percent) understand the letter-sound relationship at the beginning and about half (52 percent) understand the letter-sound relationship at the ending of words (figure 4, table 3).

We also see that children are gaining in terms of recognizing words and understanding words in context. At kindergarten entry, very few children recognize words by sight (2 percent) and understand words in context (1 percent). These numbers increase by the end of kindergarten.

¹⁰ The estimates in this report do not exactly match those found in *America's Kindergartners* (a previous report based on the same data). This report utilizes both fall and spring child assessment scores, therefore a different weight was used in making the estimates. The weight in this report is based on children with both fall and spring assessment scores, whereas the weight used in *America's Kindergartners* was tailored to children with only fall assessment scores. The weight in this report is stricter in its response requirements and utilizes a slightly smaller sample of children.

As children are completing the first year of school, 13 percent recognize words by sight and 4 percent understand words in context (figure 4, table 3).

Figure 4.—Percentage of first-time kindergartners demonstrating specific reading knowledge and skills: Fall 1998 and spring 1999



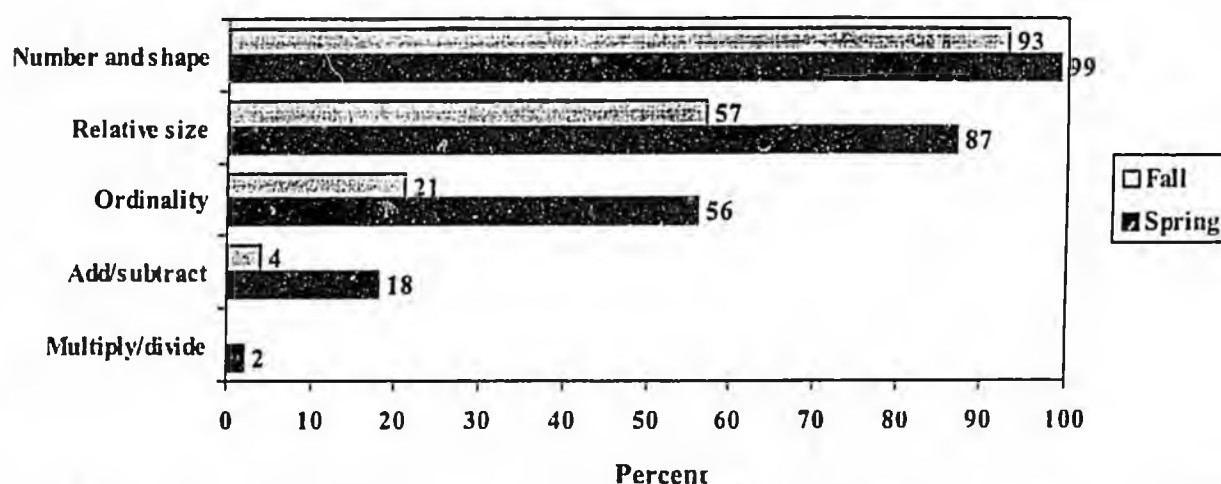
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

Regarding children’s mathematical knowledge and skills, when children enter kindergarten for the first time, most are familiar with basic numbers and shapes (93 percent). By the end of kindergarten, nearly all children can demonstrate these skills (99 percent). In terms of the skills represented by relative size, 57 percent of children demonstrate these skills at the beginning of kindergarten, increasing to 87 percent of children at the end of kindergarten. The number of children able to demonstrate the skills represented by ordinality more than doubles from fall (21 percent) to spring (56 percent) (figure 5, table 4).

Though few children (4 percent) demonstrate the ability to solve simple addition and subtraction problems at the beginning of kindergarten, almost five times as many demonstrate these skills at the end of kindergarten (18 percent). A similar pattern is found for multiplication and division—few (less than 1 percent) demonstrate an understanding of

multiplication and division at the beginning of kindergarten and the number approximately doubles by the end of kindergarten (2 percent) (figure 5, table 4). We may not expect kindergarten children to have these higher mathematical knowledge and skills, but some kindergarten children demonstrate these higher level mathematical knowledge and skills.

Figure 5.—Percentage of first-time kindergartners demonstrating specific mathematics knowledge and skills: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

Noncognitive Knowledge and Skills

Along with their cognitive knowledge and skills, children's social skills and approaches to learning are important for school success (Kagan et al. 1995; Meisels et al. 1996). The ECLS-K assesses children's social skills and approaches to learning by asking their teachers to rate the frequency with which children exhibited certain behaviors, such as making friends, arguing with others and persisting at tasks. Three behaviors exemplify children's prosocial interactions: accepting peer ideas, making friends, and comforting others. Three behaviors exemplify children's problem behaviors: arguing with others, fighting with others, and getting angry easily. Finally, three behaviors capture how children approach learning: persistence at tasks, eagerness to learn, and paying attention in class. Teachers were asked to

rate these behaviors as occurring *never*, *sometimes*, *often*, or *very often*. In this report, we collapse the categories into *never/sometimes* or *often/very often*.

