Social Policy Report

Giving Child and Youth Development Knowledge Away

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Kindergarten: An Overlooked Educational Policy Priority

Sara Vecchiotti

Summary

Many Americans assume children's publicly funded education begins with kindergarten. To the contrary, kindergarten is not mandated in all states. Moreover, most kindergarten programs implemented in the public education system are half-day; full-day kindergarten is far less frequent. Access to kindergarten is highly dependent on state, school district, and individual school initiatives and resources. Thus, kindergarten provision is an educational equity issue.

Kindergarten is a pivotal transitional year in which children learn foundational skills and develop knowledge necessary for academic success in the early grades. Considering this crucial role, it is surprising how often kindergarten is overlooked when research and education policy agendas are formed. Neither states, nor the federal government, collect enough systematic data on kindergarten, especially at a school district or individual school level. Extant data sources differ in reported state kindergarten policies. Thus, an accurate picture of the availability, utilization, and content of kindergarten programs at a national or state level is not available.

Current policy debates include mandating kindergarten, requiring attendance, and establishing a uniform entrance age. Further, consensus has not been reached as to what is appropriate in kindergarten for curriculum content, instructional methods, and screening and assessment practices. Distinct roles for prekindergarten and kindergarten should be defined and programs should be coordinated to promote better continuity in learning. Research indicates that delaying entrance to kindergarten results in only ephemeral effects and that full-day kindergarten has academic and practical benefits for children and families. Finally, state and federal recommendations range from revising data collection polices to aligning kindergarten policies and practices to prekindergarten and grades 1-12.

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From the Editor

We have had a series of *Social Policy Reports* on welfare reform, because of the timeliness given pending reauthorization. An equally timely set of issues pertains to early education. Hence, we have had several issues on early education, given its relevance to current policy debates about reading instruction and narrowing the achievement gap. Deborah Stipek reviewed the research on age of school entry. Cybele Raver explored the importance of emotional development to early educational intervention, and in the last issue, Associate Editor Jeanne Brooks-Gunn reviewed evidence that early educational interventions should not be expected to work magic. In the current issue, Sara Vecchiotti reviews research and policy on kindergarten, viewing it as the overlooked school year.

At a time when several states are passing universal voluntary pre-kindergarten, kindergarten is not yet mandated by all states, and many kindergartens are only half-day programs. Research on kindergarten is equally variable across states. Many states do not have good data systems on availability, utilization, and curriculum. Research is needed on kindergarten as a transitional year from preschool to school, on what content is important given the transitional nature of this school year, and what screening and assessment procedures are appropriate. Distinct roles need to be defined for pre-kindergarten versus kindergarten; that is, a coordinated integration of pre-k, kindergarten, and elementary school needs to be designed.

We are also pleased to have in this issue a statement from Ruby Takanishi, President of the Foundation for Child Development. Dr. Takanishi initially commissioned a similar article on kindergarten by Sara when she was the Barbara Paul Robinson Fellow at the Foundation. In her commentary, Dr. Takanishi addresses the timeliness and significance of the issues raised in this article.

At a time when we are considering making all preschool, such as Head Start, more school-like and more instructional in style, it is important that we step back and take a general look at the whole school entry system. We need to review existing research on each component of the school entry system, decide where we need more research, and make policy recommendations designed to provide a cohesive, integrated approach to children's entry into school. Proceeding piecemeal by just focusing on Head Start and preschool, or just on pre-K, or just on kindergarten will not develop the comprehensive approach to schooling that is needed for maximum effectiveness. Equally important is the need to develop some federal guidelines on this growing school entry system so that vast inequities do not develop across states.

Sara Vecchiotti's *Social Policy Report* provides the needed research information and policy perspective on kindergarten. With other relevant *SPR*s, we hope we will make a contribution to the current debate on early education.

Lonnie Sherrod, Ph.D.
Editor

Kindergarten: An Overlooked Educational Policy Priority

Sara Vecchiotti
Foundation for Child Development

Traditionally, kindergarten has been viewed as children's first organized educational experience in a group. In kindergarten, children are expected to begin to integrate their intellectual, social and physical competencies to meet the demands of a structured educational experience (Early, Pianta & Cox, 1999). Kindergarten is described as setting the stage for subsequent learning and school success, since it aims to provide the foundation for future academic progress (Alexander & Entwisle, 1988). Recent results from national studies confirm its importance to the educational success of young children (Denton & West, 2002; West, Denton, & Germino-Hausken, 2000; West, Denton, & Reaney 2001).

Kindergarten is an important policy issue since a child's access to kindergarten is highly dependent on state, school district, and school level initiatives and resources. Across and within states, wide variability exists in kindergarten policies and in the implementation of kindergarten programs. This variability in the availability, utilization, content and duration of kindergarten programs contributes to current inequities in children's early education.

Further, kindergarten provision in the public education system must respond to current social changes. The traditional view of kindergarten differs from reality in two ways. First, for even more children than before, kindergarten is not their first educational experience due to increasing participation in preschool and child care programs (NCES, 2000). These programs may fulfill many of the traditional aims of kindergarten, but kindergarten still serves as an important transitional experience for children. Once kindergarten bridged home and formal education. Now it is more likely to bridge early childhood education and K-12 education. Second, some kindergarten programs no longer aim to foster all areas of children's development, but tend to focus only on academic skills once taught in the first grade.

The Current Provision of Kindergarten: An Unknown

In contrast to the early history of kindergarten which served three- to six-year-olds (Beatty, 1995), kindergarten programs now serve primarily five-year-old children. Over the years, participation in kindergarten has increased, so that the majority of five-year-old children attend kindergarten in either public or private school programs (U.S. Census Bureau, 2001), and 55 percent attend full-day programs (West et al., 2000). There is still a mix of public and private schools offering kindergarten, though in a reversal of past years, public programs now outnumber private programs (Snyder & Hoffman, 2001). Today, eighty-three percent of private programs are religiously affiliated, while 17 percent are non-sectarian (NCES, 1999).

Across the United States, kindergarten classes are half-day, full-school-day, or alternate-day (attend for a full-day every other day). However, some states do not mandate the provision of kindergarten. Further, it appears that half-day kindergarten is the program most likely to be required, while full-school-day kindergarten is less likely to be a requirement. There are varied definitions of the number of hours constituting a half-day or a full-school-day, and few states require compulsory attendance in kindergarten.

In general, little information is collected about the provision of kindergarten programs. Knowledge of kindergarten programs varies according to which data source and what level of data collection (e.g., national, state, school district, local school) is used (see Table 1). As a result, little is known about the extent of kindergarten provision across the states. Questions about how school district policies may differ within and between states cannot be definitively addressed with data currently collected.

Mandated Half-Day or Full-School-Day Kindergarten: Unfinished Business

For the most part, information on kindergarten is limited to state policies governing the provision of kindergarten and is collected by State Departments of Education. Two sources about kindergarten are the Council of Chief State School Officer's (CCSSO) *Key State Education Policies on K-12 Education*, 2000 and the National Center for Children in Poverty's (NCCP) *Map and Track: State Initiatives for Young Children and Families* (Cauthen, Knitzer, & Ripple, 2000). These reports outline kindergarten policies for each state, including requirements for programs school districts must offer, program duration, and attendance (see Table 1). Where appropriate, kindergarten data from the Education Commission of the States (ECS) (McMaken, 2001) is included as well.