Similar to children's cognitive knowledge and skills, we see change in children's social skills and in how they approach learning (tables 5, 6, and 7). According to their teachers,¹¹ in the spring of their kindergarten year, a majority of children often or very often accept peer ideas in cooperative activities (77 percent), form friendships easily (82 percent) and comfort others (62 percent). This is a slight increase from when these same children entered kindergarten, when 74 percent often or very often accepted peer ideas in cooperative activities, 77 percent formed friendships easily, and 52 percent comforted others (table 5). Similar to the fall, in the spring of kindergarten relatively few children show problem behaviors often or very often. For example, in the spring, teachers reported 13 percent of children often or very often argue with others, 8 percent fight with others, and 9 percent get angry easily (table 6). In terms of how children approach learning, across the kindergarten year, we see slight increases in how often they persist at tasks (fall, 71 percent—spring, 75 percent), demonstrate an eagerness to learn (fall, 75 percent—spring, 79 percent) and pay attention well (fall, 66 percent—spring, 70 percent) (table 7).

Summary: Gain in Specific Knowledge and Skills, Fall to Spring

Across the kindergarten year, children are gaining specific reading and mathematics knowledge and skills. By the end of their kindergarten year, nearly all children recognize their letters, their numbers and their shapes. The percent of children who can recognize words by sight and demonstrate an understanding of words in context, though still relatively low, increased across the kindergarten year. And the numbers of children adding and subtracting also increased across the kindergarten year.

We see less dramatic changes in children's social skills and approaches to learning across the kindergarten year, though we do see that for the most part, children are gaining in prosocial interaction and in their approaches to learning. It should be noted that the gains children make in the cognitive area cannot truly be compared to the gains children make in the social

¹¹ In most cases, the same teacher rated the child at both points in time. Therefore, gains in these areas should be interpreted with this in mind.

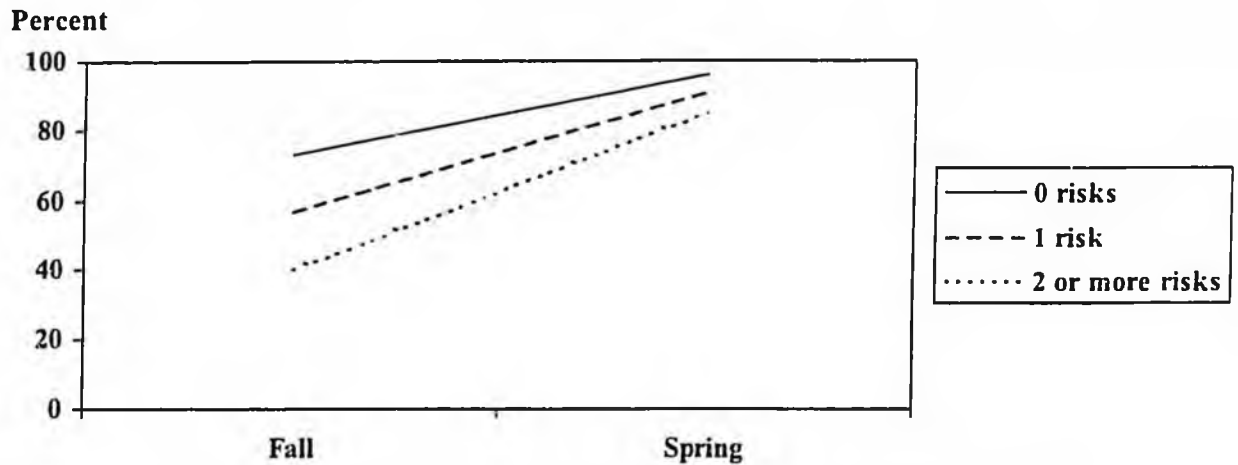
areas. For the cognitive assessment, we were able to administer a more comprehensive direct assessment. In the social area, for these very young children, we relied on the teacher's report. Therefore, the less dramatic changes we report in social skills and approaches to learning may be, in part, attributed to how well we are able to measure these different developmental domains.

Differences in the Gain of Children's Specific Knowledge and Skills by Child, Family, and Kindergarten Program Characteristics

When we examined children's overall gains in reading and mathematics knowledge and skills, as measured by their reading and mathematics scale scores, by child, family and kindergarten program characteristics, we found little evidence of differential gains from fall to spring. Based on those findings, the conclusion might be that from fall to spring of kindergarten all children are acquiring knowledge and skills at approximately the same rate and that they are learning the same things. However, this is not completely accurate. We see a very different picture when we look at children's acquisition of specific knowledge and skills.

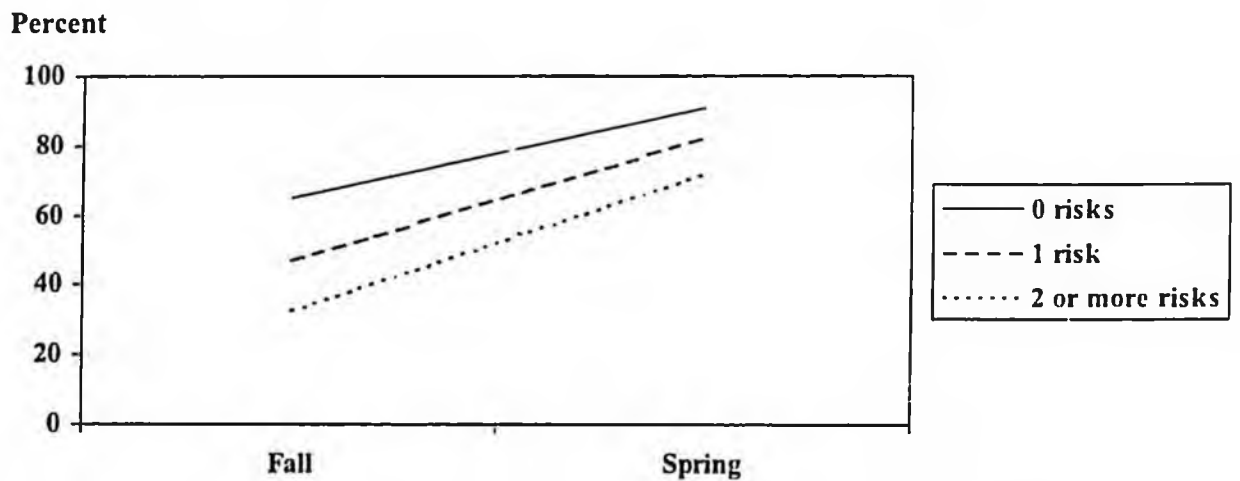
To illustrate, children from the more disadvantaged backgrounds (those with at least one risk factor) are closing the gaps in basic skills (i.e., recognizing their letters and counting beyond 10, recognizing the sequence in basic patterns, and comparing the relative size of objects) (figures 6 and 7). However, these same children lag further behind their more advantaged classmates when it comes to gaining more sophisticated reading and mathematics knowledge and skills (i.e., recognizing words by sight or solving simple addition and subtraction problems) (figures 8 and 9). In fact, the gap has widened.

Figure 6.—Percentage of first-time kindergartners recognizing their letters, by number of risk factors: Fall 1998 and spring 1999



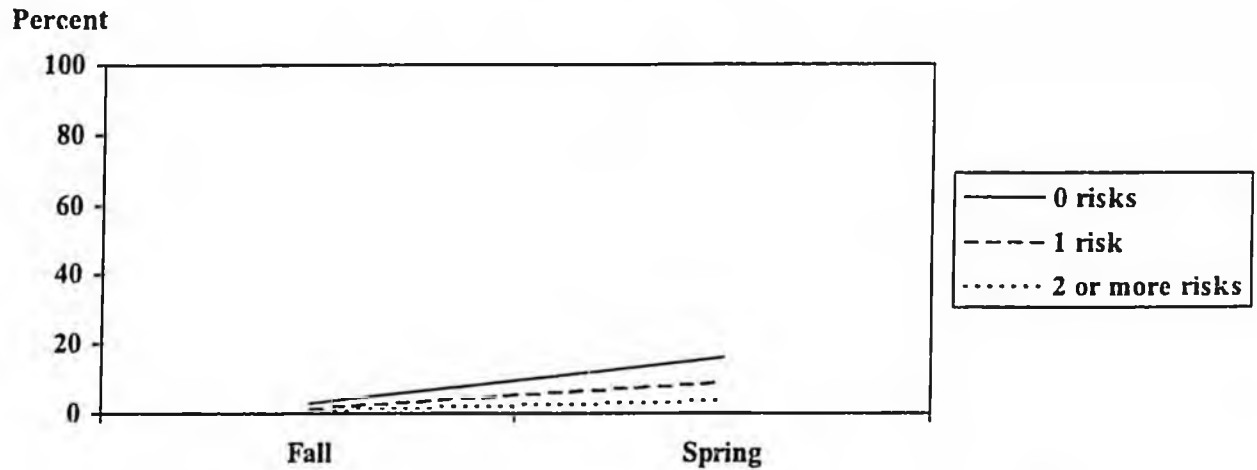
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Figure 7.—Percentage of first-time kindergartners counting beyond 10, recognizing the sequence in basic patterns and comparing the relative size of objects, by number of risk factors: Fall 1998 and spring 1999