Data from CCSSO (2000) indicate that ten states require school districts to offer full-school-day programs; 20 states require half-day programs (including Nebraska which requires 400 hours); five states require school districts to provide both full-and half-day programs; five states require either full-school-day or half-day programs; and ten states have no specific policy. NCCP (2000) data show that eight states require school districts to offer full-school-day programs; 38 states require half-day programs; and three states have no specific policy. ECS (2001) reports that eight states require districts to offer full-day programs (Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and West Virginia). Sources show that half-day kindergarten itself has not been fully accepted or

Table 1

The Status of Kindergarten in the United States

This table includes information about requirements for public school districts to provide half and/or full-school-day programs, the length of the kindergarten school day, attendance requirements, kindergarten entrance age, the age of compulsory school attendance, the number of children served in the public school kindergarten programs, and the percentage of eligible kindergarten children served in public school programs. Multiple sources were used to gather data.

KEY

'---' - No State or Local District Policy
LEA - Local Education Agency
N/A - Not Available
CSSCO - Council of Chief State School Officers
NCCP - National Center for Children in Poverty
ECS - Education Commission of the States
NCES - National Center for Education Statistics
FCD - Foundation for Child Development

State[1]	Kindergarten Program					Attendance Requirement			Kind. Entrance Age	Compulsory Ed. Ent. Age	Length of School Day (hours)		# of Children Served Pub. Schl. Kind. 1998-1999	% of Eligible Kind. Chdn. Served in P.S.[6]
	CCSSO[2]			NCCP[3]		CCSSO		NCCP[4]	ECS[5]	ECS[5]	CCSSO		NCES	FCD
	Half Day	And /Or	Full Day	Half Day	Full Day	Half Day	Full Day				Half Day	Full Day		
Alabama	No		Yes	No	Yes	N/A	Yes[7]	No	5 on or before 9/1	7	--	6	58,055	100
Alaska	--	--	--	Yes	No	--	--	No	5 on or before 8/15	7	<4	>=4	9,838	92
Arizona	Yes		No	Yes	No	Yes	N/A	No	5 on or before 9/1	6	2	--	65,312	114
Arkansas	No		Yes	No	Yes	N/A	Yes	No	5 on or before 9/15	5	--	6	34,120	100
California	Yes		No	Yes	No	No	N/A	No	5 on or before 12/2	6	3.3	--	459,781	100
Colorado	--	--	--	--[12]	--	--	--	--[12]	LEA option	7	--	--	50,859	100
Connecticut	Yes		No	Yes	No	No	N/A	Yes	5 on or before 1/1	5	--	--	42,500	98
Delaware	Yes		No	Yes	No	Yes	N/A	Yes	5 on or before 8/31	5	2.5	--	8,025	84
Florida	No		Yes	Yes	No	N/A	Yes	Yes	5 on or before 9/1	6	--	--	174,470	104
Georgia	No		Yes	No	Yes	N/A	No	No	5 by 9/1	6	--	4.5	112,287	116
Hawaii	No		Yes	No	Yes	N/A	No	No	5 on or before 12/31	6	6	6	15,019	92
Idaho	--	--	--	Yes	No	--	--	No	5 on or before 9/1	7	2.5	4	17,318	101
Illinois	Yes	or	Yes	Yes	No	No	No	No	5 on or before 9/1	7	2	4	150,953	90
Indiana	Yes		No	Yes	No	No	N/A	No	5 on or before 7/1	7	2.5	--	71,974	89
Iowa	Yes	or	Yes	Yes	No	No	No	No	5 on or before 9/15	6	--	--	35,772	88
Kansas	--	--	--	--	--	--	--	--	5 on or before 8/31	7	2.5	5	31,279	80
Kentucky	Yes		No	Yes	No	No	N/A	No	5 by 10/1	6	3	6	46,900	90
Louisiana	No		Yes	No	Yes	N/A	No	No	5 on or before 9/30	7	--	6	58,922	83
Maine	--	--	--	Yes	No	--	--	No	At least 5 on 10/15	7	2.5	2.5	14,698	82
Maryland	Yes		No	Yes	No	Yes	N/A	Yes	5 by 12/31	5	--	--	57,813	84
Massachusetts	Yes		No	Yes	No	No	N/A	No	LEA option	6	--	--	71,390	91
Michigan	--	--	--	Yes	No	--	--	No	At least 5 on 12/1	6	--	--	131,021	93
Minnesota	Yes	or	Yes	Yes	No	No	No	No	At least 5 on 9/1	7	--	--	60,876	87
Mississippi	No		Yes	No	Yes	N/A	No	No	5 on or before 9/1	6	--	5.5	39,509	96
Missouri	Yes	or	Yes	Yes	No	No	No	Yes	5 before 8/1	7	1.5	3-7	67,335	89
Montana	Yes		No	Yes	No	No	No	No	5 on or before 9/10	7	See [8]		10,848	84
Nebraska	Requires 400 hours			Yes	No	No	N/A	No	5 on or before 10/15	7	--	--	21,145	84
Nevada	Yes		No	Yes	No	No	N/A	Yes	5 on or before 9/30	7	--	2	23,986	135
New Hampshire	--	--	--	--	--	--	--	--	LEA option	6	2.5	--	8,831	53
New Jersey	--	--	--	Yes	No	--	--	No	LEA option	6	2.5	6	90,689	89
New Mexico	Yes		No	Yes	No	Yes	N/A	No	5 before 9/1	5	2.5	--	23,759	90
New York	--	--	--	Yes	No	--	--	No	LEA option	6	2.5	5	202,894	84
North Carolina	No		Yes	Yes	No	N/A	No	No	5 on or before 10/16	5	See [9]		102,603	116
North Dakota	Yes	and	Yes	Yes	No	No	No	No	5 before 9/1	7	2.75	5.5	7,917	78
Ohio	Yes	or	Yes	Yes	No	Yes	Yes	Yes	5 by 9/30	6	2.5	--	134,949	85
Oklahoma	Yes		No	Yes	No	Yes	N/A	Yes	5 on or before 9/1	5	2.5	6	44,664	93
Oregon	Yes		No	Yes	No	No	N/A	No	5 on or before 9/1	7	--	--	37,530	90
Pennsylvania	Yes		No	Yes	No	No	N/A	No	LEA option	8	2.5	5	126,155	79
Rhode Island	Yes		No	Yes	No	Yes	N/A	Yes	5 on or before 12/31	6	2.5	5	10,907	84
South Carolina	No		Yes	No	Yes	N/A	Yes	Yes	5 on or before 9/1	5	2.5	5	47,160	93
South Dakota	Yes	and	Yes	Yes	No	No	No	No	5 on or before 9/1	6	See [10]		9,495	81
Tennessee	Yes		No	Yes	No	Yes	N/A	Yes	5 on or before 9/30	6	4	4	71,870	108
Texas	Yes	and	Yes	Yes	No	No	No	No	5 on or before 9/1	6	--	7	290,432	103
Utah	Yes		No	Yes	No	Yes	N/A	No	5 before 9/2	6	2	--	34,529	98
Vermont	Yes	and	Yes	Yes	No	No	No	No	5 on or before 1/1	6	2	--	6,976	82
Virginia	Yes	and	Yes	Yes	No	Yes	Yes	Yes	5 on or before 9/30	5	3	5.5	84,154	98
Washington	--	--	--	--	--	--	--	--[13]	LEA option	8	2	4	71,323	95
West Virginia	No		Yes	No	Yes	N/A	Yes	No	5 before 9/1	6	--	5.25	21,821	96
Wisconsin	Yes		No	Yes	No	No	N/A	No	5 on or before 9/1	6	See [11]		59,611	79
Wyoming	Yes		No	Yes	No	No	N/A	No	5 on or before 9/15	7	2.5	5	6,383	80

Notes follow on page 5

Table 1 Notes.

[1] States in which there are differences between CCSSO and NCCP data are in bold. Differences occur in program requirement and/or the attendance requirement data. For example, CCSSO data indicate that there is no state kindergarten policy for program requirements but NCCP data indicate that half-day programs are required. NCCP data for Illinois state that only half-day programs are required to be offered, while CCSSO data state that half-day or full-school-day programs are required. For Arizona, CCSSO data state that attendance is required while NCCP does not. [2]Data are from Key State Education Policies on K-12 Education, 2000, a publication of the Council of Chief State School Officers. [3]Data are from Map and Track: State Initiatives for Young Children and Families, 2000, a publication of the National Center for Children in Poverty. [4]Collected data on kindergarten attendance did not make the distinction between half- and full-day programs. [5]Data are from the Education Commission of the States website, specifically: State Notes: Kindergarten State Characteristics by McMaken (August, 2001; last updated March 2002). [6]Calculated using 2001 Census Data estimates of the 1999 five-year-old population by State and the 1998-1999 NCES data on the number of Kindergarten children served in public school programs by State in Digest of Education Statistics 2000 (Snyder & Hoffman, 2001). Since both data sources are estimations and the NCES data includes children younger or older than five years who attend kindergarten, some percentages total over 100%. [7] In Alabama, student attendance is only required if the student is enrolled. [8] Montana has an annual aggregated hours requirement. [9] North Carolina requires 1,000 hours of kindergarten per school year. [10] South Dakota has no minimum hourly requirement. [11] Wisconsin has no minimum hourly requirement. [12] In Colorado, state funding is available for half-day kindergarten and all school districts provide half-day programs, even though it is not a requirement. Kindergarten attendance is voluntary. [13] In Washington, kindergarten attendance is not required.

implemented in the public education system across all fifty states, and clearly not full-school-day kindergarten.

Length of Kindergarten Day: No Common Definition

What constitutes a full-school-day or half-day program, as measured by school day hours, varies across the states (see Table 1). CCSSO (2000) data indicate that eight states consider a full-school-day to be 6.0 hours or more (plus Missouri, which allows hours to range from 3.0-7.0). Ten states consider a full-school-day program to be between 5.0 to 5.5 hours, and eight states consider a 2.0-4.5 hour range acceptable for full-school-day programs. For half-day programs, 20 states consider between 2.0 to 2.5 hours to be acceptable, six states consider between 2.75 and 4.0 hours to be adequate, one state considers 1.5 hours to be half-day, and another considers a half-day to be 6.0 hours. No standard for defining full-school-day or half-day hours exists, thereby making comparisons among states and knowledge-based policymaking difficult.

Attendance: Not Compulsory for Kindergarten

Most states do not have policies requiring kindergarten attendance. According to CCSSO (2000), nine states with half-day programs require attendance and six states with full-school-day programs require attendance. NCCP (2000) reports that 12 states require kindergarten attendance (11 of these states require school districts to offer half-day programs and one state requires school districts to offer full-school-day programs). ECS (2001) data show that 12 states have policies that mandate kindergarten attendance (two are full-day). School officials or truancy officers rarely enforce attendance policies in kindergarten. Based on these sources, more children are required to attend half-day programs than full-school-day programs.

Uncertainty about Compulsory School Age

It is not surprising that compulsory attendance in kindergarten differs across the states since the entrance age to compulsory education varies as well. Kindergarten entrance age is generally around five years (although in some states and, historically, four-year-olds may attend), and compulsory attendance age ranges from age five to age eight. CCSSO (2000) data show that two states have a compulsory school entrance age at eight, 18 states at age seven, 22 states at age six, and seven states at age five. ECS data (2001) are similar with two states having a compulsory entrance at age eight, 18 states at age seven, another 22 states at age six, and eight states at age five. This variation may reflect reluctance among states to make kindergarten attendance compulsory, as it is for rest of public education. Differences in the age for compulsory education should be a topic for further exploration, to investigate whether it is due to state budgetary constraints, parental preferences, or uncertainty about the appropriate age for beginning compulsory education.

Differences among State Reports: Cautions for Interpretation

The differences found in state policies about kindergarten require careful interpretation. Differences may be due to: 1) policy changes since the time of the surveys, 2) different survey questions eliciting different answers, and/or 3) different administrators within the State Departments of Education completing the surveys. The CCSSO and NCCP data on full- and half-day programs and attendance requirements differ in the reported findings (see Table 1). Researchers who collected the CCSSO and NCCP data reported that they relied on respondents within the State Departments of Education, and that no verification occurred.

It appears that state administrators at different levels such as assistant superintendents, directors of early childhood education programs, and research analysts do not share a common understanding of state kindergarten policy, and, therefore, did not provide consistent answers to questions. Thus, a clear picture of kindergarten programs in the United States does not emerge.

School District and Local School Level Data Needed

Little is known about the policy choices and rationales of various school districts and schools. To form an accurate depiction of kindergarten provision across the United States requires data at a school district or local school level in each state, not just at the state-policy level. National sources such as the National Center for Education Statistics (NCES) and many states generally collect information only about kindergarten enrollment; the distinction between half- and full-school-day programs is rarely made. In response to a list-serve inquiry about kindergarten programs through the National Association of Early Childhood Specialists, State Department of Education representatives from 14 states replied that they collect information on kindergarten. Only five states (one was not able to share data) made the distinction between full- and half-day programs in data collection; six states did not; and three states did not respond.

This initial examination of the provision of kindergarten programs indicates that, like many social goods in the United States, residency is crucial to access. What state or school district a five-year-old child resides in or what local school a child attends determines her access to, and the extent, of her kindergarten experience.

In the United States, educational policy decisions are made locally in different political and socio-economic contexts, resulting in the variation in kindergarten programs available at a state and local level. Through inspection of data that a few states shared regarding their provision of full- and half-day programs (see Table 2), the importance of school-district level data in contrast to state level data is demonstrated. For both Illinois and Missouri, CCSSO reported a state policy of offering either full- or half-day programs, and NCCP reported a state policy of only half-day programs. Using school district and school level data in Missouri, full-school-day kindergarten is the most common program implemented in the public schools. In Illinois, slightly more children attend half-day programs than full-school-day programs.

According to both the CCSSO and NCCP, Kansas has no explicit state policy regarding kindergarten provision, yet kindergarten has an established presence in Kansas with most schools offering half-day programs and with a recent trend towards offering full-school-day programs. Both data sources also indicated that Connecticut had a state policy of half-day programs, yet there is an even split between the number of children in half-day programs and the number of children in full-school-day or extended day programs. As is often the case, reported state policy may not reflect school district and local school practice. Clearly, relying on state-level reports does not fully capture the extent of kindergarten provision and utilization in school districts in these states. What is needed is more research, using statewide school district and local school level data, to present a more detailed accurate picture of kindergarten programs across the states.