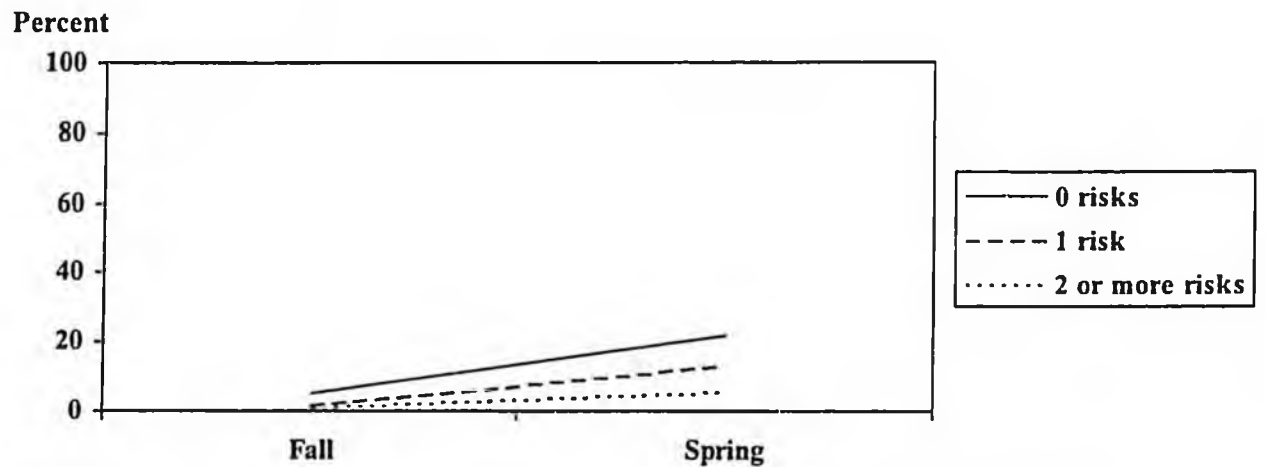
SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Figure 8.—Percentage of first-time kindergartners recognizing words by sight, by number of risk factors: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

Figure 9.—Percentage of first-time kindergartners adding and subtracting, by number of risk factors: Fall 1998 and spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

The same basic patterns we see when we consider cumulative family risk factors are present when we consider other child characteristics, such as race/ethnicity (tables 3 and 4). For example, during the kindergarten year, black and Hispanic children closed the gap with white and Asian children in basic reading and mathematics knowledge and skills (i.e., recognizing letters and relative size). Yet, they are not acquiring the more advanced knowledge and skills (i.e., sight words and addition) at the same rate as their white and Asian counterparts.

Furthermore, to illustrate, we see some evidence of differential gain in the frequency with which children demonstrate specific social skills (tables 5, 6, and 7). According to their teachers, younger children are more likely to acquire the skill of paying attention than their older counterparts during the kindergarten year (table 7).

Differences in Children's Specific Knowledge and Skills by Child, Family, and Kindergarten Program Characteristics: Spring of Kindergarten

Kindergartners acquire specific knowledge and skills across the school year. As children enter school, differences exist in their knowledge and skills by child and family characteristics (West et al. 2000). We see similar differences as children are finishing kindergarten and preparing for first grade (tables 3 and 4).

Age:¹² In the spring of their kindergarten year, older children possess higher specific reading and mathematics knowledge and skills than their younger counterparts. For example, older first-time kindergartners are more likely to demonstrate emergent literacy skills and knowledge (i.e., recognizing their letters and understanding the letter-sound relationship at the beginning and ending of words) than younger kindergartners (table 3). Older kindergartners are also more likely than younger kindergartners to be reading (i.e., recognizing words by sight and understanding words in context) (table 3).