This initial examination of the provision of kindergarten programs indicates that, like many social goods in the United States, residency is crucial to access. What state or school district a five-year-old child resides in or what local school a child attends determines her access to, and the extent, of her kindergarten experience. The uneven educational playing field begins with kindergarten, if not before. Within a state, a child in one school district may attend half-day kindergarten for 2.5 hours while another child in a different district attends full-school-day kindergarten for 5.0 hours. If kindergarten is truly the entrance into the public education system, as most perceive it to be, it is the state's responsibility to ensure that kindergarten policies regarding availability, length of school day, or attendance are consistent with policies of the subsequent school years (Grades 1-12). Additionally, as kindergarten bridges early education and early formal schooling, kindergarten curricula and instructional methods should be aligned with those of preschool and first grade.

Kindergarten suffers from the middle child syndrome, caught between early education and public education, because it shares features with both educational levels. The variation in kindergarten polices across the states show that policymakers and legislative bodies alike overlook kindergarten. Although the kindergarten classroom is affiliated with the public education system at the elementary school level, the diversity in the provision and structure of kindergarten resembles the diverse programs of the early education and care system for preschoolers and infants/toddlers. Yet, as part of the public education system, kindergarten teachers are typically more highly educated and better compensated than teachers in preschool programs (Head Start and community-based programs) (Early, Pianta & Cox, 1999; Saluja, Early, & Clifford, 2001). Kindergarten is unfinished business and deserves our attention.

Table 2

Differences between State Policy and School District and Individual School Practice

State[1]	Kindergarten State Policy[2] *For School District Requirements*		Number of Children Enrolled in Kindergarten Programs[4] *State Departments of Education Data*			
	CCSSO	NCCP	HDK	FDK	AFDK	ED
MO[5]	HDK *or* FDK	HDK	13,903	49,791	N/A[3]	N/A
IL[6]	HDK *or* FDK	HDK	78,145	68,890	523	N/A
KS[7]	NSP	NSP	21,421	9,534	430	N/A
CT[8]	HDK	HDK	21,119	16,266	N/A	4,185

	Number of Kindergarten Programs Offered *State Departments of Education Data*				
	HDK	FDK	AFDK	ED	Both HDK & FDK
MO					
School Districts	14	475	N/A	N/A	33
Individual Schools	102	905	N/A	N/A	127
IL					
School Districts	265	500	9	N/A	117
Individual Schools	883	1,138	9	N/A	249
KS					
School Districts	–	–	–	N/A	N/A
Individual Schools	520	238	26	N/A	N/A
CT					
School Districts	120	70	N/A	42	58
Individual Schools	335	305	N/A	70	102

Note. [1]All data are for the 2000-2001 school year. [2]HDK is half-day kindergarten, FDK is full-day kindergarten, NSP is no set policy. [3]N/A means "not applicable." [4]AFDK is alternate-full-day kindergarten programs and ED is extended-day programs. [5]Data from the Early Childhood Education Section of the Missouri Department of Elementary and Secondary Education. [6]Data from the Illinois State Board of Education, Research and Policy. [7]Data from the Kansas State Department of Education, Planning and Research. In Kansas over the past five years there has been a gradual increase in full-school-day programs and a decrease in half-day programs since in the 1996-1997 school year only 152 schools offered full-school-day, every-day kindergarten and 567 schools offered half-day, every-day programs. [8]Data from the Connecticut State Department of Education, Division of Grants Management. Half- and full-school-day combinations mean either half- and full-school-day or half-and extended-day.

Policy Issues in Kindergarten

A main question for each policy issue regarding kindergarten is posed in the following section. Concerns surrounding these issues are briefly presented and summarized. Directions for future research, and policy action are provided, and in some cases, when supported by research, recommendations are offered. Generally, the purpose is to inform future debates, not to provide answers to these neglected issues.

Kindergarten Mandates: Should the kindergarten year be required for all children?

Kindergarten teachers, principals, parents, advocates, and policy-makers expect that in kindergarten children learn the basic academic and social skills that prepare them for the demands of first and subsequent grades. Since some states do not mandate the provision of kindergarten, many programs are half-day, and kindergarten attendance is rarely compulsory, this expectation may not consistently be met. This situation has inspired calls for mandated kindergarten to ensure that either kindergarten is offered, that children are required to attend, or both. Others believe that only the establishment of full-school-day kindergarten programs will meet current and future expectations of the kindergarten year. They believe that expectations of what children should learn in kindergarten will not be fully realized until statewide, required attendance and/or full-school-day kindergarten is implemented throughout the public school system. Research has not explored the effects of policies mandating kindergarten or full-school-day kindergarten on children's access to or development in kindergarten programs, nor on how mandates influence the financing of kindergarten programs.

Entrance Age: Should there be a uniform entrance age?

Across and within states and school districts, entrance cut-off ages for kindergarten are not uniform. Cut-off points

for entrance ages vary between summer and winter months for five-year-olds (ECS, 2000). Usually, there is an age span of one year in kindergarten classrooms, with younger children having their date of birth close to the cut-off age (called summer children). In some classrooms, however, in the beginning of the school year children as young as four and as old as six are present. Wide age spans in classrooms can make it difficult for teachers to implement a curriculum that accommodates children's substantially different levels and paces of learning (Shepard & Smith, 1986; NAECS/SDE, 2000), unless more teacher training programs include preparation for ungraded classrooms. Research does not specifically address the implications that a *uniform* entrance age policy would have on children's access to or development in kindergarten, but Stipek's (2002) recent review of entrance age research does suggest that educational experiences in school contribute more to children's overall cognitive competencies than does maturation.

To form an accurate depiction of kindergarten provision across the United States requires data at a school district or local school level in each state, not just at the state-policy level.

Kindergarten Entrance: Should entrance be delayed?

In kindergarten classrooms, there are always younger children and older children, typically with an age span of a year. Delaying entrance further widens the gap between them and establishes the expectations for kindergarten achievement based on the performance of the oldest children in the class (NAECS/SDE, 2000). The emphasis on school readiness has also led many parents and school administrators to expect that children possess basic academic skills (e.g., identifying sound-letter relationships and shapes) prior to kindergarten entrance.

Both schools and parents sometimes delay children's entrance into kindergarten for a year (most likely for summer children), a practice called red-shirting. This practice is based on the belief that some children need extra time to mature, and that older children adjust better to the demands of kindergarten than younger children. Research does not support these practices (Stipek, 2002). Extra time to mature or additional educational experience (e.g. retention or transitional kindergarten) does not result in an academic boost. While older children do initially perform better academically, these positive effects are limited and fade out in the early grades (Carlton & Winsler, 1999; Crone & Whitehurst, 1999; Shepard & Smith, 1986; Shepard & Smith, 1989). Retaining children in kindergarten can also negatively affect children's social and emotional development, particularly their self-esteem (Shepard & Smith, 1986; Shepard & Smith, 1989). Stipek (2002) suggests that greater attention should focus on making school ready for children by tailoring teaching and learning opportunities to children's diverse skills, rather than concentrating on making children "ready" for school.

Curriculum and Instructional Methods: What is appropriate?