We see a similar pattern in children's specific mathematics knowledge and skills. Almost all kindergartners know their basic numbers and shapes; however, older kindergartners are more

¹² Similar to the discussion on children's reading and mathematics knowledge and skills, when we make comparisons by age, we are comparing the children born in the mainstream age groups, those born between September 1992 and December 1993.

likely than younger kindergartners to demonstrate other early mathematics knowledge and skills (i.e., relative size; ordinality) (table 4). Older kindergartners are also more likely to do simple addition and subtraction problems and even to do simple multiplication and division problems (table 4).

Overall, the frequency with which children, in the spring of their kindergarten year, engage in prosocial behaviors, such as accepting peer ideas, making friends and comforting others, does not differ by their age. However, we see a difference between the older kindergartners (those just turning 6 as they enter school—born September through December 1992) and the youngest kindergartners (those just turning 5 as they enter school—born September through December 1993). How children approach learning differs by their age. Older kindergartners are more likely to persist at tasks, seem more eager to learn and to pay attention than their younger counterparts (table 7).

Maternal Education: Similar to when they entered kindergarten, at the end of their kindergarten year children's specific reading and mathematics knowledge and skills differ by the level of their mother's education. Children whose mothers have higher levels of education, do better in specific reading and mathematics areas than children whose mothers have less education. For instance children whose mothers have higher levels of education are more likely to demonstrate emergent literacy knowledge and skills than children whose mothers have less education (table 3). Moreover, children whose mothers have higher levels of education are more likely than children whose mothers have less education to be reading (i.e., recognizing words by sight and understanding words in context) (table 3). The same basic pattern is evident in mathematics. Children whose mothers have higher levels of education are more likely to demonstrate mathematics knowledge and skills (i.e., relative size, ordinality, addition/subtraction, and multiplication/division) than children whose mothers have less education (table 4).

How often children exhibit prosocial interactions and problem behaviors at the end of their kindergarten year differs by the level of their mother's education. Children whose mothers have higher levels of education are more likely to often or very often accept peer ideas in play, make friends, and comfort others (table 5). In terms of their problem behaviors,

children whose mothers have less education are more likely to argue with others, fight with others, and get angry easily than children whose mothers have more education (table 6). How children approach learning also differs by their mother's education. Children with mothers who have more education are more likely to persist at tasks, seem eager to learn, and pay attention than children whose mothers have less education (table 7).

Race/ethnicity: Children's reading and mathematics knowledge and skills differ by their race/ethnicity. White and Asian children tend to have higher specific reading and mathematics knowledge and skills than their black and Hispanic classmates. White and Asian children are generally more likely to demonstrate reading and mathematics knowledge and skills than black and Hispanic children (tables 3 and 4).

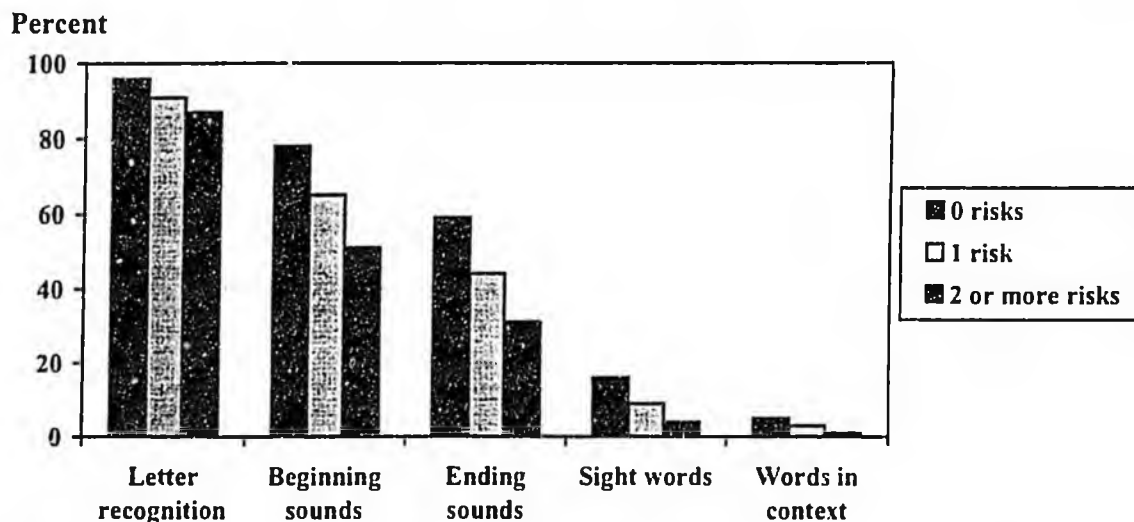
According to their teachers, in the spring of their kindergarten year, children's social skills and how they approach learning differs by their race/ethnicity.¹³ White and Asian children are more likely to accept peer ideas and form friendships than black children (table 5). Black children are more likely to get angry easily, argue with others, and fight with others than white, Asian and Hispanic children (table 6). Also according to their teachers, Asian children are the most likely to persist at tasks, seem eager to learn, and pay attention and white children are more likely to exhibit these behaviors than black or Hispanic children (table 7).

Risk: To explore children's specific knowledge and skills by family risk factors, we utilize the risk factor index (discussed earlier in this report). At the end of the kindergarten year, children who have fewer risk factors are doing better than children with more risk factors in each of the specific areas of reading and mathematics measured in the ECLS-K (tables 3 and 4). This is true in terms of kindergartners' specific reading (figure 10) and mathematics (figure 11) knowledge and skills. For example, children who have fewer risks are more likely than children with more risks to recognize their letters and understand the letter-sound relationship at the beginning and ending of words. A similar pattern is evident in terms of children's ability to understand the mathematical concepts of relative size and ordinality.

¹³ Information on children's social skills and how they approach learning is provided by their teachers. Consequently, there may be an interaction between the teacher's race/ethnicity and the race/ethnicity of the child that is not accounted for in this analysis. For example, teachers whose race/ethnicity matches that of the children may rate children differently from teachers whose race/ethnicity is different from other children.

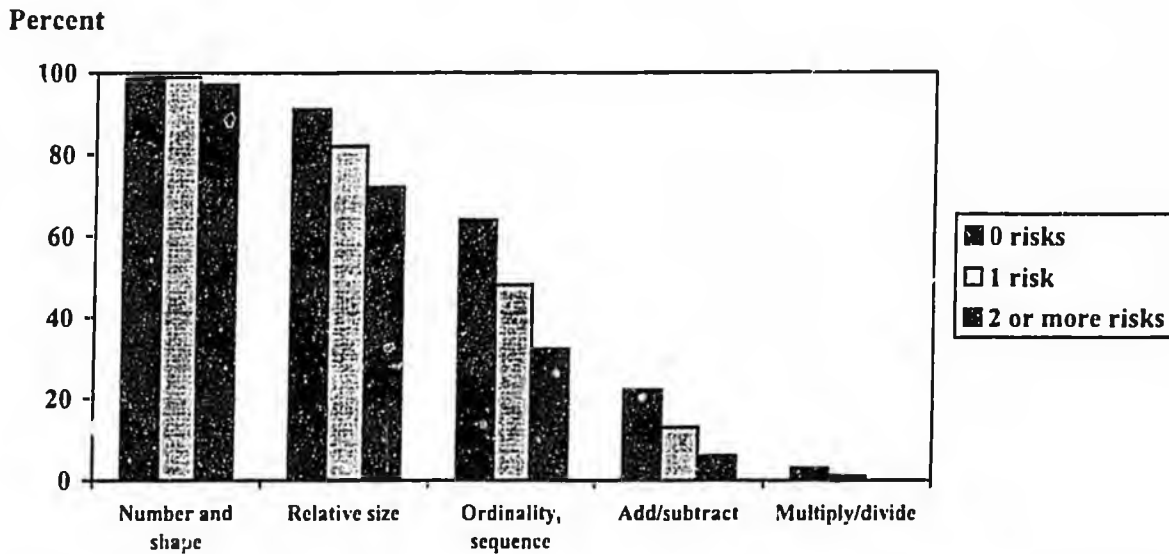
In the spring, teachers report that kindergartners with fewer risk factors are more likely to often or very often accept peer ideas and form friendships, and less likely to argue with others, fight with others, and get angry easily than children with more risk factors (tables 5 and 6). How children approach learning is also associated with the number of family risk factors. According to their teachers, children with fewer risk factors are more likely to persist at tasks, to seem eager to learn, and to pay attention well than children with more risk factors (table 7).

Figure 10.—Percentage of first-time kindergartners demonstrating specific reading knowledge and skills, by number of family risk factors: Spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99, Fall 1998 and Spring 1999.

Figure 11.—Percentage of first-time kindergartners demonstrating specific mathematics knowledge and skills, by number of family risk factors: Spring 1999



SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99, Fall 1998 and Spring 1999.