Early childhood researchers, parents, school administrators, teachers, and policymakers occasionally disagree about what curriculum content and instructional methods should be used in kindergarten. In developing or adopting kindergarten curricula or kindergarten program standards, many programs today do not use the available research knowledge of young children's development and learning. (NAECS/SDE, 2000). Other factors influencing curriculum design include: differing interpretations of the National Education Goals Panel definition of school readiness (which refers to both the children's and the schools' readiness), the increasing rates of retention in kindergarten (more children are being held back in kindergarten based on their academic and/or social skills) (NAECS/SDE, 2000), and the recent context of high-stakes testing in public schools. A common terminology to discuss classroom curricula and instruction does not exist, and often the concepts described are framed in opposition to each other. Researchers, early educators, parents, and policymakers use the language of *child-centered* vs. *didactic*, *intellectual skills* vs. *academic skills*, *child-initiated activities* vs. *teacher-directed activities*, and *developmentally appropriate practice* vs. *developmentally inappropriate practice*. Within this context, two original purposes of kindergarten—fostering thinking skills and building basic academic skills—can become sources of conflict in some kindergarten programs when one approach is favored over the other.

The approach typically described as child-centered focuses on how children learn in terms of developing children's general thinking, problem solving, and social skills, while the other approach, typically described as didactic, concentrates on what children learn in terms of the acquisition of basic knowledge and skills. The first approach values learning as children actively constructing, reflecting, evaluating, integrating, and applying their knowledge and skills in their daily activities and social interactions. The second approach values learning as children gaining knowledge in reading, math, and writing, as well as mastering basic skills, with a particular emphasis on literacy.

The "child-centered" approach has been criticized as inadequately preparing children for the academic demands

of the first grade, underestimating children's competencies, and placing little emphasis on reading. The "didactic" approach has been criticized as promoting the pushdown of the first-grade curriculum into kindergarten, narrowly focusing on "surface" skills and children's performance on specific academic outcomes, and undermining children's motivation to learn.

Everyday in kindergarten classrooms, teachers meet the greatest challenge of developing curriculum content and instructional practices that foster all areas of child development (Burns, Griffin, & Snow, 1999; NAS, 2000; NRC, 2001), perhaps by blending the approaches described above. Yet, research demonstrates that across kindergarten classrooms great variability exists in terms of curricula content, methods of delivery instruction, and teacher expectations (Pianta, 2002): this variability is also found among prekindergarten and first-grade classrooms (Pianta, 2002).

Consensus as to how and what children should learn in kindergarten among educators, administrators, and parents will not be reached until a common language is used to promote mutual understanding of the concepts involved. Further, instructional practices and curricula that are sensitive to the influence of culture and language should be developed, since kindergartners come from diverse backgrounds, including both immigrant and American-born children. It is also important to consider that other factors affect curriculum design, such as children's prior educational experience and parental preference. States and school districts should set kindergarten program standards that aim to enhance children's thinking, academic, and social skills, instead of focusing on one area to the exclusion of others.

Screening and Assessment: What are appropriate practices?

Due to emphasis on school accountability and children's achievement, the practice of assessing young children is growing. In some cases, schools also assess children to determine admission into kindergarten. Assessment of young children is complex, because young children's abilities are emerging. Children learn different knowledge and skill domains at varying rates. These complexities contribute to the confusion in determining the appropriate purpose and methods of assessment in kindergarten. Questions underlie how and when assessments should be made and used: to measure individual children's ability or progress, to influence placement and retention decisions, to identify learning differences, to inform instructional planning, or to evaluate outcomes of kindergarten programs. Methodological issues refer to what form of assessment (such as standardized testing or curriculum-based, performance assessments) should be used to fulfill a particular purpose. These concerns have grown out of schools' practice of using results *solely* from assessments of children's school readiness skills using norm-referenced, standardized tests (NAECS/SDE, 2000), instead of gathering information from various sources and with different instruments (Linn, 1981; Wolery, 1987). Assessment practices are important and should be informed by research, since decisions to delay entrance into kindergarten, place children in developmental or transitional kindergartens, or retain children in kindergarten, are made according to assessment results. State and school district policy should reflect assessment practices that use multiple sources of information and allow children to demonstrate their skills in different ways, allowing for variability in skill learning and learning pace, as well as being sensitive to the influence of children's cultural background (APA, 1985; 1999; NAS, 2000).

Qualified Teachers: Is there a persistent shortage?

The National Association for the Education of Young Children's (NAEYC) position is that kindergarten teachers must have a college education with a specialization in early childhood education, and have completed a supervised teaching experience (Bredekamp & Copple, 1997). Early, Pianta, and Cox (1999) found that 46.5 percent of the public school kindergarten teachers had a master's degree or higher, 78.6 percent had an elementary education certificate (K-6), and 49.6 percent had certification specifically for kindergarten or the early primary grades, with an average of eleven years of teaching experience. Thus, kindergarten teachers typically have appropriate training and education according to professional standards, but only half have a specialization in teaching kindergarten or the early primary grades.

Consensus as to how and what children should learn in kindergarten among educators, administrators, and parents will not be reached until a common language is used to promote mutual understanding of the concepts involved.

A shortage of qualified kindergarten teachers is due to the increased efforts to reduce class size in the early primary grades or institute full-school-day kindergarten. As a result, schools hire teachers with emergency or temporary certification, or certification in areas other than early education, or new teachers with little teaching experience to work in kindergartens (personal communication with Z. LeFrak, president of the National Kindergarten Alliance, C. Gossett, president of the California Kindergarten Association, and F. Nathan, executive director of Think New Mexico, April, 2001). Overall, little is known about the prevalence and

impact of these and other practices, which research suggests affects the quality of children's experience in kindergarten. Therefore, school officials are faced with the problem of recruiting and retaining suitable teachers, a situation which plagues not only the rest of the public education system in the United States, but also other countries (OECD, 2001).

Facilitating the Transition into Kindergarten: What are the best practices?

Considering the organizational niche of kindergarten between early childhood education programs and elementary education, easing transition from home or any other site into kindergarten is a concern. Much research has focused on the difficulties many children have transitioning to the intellectual, behavioral, and social demands of kindergarten (Pianta & Cox, 1999; Ramey, Ramey, Phillips, Lanzi, Brezausek, & Katholi, 2000). In Pianta, Cox, Early, Rimm-Kaufman, Laparo, and Taylor (1998), kindergarten teachers reported that half of children transition successfully from early education programs into kindergarten, a third have some problems, almost one-fifth of children experience difficulty when entering kindergarten. In Rimm-Kaufman, Pianta, and Cox (2000), teachers reported that the most common transition problem for children was difficulty following directions (46 percent), while lack of academic skills was reported 36 percent of the time, and social skills was reported as a problem 21 percent of the time.

Despite recent research on kindergarten transition by Ramey et al., 2000, little evaluation research specifically investigates the effectiveness of program approaches that ease the transition from home to school or from early education programs to kindergarten to promote continuity in learning (ECS, 2000; Kagan & Neuman, 1998). Common practices used by schools and teachers to help families and children adjust to kindergarten (such as school open houses, classroom visits, and parent-teacher meetings held prior to the start of the school year), are primarily unevaluated (ECS, 2000). Prekindergarten programs may also play a role in promoting positive transitions to kindergarten, highlighting the need for good communication between kindergarten and prekindergarten programs, and additional research on standards for best practice.