School Type and Kindergarten Program Type: In the spring of their kindergarten year, children who attend private kindergartens are more likely to demonstrate, in specific areas, the various reading and mathematics knowledge and skills than children in public school kindergartens.¹⁴ However, any differences in the spring of kindergarten in children's specific cognitive knowledge and skills by school type need to be interpreted with caution. These differences also exist in the fall, as children are entering kindergarten for the first time (tables 3 and 4). In the spring of their kindergarten year, there are no differences by kindergarten program type in children's basic reading knowledge and skills (i.e., letter recognition, beginning sounds) and no difference in any of their specific mathematics knowledge and skills. Children in full-day programs are more likely to understand the letter-sound relationship at the end of words, recognize words by sight, and understand words in

¹⁴ Differences in school type may reflect, in part, differences in socioeconomic status of the families whose children attend public and private schools (Zill & West forthcoming).

context than children in part-day kindergartens (table 3).

Though no clear pattern emerges in children's prosocial behaviors (e.g., accepting peer ideas and forming friendships) by their school type or their program type, there are some interesting differences when we examine children's problem behaviors by kindergarten program type (i.e., how often they argue with others and fight with others) (tables 5 and 6). According to their teachers, children in full-day kindergarten programs are more likely than children in part-day programs to exhibit these problem behaviors. Once again, caution should be used in interpreting differences, as the same differences are observed at kindergarten entry. In terms of kindergarten program type, it is interesting to note that children in full-day programs may demonstrate slightly higher cognitive knowledge and skills, but they also are more likely to exhibit a higher frequency of some problem behaviors.

Summary

Young children need knowledge and new experiences to develop and thrive. Schools offer a plethora of learning and development opportunities for children. Consequently, it is not surprising that across the kindergarten year, children are rapidly acquiring the knowledge and skills integral to succeed in school and life.

Across the kindergarten year, children's reading and mathematics scores increase by about a standard deviation. Often, it is difficult to interpret what this type of gain means. Therefore, in this report we provide information on the specific reading and mathematics knowledge and skills children are gaining. For example, we know that as children enter kindergarten for the first time about two-thirds know their letters, while by the end of kindergarten almost all (94 percent) children know their letters. We know that the number of children who understand the letter-sound relationship at the beginning of words more than doubles across the kindergarten year; and the number of children who understand the letter-sound relationship at the ending of words triples. In mathematics, by the end of kindergarten, nearly all children (99 percent) recognize their numbers and basic shapes, and the majority demonstrate understanding of dimensional relationships among objects (relative size). Furthermore, the number of children who demonstrate understanding of the mathematical concept ordinality more than doubles across the kindergarten year; the number of children who demonstrate that they can do basic addition and subtraction increases. We see less dramatic changes in children's social skills and approaches to learning. A large percentage of children exhibit prosocial behaviors and positive approaches to learning as they are ending kindergarten and preparing for first grade.

When we look at which children are demonstrating gains in reading and mathematics knowledge and skills, we find an interesting picture. As children enter kindergarten, they demonstrate a wide range of knowledge and skills. At kindergarten entry, children at risk for later school difficulty (as indicated by the risk-factor index we formed) are less likely to know their letters, understand the letter-sound relationship at the beginning and ending of words, know their numbers, demonstrate an understanding of relative size and of ordinality (West et al. 2000). Across the kindergarten year, we see that these same children (those at

risk) are gaining, in terms of basic reading and mathematical knowledge and skills (i.e., letters, relative size), on their more advantaged counterparts—in other words, the gap is closing. However, at-risk children are falling further behind in terms of the more sophisticated reading and mathematics knowledge and skills (i.e., recognizing words by sight, addition/subtraction)—in other words, the gap is widening. As a result, by the end of kindergarten, we see many of the same differences in knowledge and skills that we saw at the beginning of the school year. After a year of formal schooling, we still see differences in children's knowledge and skills by child and family characteristics (e.g., children with mothers who have higher levels of education demonstrate higher reading and mathematics knowledge and skills, children with fewer risks for later school difficulty demonstrate higher reading and mathematics knowledge and skills).

This report presents a simple picture of the gains children are making across the kindergarten year. The ECLS-K will follow these children through the fifth grade. We will be able to track children's performance and the differences in their performance, not only by child and family characteristics but also by teacher and school characteristics. This report represents only the beginning of understanding the role of the kindergarten year in children's development. Future analyses, based on the information from the ECLS-K, will help us understand the role of such things as child care, home educational environment, teachers' instructional practices, class size and the general climate, facilities, and safety of the schools.

Methodology and Technical Notes

Survey Methodology

The Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), is being conducted by Westat for the U.S. Department of Education, National Center for Education Statistics (NCES). It is designed to provide detailed information on children's early school experiences. The study began in the fall of the 1998–99 school year. The children participating in the ECLS-K are being followed longitudinally through the fifth grade. Estimates in this report are based on children entering kindergarten for the first time in the fall of 1998.