The transition from kindergarten to first grade has not received attention in recent research and practice, and deserves renewed interest (Alexander & Entwisle, 1998). In kindergarten, children typically have circle time, dramatic play, and learning centers (e.g., blocks, science, free writing), but in first grade children often have individual desks, subject periods, and more paper-pencil work. Transition practices primarily revolve around the transition into kindergarten, overshadowing the crucial transition from kindergarten to first-grade. Since preparation for and success in first-grade relies on kindergarten experience (Alexander & Entwisle, 1998), attention should be devoted to developing practices in kindergarten that promote the transition from kindergarten into the first-grade.

Kindergarten: What should be the relationship to prekindergarten?

Little attention has been devoted to the relationship between kindergarten and prekindergarten programs. NCCP (2000) reports that ten states (Arkansas, Connecticut, Delaware, Georgia, Illinois, Maryland, Michigan, New Jersey, New York, and Oregon) require state-funded prekindergarten or Head Start programs to have a plan to prepare children for transition into kindergarten. With increasing participation in prekindergarten programs, kindergarten, for many, is no longer children's first experience in an educational program (Blank, Schulman, & Ewen, 1999; Mitchell, 2000; NCES, 2000). Since the goal of many preschool programs is to promote school readiness, what then is the role of kindergarten? Curricula could be coordinated to ensure continuity in learning, information about individual child development could be shared, visits to kindergarten classrooms could be arranged, and staff could participate in joint professional development activities (ECS, 2000). Routine, structured relationships should be developed between prekindergarten and kindergarten programs to promote positive transitional experiences for children. This is a particularly difficult challenge since children in a single preschool program often attend kindergarten in different schools.

If kindergarten is truly the entrance into the public education system, as most perceive it to be, it is the state's responsibility to ensure that kindergarten policies regarding availability, length of school day, or attendance are consistent with policies of the subsequent school years (Grades 1-12). Additionally, as kindergarten bridges early education and early formal schooling, kindergarten curricula and instructional methods should be aligned with those of preschool and first grade.

The impact of Georgia's voluntary, universal prekindergarten program on kindergarten programs provides some preliminary information about relationships between the two programs (personal communication with C. Trammell, program manager of the Georgia Voluntary Prekindergarten, May, 2001). Kindergarten teachers agree that the children

who participated in the voluntary prekindergarten program were better prepared for kindergarten, especially regarding pre-reading, pre-math, and social skills (Henderson, Basile, & Henry, 1999). Improving performance in kindergarten is only one area in which prekindergarten and kindergarten influence each other. Other areas include transition practices, curriculum content, and in the professional development of teachers.

In Georgia, informal relationships between prekindergarten and kindergarten programs serve to provide children with additional services and to ease the transition into kindergarten. Prekindergarten programs build relationships with local public schools to obtain services for children that are not available in the prekindergarten program, such as referrals for testing to determine special education needs. At the end of the prekindergarten year various activities occur to promote positive transitions, such as children visiting kindergarten classrooms, kindergarten teachers visiting prekindergartens, and providing parents with transition kits that include puzzles, crayons, magnetic letters, books and suggested summer activities.

Public school prekindergarten teachers are more likely to share information about children with public school kindergarten teachers than prekindergarten teachers in private child care centers or Head Start. This may be a result of the public school prekindergarten and kindergarten programs sharing the same school building and administrative staff, which allows for easier access and interaction among teachers. Thus, the nature and strength of program interactions vary according to the location of the prekindergarten program.

In a few Georgia counties, prekindergarten and kindergarten teachers participate in joint professional development activities. Teachers plan for the upcoming school year together to help promote continuity in children's learning. A few counties have also instituted the practice of "looping," in which prekindergarten teachers follow children to kindergarten and, in some cases, to the first grade. Through this practice, teachers develop a richer knowledge of the children's abilities and development, and continuity in teacher and child relationships is supported.

What is the evidence to support full-school-day kindergarten?

Full-school-day programs have been promoted as enhancing instruction and learning in kindergarten (Fromberg, 1995; Rothenberg, 1995). Research indicates that in full-school-day programs, children spend more time engaged in self-directed, independent learning and dramatic play. Research indicates that in full-day kindergarten science, social studies, art, music, and physical education are included more often than in half-day programs (Elicker & Mathur, 1997; Snyder & Hoffman, 2001). Kindergarten teachers report that children experience less frustration in full-day kindergarten since there is more time for them to develop their interests and engage in social activities (Elicker & Mathur, 1997).

Beyond the initial research indicating educational benefits, full-school-day kindergarten, also has practical advantages for families.

Also, full-school-day kindergarten allows teachers to more easily pace instruction according to children's individual needs, explore instructional topics in-depth, develop close parent-teacher relationships, and accommodate more teacher-directed individual work with students (Cryan, Sheehan, Wiechel, & Bandy-Hedden, 1992; Elicker & Mathur, 1997; Evansville-Vanderburgh, 1988). Researchers caution that merely increasing hours may not lead to the positive benefits of full-school-day kindergarten. It is what children experience during the day—an educational environment with appropriate curriculum and teaching practices informed by research—that promotes young children's exploration and learning (Cryan et al., 1992; Gullo, 1990). Any effort to implement full-day kindergarten should also include efforts to ensure that the full-day program is a high-quality, educational experience for children.

Earlier research reviews indicated positive effects of full-school-day kindergarten programs on children's learning and achievement, especially for children from low-income families (Housden & Kam, 1992; Karweit, 1989; Puleo, 1988*)*. Recent reviews conclude that full-school-day kindergarten is advantageous for all children, not just children from low-income families (Clark & Kirk, 2000; Fusaro, 1997). Participation in full-school-day kindergarten, as compared to half-day kindergarten, results in higher academic achievement in kindergarten, especially in reading and math, and promotes good relationships with peers and teachers (see Table 3 for a research summary) (Cryan et al, 1992; Elicker & Mathur., 1997; Gullo, 2000; Sheehan, Cryan, Wiechel, & Bandy, 1991). Studies also indicate that children in full-school-day programs had higher attendance rates and more satisfied parents, as well as long-term, positive effects such as fewer grade retentions and higher reading and math achievement in the early school years (Cryan et al., 1992; Elicker et al., 1997; Gullo, 2000; Sheehan et al., 1991).

However, more research is needed to fully examine the short and long-term effects of full-day kindergarten, especially on subsequent school success in elementary school and other life outcomes (Vecchiotti, 2002). Also, of concern is whether full-day kindergarten lessens the educational performance

Table 3

Summary of Recent Research Comparing Full-School-Day (FDK) and Half-Day (HDK) Kindergarten Programs[1]

Reference	Design/Sample	Meaures	Effects of Full-Day Kindergarten
Gullo (2000)	Longitudinal Midwest school district N=974 second graders N=730 FDK, N=244 HDK	Iowa Test of Basic Skills (ITBS) Grade Retention (1st three years) Special Education (1st three years) Attendance records	FDK higher standard scores in ITBS reading and math. FDK less likely to be retained. FDK higher attendance. No differences in special education referrals between HDK & FDK.
Elicker & Mathur (1997)	2 year program evaluation: outcome and process data Middle-class, Midwest community N=179, N=69 FDK, N=110 HDK	Developmental Indicators for the Assessment of Learning-Revised (DIAL-R-Spring of each year) Academic Report Cards Early Childhood Classroom Observation System (ECCOS) Parent Surveys Teacher Interviews 1st Grade Reading Readiness Ratings	HDK had slightly higher work habit scores on the DIAL-R sub-test. FDK showed greater progress on report cards for literacy, math, general learning, & social skills. FDK (27%) & HDK (47%) spent the greatest amount or time in large-group, teacher-directed activities. FDK spent more time in child-initiated activities, teacher-directed individual work, & free play. FDK displayed a slightly higher proportion of positive affect and lower levels of neutral affect. FDK spent more time actively engaged, HDK spent more time listening. *Teachers feel FDK*: eases transition to 1st grade, more time for free choice activities, more time to adjust instruction at an appropriate level for individual children, more time for instruction planning, more time to develop child & parent relationships, less frustrating for children since there is more time to develop their interests. *Parents feel FDK*: more time to explore & learn, better teacher-child relationships, positively influences social development. FDK higher reading readiness scores.
Cryan, Sheehan, Wiechel, & Bandy-Hedden (1992)	Statewide retrospective study N=8,290 kindergartners in 27 school districts Longitudinal study of two cohorts (N=5,716 from 27 & 32 school districts)	Hahnemann Elementary School Behavior Rating Scale	FDK had higher ratings for the following positive behaviors: originality, independent learning, classroom involvement, productivity with peers (react positively to & work well with), approach to teacher. FDK had lower ratings for following negative behaviors: failure/anxiety, unreflectiveness, and holding back-withdrawn.
Sheehan, Cryan, Wiechel, Bandy (1991)	Same as above	Metropolitan Readiness Test Metropolitan Achievement Test	FDK had positive effects into 1st and 3rd grade, with better standardized test performances (5-10 percentile point difference over HDK). FDK less likely to be retained (17%-55% fewer retentions) and placed in Chapter 1 programs (50%-90% fewer placements).

Note.[1] Only includes studies reported in published, peer-reviewed journals (excludes dissertations, conference reports, technical reports etc.) that compared full-school-day, everyday programs with half-day, everyday (excludes alternate day program findings).

gap between children from low- and high-income families. Additional research is needed to fully examine differences between full- and half-day kindergarten programs regarding content, instructional process, and children's social experiences in these programs (Vecchiotti, 2002).

Beyond the initial research indicating educational benefits, full-school-day kindergarten also has practical advantages for families. Consider the following facts: 1) in 1998, women comprised 46 percent of the workforce; 2) 60 percent of mothers with children under six years of age worked in 2000; 3) 57 percent of families with children under six in 2000 were dual-income; 4) 27 percent of families in 1998 were single-parents; and 5) in 2000 78 percent of unmarried mothers (single, widowed, divorced or separated) were employed and 69 percent of married mothers were employed (Fullerton, 1999; U.S. Bureau of Labor Statistics, 2001; U.S. Census Bureau, 1998). With half-day kindergarten programs, arrangements for afternoon care are still needed for children in working families. Even though children in full-day programs need after-school care, since the typical work day ends after the traditional full-school day, full-school-day kindergarten provides more support to working families than part-day programs (Capizzano & Adams, 2000; Capizzano, Trout, & Adams, 2000). Moreover, public full-school-day kindergarten may provide children with a high-quality, educational experience that lower-to-middle-class families are unlikely to be able to afford in the private (for profit and non-profit) early education/child care market.

During the 1980s, 56 percent of children participating in research on half versus full-day kindergarten in Ohio spent

the remaining school-day hours in another child care program outside the home (Sheehan, 1988). Today, this percentage is likely even higher. Considering that the quality of care in many child care programs and family child care settings is mediocre (Helburn, 1995; Kontos, Howes, Shinn, & Galinsky, 1995), the option of spending a full-school-day in an enriching, educational kindergarten may better serve children. Moreover, time spent in poor-to-mediocre programs after a half-day in kindergarten may diminish the gains made in the kindergarten educational experience. Thus, parents should have the option of choosing full-school-day kindergarten for their children to attend in the public education system.

Since kindergarten is primarily the responsibility of the states, campaigns to promote full-day kindergarten should be tailored to the state's political, economic, and social context (Vecchiotti, 2002). Over the past few years, legislation has been proposed to establish or expand full-school-day kindergarten in Colorado, Maryland, New Jersey, New Mexico, Oklahoma, Virginia, and Washington. While some efforts met with limited success, the move for full-school-day kindergarten was successful in New Mexico. In 2000, full-school-day kindergarten legislation was passed by the legislature (House vote 63-4 and Senate vote 28-8), and was signed into law by Governor Gary Johnson.

Success of this initiative may be attributed to the campaign work of Think New Mexico (a non-profit, bi-partisan, solution-oriented think tank) and their strategy of promoting full-day kindergarten as voluntary. However, Think New Mexico's advocacy for full-school-day kindergarten did not end with passing the legislation, but continued with monitoring the full implementation of the program. In New Mexico, three important issues arose in the effort to establish full-school-day kindergarten: funding sources for the programs, recruiting and retaining qualified teachers, and lack of classroom space. These issues will be at the core of any effort to expand and improve access to full-school day kindergarten.

Areas of Future Inquiry and Research

Kindergarten is a topic ripe for research and for policy development. Ideas for further examination include:

- What constitutes a high-quality kindergarten program? How is quality defined in kindergarten? What are children actually experiencing in kindergarten classrooms? What are the model teacher-parent relationships in kindergarten? (Vecchiotti, 2002)
- How do school district characteristics (e.g., urban, suburban, or rural, district wealth) relate to the implementation of half- or full-school-day programs?
- Do different populations of children (e.g., prior preschool or child care experience; socio-economic status; race; ethnicity) attend half- and full-school-day programs? If so, how do these factors influence children's adjustment and development in kindergarten and beyond?

Multi-method, multi-measure evaluations examining the effectiveness of specific kindergarten practices in promoting child learning and development are needed:

- How do curricula, instructional processes, and children's social experiences differ between half- and full-school-day programs? (Vecchiotti, 2002)
- How can research-knowledge be better translated into schools' design of appropriate curricula and instruction practices to best serve children's development and fulfill local needs?
- What are the practices of states, school districts, or schools in assessing individual children's growth and in assessing the impact of their kindergarten programs? What policies and rationales are needed to develop appropriate assessment practices?
- How are children with disabilities being served in public and private kindergartens?
- How are English Language Learners being served in public and private kindergartens?

The relationship between prekindergarten and kindergarten programs, both public and private, is an area of increasing importance:

- Do prekindergarten and kindergarten overlap? What are their appropriate roles?
- Are there established partnerships and collaborations between prekindergarten and kindergarten programs to ease children's transitions? What practices are effective?

Questions surrounding teacher preparation are:

- What are the characteristics of qualified kindergarten teachers compared to those in other school grades and early education programs?
- Do teacher credentials/qualifications vary by program type (half- and full-school-day) or auspice (public or private)?
- What is the relationship between teacher credentials/ qualifications and children's cognitive, academic, and social development?

Research is also needed to understand efforts to implement full-school-day kindergarten:

- How are states, school districts, and schools financing full-school-day kindergarten?
- Are there trade-offs in implementing full-day kindergarten? Are other worthy programs cut to provide funding for full-day kindergarten?
- When financing is limited, on what basis should options (e.g. prekindergarten, class size reduction) be chosen? (Vecchiotti, 2002.)