Sample Design

A nationally representative sample of 22,782 children enrolled in 1,277 kindergarten programs during the 1998–99 school year were sampled to participate in the ECLS-K. The children attended both public and private kindergartens that offered full-day and part-day programs. The sample includes children from different racial/ethnic and socioeconomic backgrounds, and includes oversamples of Asian children, private kindergartens, and private kindergartners.

Sampling for the ECLS-K involved a dual-frame, multistage sampling design. The first stage of sampling involved the selection of 100 primary sampling units (PSU) from a national sample of PSUs. The PSUs were counties and county groups. Public and private schools were then selected within the PSUs, and children were sampled from the selected schools. Public schools were selected from the Common Core of Data, a public school frame, and private schools were selected from a private school frame developed from the Private School Survey.¹⁵ Approximately 23 kindergartners were selected on average in each of the sampled schools.

¹⁵ During the spring of 1998, Westat identified new schools that were not found on either frame. A sample of these schools was included in the ECLS-K school sample.

Fall kindergarten data were obtained from September to December 1998. Spring kindergarten data were obtained from March to June 1999.

Response Rates

A total of 944 of the 1,277 originally sampled schools participated during the base year of the study. This translates into a weighted response rate of 74 percent for the base year of the study. The school response rate during the spring of the base year (74.2 percent) was higher than during the fall (69.4 percent), due to some of the schools that originally declined to participate changing their minds and participating in the spring. Nearly all (99.4 percent) of the schools that participated in the fall of the base year also participated in the spring.

The child base-year completion rate was 92 percent, i.e., 92 percent of the children were assessed at least once during kindergarten. The parent base-year completion rate was 89 percent (i.e., a parent interview was completed at least once during kindergarten). Thus, the overall base-year response rate for children was 68.1 percent (74 percent x 92 percent) and the base-year response rate for the parent interview was 65.9 percent (74 percent x 89 percent). About 95 percent of the children and 94 percent of the parents who participated in the fall of kindergarten also participated in the spring.

A nonresponse bias analysis was conducted to determine if substantial bias is introduced due to school nonresponse. Five different approaches were used to examine the possibility of bias in the ECLS-K sample. First, weighted and unweighted response rates for schools, children, parents, teachers, and school administrators were examined to find large response rate differences by characteristics of schools (e.g., urbanicity, region, school size, percent minority, and grade range) and children (e.g., sex, age, race/ethnicity). Second, estimates based on the ECLS-K respondents were compared to estimates based on the full sample. The distributions of schools by school type, urbanicity, region, and the distributions of enrollment by kindergarten type (public versus private), race/ethnicity, urbanicity, region and eligibility for free and reduced-price lunch were compared for the responding schools and all the schools on the sampling frame. Third, estimates from the ECLS-K were compared with estimates from other data sources (e.g., Current Population Survey, National Household Education Survey, Survey of Income and Program Participation). Fourth, estimates using the

ECLS-K unadjusted weights were compared with estimates using the ECLS-K weights adjusted for nonresponse. Large differences in the estimates produced with these two different weights would indicate the potential for bias after nonresponse adjustments. Fifth, and last, simulations of nonresponse were conducted. The results of these analyses are summarized in the *ECLS-K User's Manual* and reported in detail in the *ECLS-K Methodology Report*. Findings from these analyses suggest that there is not a bias due to school nonresponse.

Data Reliability

Estimates produced using data from the ECLS-K are subject to two types of error, sampling and nonsampling errors. Nonsampling errors are errors made in the collection and processing of data. Sampling errors occur, because the data are collected from a sample rather than a census of the population. A detailed discussion of these types of errors can be found in *America's Kindergartners* (West et al. 2000).

Standard Errors and Weights

In order to produce national estimates from the ECLS-K data collected during the fall and spring of the 1998-99 school year, the sample data were weighted. Weighting the data adjusts for unequal selection probabilities at the school and child levels and adjusts for school, child, teacher, and parent nonresponse. The first stage of the weighting process assigns weights to the sampled primary sampling units (PSUs) equal to the inverse of the PSU probability of selection.¹⁶ The second stage of the weighting process assigns weights to the schools sampled within PSUs. The base weight for each sampled school is the PSU weight multiplied by the inverse of the probability of selecting the school. The base weights for eligible schools are adjusted for nonresponse. These adjustments are made separately for public and private schools.

The base weight for each child in the sample is the school nonresponse adjusted weight for the school the child attends, multiplied by a post-stratified within-school student weight

¹⁶ The approach used to develop weights for the ECLS-K is described in the *ECLS-K User's Manual* and the *ECLS-K Methodology Report*.