- What advocacy strategies have been successful in promoting full-school-day kindergarten as a priority for state, school district, or individual school policy action?
- What policies stimulate full-school-day kindergarten? Does lowering the compulsory school age or kindergarten entrance age, or does mandating full-day kindergarten or establishing voluntary, full-day prekindergarten encourage implementation of full-school-day kindergarten?

Recommendations for State and Federal Action

A state or national perspective on kindergarten programs cannot be formed with current data sources. Little information is specific to kindergarten, even though or perhaps because kindergarten occupies a unique place in the public education system. Since kindergarten policies now differ from the rest of the public education system (e.g., length of school day, assessment practices, and compulsory attendance), kindergarten-specific information is necessary. As kindergarten policies align themselves with grades 1-12, special attention may no longer be necessary. At present, additional policy analysis and research must be conducted to understand this transitional year in children's educational experiences and to formulate appropriate kindergarten policies.

Data Collection and Analysis

States should:

- Ensure that State Departments of Education collect and provide consistent information on kindergarten policies and practices at the school district, and school level.
- Collect appropriate kindergarten data on enrollment, program type (half or full-day), hours served, qualifications of teachers, entrance ages, and assessment practices, at the state, school district, and school level.
- Assess the relationship between state policy, school district, and school practices to inform future kindergarten policy.

Pedagogical and Structural Alignment Issues

States should:

- Align the basic structural requirements of kindergarten, such as length of school day, to those of the subsequent school years, grades 1-12.
- Align kindergarten classroom practice to preschool and first-grade practices to promote continuity in children's early learning.
- Set kindergarten program standards informed by developmental research and that enhance children's thinking, academic, and social skills.

Program Service and Expansion

States should:

- Establish equitable policies to guarantee that high-quality kindergarten programs are available to all children within the state.
- Implement voluntary, full-school-day kindergarten programs in the public schools.
- Evaluate state education budgets and reformulate school-financing formulas to ensure that kindergarten programs, including full-day kindergarten, are fully funded.
- Foster regular interactions between prekindergarten/preschool and kindergarten programs to promote continuity in learning.

Recommendations for federal action include:

- The National Center for Education Statistics must separate kindergarten data from general k-3, k-6, or k-8 data collection questions and institute kindergarten specific questions to include data such as program type, hours served, etc.
- Establish federal incentives for states to expand or establish full-school-day kindergarten programs (similar to federal incentives that exist to establish prekindergarten programs).

Conclusion

Publicly supported kindergarten is over 100 years old, but much work is still needed. Neither states, nor the federal government, collect enough systematic data on kindergarten policies, financing, or practices, especially at a school district or individual school level. The lack of accurate information at the national and state levels obscures the extent of children's access to kindergarten across the states.

Now more than ever, kindergarten bridges early education and formal schooling. To promote continuity in children's early learning, kindergarten policies and practices must be better articulated and aligned with those of grades 1-12, as well as with preschool policies and practices. Kindergarten must define a new role for itself as a pivotal transitional year between preschool and first-grade. What constitutes a high-quality kindergarten program in terms of hours and curricula content is a topic for further research.

Equity considerations are absent from issues involving the provision of kindergarten since kindergarten is assumed to be fully established in the public education system. Yet, a child's kindergarten experience depends on the state and school district in which a child resides, as well as the school a child attends. Moreover, the voluntary option to attend full-school-day kindergarten is not readily available to all children. Children's access to kindergarten, specifically full-day kindergarten, should be a research and policy priority to ensure equal educational opportunities for young children.

Opening Pandora's Box: Discovering Kindergarten as a Neglected Child Policy Issue

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In the spirit of full disclosure, Sara Vecchiotti's policy-oriented brief resulted from a combination of foreseeing a policy opportunity and good timing. Since 1997, the Foundation for Child Development (FCD) has supported a coordinated program of research, policy analysis, and advocacy on voluntary, universal prekindergarten (UPK) for all three- and four-year-olds and full-school day kindergarten for all five-year-olds. Most of FCD's grants and allied activities, however, focused on UPK. We believed, as many policymakers still do, that compulsory public education begins with kindergarten. We, and they, are wrong.

As Vecchiotti explored key research and policy issues related to kindergarten, I experienced an opening of Pandora's box. Kindergarten, as she describes in her paper, is a neglected policy issue in education with important implications for children's learning before and after the kindergarten year. With the expansion of state-funded prekindergarten programs in recent years and looming "high stakes testing" in the third or fourth grade, the alignment of children's opportunities to learn and the content of their education from prekindergarten through Grade 3 is critical in the coming years.

Vecchiotti's analysis also coincided with increasing attention to the kindergarten year, stimulated by a growing number of research reports from the U.S. Department of Education's Early Childhood Longitudinal Study (ECLS-K), based on a nationally representative sample of children who entered kindergarten in fall 1998. These studies highlighted the disparities in knowledge and skills of children when they entered kindergarten, and the gaps which increase during the kindergarten year (Lee and Burkham, 2002). Children with low skills are also likely to enroll in low quality schools. Other studies supported the benefits of full-day school day kindergarten for children's achievement. Meanwhile, about 45 percent of American children still participate in half-day kindergarten, which can be about two-and-a-half to three hours a day.

At the same time that research pointed to the importance of kindergarten in addressing educational inequality, states facing severe budgetary deficits were seeking ways to raise the age of kindergarten entry, e.g., Hawaii, and to require parents to pay for full-day kindergarten provided in public schools, e.g., an Indiana school district and in Seattle where higher income parents pay for full-day kindergarten and lower income parents do not. Other states, recognizing the role of kindergarten and universal preschool in school readiness and early learning, were creating full-day kindergartens as an educational policy initiative to narrow the achievement gap between children, e.g., New Mexico (Raden, 2002) and Oklahoma. In some of these states, Vecchiotti's unique brief has informed the debates and state planning. No other resource exists which identifies the key kindergarten policy issues and then integrates existing research to inform these issues. What is missing from the brief is the critical issue of financing kindergarten in states and local school districts.

Vecchiotti's work has led to two FCD initiatives. First, FCD is supporting the Education Commission of the States (ECS) to conduct the first national study of which children have access to full-day kindergarten (FDK), and how states and localities finance FDK. The ECS study includes indepth studies of seven states and school districts within these states, as well as an attempt to address the serious data collection issues of financing and attendance requirements which Vecchiotti identified. As states turn their attention to full-day kindergarten, either to expand it to provide children with more early opportunities to learn or to reduce it because of state deficits, the

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ECS study is already providing policy-relevant information. Second, Vecchiotti's findings have shaped the Foundation for Child Development's efforts to promote the restructuring of prekindergarten, kindergarten, and Grades 1-3 (initially to be called a P-3 initiative) into a well-aligned first level of public education in the United States. FCD aims to contribute to framing how policymakers and the public view the first five years of publicly supported education to include prekindergarten and full-day kindergarten for each children, and to develop integrated curricula and instruction across the current three separate levels of early education supported by well-educated teachers.

The kindergarten year remains a neglected child and education policy issue. Vecchiotti's contribution has been to highlight this neglect and to marshall research to identify what we know and what we need to know to assure that all children have sound early educational opportunities.

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